

India Studies in Business and Economics

Vinod B. Annigeri
R. S. Deshpande
Ravindra Dholakia *Editors*

Issues in Indian Public Policies

 Springer

India Studies in Business and Economics

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Issues in Indian Public Policies

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Dedicated to

Founders of

Centre for Multi-disciplinary Development Research (CMDR)

Dharwad.



Vidyaratna Shri R. S. Panchamukhi, Founder President

Founders of CMDR

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Shri Ashok Kulkarni, M.A.	Former Director, Rural Family Planning and MCH Programme, Family Planning Association, Dharwad

Foreword

I am very much moved by the efforts to bring out an edited volume in honor of founding members of Centre for Multi-disciplinary Development Research (CMDR), Dharwad, India. Sacrifice and pain of the committed band of social scientists did culminate in the creation of a national-level social science research institute in the less-developed region of the country.

A Brief About the Founder President

Vidyaratna Sri R. S. Panchamukhi was an erudite scholar of Sanskrit, Indology, History, Epigraphy and Archaeology. He was probably one of the earliest Indologists who emphasized that history should be an account of development of the society, culture, economy and polity. With his early education in Jalihal (a village in Karnataka), Bagalkot and Dharwad (Karnataka), he attended Deccan College (Pune) and Karnatak College (Dharwad) for higher education. He responded to the Call for Freedom Movement by boycotting the College in Pune and starting a 'National School' in Bagalkot.

He interpreted the long freedom struggle of India as the process of interaction of two cultures and the resultant conflicts—a *Sanskriti Sangrama*. This eclectic perspective, about the development of *people and the masses*, seems to have motivated an Indologist in him to encourage the process of creation of CMDR in Dharwad. In this endeavor of his, he was ably supported by luminaries like Prof. D. T. Lakadawala, Prof. M. S. Gore, Prof. V. R. Panchamukhi, Prof. B. M. Udgaonkar, Prof. P. R. Panchamukhi.

Duly recognizing his contributions to society, he was honored with titles, such as *Vidyaratna*, *Vidyabhushana*, *Mahamahimopadhyaya*, *Haridasa Sahityalankara*, *Panditaraja*, by Indian institutions and scholars' community throughout the country. In 1978, he was elected as the President of All India Epigraphical Society. In 1980, he was awarded the coveted Certificate of Honour in Sanskrit by the then

President of India. In 1981, the Government of Karnataka honored him with the State Award of *Man of Scholarship and Research*. He was popularly known as ‘Bhishma Pitaamaha’ of research.

It would be my duty to remember all the other founding members of CMDR on this occasion, and I feel proud that I was also one among them. With great honor and respect, I would like to reproduce their names as a mark of tiny tribute for their yeomen service in the domain of social sciences.

Founders of CMDR	
Vidyaratna Shri R.S.Panchamukhi	President
Prof.D.T.Lakdawala,	Member
Prof.M.S.Gore	Member
Prof.V.R.Panchamukhi	Member
Prof.P.R.Panchamukhi	Member Secretary
Shri A.R.Panchamukhi	Member
Prof.B.M.Udgaonkar	Member
Sri D.P.Karmarkar	Member
Shri Ashok Kulkarni	Member

About the Volume

The volume that is published in honor of founding members of CMDR has invited papers by the best economists and other social scientists that India has produced. The scholarly contributions would definitely enrich the academic world both in economics and in the domain of other social sciences. For example, a paper by Prof. M. V. Nadkarni examines the linkage between economics and philosophy. A paper by Prof. V. R. Panchamukhi tries to bring in the Indian version of economics, which advocates for a new paradigm of holistic development. This would in a way bring out conceptual issues and relevance of economic thought viewed from a normative platform. Professor K. L. Krishna has tried to review the literature on balanced regional development bringing to the fore, the policy options in the present-day context.

The paper by Prof. Sudarshan Iyengar also hovers around conceptual issues and makes a linkage between Financing of Education from a Gandhian perspective and the development dialogue which is changing its colors from time to time.

A paper by Prof. Ravi Kanbur addresses empirics of development with a peep into the role of World Bank in the middle-income countries. This in a way would examine issues of growth and development from ground zero. Professor R. S. Deshpande has tried to sketch policy options for balanced regional development in agricultural sector.

Papers on educational finances have addressed the larger issue of human resource development in the Indian context. Human resources are crucial in achieving economic development as well as distribution of national cake on an equal footing. Papers by Prof. Ganesh Devy, Prof. V. B. Annigeri and Prof. Veena Naregal touch upon issues relating to educational finances.

Others scholars like Prof. R. Dholakia have tried to understand inflationary impact on the people by using reflections from both theory and practice.

From here onward, the volume includes recent experiments in India like ‘Make in India’ by Prof. G. K. Kadekodi.

Thus, the volume contains scholarly contributions on growth and development in general and sector-specific issues in particular relating to the Indian economy and select developing countries.

In this regard, the proposed volume would in a way be useful reading/teaching/learning material for economists and non-economists as well. It would also have implications for policy making which would benefit administrators and policy makers.

I take this opportunity to thank all the contributors for sharing their views on various issues of growth and development. I am sure the volume would go a long way in educating the students of social sciences in the years to come. I also sincerely thank Springer for publishing this volume in honor of founding members of CMDR.

Prof. P. R. Panchamukhi
Founder Director and Chairman, CMDR

Tribute

Centre for Multi-disciplinary Development Research (CMDR), Dharwad, India, has been functioning for more than 30 years and is one of the ICSSR (Indian Council of Social Science Research) institutes. The institute is the brainchild of a committed band of eminent social scientists, who had the vision of establishing an institute in the domain of social science to reach out to the public at large and to the academicians in this part of Karnataka State.

The institute has since then been serving the cause for which it was established. Despite the locational disadvantage, the institute made sincere efforts to come to the limelight through active involvement in social science research with a focus on capacity building programs and action research especially for deprived sections and at the grassroots level.

In the present-day context, the institute has been functioning in its own campus and offers modern research environment for social scientists. It has been recognized by some universities under which it offers Ph.D. program. Training programs for the social scientists, representatives of PRI bodies, panel discussions on relevant themes, seminars on topical themes and publication of researched papers are some of the core areas that the institute caters to.

After a journey of more than 30 years, there seems to be a sense of fulfillment at CMDR. At the same time, the institute also has a vision for futuristic activities for serving the cause of social sciences in the Indian context and realizes that now it is opportune time to remember and thank the creators of this institute in an appropriate way.

In this background, the present volume is a small step to acknowledge the efforts of founders of CMDR. I also take this opportunity to profusely thank all the scholars who have contributed papers for this volume. These papers have enriched

the academic content of the volume. I wish the volume would be useful to students, activists, administrators, policy makers and academic world at large.

I thank Team CMDR for supporting me in fulfilling this task.

I also thank Team Springer for bringing out this volume.

Vinod B. Annigeri
Director, Centre for Multi-disciplinary
Development Research (CMDR)
Dharwad

Prelude

It is quite a long journey for CMDR, and as founders of the institute, we feel proud that it is growing stronger and stronger. My memories are still fresh when founders of CMDR under the support and guidance of Vidyaratna Shri R. S. Panchamukhi (Founder President of CMDR) took forward this initiative. Though all of us were busy in our own professions, devoting time and efforts for nurturing CMDR was our utmost concern.

Vidyaratna Shri R. S. Panchamukhi, a noted Historian and Indologist, had the advantage of nurturing and developing Karnataka Historical Research Society (KHRS) at Dharwad. It was his concern for research in socioeconomic issues, which resulted in the creation of a socioeconomic unit under the umbrella of KHRS. This is the seed which later on developed as CMDR.

It is time for me to recall the hard but rewarding journey which has resulted in the present shape and size of CMDR. The institute has transformed itself from a small organism into an optimum-sized socioeconomic research institute with its own campus. The research studies undertaken by CMDR have been well received in the academic circles both within and outside India. I am sure the institute will climb greater academic heights in the years to come.

I am glad to know that an edited volume would be published in honor of founding members of CMDR. I take this opportunity to thank all the scholars who have contributed in this regard. It is additionally very satisfying to learn that all these scholars are giants in their own sphere and are of international repute.

Looking at the contributions, I am happy to know that the book presents issues and policies relating to development in economic and social domain in the Indian context, draw wisdom from Gandhian thoughts and try an ethical interface. It showcases both theory and practice and presents lessons for policy correctives in

the Indian economy and select developing economies. It also has rich discussions highlighting symbiotic relationship between health, education and other development sectors.

I also thank Springer for supporting this initiative of CMDR.

V. R. Panchamukhi
Former Chairman
Indian Council of Social
Science Research (ICSSR), New Delhi
Founder Member, CMDR

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About the Editors

Vinod B. Annigeri is currently serving as Professor and Director of the Centre for Multi-disciplinary Development Research (CMDR), Dharwad, India. He obtained his Ph.D. in Economics of Education from Mangalore University, India. He has served as a consultant for many national and international organizations and has worked on research studies funded by the Ford Foundation; Canadian International Development Research Centre (IDRC), Canada; Department for International Development (DFID); and the US Agency for International Development (USAID), to name a few. He was part of the WHO's international team for the development of Reproductive Health Accounts. He has to his credit some of the most pioneering studies on health accounts at the micro level. His core areas of interest include issues relating to the economics of education and health. He played a key role in the formation of the Indian Health Economics and Policy Association (IHEPA) and has served as the Founder Joint Secretary of this association for 6 years. His papers have been published in journals of national and international repute. He has also co-authored two books on health education and development in 2006 with Himalaya Publishing House, Mumbai, and Serials Publication, New Delhi.

R. S. Deshpande is currently Director and Advisor at the Centre for Development Studies, PES University, Bangalore, India. He is an ex-Director and Honorary Visiting Professor of the Institute for Social and Economic Change (ISEC), Bangalore. He is also a former Rajiv Gandhi National Fellow, Indian Council of Social Science Research (ICSSR). In addition to numerous research studies, he steered the mega study on "Farmer at the Millennium." He has authored 17 books and has published more than 140 research papers in national and international journals. He has been invited as Visiting Professor to institutions such as University of Ottawa, Canada; Saskatchewan Institute of Policy Planning, Regina; University of Paris, France; and Lund University, Sweden. He has served as consultant to the

World Bank, Asian Development Bank and Land Equity Australia, to name a few, and is a member of many boards of studies, governing boards of institutions/universities and prestigious government committees.

Ravindra Dholakia obtained his doctorate in Economics from the M.S. University of Baroda in 1978. Before joining the Indian Institute of Management Ahmedabad in 1985, he worked with the Sardar Patel Institute of Economic and Social Research, Ahmedabad, and the M.S. University of Baroda for 8 years. He has over 40 years of experience teaching students, executives, senior government officials and policy makers. He has worked on several high-powered committees, task forces and commissions of the central government and the state government of Gujarat since 1998. He was a member of the Sixth Central Pay Commission and is currently a member of the Monetary Policy Committee of India. He has worked on the boards of directors of several private and public sector enterprises and of several academic institutions in India. He has published several books, monographs and research papers in prominent national and international journals.

Sacrifice Ratio and Cost of Inflation for the Indian Economy



Ravindra H. Dholakia

Abstract Traditional concept of the Sacrifice Ratio measures the loss of potential output sustained by the society in the medium term to achieve reduction in the long-run inflation by 1% point. This concept is critically examined and generalized to include episodes increasing the long-run inflation rate to gain higher growth of output and employment and hence reduction in the poverty proportion in the medium term. Since the concept needs measurement through a shifting short-run equilibrium of dynamic aggregate demand and supply in terms of inflation rate and output attributable to monetary policy interventions, its estimation is challenging. There are two alternative approaches to estimate the ratio, the direct one and regression based. Both have their relative merits and demerits. The regression-based approach provides one unique average estimate of the Sacrifice Ratio for all episodes but allows holding other factors constant. The direct approach provides separate estimates by episodes but fails to hold other factors constant. The Sacrifice Ratio turns out to be in a narrow range of 1.8–2.1 for deliberate deflation and 2.8 for inflation in India. On the other hand, benefits of 1% point reduction in trend rate of inflation are at best 0.5% points increase in long-term growth of output that occurs after 4–5 years. This has implications on policy to disinflate.

Data collection and computational assistance provided by Mr. Shrikant Taparia is gratefully acknowledged. The present paper is the first in the series of my papers on Sacrifice Ratio in India that was registered at the Indian Institute of Management Ahmedabad (IIMA) as a Working Paper available on their website since 4th February 2014. It is referred to in the subsequent papers as IIMA W.P. No. 2014-02-04. The other papers are Dholakia (2014) and Dholakia and Virinchi (2017).

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1 Introduction

Sacrifice Ratio essentially represents the cost of permanently reducing inflation in terms of possible loss of output. It is, therefore, a very relevant concept for the policy makers, but its empirical estimation involves practical difficulties that make it less reliable for direct application. As such, there are only two serious efforts to estimate the Sacrifice Ratio for the Indian economy (RBI 2002a; Kapur and Patra 2003). RBI (2002a) reports only one estimate of +2 for the Sacrifice Ratio for India. On the other hand, Kapur and Patra (2003) have shown that the estimates of the Sacrifice Ratio for the Indian economy differ widely depending on: (a) measure of inflation—whether WPI based or GDP deflator based; (b) time period considered; and (c) alternative specifications of the short-run aggregate supply equation. Their estimates vary from 0.3 to 4.7, and in some of the cases the estimates were not statistically significantly different from zero. Such a wide range of estimates of the ratio is also a feature of the empirical studies for various other countries like USA, Canada, Australia, New Zealand, and OECD countries (see Kapur and Patra 2003 for summary with references).

Thus, there is a need to examine the precise concept of the Sacrifice Ratio and methods to estimate it, particularly for a fast growing economy like India. The present paper discusses the concept of the Sacrifice Ratio within the standard macroeconomic theory and considers some of its features not emphasized in the literature in the next section. The third section critically reviews various methods to estimate it. It also presents the estimates of the ratio for the Indian economy by appropriate methods in the fourth section. The fifth section discusses the cost of inflation or the benefits of disinflation in the long-run in the Indian context, and the last section provides concluding remarks with some policy implications.

2 Concept of the Sacrifice Ratio

Standard textbooks define the Sacrifice Ratio as percentage of a year's real output lost in order to obtain 1% point reduction in the inflation rate (see Mankiw 2010, p. 396; Dornbusch et al. 2012, p. 147). Whatever empirical evidence exists on various economies suggests that efforts to reduce inflation on permanent basis invariably involve some cost in terms of the temporarily increased unemployment and lower output over medium term.

The literature considers the Sacrifice Ratio only when there is a deliberate effort by the monetary authority to reduce the inflation rate permanently, and not when the unemployment is reduced by deliberate policy below its natural rate. The latter would also involve a similar sacrifice of living with higher inflation permanently to reduce unemployment and pull people above the poverty line through temporary cumulative income gains. For a developing country like India where a large proportion of population lives in poverty, this could be a legitimate policy option for poverty reduction. This is particularly relevant in light of the argument by Fischer

(1993) and Barro (1995) that inflation rate of 10% or less may not have any adverse impact on growth. Thus, if the trend rate of inflation is 8% in India and if RBI wants to bring it down to 5%, according to Fischer (1993) and Barro (1995), resultant gain in the long-term growth in the economy may not be sufficient to justify any sacrifice of consequent output loss. The same argument would also justify increasing the trend rate of inflation from 5 to 8% because of the resultant employment and output gain in the interim period to achieve poverty reduction.

Therefore, in the case of India, it is necessary to examine the validity of the arguments of Fischer (1993) and Barro (1995), i.e., whether or not reduction in the trend rate of inflation from moderate level to lower level entails any benefits in terms of higher long-term growth; and whether or not increase in the average inflation rate from lower to moderate level leads to lower long-term growth. If these arguments are valid, we may consider defining the Sacrifice Ratio for the Indian economy in terms of inflation cost of reducing unemployment and poverty temporarily.

The standard dynamic general equilibrium model provides better insights into the concept of Sacrifice Ratio. The concept is relevant in a dynamic model and not in the static model of aggregate demand (AD) and aggregate supply (AS). Dynamic stochastic general equilibrium (DSGE) models would address the issue. At the basis of such models lies a simplified framework consisting of dynamic aggregate demand (DAD) and dynamic aggregate supply (DAS) functions. In AD and AS, we have a relationship between price level (P) and output (Y), whereas in DAD and DAS, the relationship is between inflation rate (π) and output (Y). In order to get clarity about other variables entering the DAD and DAS functions, we briefly derive them here in the most simplified open economy framework. In the standard notations, the model is as follows:

$$C = C^* + c(Y - T) \Rightarrow \text{Consumption Function; } T = \text{taxes}$$

$$I = I^* - br = I^* - bi + b\pi^e \Rightarrow \text{Investment Function;}$$

$$r = i - \pi^e \Rightarrow r \text{ is real interest,}$$

i is nominal interest and π^e is expected inflation;

$$NX = NX^* + j(eP_f/P) - mY \Rightarrow \text{Net Export Function,}$$

where e is nominal exchange rate, P_f is foreign price level, and P is domestic price level.

G^* is Government final expenditure;

All variables with '*' represent autonomous demand;

$$L = M_D/P = kY - hi \Rightarrow \text{Money Demand Function}$$

$$M = M_S/P \Rightarrow \text{Money Supply}$$

Therefore, the money market equilibrium is given by

$$i = (k/h)Y - (i/h)(Ms^*/P) \Rightarrow \text{LM curve}$$

And the goods and services market equilibrium is given by

$$Y = A^* \propto -b \propto \cdot i + b \propto \cdot \pi^e + bj \propto (eP_f/P) \Rightarrow \text{IS curve}$$

and A^* is all autonomous expenditures or demand

where $\propto = 1/1 - c + m \Rightarrow$ simple open economy Keynesian multiplier.

Solving IS and LM together and taking $\beta = \left(\frac{\alpha}{h + \alpha bk}\right)$, we get,

$$Y = h\beta A^* + b\beta(Ms^*/P) + hb\beta\pi^e + hj\beta(eP_f/P)$$

Taking first difference in the above equation, we get,¹

$$\begin{aligned} Y = Y_{-1} + h\beta(\Delta A^*) + b\beta(Ms^*/P)(gMs - \pi) + hb\beta(\Delta\pi^e) \\ + hj\beta(eP_f/P)(g_e + \pi_f - \pi) \Rightarrow \text{DAD Function} \end{aligned} \quad (1)$$

Turning to the dynamic aggregate supply (DAS), it has the following three component functions: production function, wage–price relationship for setting prices, and extended expectation augmented Phillips curve. In the short run, the production is assumed to be proportional to labor, which is the same thing as assuming constant average labor productivity. The price fixation is assumed to be on the basis of markup pricing on variable costs, of which the wage bill is a major component. The extended augmented Phillips curve as discussed in Dornbusch and Fischer (1990, pp. 581–582), Dholakia (1990) and Dholakia and Sapre (2012) makes the growth in wages a function of expected inflation (π^e), unemployment rate difference from its natural rate, and changes in unemployment rate from the past. Based on these three component functions and the definition of the unemployment rate, Dholakia and Sapre (2012) derive the equation of the DAS as

$$\pi = \pi^e + \epsilon [(Y - Y^*)/Y^*] + (n/q)(g_Y - g_Y^*) \quad (2)$$

where Y^* is the trend rate of output, ϵ is the sensitivity of the inflation rate to the output gap, n is the sensitivity of inflation to the changes in unemployment rate, and q represents Okun's law.

From the above equations of the DAD and DAS, it is clear that last period's output ($Y - 1$), changes in autonomous demand including changes in fiscal policy, growth of nominal money supply, growth in nominal exchange rate, foreign inflation, and

¹The derivation given here is an extended version of Dornbusch and Fischer (1990), Appendix to Chap. 14. There are other ways to derive the DAD function also. One alternative is to treat the nominal interest (i) as a policy variable depending on Taylor's rule. For details; see Mankiw (2010).

change in expected inflation would shift the DAD curve between inflation rate and output. Similarly, expected inflation rate, the trend level of output (Y^*), and growth gap from the trend rate of growth would shift the DAS curve. The long-run equilibrium or the state of rest for the system is reached when output (Y) equals trend rate of output (Y^*) and when inflation rate (π) stabilizes and equals the expected inflation (π^e).

In this system, both the curves keep shifting in response to even a slightest external disturbance. However, it is important to note that in this model, inflationary expectations are largely formed on the supply side and changes therein are affecting the demand side. The expected inflation rate underlying a given short-run aggregate supply (SAS) curve is obtained at the trend rate of output (Y^*). However, the actual rate of inflation is obtained at the intersection of the SAS and DAD. If this intersection does not take place at Y^* , both the curves would keep shifting till their intersection occurs at Y^* , which would give the long-run equilibrium.

This entire process of adjustment captured by the dynamic demand and supply curves gives rise to the trade-off between inflation and output or employment levels. Thus, the concept of the Sacrifice Ratio is neither a pure supply side nor a pure demand-side phenomenon—unlike generally viewed in the empirical studies on the field (see Kapur and Patra 2003 for review). As such, the Sacrifice Ratio is a phenomenon on adjustment path consisting of a series of shifting short-run equilibria from one long-run equilibrium to another long-run equilibrium. Therefore, the definition of the Sacrifice Ratio should be in terms of cumulative output losses (or gains) arising out of a series of deliberate policy changes, resulting in a permanent reduction (or increase) in expected inflation rate in the economy. It is not the change in the actual rate of inflation, but in the long-run equilibrium or expected rate of inflation that forms the basis of estimation of the Sacrifice Ratio.

An adverse supply shock is generally not allowed to settle down on its own without policy intervention, but is often accommodated by expansionary policies to minimize output and employment losses at the cost of raising expected inflation permanently. In order to curb and cut these inflationary expectations, contractionary demand policies have to be followed. The Sacrifice Ratio would depend on the nature, dose, and effectiveness of such contractionary policies. Broadly speaking, such policies could be either ‘cold turkey’ type or ‘gradualist.’ Within each of these, there could be various shades and extents. Sacrifice Ratio for all such alternatives could be a very valuable guiding principle to select the best alternative acceptable politically. However, it implies that there cannot be one uniform Sacrifice Ratio for a given country for all time. While a Sacrifice Ratio requires a macro-model, the same macro-model can generate several Sacrifice Ratios for a given country under different policy strategies and doses.

Moreover, another important feature of the dynamic macro-model is that the trend level of output (Y^*) is growing with time. In the developed countries, it grows at the rate of 2–3% or less per annum. On the other hand, in India, it is growing at 8–9% per annum, which is substantial to impact the long-run equilibrium position in relation to policy changes. The so-called perverse results contrary to the expected ones theoretically from usual macro-models in the case of India are, therefore, not surprising as seen from Fig. 1. Similarly, the figure can also be used to show differences in the disinflation policies. If the adverse external supply shock is

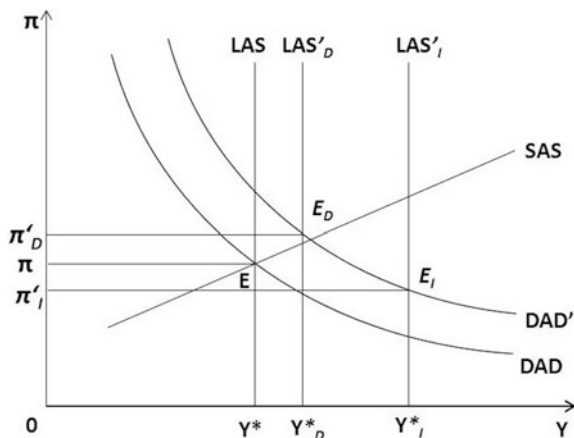


Fig. 1 Effect of change in the trend rate of output on the effectiveness of the expansionary policy changes of the same magnitude. Intersection of DAD, SAS, and LAS at E defines the original long-run equilibrium. In the next year, the trend rate of output shifts by 3% in developed countries to Y_D^* and by 8% in India to Y_I^* . Simultaneously, expansionary policies of the same magnitude are followed to shift DAD to DAD'. After all adjustments, the new long-run equilibrium would settle at E_D in developed countries showing rise in both expected inflation and output, and at E_I in India showing a fall in expected inflation but rise in output corresponding to the same magnitude of policy does. In developed countries, disinflation policies would be required to control inflation, but in India, inflation is taken care of by growth of Y^*

accommodated by expansionary aggregate demand policies that push the inflation rate further up, central bankers in developed countries have to follow deliberate disinflation policies to bring it back to the normal level soon. On the contrary, in a rapidly growing developing country like India, disinflation can occur on its own if the central bankers merely hold the growth of nominal money supply and nominal depreciation of exchange rate constant.

3 Methods to Estimate the Sacrifice Ratio

There are essentially two distinct approaches to estimate the Sacrifice Ratio. One is the direct approach, and the other is the regression-based approach. In the direct approach, the deliberate disinflation policy episodes are identified from the history and then the output losses from the trend rate of output during the given time period are calculated to obtain the Sacrifice Ratio. The famous study by Ball (1994) follows this approach. The main advantage of this approach is that it allows variation in the Sacrifice Ratio by disinflation episodes even within the same country over time. Thus, it allows comparison of efficiency and effectiveness of the central monetary authority in disinflating the economy. The prominent disadvantages of the approach are (a) it does not consider

inflation cost of reducing unemployment²; (b) any external shocks, particularly the supply shocks are not controlled; (c) it does not control other exogenous variables like fiscal policy changes, foreign inflation, exchange rate depreciation; and (d) it involves arbitrary decisions about the length of the episodes.

The regression-based approach largely focuses on estimating the DAS derived from the Phillips curve. While it avoids all the limitations of the direct approach as argued by Kapur and Patra (2003), it has the limitation of providing a single estimate of the Sacrifice Ratio for a country covering different and often structurally distinct episodes of both disinflation and inflation. Moreover, it arbitrarily specifies the functional form and variables to be included. However, most of the studies taking the route of DAS to obtain an estimate of the Sacrifice Ratio fail to consider effectively the series of short-run equilibria between shifting DAS and DAD curves in the interim adjustment period. Therefore, studies based on the regression approach would invariably suffer from serious errors of measurement, specification of equation, and simultaneity bias for estimation.

Andersen and Wascher (1999) estimate the Sacrifice Ratio through DAS function by introducing the growth of nominal income (g_{YP}) as an explanatory variable and taking the last period's inflation rate (π_{-1}) as the expected inflation. Their DAS function is formulated as

$$\pi = \lambda g_{YP} + \beta \pi_{-1} + \alpha (Y - Y^*)_{-1} + \mu S \quad (3)$$

where S represents exogenous supply shock variables. This is an unconstrained equation providing three different calculations of the Sacrifice Ratio. If a constrained version of (3) is taken by imposing the restrictions: (i) $\alpha = \lambda$ and (ii) $\beta = (1 - \lambda)$, and then we get an unique estimate of the Sacrifice Ratio as $(1 - \lambda)/\lambda$.

Chand (1997) has used another method based on regressions but independent of the DAS function to calculate the Sacrifice Ratio. This is based on the definition of the nominal income. Nominal Income = $Y \cdot P$

$$\begin{aligned} \Rightarrow g_{YP} &= g_Y + \pi \\ \Rightarrow g_{YP} &= (g_Y - g_Y^*) + (\pi - \pi_{-1}) + (g_Y^* + \pi_{-1}) \\ \Rightarrow (g_Y - g_Y^*) + (\pi - \pi_{-1}) &= g_{YP} - (g_Y^* + \pi_{-1}) \end{aligned} \quad (4)$$

Let us define the Sacrifice Ratio as $(g_Y - g_Y^*)/(\pi - \pi_{-1}) = (1 - a)/a$
Then, $(1 - a)(\pi - \pi_{-1}) = a(g_Y - g_Y^*)$

$$\begin{aligned} \Rightarrow (\pi - \pi_{-1}) &= a(g_Y - g_Y^* + \pi - \pi_{-1}) \\ \Rightarrow (\pi - \pi_{-1}) &= a[g_{YP} - (g_Y^* + \pi_{-1})] \end{aligned} \quad (5)$$

²The Sacrifice Ratio as discussed earlier should be defined both ways: (1) Cumulative output loss to achieve 1% point reduction in inflation rate; (2) Cumulative output gain to accompany 1% point increase in inflation rate. The latter refers to the inflation cost of reducing unemployment.

Replacing (5) in (4), we get,

$$(g_Y - g_Y^*) = (1 - a)[g_{YP} - (g_Y^* + \pi_{-1})] \quad (6)$$

Either Eq. (5) or (6) can be used to estimate the Sacrifice Ratio as defined above. However, if we estimate both Eqs. (5) and (6) independently, we can check the internal consistency also. However, it may be noted that this method suggested by Chand (1997) does not estimate the correct Sacrifice Ratio because it measures the sacrifice of the growth of output compared to the trend rate of growth of output in order to reduce the current inflation rate by 1% point without ensuring a common starting point. Thus, if the economy is above the trend to begin with, it can remain above the trend even if $g_Y < g_Y^*$. It may not represent any sacrifice of potential output.

4 Sacrifice Ratio in India

Since time series data on unemployment rate is not available in India, we can examine only the inflation–output trade-off. For this purpose, we consider the period of the last 32 years—from 1980–81 to 2011–12. We need to examine the data on inflation, growth in broad money (M3), and fiscal deficit as a percentage of GDP over the period to identify episodes of deliberate disinflation and inflation in the recent years. Although it is alleged by Kapur and Patra (2003) that in such a direct approach, the choice about the length of the episodes is arbitrary, actually it is often possible to justify the length of the episode from the data only and hence would not be arbitrary. Table 1 provides annual rates of inflation, growth of broad money, fiscal deficit, and growth of real GDP in India³ over the period 1980–81 to 2011–12.

We can see from the table that the first episode of deliberate disinflation during this period started in 1980–81 when inflation rate was 11.51%, growth of money supply was 18.10%, and the fiscal deficit was 6.79%. RBI cut the growth of broad money to 12.51% and government cut the fiscal deficit to 6% in 1981–82 as a result of which inflation rate fell to 10.85%.⁴ In the next year 1982–83, the government continued with the policy to reduce the fiscal deficit to 5.70% but RBI relaxed the growth of broad money to 16.62%—still less than initial 18.10%. The inflation rate further fell to 8.54%. In 1983–84, the fiscal deficit was increased back to 7% (marginally higher than the initial level) and the growth of money supply was restored to 18.23%. Inflation rate dropped marginally to 8.45%. Thus, the first episode of deliberate disinflation can be taken as 1980–81 to 1983–84, because the growth rate of real GDP also returned from 7.17% in 1980–81 to 7.85% in 1983–84. If we take the growth of potential output as the average of these two endpoints, i.e., 7.51%, we can get the Sacrifice Ratio in this

³Inflation is measured here through GDP deflator with the base year 2004–05. Money supply is based on the concept of M3. Fiscal deficit is the combined deficit of Center and States. Real GDP is measured at constant 2004–05 prices.

⁴It may be noted that during this period, RBI was not autonomous from the government.

Table 1 Annual rates of inflation, growth of money supply, fiscal deficit, and growth of real GDP (in %)

Year	Annual inflation rate based on GDP deflator (%)	Annual growth rate of M3 (%)	Combined fiscal deficit (% of GDP)	Annual growth rate of real GDP
1980–81	11.51	18.10	6.79	7.17
1981–82	10.85	12.51	6.00	5.63
1982–83	8.54	16.62	5.70	2.92
1983–84	8.45	18.23	7.00	7.85
1984–85	8.02	18.96	8.60	3.96
1985–86	7.28	15.99	7.70	4.16
1986–87	6.89	18.63	9.50	4.31
1987–88	9.49	15.99	8.80	3.53
1988–89	8.33	17.79	8.20	10.16
1989–90	8.54	19.36	8.60	6.13
1990–91	10.64	15.10	9.10	5.29
1991–92	13.74	19.27	6.80	1.43
1992–93	8.86	14.81	6.80	5.36
1993–94	9.98	18.42	8.00	5.68
1994–95	9.78	22.39	6.90	6.39
1995–96	9.13	13.57	6.30	7.29
1996–97	7.78	16.16	6.10	7.97
1997–98	6.62	18.01	7.00	4.30
1998–99	8.05	19.44	8.70	6.68
1999–00	3.10	14.60	9.10	8.00
2000–01	3.38	16.81	9.20	4.15
2001–02	3.17	14.10	9.60	5.39
2002–03	3.73	14.66	9.30	3.88
2003–04	3.76	16.75	8.30	7.97
2004–05	5.71	11.97	7.20	7.05
2005–06	4.22	21.10	6.50	9.48
2006–07	6.42	21.72	5.10	9.57
2007–08	6.02	21.38	4.00	9.32
2008–09	8.45	19.34	8.30	6.72
2009–10	6.07	16.85	9.30	8.59
2010–11	8.82	16.09	6.90	9.32
2011–12	8.23	13.23	8.10	6.21

Source: RBI (2013); handbook of statistics on Indian economy 2012–13

disinflation episode to be 2.11, implying that the society incurred the cost of 2.11% of a year's potential output to reduce the inflation rate by 1% point.

The second episode of deliberate disinflation though aided by some favorable supply shocks (RBI 2002b) is during the period 1998–99 to 2003–04. In 1998–99, RBI was also effectively made autonomous from the Central Government. The inflation was high at 8.05%, growth of broad money was at 19.44%, and fiscal

deficit was at 8.70% of GDP. RBI started cutting down the growth rate of money supply and brought it down to 16.75% in 2003–04. Subsequently, the inflation came down to 3.76% in 2003–04. This episode presents an opportunistic disinflation policy by RBI because the global factors were initially favorable (RBI 2002b). Again following the same method of taking the average of the endpoint growth rates of real GDP as the growth of potential output, the Sacrifice Ratio for this second period turns out to be 1.84.

The third episode is not an episode of disinflation but deliberate inflationary policies and covers the period from 2004–05 to 2008–09.⁵ Inflation was at 5.71% in 2004–05 and rose to 8.45% by 2008–09. While there was a fiscal tightening, RBI increased the growth of money supply from 11.97% in 2004–05 to 19.34% in 2008–09. During this period of inflation, growth of real GDP increased and reached the peak of 9.5% in 2006–07. The potential output growth during the period as per the average of the two-endpoint growth was 6.89%. Therefore, the Sacrifice Ratio during this inflationary episode would be 2.81, implying that by incurring the cost of 1% point of more inflation, the society gains 2.81% more output that may result in reduced unemployment and hence reduced poverty proportion.

The above discussion clearly brings out that the direct approach for calculating the Sacrifice Ratio results in the ratio differing with episodes. Moreover, inflationary episodes can also be identified with the deliberate easy monetary policy and the Sacrifice Ratio in such cases can also be calculated and meaningfully interpreted for developing countries like India. Finally, the Sacrifice Ratio in India from episode to episode moves in a relatively narrow range of 1.8–2.8 and is of credible magnitude compared to whatever international experience and estimates are available (see Kapur and Patra 2003, Table 1).

Turning to the regression-based approach to estimate the Sacrifice Ratio for India, we must note several concerns raised for such estimates in our discussion in the previous two sections. Estimates based only on the aggregate supply curve may not truly reflect the Sacrifice Ratio because the latter captures the phenomenon on the locus of the short-run equilibria between shifting DAS as well as DAD. Therefore, the variables shifting both DAS and DAD should be considered while estimating the Sacrifice Ratio. The equations considered for the estimation represent the solution of DAS and DAD functions for the short-run equilibrium values of π and the percentage output gap. In simplified linear form, these equations would be:

$$\pi = b_1\pi_{-1} + b_2(\pi_{-1} - \pi_{-2}) + b_3g_{MS} + b_4\Delta(\text{FD}/\text{GDP}) + b_5(Y_{-1} - Y^*)/Y^* + b_6g_e + b_7\pi_{us} + b_8(g_Y - g_Y^*) \quad (7)$$

$$(Y - Y^*)/Y^* = a_1\pi_{-1} + a_2(\pi_{-1} - \pi_{-2}) + a_3g_{MS} + a_4\Delta(\text{FD}/\text{GDP}) + a_5(Y_{-1} - Y^*)/Y^* + a_6g_e + a_7\pi_{us} + a_8(g_Y - g_Y^*) \quad (8)$$

⁵Again in this case, the endpoint coincides with the global financial crisis, but it would only overstate the Sacrifice Ratio marginally.

where FD is the combined fiscal deficit and GDP is at current market prices and the rest of the variables are as defined earlier. Here, we are taking the expected inflation to be the previous year's inflation (π_{-1}) following Andersen and Wascher (1999). Now, Eqs. (7) and (8) would closely reflect short-run equilibrium values of π and percentage output gap as a function of exogenous variables including growth in money supply. Equations (7) and (8) would provide the Sacrifice Ratio as a ratio of the coefficients of g_{MS} in the two equations. The short-run Sacrifice Ratio is given by (a_3/b_3) . However, the long-run Sacrifice Ratio is $[(a_3/(1 - a_5))/(b_3/(1 - b_1))]$.

In order to obtain the estimates of Eqs. (7) and (8), we first need to measure the percentage output gap from the potential output. This is obtained by fitting a log-linear trend to the data. Based on the scatter of real GDP, we have considered trend-breaks at 1991–92 and 2003–04 in the series and obtained the following estimate of the spliced regression on $\ln Y^6$:

$$\ln Y_t = 13.54 + 0.0500t + 0.0084D_1(t - 12) + 0.0227D_2(t - 24) \quad (9)$$

(t-values)(1606) (50.13) (5.20) (10.94)

Adjusted R -squared = 0.9993; residual standard error = 0.0146 on 28 degrees of freedom; all the parameter estimates are statistically significant at 0.1% level.

Where $t = 12$ for year 1991–92; and $t = 24$ for year 2003–04. D_1 and D_2 are dummy variables such that

$$D_1 = \begin{cases} 0, & 1 \leq t \leq 11 \\ 1, & 12 \leq t \leq 32 \end{cases}$$

$$D_2 = \begin{cases} 0, & 1 \leq t \leq 23 \\ 1, & 24 \leq t \leq 32 \end{cases}$$

From Eq. (9), we get the estimate of the trend level of output (Y_t^*) and hence the output gap = $(Y_t - Y_t^*)/Y_t^*$.

Now, we turn to the estimates of Eqs. (7) and (8) above. Table 2 presents these estimates.

It can be seen from Table 2 that several variables in the two equations are statistically not significant and the corresponding t -values are less than unity. However, the overall fit of the regression is good in both the cases. It is, therefore, possible to get a better fit in terms of adjusted R^2 by dropping insignificant variables one by one in the stepwise regression. Finally, the acceptable regression estimates that emerged are presented in Table 3.

⁶It is interesting to see that this trend Eq. (9) implies annual compound growth of 5.12% during 1980–81 to 1991–92; 6.01% during 1991–92 to 2003–04; and 8.44% during 2003–04 to 2011–12. There has been a continual and substantial acceleration in growth of real GDP in India.

Table 2 Estimates of Eqs. (7) and (8) for India, 1980–81 to 2011–12

Variables	Equation (7) on π			Equation (8) on $(Y - Y^*)/Y^*$		
	Coefficient	t-value	p-value	Coefficient	t-value	p-value
π_{-1}	0.5926**	3.822	0.000	-0.0748	-0.804	0.429
$\pi_{-1} - \pi_{-2}$	-0.1414	-1.237	0.228	-0.0061	-0.089	0.930
g_{MS}	0.1045	1.221	0.234	0.1529**	2.979	0.007
$\Delta(FD/GDP)$	-0.2135	-0.900	0.377	0.0514	0.362	0.721
$(Y_{-1} - Y^*)/Y^*$	-0.0537	-0.261	0.796	0.3998**	3.238	0.004
π_t^{us}	0.1888	0.949	0.352	0.0902	0.756	0.457
g_e	0.0578	1.211	0.238	0.0070	0.245	0.808
$g_Y - g_Y^*$	-0.1371	-0.719	0.479	0.5853**	5.115	0.000
Adj. R-square	0.954**			0.424**		
Res. Std. error	1.722 on 24 DF			1.033 on 24 DF		

Note **Significantly different from zero at 1% level

Table 3 Estimates of the best fit of Eqs. (7) and (8) for India, 1980–81 to 2011–12

Variables	Equation (7) on π			Equation (8) on $(Y - Y^*)/Y^*$		
	Coefficient	t-value	p-value	Coefficient	t-value	p-value
π_{-1}	0.5779**	4.082	0.000	–	–	–
$\pi_{-1} - \pi_{-2}$	-0.1464	-1.324	0.196	–	–	–
g_{MS}	0.1247***	2.462	0.020	0.1464**	4.106	0.000
$\Delta(FD/GDP)$	–	–	–	–	–	–
$(Y_{-1} - Y^*)/Y^*$	–	–	–	0.4258**	4.207	0.000
π_t^{us}	0.2096	1.129	0.269	–	–	–
g_e	0.0584	1.513	0.142	–	–	–
$g_Y - g_Y^*$	–	–	–	0.5707**	5.555	0.000
Adj. R-square	0.957**			0.503**		
Res. Std. error	1.667 on 27 DF			0.9596 on 29 DF		

Note **Significant at 1% level; ***significant at 5% level

From the estimates of the coefficients of g_{MS} given in Table 3, we can calculate the Sacrifice Ratio for India since both the coefficients are statistically significant. The estimate for the Sacrifice Ratio turns out to be $(0.1464/0.1247) = 1.2$ in the short-run and $[0.1464/0.5742]/(0.1247/0.4221) = 0.9$ in the long-run.⁷ The short-run ratio is higher than the long-run ratio because the ratio is calculated for

⁷As an alternative method to estimate the Sacrifice Ratio through the regression approach, we may consider Eqs. (5') and (6') above following Chand (1997). The estimates of the two equations are

$$\begin{aligned}
 (\pi - \pi_{-1}) &= 0.5812[g_{YP} - (\pi_{-1} + g_Y^*)] \\
 t\text{-value:} & \quad (4.79); \quad \text{Adj. R-square} = 0.4065
 \end{aligned}
 \tag{5'}$$

1% point reduction in the growth of money supply (other things remaining the same). As time passes, expected inflation falls leading to positive effect on output and negative effect on inflation. Therefore, the Sacrifice Ratio in the long-run is likely to be lower than in the short-run for the same initial reduction in growth of money supply.

The regression approach estimates a constant and unique Sacrifice Ratio for an economy as an average applicable over the entire period under consideration. On the other hand, the direct approach allows the Sacrifice Ratio to vary across different episodes of disinflation and inflation. However, the regression approach allows us to estimate the Sacrifice Ratio for the monetary policy interventions by holding all other relevant factors constant. The regression approach is, therefore, likely to provide more conservative estimates of the ratio. In case, our interest is to get separate estimates of the Ratio for episodes of disinflation and inflation, and the direct approach is the only alternative. For India, it shows the ratio varying by episodes of disinflation from 1.8 to 2.1 and for the episode of inflation to be 2.8.

5 Cost of Inflation in India

It is necessary to consider the cost of inflation in India in view of the Sacrifice Ratio estimates. Thus, reducing the long-run inflation say, from 8 to 5%, would entail the social cost of sacrificing 5.4–6.3% of potential output as per our estimates in the previous section.

By now it is very well accepted that long-term anticipated inflation has hardly any serious cost on the society and that unanticipated inflation largely has distributional costs in the society (Dornbusch et al. 2012; Mankiw 2010). Barro (1995) and Fischer (1993) argue that so long as inflation is moderate, say less than 10% p.a., it does not hurt the long-term growth of the economy. On the other hand, Chopra (1988), Motley (1994), Paul et al. (1997), and Chaturvedi et al. (2009) find negative impact of inflation on growth in a cross-country and Indian context. Chaturvedi et al. (2009) provide the latest evidence, and their study period is 1989–2003. It, therefore, requires examining this issue with latest data for India. This is because if reducing inflation rate from say 8 to 5% does not have any positive impact on the long-term

$$g_y - g_y^* = 0.4188[g_{yp} - (\pi_{-1} + g_y^*)]$$

$$t\text{-value: } (3.45); \quad \text{Adj. } R\text{-square} = 0.2541 \quad (6')$$

Both these estimates are significant at 1% level. Moreover, since both the estimated coefficients add up to one, the requirement of internal consistency is met. The Sacrifice Ratio in this framework works out to be $(0.4188/0.5812) = 0.72$. However, it should be noted that this estimate should be interpreted to say that the difference of actual growth of output from the growth of potential output would fall by 0.72% points when actual inflation declines by 1% point. This estimate is close to the one obtained above for the long-run (0.86), but since no other factor is held constant, it cannot be considered only the result of any deliberate monetary policy.

growth, it may not be worth sacrificing about 6% of potential output to achieve such a reduction. If, on the other hand, it raises the long-term growth substantially, then it may be worth undertaking reduction of inflation.

In order to examine this relationship, we have fitted the log-linear trend on the GDP deflator from which we derive the inflation rate. By observing the scatter, we identified two trend-break points: 1998–99 when RBI was given effective autonomy and 2004–05 when UPA-1 came to power with an explicit commitment to double agricultural credit every three years. The fitted regression equation is

$$\begin{aligned} \text{Ln}(\text{GDP def.}) &= 2.7463 + 0.0867t - 0.0560 D_1(t - 19) + 0.0376 D_2(t - 25) \\ t\text{-values:} &\quad (286.2) \quad (108.7) \quad (-18.94) \quad (8.02) \end{aligned} \quad (10)$$

Adjusted R -square = 0.999; residual standard error = 0.0206 for 28 degrees of freedom.

D_1 and D_2 are dummy variables such that

$$\begin{aligned} D_1 &= \begin{cases} 0, & 1 \leq t \leq 18 \\ 1, & 19 \leq t \leq 32 \end{cases} \\ D_2 &= \begin{cases} 0, & 1 \leq t \leq 24 \\ 1, & 25 \leq t \leq 32 \end{cases} \end{aligned}$$

All parameters are significant at 0.1% level.

Thus, there are three distinct phases of inflation experienced in the country: (i) 1980–81 to 1998–99, when the trend rate of inflation was 9.06% p.a.; (ii) 1998–99 to 2004–05, when the trend rate of inflation was 3.02% p.a.; and (iii) 2004–05 to 2011–12, when the trend rate of inflation was 7.07% p.a. From phase (i) to (ii), there was a conscious effort to bring down the long-run inflation in the economy by almost 6% points. It can be seen from Table 1 that RBI after becoming autonomous in 1998–99 attempted to cut the growth of money supply substantially to achieve this, though its efforts were compounded and facilitated by global factors (RBI 2002b). On the contrary, from phase (ii) to (iii), there was a conscious effort to raise the inflation rate in the economy by almost 4% points through systematic efforts to raise the growth of money supply (see Table 1). In order to examine the broad effects of such sharp long-term deflation and inflation on the output growth in the economy, we also fitted log-linear trend on GDP at 2004–05 prices taking the same trend-break points as in the case of GDP deflator. The fitted regression equation is

$$\begin{aligned} \text{Ln } Y_t &= 13.52 + 0.0533t + 0.0102D_1(t - 19) + 0.0192D_2(t - 25) \\ t\text{-values:} &\quad (1556) \quad (73.8) \quad (3.81) \quad (4.52) \end{aligned} \quad (11)$$

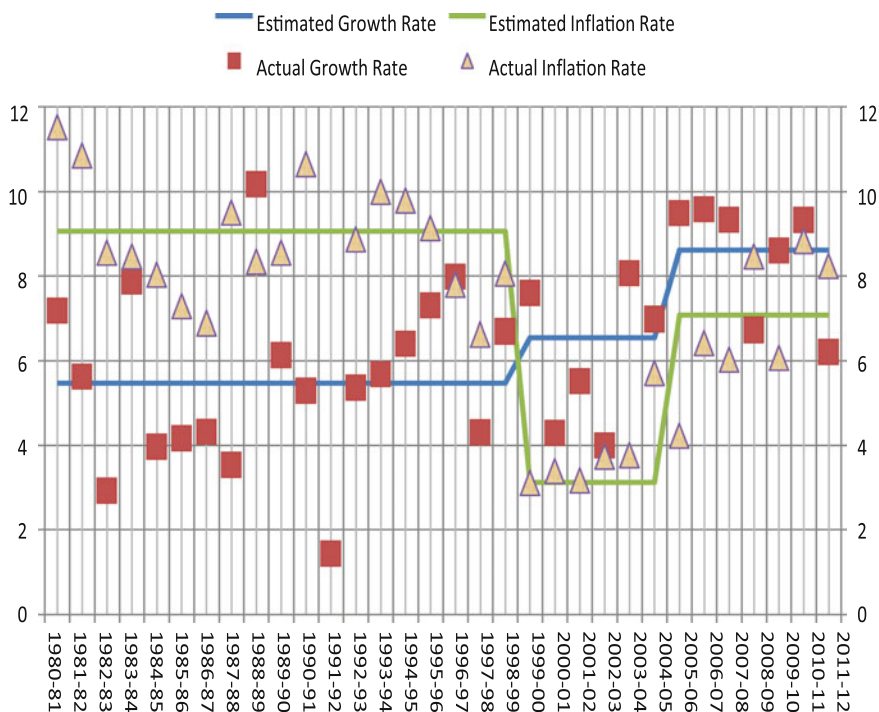


Fig. 2 Fitted trend rates and actual annual inflation rates and growth rates in India

Adjusted R -square = 0.9989; residual standard error = 0.0187 for 28 degrees of freedom. D_1 and D_2 are dummy variables with same definition as in Eq. (10).

All parameters are significant at 0.1% level.

These estimates show that during the same three phases identified above on the basis of inflationary trends, the trend growth of output turned out to be: (i) 5.47% p.a. during 1980–81 to 1998–99; (ii) 6.55% p.a. during 1998–99 to 2004–05; and (iii) 8.61% p.a. during 2004–05 to 2011–12. Thus, the output growth consistently and continually accelerated across the three phases while the trend rate of inflation fell sharply between phases (i) and (ii); and sharply increased between phases (ii) and (iii). Figure 2 provides the graphs of the fitted log-linear trend rates and actual annual growth for both GDP deflator and real GDP by years.

If we consider the period only up to 2004–05 as was done by Chaturvedi et al. (2009), it would appear that inflation and growth of output are negatively related. In other words, a reduction of inflation by about 6% points leads to an increase of about 1% point in long-term output growth, or a reduction of 1% point in trend rate of inflation would lead to about 0.18% points increase in the long-term annual growth rate.

However, after 2004–05, the experience in India tells a different story. An increase of about 4% points in trend rate of inflation between phases (ii) and (iii) is

accompanied by an increase of more than 2% points in the long-term growth rate of output. Thus, inflation and growth of output are positively related. In this case, there are no particular benefits of attempting to reduce trend rate of inflation. On the contrary, raising the trend rate of inflation by 1% point may result in increasing the long-term growth by 0.51% point. Such contradictory evidences would obviously make the regression results covering the entire period less reliable and even statistically less significant.

In this context, the finding of Dholakia and Sapre (2012) about the length of period considered by people to form price expectations in the country becomes very relevant to examine costs or benefits of changes in the long-term inflation trend in terms of output growth. Dholakia and Sapre (2012) find that people consider the experience of last four years to form inflationary expectations in India. Therefore, the permanent benefits of reducing long-term inflation rate would be felt only after 4–5 years. Thus, reduction of trend rate of inflation by about 6% points during 1998–99 to 2003–04 would show the real impact on the long-term growth of output after 2004–05 and continue up to 2008–09, because there is an upward shift in the trend rate of inflation around 2004–05. A sharp increase in trend rate of inflation after 2004–05 similarly would show its negative impact on growth after 4–5 years, i.e., after 2008–09 or 2009–10. If we examine the growth experience in recent years, adjust for the external and exogenous factors, and relate it to the inflation rate before 4–5 years; we would corroborate the substantial negative influence of inflation on growth.⁸ It is too recent to permit enough data points to test this hypothesis rigorously at present.

6 Concluding Remarks

Thus, the cost of high inflation is the sacrifice of substantial growth in the long-term and the benefit of disinflation is a sizeable gain in the long-term growth in the economy. However, disinflation is not costless as we have seen through the Sacrifice Ratio of about 0.9–2.1 in the short to intermediate period. On the other hand, the long-run gain in the growth rate per percentage point reduction in inflation rate is only 0.5. If, therefore, a 3% point reduction in trend rate of inflation is targeted, it would start positively impacting the growth after about 4–5 years and would take nearly 2–4 additional years to recover the cost of achieving it for the society without any discounting. It is a moot question whether the political priorities and commitments would remain the same over such a long period. If not, it may take longer to recover the cost of disinflation. RBI needs to seriously consider

⁸This is because Chaturvedi et al. (2009) have conclusively established that the relationship between inflation and growth is not bidirectional, but unidirectional—from inflation to growth only. This is particularly true for Asian countries.

achieving disinflation at a relatively high cost compared to the gain from it with respect to the time element involved.

On the other hand, raising the trend inflation marginally appears to be politically a good option, because the gains are immediate in terms of higher growth, more employment, and poverty reduction; the costs in terms of lower long-term growth are in the future, perhaps for the next government to face. On account of data limitations, strong evidence on the hypothesis of growth of output leading to expansion in employment leading to poverty reduction in India is not available. However, output elasticity of employment and employment elasticity of poverty proportion can be calculated from the readily available data from the NSS Surveys on employment–unemployment situation and on consumer expenditures undertaken in 1993–94 (NSS 43rd Round) and 2011–12 (NSS 63rd Round). The output elasticity of employment works out to +0.1882; employment elasticity of poverty proportion works out to (–)3.3643; and output elasticity of poverty proportion works out to (–)0.6331.⁹ These figures do provide broad support to the hypothesized relationship between higher growth and more employment and poverty reduction in India. It is then possible to argue a case for an inflationary policy through the Sacrifice Ratio to incur permanent cost of inflation to gain temporarily in terms of employment creation and poverty reduction. Thus, pure cost–benefit analysis of disinflationary versus inflationary policies may favor the latter over the former depending on the magnitudes of the Sacrifice Ratio and the long-term costs/benefits of disinflation/inflation in an economy.

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Financing Education in Gandhi's Thought Perspective



Sudarshan Iyengar and Nimisha Shukla

Abstract Gandhi's idea on financing education under the Nai Talim or Buniyadi Talim—basic education was quite original. Cultivating production skills and conducting literary education around the skill or craft was his central theme of education which was christened as Nai Talim. It was education for life. Literacy *per se*, i.e. three R's were not very important for him. An attempt is made in the paper to first examine key elements of the concept of *Nai or Buniyadi Talim* in some detail. The skill or vocation around which literary education had to be developed depended upon the livelihood base of the area and the community. This understanding of Gandhiji led him to argue a cogent case of financing education. In the next section, the paper discusses Gandhiji's ideas on financing education. Vocation or craft was to be taught not for skill development only, but the education centre was also visualised as production centre. The earnings from production are the finance needed in the scheme. In a sense, Gandhiji talked about private financing. Interestingly, privatisation of education these days is understood as self-finance vis-a-vis State finance. This feature and its implications are discussed in the final section of the paper in comparison with Gandhiji's idea of financing education. In concluding, it is argued that in Gandhian perspective financing education rests on producing classes of the society.

Gandhiji had been thinking about alternative education system from the days he took his family to South Africa in 1897. He set up an Ashram in Phoenix in 1904, where an extended Gandhi family and friends started living. It was 21 miles away from Johannesburg and the teachers would not come to teach for small salaries and the members could not afford to pay the teachers' higher salaries. It was in Phoenix that Gandhi gradually developed a curriculum. His central concerns and approaches from the beginning were the following.

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1. In 1897, when he landed with his two sons and a nephew in South Africa, he was not sure where to educate them in a formal school. European schools would have admitted his children under obligation and Mission schools would have taught in incorrect Tamil or Hindi. He decided to become their teacher and hired a governess. Later, his children were also educated in Phoenix settlement and some other children in the Tolstoy farm. For all his experiments, he had remarked, 'But the ultimate result of my experiments is in the womb of the future'.¹ He had added that, 'it was far better to remain unlettered and break stones for the sake of liberty than to go for a literary education...'²
2. Gandhiji said that he did not believe in the then existing system of education. For him character building was extremely important. He conceded, 'But as I fully appreciated the necessity of a literary education in addition, I started some classes with help of Mr. Kallenbach and Sjt. Pragji Desai'.³
3. Besides character building, Gandhiji wanted to train children in some vocation. He said, 'It was my intention to teach every one of the youngsters some useful manual vocation'.⁴ Gardening, scavenging, fruit tree rearing, carpentry and leather footwear making were taught to the students in Phoenix Ashram and Tolstoy farm. Students showed great interest in doing things. Interestingly, this remained Gandhiji's insistence all through when it came to teaching children.
4. Gandhiji eventually appreciated importance of teaching literary subjects as well. In Phoenix settlement, some elders took up the task of teaching languages, geography, history and arithmetic. Gandhiji thought that it was laborious for the children to remember what they learnt from books. His experience in imparting through word of mouth was good as children could repeat with greatest ease.⁵

In whatever model of educating children was set up the issue of financing did crop up. In South Africa until 1914 and later in India, the education experiments were always conducted with farming and with non-farming vocations leading to production. Productive work by students and teachers was an essential feature of all educational experiments and it also became the source for financing education. This approach became the hallmark in Gandhiji's idea of financing education. In this paper, Gandhiji's concerns and thoughts about financing education are discussed in some details. In section one, Gandhiji's major initiative in founding nationalist educational institution Gujarat Vidyapith in 1920 is discussed and its finances are

¹Gandhiji's *Autobiography or My Experiments with Truth* was first published in 1927 by Navajivan Publishing House, Ahmedabad. It was incorporated in *the Collected Works of Mahatma Gandhi* (CWMG) Volume 39, September 1970 also published by Navajivan Trust, Ahmedabad. All references from Autobiography are from the CWMG. This quote is on page 163. CWMG can also be accessed at <https://www.gandhiheritageportal.org/the-collected-works-of-mahatma-gandhi>.

²*Ibid*, p. 163.

³*Ibid*, p. 267.

⁴*Ibid*, p. 267.

⁵Gandhiji's grand-nephew who grew up in Phoenix Ashram has rendered a good narrative on how the children like him were schooled. Interested readers knowing Gujarati should refer Prabhudas Gandhi, 1948. *Jeevanu Parodh*. Navajivan Trust, Ahmedabad. January 2000 Reprint.

discussed. In section two, Gandhiji's ideas on education, finance mobilisation and his participation in the National Education Conference in 1937 in Wardha are discussed. In section three, development of education system in the country is reviewed in the light of the Gandhiji's criticism of the British system of education. In this section, privatisation of education and relevance of Gandhiji's ideas on education and financing are also discussed.

I

Gandhiji founded Gujarat Vidyapith in October 1920, a National University, as an alternative to the British education system to educate children and youth in creating a force for nation building. Gandhiji had called the youth to join the national movement for independence. *Sangharash* and *Rachana* were two sides of nationalist education. Gandhiji firmly believed that in order to reconstruct the society with the vision he had given in *Hind Swaraj* establishing an appropriate education system was essential. Education determined the type of the society that could be built. The British education system was brought to suit the society that had been formed and was being shaped further. Gandhiji in a very long speech made at the Second Gujarat Educational Congress on 20 October 1917 in Bharuch concluded in the following manner.

In education lies the key to swaraj... It does not matter if politics is out of bounds for this Conference. But the fact remains that all efforts are futile without the right kind of education, which is the special concern of this Conference. If we succeed in this, we succeed in all other things as well.⁶

Even before Gandhiji returned to India, education was on the agenda of the political activists. Gokhale had introduced an Elementary Education Bill in 1911. He was a non-official member of the Imperial Legislative Council. The proposed Bill sought to make elementary education compulsory in certain selected areas. It was realised that poor parents would not be able to pay any fees. Hence, there was a provision in the Bill that school fees were not to be charged to parents whose income was less than ten rupees a month. Gokhale was in favour of free and compulsory primary education for all. And he regarded his proposal as only a first step towards making elementary education free and compulsory throughout India.

Gandhiji believed in desirability of elementary education being generally available and suggested that it could be 'free but optional'. But more importantly, he differed on the content and quality. Three R's were his last priority and he wanted the schools to be self-supporting. He continued with his stance till the end, although he had realised that the State would have to provide financial support to significant extent.⁷

From the time he returned to India from South Africa in 1915 and Independence, Gandhiji was not able to run his own school because of other pre-occupations. He had clearly outlined his thoughts on education in the Second Gujarat Educational Conference in 1917. The Fourth Gujarat Political Conference held towards the end

⁶CWMG Volume 14, p. 36. Navajivan Trust, Ahmedabad March 1965.

⁷Ajit K. Dasgupta, *Gandhi's Economic Thought*, Routledge, London, 1996.

of August 1920 resolved that the politics of British education policy was unbecoming to India's culture and the prevailing status. Hence, nationalist education was the need of the hour to make students patriots, self-reliant and of sound character. In order to achieve the above objective, elementary schools, high schools, vocational and skill schools, Urdu schools and Ayurvedic schools should be set up. A university namely Gujarat Vidyapith should also be founded to coordinate the various schools and places of higher learning. In present-day terminology, Gujarat Vidyapith was to be found as an affiliating and examination conducting body for the nationalist educational institutions in Gujarat. Initially, about 226 schools with 29,000 students sought affiliation. With the founding of Gujarat Vidyapith, Gandhiji directed his colleagues to run school education as well. Thus, Vidyapith was from the beginning a 'K.G. to P.G.' educational institution.

In his first address after the foundation of Gujarat Vidyapith, Gandhiji stated that no amount of money was less and no extent of honest effort was less in making the nationalist education initiatives successful. In his address to the National Education Congress in 1924, Gandhiji emphasised on focusing on primary education. He also gave an idea as to how primary school should get its finances. In the preceding fifty years or more the British administration had introduced the system of incurring public expenditure on education. Gandhiji reminded the country that prior to English rule in almost all the villages in India had primary schools and were financially supported by the village community. He said,

It is the primary schools to which I attach importance. I want the Vidyapith to pay more attention to them and assume more responsibility for them. We should think how these schools should be run. I give my own idea. It is folly to imitate Government schools. Two years ago I had published some figures in *Young India* I had shown with their help that there were fewer schools in the Punjab now than 50 years ago...That condition does not obtain today, because the Government closed down what it considered to be primitive schools and started its own. How can it reach all the seven lakhs of villages? There are no schools in three lakhs out of those seven lakhs. In this sorry State of affairs, what is the point of starting schools on the Government pattern? We should manage without school buildings; we need only teachers of character. The teachers of old days were such men. They used to teach children and lived by begging. They would beg for flour, and would accept ghee if they got it. Where these teachers were not good, the education was not good; and where they were good, the education was good. All that is no more today. Education cannot be imparted by means of imposing buildings. If we are ready to go to the villages and live a simple life, doing the work of spinning, etc., then we may reach our goal. We may ask the Vidyapith to think about this, but it is not a body distinct from you or me. If some men draw up a scheme and place it before the Vidyapith and if a few self-sacrificing men are ready to live in the villages, subsisting on what little they get, then only will this be possible.⁸

Vidyapith and other nationalist educational institutions were indeed supported by people at large. Donations were raised and most importantly spinning by students and teachers helped in raising some funds too. An interesting account is available on how funds were mobilised and spent for the educational activities between 1920 and

⁸CWMG Vol. 24, pp. 496–7, Navajivan Trust, Ahmedabad, March 1967.

1949.⁹ Vidyapith managed and supported Gujarat Mahavidyalaya and Mahadeve Desai Samaj Seva Vidyalaya (higher education unit); Library, School of Archaeology, Teachers Training College, own schools: Vallabh Vidyalay, Bochasan in the then Kheda District and the Vidyapith recognised schools. A total of Rs. 13.92 lakh were expended. The expenditure included purchase of land admeasuring a little above 25 acres (where the present campus is located) for about Rs. 96 thousand (6.89%) and construction of buildings worth Rs. 1.75 lakh (12.57%). The amount was fully raised by way of donations and help. Gandhiji's close and most long-standing friend Dr. Pranjivan Mehta had contributed Rs. 2.5 lakh (17.96%). It should be noted that a nominal fee was also charged to the students for revenue raising.

It was in the ninth Convocation of Gujarat Vidyapith held on 11 April 1931, of which he was lifetime Chancellor, in which he dealt with the issue of spending public money for a cause. He referred to the appeal for funds and donations made by Kaka Saheb Kalelkar who was the Vice Chancellor then, and that led him to the question of economy in national expenditure and the duty of those who would have to run the Swaraj Government in future. He said,

I want you to study the Vidyapith accounts. You will see that strict economy has been maintained. I do not think anyone can beat me in my passion for guarding and expending public money like a miser. The reason is obvious. Public money belongs to the poor public of India than whom there is none poorer on earth...And if God wills that there should be no peace, you may be sure that the next struggle will be fiercer than the last and will engulf us all. And it may have to be fought without any resources. Gujarat may be always ready to contribute funds, but even the resources of Gujarat are not inexhaustible. Let us therefore think twice before we expend a pie and curtail our expenditure in all directions. I have often wondered where we get all our cars from, and whether we need them really. I know I often use motor-car but let no one follow my bad example. Let the *snataka* and the *dikshit* of the Vidyapith make a point of going out to the villages on foot whenever possible. Let us be worthy of swaraj when it comes...Let us keep that ideal in mind and cut our coat according to our cloth. The Government of today collects taxes by force and recovers revenue at the point of the bayonet. In swaraj we shall not be able to do so...Let us therefore order our affairs in the terms of the poor of the land...We have to be more wakeful, more cautious, more careful and let us be ready to account for every pie that we receive from the public.¹⁰

For the purpose of record, it may be noted that within short period Gujarat Vidyapith had ceased to be an affiliating apex body. The enthusiasm for nationalist recognition was waning. From 226 schools and 29,000 students in 1921–22, the number of schools came down to 9 and the students' number dropped to 296 by 1929–30. The centres for higher education continued to attract students. In all, Vidyapith continued with about 1000 students in all sections. A high-level Assessment Committee was set up under the Chairmanship of Prof. Anandshankar Dhruv. The Committee recommended that the focus should be on a centre for excellence for higher education with a base of primary and high school, all under

⁹Interested readers may refer Kothari V. M. 1950. *Kelavani vade Kranti*. Gujarat Vidyapith, Ahmedabad. pp. 74–75 and 194–8.

¹⁰CWMG Vol. 45, pp. 408–9, Navajivan Trust, Ahmedabad, July 1971.

the same management. The goals of nationalist education should be pursued and education should have a strong component of vocation. It was implied that finances should come from people and the institutions should generate its own resources including through production.

Gujarat Vidyapith was thus brought under a regular management with a separate management committee that came to known as Gujarat Vidyapith Mandal. It was financed all through with donations and public support. Serious efforts were undertaken to become self-supporting also. Vocations pursued were agriculture, animal husbandry, spinning and weaving, carpentry, blacksmith and other skills.¹¹ Even after Independence, Vidyapith continued to follow education through vocation and made efforts to be self-supporting. In 1963, the University Grants Commission (UGC) gave recognition and began to give seed grant. It was the beginning of the end of Gandhiji's experiment in education through vocation and being self-supporting. At the turn of the Century Vidyapith had become almost completely State dependent to meet all its education-related expenditure. The craft training was reduced to symbolic *Charakha* spinning. From 2004 onwards, new leadership emerged and by 2007 Vidyapith was making sincere efforts to go back to basics. By 2011, Vidyapith's main campus and the rural campuses revived production of agriculture produce and a few items of Gramodyog including Khadi. However, teachers and other staff salaries cannot be mobilised through craft training and production.

II

Gandhiji continued to advocate his ideas on education through vocation and making education a self-supporting venture. It is often argued that for Gandhiji the setting and running educational institutions were in villages, it is not possible to generate revenue from agriculture and allied activities in urban areas. However, Gandhiji had also thought about the urban issue. The central point to his argument was participation of students and teachers at all levels in production activity to both learn and to meet the expenditure.

In an article in *Harijan* of 11 September 1937, Gandhiji reproduced part of a letter by Dr. A. Lakshmipathi reporting revenue generation of a missionary school. The letter said,

I have seen some institutions conducted by missionaries, where the schools are worked only in the mornings, the evenings being spent either in agricultural operations or in some handicraft work for which the students are paid some wages according to the quality and quantity of work done by them. In this way, the institution is made more or less self-supporting, and the students do not feel like fish out of water when they leave the school, as they have learnt to do some work enabling them to earn at least their livelihood. I have noticed that the atmosphere in which such schools are conducted is quite different from the dull routine of the stereotyped schools of the Education Department. The boys look more healthy and happy in the idea that they have turned out some useful work, and are physically of a better build. These schools are closed for a short period in the

¹¹For a detailed account refer Kothari V. M. 1950. *Kelavani vade Kranti*. Gujarat Vidyapith, Ahmedabad.

agricultural seasons when all their energy is required for field work. Even in cities, such of the boys as have an aptitude may be employed in trades and professions, thereby enabling them to find a diversion. One meal may also be provided at school for those boys who are in need, or for all who wish to partake of the same in an interval of half an hour during the morning classes. Poor boys may thus be persuaded to run to the school with pleasure and their parents may also encourage them to go to school regularly.¹²

Gandhiji endorsed the idea expressed and also quoted a point made by a Jewish scholar of putting productive efforts while learning being a sure way of patriotism as well. Gandhiji added that physical labour or working by hand was good for intellectual development. He wrote,

Given the right kind of teachers, our children will be taught the dignity of labour and learn to regard it as an integral part and a means of their intellectual growth, and to realise that it is patriotic to pay for their training through their labour. The core of my suggestion is that handicrafts are to be taught, not merely for productive work, but for developing the intellect of the pupils. Surely, if the State takes charge of the children between seven and fourteen, and trains their bodies and minds through productive labour, the public schools must be frauds and teachers idiots if they cannot become self-supporting.¹³

In addition, Gandhiji tried to argue on economic grounds. However, ethical values were central to Gandhi's economic thought.¹⁴ He wrote,

Supposing that every boy and girl works, not as a machine but as an intelligent unit, taking interest in the corporate work done under expert guidance, the corporate labour should be, say, after the first year of the course, worth one anna per hour. Thus for twenty-six working days of four hours per day, each child will have earned Rs. 6-8-0 per month. The only question is whether millions of children can be so profitably employed. We should be intellectual bankrupts if we cannot direct the energy of our children so as to get from them, after a year's training, one anna worth of marketable labour per hour. I know that nowhere in India do villagers earn so much as one anna per hour in the villages. That is because we have reconciled ourselves to the intense disparity between the haves and the have-nots, and because the city people have, perhaps unwittingly, joined in the British exploitation of the village.¹⁵

The political situation during these times warrants attention in the context. The British Government was financing primary education from the resources generated by tax on liquor. Gandhiji had argued for complete prohibition in the country. Women had been picketing before the liquor shops. Hence, it was argued that Gandhiji did not support making primary education compulsory as he was not for such financing through liquor money. The next issue of *Harijan* published an article titled 'Discussion with an Educationist'. The educationist's belief that education could not be made self-supporting led him to disagree with Gandhiji's argument for

¹²CWMG Volume 66, p. 123. Navajivan Trust, Ahmedabad, October 1976.

¹³*Ibid*, page 124.

¹⁴For a useful and relevant elaboration on this point refer Iyengar Sudarshan, 2014. "Rethinking Human Behavior in Modern Economics: A Gandhian Perspective", in Amitabh Kundu and Arash Fazli (Eds) 2014, Paradoxes of Rationality and Norms of Human Behaviour, Manak Publications, New Delhi.

¹⁵CWMG Volume 66, p. 125. Navajivan Trust, Ahmedabad, October 1976.

self-supporting education as a necessary condition for total prohibition. For Gandhiji, prohibition and education were independent issues, total prohibition being non-negotiable. He believed manual work to be used as a prime means of learning. He said,

We have up to now concentrated on stuffing children's minds with all kinds of information, without ever thinking of stimulating and developing them. Let us now cry a halt and concentrate on educating the child properly through manual work, not as a side activity, but as the prime means of intellectual training.¹⁶

The educationist conceded the point, but could not back the case for self-supporting education. He argued on two counts. One was Khadi making sufficient to occupy the student's skill for seven years. Second, Gandhiji was seemingly limiting the skill building to only one craft of cloth making. Gandhiji replied,

The child at the age of 14 that is after finishing a seven years' course should be discharged as an earning unit... Even so the State takes charge of the child at seven and returns it to the family as an earning unit. You impart education and simultaneously cut at the root of unemployment... Then we will teach him some other craft... and have each of these schools specializing in a separate craft-carpentry, smithy, tanning or shoe-making. Only you must bear in mind the fact that you develop the child's mind through each of these crafts... That is why you cannot think of subjects like brickmaking. If they must be civil and mechanical engineers, they will after the seven years' course go to the special colleges meant for these higher and specialized courses. And let me emphasize one more fact. We are apt to think lightly of the village crafts because we have divorced educational from manual training. Manual work has been regarded as something inferior, and owing to the wretched distortion of the varna we came to regard spinners and weavers and carpenters and shoe-makers as belonging to the inferior castes and the proletariat. We have had no Cromptons and Hargreaves because of this vicious system of considering the crafts as something inferior divorced from the skilled. If they had been regarded as callings having an independent status of their own equal to the status that learning enjoyed, we should have had great inventors from among our craftsmen.¹⁷

Continuing the debate, the *Harijan* published another piece where parts of a letter by a professor were reproduced with Gandhiji's response. The issue was of child labour that is popular even today; perhaps with more political overtones. Producing a welfare economics argument in neo-classical economics framework, the professor had argued,

The main cause of India's economic decay is that her workers begin life too early... The immature mind put to industrial apprenticeship gets dwarfed and fossilized; and there is no grasp of the economic significance of work. Anybody can exploit such a worker... When I visited the Ceylon plantations what harrowed me most was the existence of child-labour... Even in a country like Ceylon where the population is inadequate to exploit natural resources, child-labour is indefensible; much more so is it in India where the employment of children may mean the unemployment of adults.

¹⁶*Ibid*, page 137.

¹⁷*Ibid*.

Let us not delude ourselves into believing that self-supporting workshop schools manufacturing and marketing goods will impart education. In actual practice, it will be nothing but legalized child-labour...I cannot agree with the editor of the *Harijan* that mathematics can be studied by calculating how much yarn would be needed for a piece, and science and geography by observing the growth and improvement of strains of cotton... A careful study of Sjt. Parikh's figures in the current issue of the *Harijan* shows that even when a school has specialized in one occupation and has trained grown-up children, waste is considerable...Let us not demand that schools should produce not only men but also goods...To sum up, it is bad economy to adopt a short-sighted policy which will make the schools solvent and the nation bankrupt.¹⁸

Gandhiji considered the argument as a preconceived notion blurring one's vision. The writer had failed to understand Gandhiji's plan as he would never advocate semi-slavery taking place in Ceylon (present-day Sri Lanka). In Gandhi's school, boys and girls were admitted as students. Rather than complete rejection, it would have been better had the Professor had cautioned against the expectation through such an experiment. He further argued,

I admit that my proposal is novel. But novelty is no crime. I admit that it has not much experience behind it. But what experience my associates and I have encourages me to think that the plan, if worked faithfully, will succeed. The nation can lose nothing by trying the experiment even if it fails. And the gain will be immense if the experiment succeeds even partially. In no other way can primary education be made free, compulsory and effective... Shri Narahari Parikh's figures have been written in order to support the plan to the extent they can. They are not conclusive. They are encouraging. They supply good data to an enthusiast...The integral parts of the scheme are:

- (1) As vocations are the best medium for the all-round development of a boy or a girl, the syllabus should be woven around such training.
- (2) Primary education thus conceived is bound to be self-supporting, maybe partially for the first or even the second year.

On the issue of teaching arithmetical and other subjects through vocations, Gandhiji had modestly stated his experience-based advantage than the Professor! He reiterated the experience at Tolstoy farm where literary education was provided to children between six and sixteen through vocation.

The discussion so far clearly indicates Gandhiji's determination for the pedagogy of educating the child and the reason for self-supporting school. His thoughts on education were given expression at an All India Conference on Education where Gandhiji's proposal was accepted almost entirely and named as *Nai or Buniyadi Taleem*. In English, it became Basic Education. A brief history would not be out of context.

¹⁸Harijan, 18th September, 1937.

In 1937, the Marwadi Shiksha Mandal wanted to celebrate its Silver Jubilee. The school Principal Aryanayakam and Managing Secretary Shrimannarayan invited Gandhiji to preside over. Gandhiji made a conditional commitment with setting the agenda. About sixty prominent educationists and scholars were invited, so also the education Ministers from the provincial governments. In the opening speech of about 85 min, Gandhiji elaborated the pedagogy to be imparted to school children. Mahadev Desai had taken notes of Gandhiji's speech. Followings were the highlights.

- The focus of the nationalist educationists should be on primary education. The moment that primary question was solved the secondary one of college education would also be solved.
- The emphasis was not the occupations but education through manual training.
- The remedy lay in imparting the art and science of a craft through practical training, thereby imparting education. Teaching of *takli-spinning*, for instance, presupposed imparting of knowledge of various varieties of cotton, different soils in different provinces of India, the history of the ruin of the handicraft, its political reasons which would include the history of the British rule in India, knowledge of arithmetic and so on.
- Funding the expenses of the teacher through the product of the manual work of his pupils was very important, as the only way to carry education to crores of children. Self-supporting school would be a test of its efficiency. The children ought to, at the end of seven years, be able to pay for their instruction and be earning units.
- Gandhiji's education plan was for building non-violence society. It is in that connection, he had resolved for complete prohibition.

Many responded to Gandhiji's address. Apart from general agreement, there were reservations about teachers being paid from the output by the students. Shri Nanabhai Bhatt, a scholar in education and an excellent experimenter was in agreement about education through craft and production programme, but opined that economic output to be an expected outcome, not aim of educating the child. With emphasising production and output, teachers might become extractive and end up exploiting children.

The conference unanimously resolved the following.

- There should be compulsory and free education to all the children for seven years.
- Education was to be imparted in mother tongue.
- Support for Gandhiji's suggestion regarding focusing on productive vocation and craft; all the other components of education should be imparted by keeping the craft in centre. The choice of vocation or craft should be based on the environment and circumstances.
- Adoption of the above pedagogy would gradually become possible to meet the expenses of teachers.

From 1937 onwards, Gandhi spoke about *Nai Taleem* on numerous occasions, insisting on the central theme of educating children through a craft or vocation.

In a speech that was later published in Khadi Jagat, he elaborated the idea on education through craft. He said,

Nai Talim means teaching through craft. That basic craft has to be selected in the light of the conditions and produce of the region. For instance, it would not be proper to have khadi as a means of teaching in a region where cotton does not grow, but has to be imported for the purpose.¹⁹

The important point is of identifying the suitable economic activity or craft of the region. This was the specific context on which Gandhi insisted of education being self-supporting. Educational training had to be related with production of goods.

Addressing the Ministers, he suggested the same pedagogy for university education. The organic relation between primary and university education required the university education to be an extension and continuation of the basic education course. Had the Ministers not been able to see his point; he was sceptical about his advice of any use. On the other hand, unanimity regarding university education being inappropriate for independence would lead to scrapping of the prevalent system. A system on new lines consonant with the national requirement was needed to be framed.

Gandhi continued with what is relevant even today. The run for government employment or unrest of unemployed educated youth had worried Gandhiji. Such youth was devoid of shame to beg or sponge upon others. Gandhiji's belief for university education was to produce true servants of the people, who would live and die for the country's freedom. He was therefore of the opinion that university education should be coordinated and brought into line with basic education, by taking in teachers from the Talimi Sangh.²⁰ Even after gaining independence, higher education in this country has not been able to provide productive work for most of the educated youth.

III

The Wardha Conference resolutions mostly remained on paper. After Independence, the Centre and the States continued with British education system. The Gandhian decentralised model of schooling and educating next generation ensured adequate freedom and autonomy to the local communities. The Government was supposed to be in a supportive role. This was not an original idea of Gandhiji. He only claimed novelty in presenting a fresh design. He was fully aware about the universal feature of the education system in India before the advent of the British. Dharampal²¹ in *The Beautiful Tree: Indigenous Indian Education in the Eighteenth Century*, quotes Gandhi on the education system in India,

¹⁹CWMG: Vol. 82, p. 142. Navajivan Trust, Ahmedabad September 1980.

²⁰CWMG: Vol. 85, pp. 84-8 Navajivan Trust, Ahmedabad, February 1982.

²¹A well-known scholar on Gandhiji and his work who has spent years in studying the knowledge, practices and traditions in India before British. He, has written a separate volume on the education system that prevailed in India just before the British assumed full political power in India in 1860, *The Beautiful Tree: Indigenous Indian Education in the Eighteenth Century*; named from a speech by Gandhiji in Chatham House, London while participating in the Second Round Table Conference.

That does not finish the picture. We have the education of this future State. I say without fear of my figures being challenged successfully, that today India is more illiterate than it was fifty or a hundred years ago, and so is Burma, because the British administrators, when they came to India, instead of taking hold of things as they were, began to root them out. They scratched the soil and began to look at the root, and left the root like that, **and the beautiful tree perished**. The village schools were not good enough for the British administrator, so he came out with his programme. Every school must have so much paraphernalia, building and so forth. Well, there were no such schools at all. There are statistics left by a British administrator which show that, in places where they have carried out a survey, ancient schools have gone by the board, because there was no recognition for these schools, and the schools established after the European pattern was too expensive for the people, and therefore they could not possibly overtake the thing. I defy anybody to fulfil a programme of compulsory primary education of these masses inside of a century. This very poor country of mine is ill able to sustain such an expensive method of education. Our State would revive the old village schoolmaster and dot every village with a school both for boys and girls.²²

Two points need to be made here. One, Gandhiji was not being romantic in describing the past glory of India to the British citizens to win over sympathy. He had based his statements based on the research by the British officers who had tried to understand the systems in the colony.²³ Dharampal seems to have taken up from that point and conducted further research and produced the document.²⁴

The second point, directly relevant to the present discussion, is about the autonomy, freedom and way of running elementary schools for entire India. Gandhiji was arguing that before the British took charge, there existed a system of education in the country which had evolved in a time-tested way and was indeed universal, evidence of which was provided by Dharampal. A well-run education system obtained in the country and resources were mobilised for it locally. Gandhiji had developed two basic criticisms on the British system of education. One was about infrastructure and second was on the content and the pedagogy. European pattern of setting up elementary schooling infrastructure was highly expensive. The British model was highly resource intensive and undesirable for India with different traditions evolved out of climate and geophysical features. Gandhiji had challenged during the Chatham House speech in 1931 that no government would be able to fulfil a programme of compulsory primary education in one hundred years.²⁵

²²Bold is ours to highlight the words. CWMG Volume 48, pp. 199–200. Navajivan Trust, Ahmedabad. November 1971.

²³In the session a retired senior British Officer and a scholar Sir Philip Hartog had questioned Gandhiji on the issue of literacy and education system in India. Gandhiji had provided the reference to him which was an article by an Indian scholar whom he had published in *Young India* in its 8 December 1920 issue.

²⁴Gandhiji had based in his argument on the evidence that was narrated by the author who had contributed to *Young India* in 1920, but Dharampal dug out documents that were prepared by the British officers and scholars and has given account of the whole country.

²⁵Refer to footnote 21.

Gandhiji's substantive criticism of the British system of education was about the content and pedagogy that focussed on literary education. The system of primary education was besides being wasteful, also harmful. The children were lost to the parents and to the occupation to which they were born. It is in response to then prevalent system, content and pedagogy, Gandhiji had suggested education through a vocation or craft and decentralised community controlled elementary education.

Gandhiji was prophetic in his 1931 Chatham House speech. In 2011, that is after 80 years the Twelfth Five-Year Plan Document of the Government of India (after 63 years of Independence) conceded that it had failed in creating basic infrastructure in every village in India. Gandhiji's *Nai Taleem* was ignored and the socialist and welfare government ruled India for decades. The State committed and tried to provide resources to universalise the elementary education in the country. The governments on average spent 75% of the total outlay in education sector (Centre plus states) year in and year out, but could not cover all villages and habitations even with a single room primary school let alone 'British paraphernalia' as mentioned by Gandhiji in the Speech! The welfare State indeed had been committing more and more resources to the education sector since the First Five Year Plan. Allocation to education sector during the First Five-Year Plan was 0.64% of the GDP and by the Twelfth Plan period it had gone up to 4.11% in 2001 and later declined.²⁶ It always remained less than the recommended 6% by the Kothari Commission in 1966 and later reiterated by the Central Advisory Board for Education (CABE).²⁷

The government had also become more ambitious and had planned to provide a primary school with one-kilometre distance to all children above six years of age. In December 2002, following the 86th Amendment to the Constitution; Right to Education (RTE) Act with the provision to provide free and compulsory education to all children in the age group of 6–14 years was passed. Primary education has become a fundamental right after the directive by the Supreme Court of India. It was clearly established that the country had failed to provide access to each child in elementary school imparting literary education. It should be noted that it took another seven years after the Amendment to pass RTE in August 2009.

The Government of India did introduce a special programme to universalise primary education in the country. In 2002, Sarva Shiksha Abhiyan (SSA) was introduced as flagship programme of Government of India to achieve Universalisation of Elementary Education (UEE) in a time bound manner, as mandated by 86th amendment to the Constitution.²⁸ It was estimated that the country had 1.1 million habitations and in 2001 there was significant gap in the

²⁶Refer <http://infochangeindia.org/education/statistics/expenditure-on-education-in-india.html>.

²⁷Members' Reference Service, Reference Note No. 21/RN/Ref./2014 <http://164.100.47.134/intranet/BUDGET.pdf>. Accessed June 1, 2017.

²⁸For details refer <http://www.ssa.nic.in/>. Accessed May 2017.

availability of a primary school at the distance of 1 km. SSA aimed opening schools in habitations lacking schooling facilities and strengthen existing school infrastructure through provision of additional classrooms, teachers, toilets, drinking water, maintenance grant and school improvement grants.²⁹ SSA sought to provide quality elementary education including life skills. SSA has special focus on girl's education and children with special needs. SSA also seeks to provide computer education to bridge the digital divide. The achievements under the SSA after decade of implementation were as follows.

Cumulative progress under SSA up to 2011–12

S. No.	Item	Sanctions (number)
1.	Opening of new schools	2,09,914
2.	Opening of new upper primary schools	1,73,969
3.	Construction of primary schools	1,92,392
4.	Construction of upper primary schools	1,05,582
5.	Construction of additional classrooms	16,03,789
6.	Toilets	5,83,529
7.	Drinking water facility	2,23,086
8.	Teachers	19,85,207

Source Planning Commission, Government of India, 2013. Twelfth Five Year Plan (2012–2017) Volume III Social Sectors Table 21.1 p. 54. Sage Publications, New Delhi. Also accessible at http://planningcommission.gov.in/plans/planrel/12thplan/pdf/12fyp_vol3.pdf

On an optimistic note, we may perhaps meet Gandhiji's challenge of providing physical infrastructure, teachers and other necessary paraphernalia by 2031! But additional problems have cropped up that take us to new challenges.

The British system of education which the Independent India continued, ignoring Gandhiji's experienced wisdom expressed in *Nai Taleem*, with providing only literary education. An attempt to ape the Western model of industrialisation led to establishment of Industrial Training Institutes (ITIs), Polytechnics, Technical Institutes and of fully sponsored and pampered technical institutions such as the Indian Institute of Technologies (IITs). ITIs became pushed refuge for the school dropouts in urban India that too with inadequate coverage and IITs did become centres of excellence, but with brain drain. A significant number of children in seven decades after Independence continue to receive literary education. Gandhiji once again proved prophetic especially about the children in rural India. They were lost to parents and moved to urban areas in search of white collar jobs. A distilled wisdom of an old rustic in a Gujarat village expressed it by saying *thodu bhane e*

²⁹The situation with respect to the 'paraphernalia' was poor in after ten years of SSA. Those interested in knowing more about the paraphernalia situation in Gujarat and in India may refer to Iyengar Sudarshan, "Education in Gujarat: A Review", in Indira Hirway, Amita Shah, Ghanshyam Shah (Eds), 2014. Growth or Development, Which Way is Gujarat Going. Oxford University Press India, New Delhi.

kaam chhode, jaajhu bhane e gaam chhode (one who goes through literary education a little, leaves the work and one who studies more, leaves the village). India became country of 'literate babus' who had contempt for working with hand. Constitutional provisions for affirmative actions for socially and economically disadvantaged sections of population gave rise to aspirations that have scaled new heights and fan the politics of the day.

India could have perhaps surmounted the problem and given a fitting reply to the old rustic. The composition of the economy is changing with information and communication technology revolution expanding the services sector. But it was realised with a shock that the country was increasing failing in providing 'good literary education'. The corporate sector declared that even the human resource educated and trained in technical institutions was UNEMPLOYABLE, let alone poor arts, science and commerce graduates from schools and colleges. The country was brought to senses with the reports prepared after careful and meticulous all India surveys on status of schooling and learning outcomes³⁰ conducted by PRATHAM, a voluntary initiative. Under its project of Annual Survey of Education Report (ASER) evaluates the status of literary education only in terms of three R's. Children in rural schools and also in urban schools are unable to read, write and perform simple arithmetic.³¹ The driving force for undertaking the evaluation work was assessing the accountability of the government to people because for funding SSA, the government of India had imposed 2% Education Cess. The realisation today is the comprehensive failure of the State in providing quality literary education to the children. Gandhiji had clearly argued about inability of the State to achieve universalisation of primary education.

The alternative model that Gandhiji had suggested could be labelled as privatisation of education and this expression would be quite fashionable in the present times. However, there is going to be significant difference in Gandhiji's model for leaving education to communities' initiatives and parents' active participation, marketisation of education as a service providing commodity and hence almost a private good. Before amplifying Gandhiji's model, Indian government's response to opening up of education sector to the world and to the private entrepreneurs needs to be reviewed.

It has been shown that the government could not allocate desired or recommended 6% of the GDP to education. In 1990, when Indian economy was opened up education appeared in service goods category and was freed for international trade. Further, liberalisation within the economy allowed private sector participation as independent enterprises and as partners with the public sector. The Public-Private Partnership (PPP) model gained currency. One more important feature is related to the loss of credibility of the State sponsored social sector services among people at every level. People no longer trusted the government health facilities and

³⁰The reports are published in acronymic ASER—Annual Status of Education Report.

³¹For reports and findings reader may visit <http://www.pratham.org/programmes/asr> and <http://www.pratham.org/programmes/asr>.

the village-level functionaries. Similarly, the government, panchayat and municipal schools lost credibility over time. The loss had begun perhaps from 1970 onward. Irregularity, absenteeism, manipulation, corruption, high-handed and arrogant behaviour of service providers and crass neglect were some of important reasons for the public sector social services losing credibility and confidence. Private doctors and private tuitions rapidly became order of the day. Those who could pay paid for 'quality' services even cutting consumption of other vital necessities. Only the poor would avail the poor quality services. Even poor families tend to borrow and pay for private services especially in case of illness.

Overall and regional data on household-level private expenditure on education is collected by National Sample Survey Organisation. Detailed data should also be available by income deciles and by social groups. Over time, household private expenditure on education seems to be increasing.³² In 1995–96 (the 52nd Round), per student private expenditure for primary education was Rs. 297 in rural areas and Rs. 1149 in urban areas. In rural areas, 10.5% was for tuition fee, 34.3% was for books and stationery and 27.6% was for uniform. Similar private expenditure data is available for secondary, higher secondary and higher education. Data for urban areas is also available. Higher the educational category, higher is the expenditure. In urban areas, the expenditure in each category is higher than the rural for similar category. For 2007–08, per student private expenditure for primary education was Rs. 987 in rural areas and Rs. 3626 for urban areas.³³ The component share of expenditure is not available by education levels and categories. But the share of tuition fee, books and stationery and uniform were respectively 25, 25 and 12% to total expenditure in rural areas. Although the data from both rounds are not strictly comparable, the common feature is that tuition fee, books and uniform form the major bulk of private expenditure per student. Even when the right to free and compulsory primary education to every child in 6–14 years age group is granted by the Right to Education Act 2009, the NSS data suggest that parents have to incur expenditure on the child even if she/he is with fully funded government school.

In the Twelfth Five-Year Plan, it was made amply clear that private sector would have a very important place. It is said,

The role of the private sector in secondary schooling can be further strengthened through right policies, proper regulation, innovative public–private partnerships and a variety of demand-side financing measures that improve accountability and enhance parental choice, thereby achieving all three objectives of access, quality and equity in secondary education.³⁴

³²NSS 52nd Round data is presented by Rao Purnachandra 2014. "Analysis of Household Expenditure on Education", in International Journal of Education and Information Studies, Volume 4, No. 1 pp. 35–39. https://www.ripublication.com/ijeisv1n1/ijeisv4n1_08.pdf.

³³NSSO, 2010. Education in India: 2007–08 Participation and Expenditure, NSS 64th Round (July 2007–June 2008), Ministry of Statistics and Programme Implementation, GoI, New Delhi. p. 9. http://www.mospi.nic.in/sites/default/files/publication_reports/532_final.pdf.

³⁴Twelfth FYP *op. cit.* p. 73.

Privatisation of education in general and school education in particular has limited potential for nation building notwithstanding the clarity in goals specified in the Twelfth FYP document.³⁵ The first reason is privatisation really becoming marketisation of education, a traded good. Entry of non-state sector for profit has rapidly gone up. There had been a tradition; Mahajan used to participate actively in education based on philanthropic consideration with high credibility.³⁶ With changing time, many of the present generation management of these schools have turned into for-profit institutions. Privatisation has led to commodification; education becoming a tradable good. The preference and demand for a commodity is obviously for its features and the utility it has. The approach becomes utilitarian.³⁷

The present situation in education sector in India is paradoxical. Hitherto investment and expenditure were made by the State with not for profit organisations having an insignificant share. The public sector with all commitment could not ensure access, quality and equity. The opening up of the sector was with the presumption that education was to continue as a public or merit good with private institutions keep on working as not for profit organisations. Along with substantial private sector participation, the State will be able to ensure access, quality and equity. But this hope is belied. Once education is treated as a tradable commodity, profit becomes the chief motive. For profit, responding to market demand becomes a priory. People at large prefer employability with literary education and quality inputs in English and Computer skills, Maths and Science. Most private for-profit schools advertise precisely these features to attract customers. Of course, a niche segment has arisen for high-end customers where rich and very rich parents send their children and ensure 'an all-round development', whatever it means. Education responds and caters to the society needs. It no longer influences society for reconstruction with values.

It is in this context that Gandhiji had thought through and experimented with form, content and pedagogy of education mainly for children between 6 and 14 years. State was not the agency to invest and run the sector. Universalisation to Gandhiji was not centralisation. Also education meant training of heart, hand and head. Building character was non-negotiable main goal. Education through a vocation of craft was the content and pedagogy. Decentralised local resource-based educational institutions run by local panchayats, municipalities and private institutions was privatisation of education for him. He strongly considered that elementary education was a public good and should be available to all as a right. Parents had to share part of the cost. Teachers had to work through a vocation where some production for self-consumption and/or market was most essential feature.

³⁵*Ibid*, p. 72.

³⁶Iyengar Sudarshan *op. cit*.

³⁷For an interesting discussion refer, Barbara Daviet, 2016, "Revisiting the Principle of Education as a Public Good". Education Research and Foresight Working Papers, UNESCO. <http://unesdoc.unesco.org/images/0024/002453/245306E.pdf>. Accessed 17 May 2017.

Production skills had to be cultivated among the next generation from childhood. State and philanthropy had to play a facilitating role in this nationwide effort.

The International Commission set up by UNESCO to deliberate and recommend on education for twenty-first century came out with a Report *Learning: The Treasure within*. It echoes Gandhiji's thought on education.³⁸ The Chairperson of the Commission has called the Report as 'The Necessary Utopia'. It has recommended that education in the twenty-first century should be based on following four pillars.

- Learning to Know
- Learning to Do
- Learning to Live Together, Learning to Live with Others
- Learning to Be

The Chairperson in Preface writes about the title of the Report. In one of La Fontaine's fables, *The Ploughman and his Children*, the poet said in the context of hard work

*Be sure (the ploughman said) not to sell the inheritance
Our forebears left to us:
A treasure lies concealed therein*

The Commission adapted it for education and hypothetically made the poet to say

*But the old man was wise
To show them before he died
That learning is the treasure.*

Could Gandhiji be that old man for us?

³⁸UNESCO, 1996. *Learning: The Treasure within: Report to UNESCO of the International Commission of Education for Twenty First Century*. Paris. <http://unesdoc.unesco.org/images/0010/001095/109590eo.pdf>. Accessed in 2012.

Making of State Agricultural Policy: A Demonstration



R. S. Deshpande, J. Prachitha and Khalil Shaha

Abstract Policymaking in India falls in the category of responsive policies than cleanly deliberated telescopic long-run policies. The science and art of policymaking was never taken seriously by administrators or academicians. The universities and the administrators are not even aware of the theory behind policymaking, and therefore, we often end up in firefighting approach and riverine policies. This paper analyses the art and science of policymaking taking important examples on a difficult terrain. We elaborately deal with the theory of policymaking and bring forth the science behind the process. It is essential that the administrators follow the science of policymaking and employ the exquisite art of policymaking while arriving at solutions for difficult problems. Our illustration is set in the agricultural sector, where many uncertainties prevail and decision-making is one of the difficult tasks. We chose the region of Deccan Plateau purposively as this region poses significant challenges and has been the bedrock of agrarian distress in the recent past. The states of Andhra Pradesh, Maharashtra, Karnataka and Gujarat pose typical challenges for policymaking. Our information base is from the very region for which we are planning the policies and hence our policies are rooted in the soil of the region. This illustration will certainly prove useful for many.

This paper draws on the first author's earlier work.

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1 Introduction

India's experience in framing its own agricultural policies has been not less than pathetic. Right from the independence, we had a few reports that could be termed as attempts towards building up of a policy, but no sooner these came in public domain the thrust was totally lost. The policies were always laid down in response to meet the ensuing crisis and hence could be called as a riverine experience. It is like a river, whose flow is dictated by the hillocks coming in the way and the smoothness offered by the neat slopes. Our concerns about policy studies are aimed at incrementing the welfare of the society and aid the process of better governance. It involves changing over the pattern of past policies to the present one and analyses the impact of these changes. In the process of current economic policy which is trade centric, with an assumption that international trade can galvanise the growth rates, the trade-related decisions are taken at the Ministry of Commerce in the Central Government. But the welfare implications of these decisions essentially befall on the state governments. In this context, the nations with federal structure find themselves in a tricky situation. Therefore, in such situation, a clear design of the policy is an essential prerequisite at the sub-national level.

Policymaking in agriculture at sub-national level inevitably experiences difficult path. One can list at least five bold reasons entailing such difficulties. First, agriculture is largely an unorganized activity and, therefore, policy responses could not be predicted a priori with objective probabilities. Second, the availability of information to the farmers is quite slow unlike other sectors. The information asymmetry in the absence of objective probabilities about outcomes virtually authenticates to formulate disjointed policies in isolation, without detailed homework or mostly arbitrarily. Third, agriculture is strongly weather-dependent activity and thus a quick firefighting job is usually the core of the policy. Fourth, the significant factor is level of income and asset distribution in the sector that has always been a point in question. This is further complicated by variations, a mark of the peculiar sector. The policies framed need to keep these variations in view. Last, the sector has implications for the consumers as also with the other industries. Therefore, GDP growth of any country is sensitive to the fluctuations in agriculture. Agriculture policies of India as well of a few other countries have government dependence.

Our experience of policy formulation in India is largely from the five-year plans and schemes initiated by the Government of India. There is a little awareness about the theory of policymaking, and therefore, to a significant extent the policy is understood often as the problem-solving steps taken in the context of severity of the issue and/or a common denominator of various programmes. Actually, *"A policy aims at specific, often quantifiable, objectives, deploys an array of instruments to achieve them and operates according to a pre-planned time frame for implementation. It lends itself to standardised monitoring and evaluation procedures to assess the outcome and to identify those responsible for the success/failure of the policy"* (Rao 1998: 1). In this paper, we shall attempt to deliberate on the process of

policymaking in India, initially through a theoretical perspective on policymaking, followed by the experience of agricultural policy during the last seven decades. This is followed by an empirical study of policymaking across the states in the Deccan Plateau region. We have chosen these states with a particular purpose. First, agriculture being a state subject any exercise at policymaking has to be at state level. Second, the challenge of policymaking in the states on Deccan Plateau is unique due to typically similar constraints and differential experience. Third, these are the states that are hot spots of agrarian distress as also rapid commercialisation and differential experience. Therefore, these are typical cases that pose challenge for policymaking.

2 Decoding Agricultural Policy

i. *Theory of Policymaking*¹

In understanding the theory of policymaking, we need to take note of the kind of complexities involved in this process. At the first place are the objectives of the intended policy change. These objectives are time-sensitive but have a long-term goal. Often these changes are influenced by the response of the extraneous factors to the existing policy system. Hall (1993) puts forth three orders of policy changes:

- a. “Changes that imply tampering with the current setting of the policy instruments (e.g. Changes that are occurring in the domestic policy to meet the WTO requirement).
- b. Replacing the earlier policy initiative with the other, with or without any in-house evaluation (The Agricultural Policy Document of 2000 or the policy changes that occurred in Canada during 1988, opening up the Federal-Provincial sharing of expenditure on the ongoing schemes. Similar was the case about the developmental programmes in India during the early seventies).
- c. A complete departure in the policy goals following theoretical or ideological framework involving the state and political actors. (Like the shift towards opening of international trade from earlier strictly guarded trade policy)”.
(Source: Deshpande and Prachitha 2006, pp. 32–33)

We can term Hall’s model of arriving at policy changes as a mid-course correction model. The changes are necessary either due to new policy initiatives or when anomalies accumulate and create social, political and economic strain on the state. The question that arises relates to the possibility of incorporating a new change in the policymaking process and incorporating the present galvanised institutional mechanism. This is a different model from the Cumulative Policy Accumulation Model which focusses on policy instruments in the form of

¹This section is based on author’s earlier unpublished work on Agricultural Policy (Deshpande R S and J Prachitha (2006), pp. 32–34).

programmes change in rapid succession and results in a cumulative interventionist programme on the part of the state. These are broadly treated as new policy currents. Here only the new additions are accredited and the discontinued programmes along with the experience of failures are put in the trash bin even without recognising their institutional corrective role or vacuum that they may create.

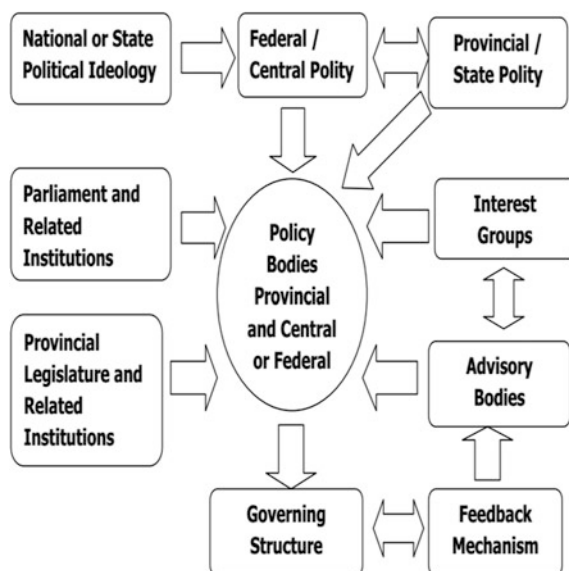
Another relevant policy model tracked from the literature is called the Rationalist Model of Harold Lasswell (Lasswell 1956). This model perceives the policy formulation that goes through six steps.

- i. Recognise a policy problem,
 - ii. Identify the nature of the problem,
 - iii. Call for alternatives,
 - iv. Rank them all on the scale of welfare gain and ease of operation,
 - v. Make predictions about risk and consequences,
 - vi. Come to a decision combining qualitative and quantitative investigation.
- (Deshpande and Prachitha 2006, p. 33)

Lasswell has elaborated this as the best possible way of looking at policymaking (Lasswell 1956). It assumes the stakeholders in the policy arena as mute participants or understood to be participating inherently at their respective levels of stake. Sutton (1999) while writing on policy process rejects any linear policy or “top-down” approach, and she prefers some ordered chaos. The steps usually advocated are: (i) Agenda Setting, (ii) Formulation, (iii) Adoption, (iv) Implementation and (v) Evaluation. These steps are advocated as the path, but the models that are advocated have different goals. Prominently, among these we find rational decision-making receiving largest attention, followed by Conflict Resolution and Artefactual. Miller and McTavish (2013) while reviewing the process of making public policy across the world distinguish across situations and rather argue that “One Hat does not fit all”. In addition to these, there are a few more theoretical constructs, but have little significance in the Indian context. A quick review of these theories suggests that any model of policy will have to be dynamic in its content, as there are rapid flows of different dominating responses from polity and society. Thus, flexibility is an essential component of the structure of any policy. In the beginning, the stakeholders as well as the decision-makers will start with some expectations about the end results from a contemplated policy framework. It gets complicated as the political stakes increase by claiming the credit for success and to assigning the failures. The two phases in policy formulation, namely the phase of identification and that of negotiations with the stakeholders, are conspicuously absent. Coleman et al. (1997) gave a different route of attaining feedback through negotiations between state actors and group of stakeholders. But when the stakeholders become aware of their role, at that time any mature economy witnesses the organisations of stakeholders asking for their rights (Deshpande and Raju 2009, pp. 242–43).

In a generalised policy model, the governing structure is dictated by the feedback mechanism as well as the goals set by the provincial and central policy institutions (Fig. 1). The parliament and related institutions along with the provincial

Fig. 1 A generalised model of policy formulation. *Source* Deshpande and Prachitha (2006, p. 34)



institutions concerned should provide broad directions to the policy. Provincial and the central political ideologies contribute to this process though the legislature debates. The role of advisory bodies and the interest groups (farmers' organisations) is also quite crucial in this endeavour. Jordan et al. (1994) argue this extensively. They state, *"Extensive consultation is an integral part of the management of pressure. Civil servants have stated that it takes less time and effort to agree to have discussions with a group than to refuse them consultation time. This process may be purely cosmetic, but it allows civil servants to present an image of wide participation and over-consultation, rather than under-consultation"* (Jordan et al. 1994, p. 507). In the Indian context, we have some weak evidence about functioning of this model, but there is no established drill in its functioning. It is, however, a common feature in Canada and European Union. Therefore, we argue for a unique "Telescopic Chaos Organising Model" in the Indian situation (Deshpande and Prachitha 2006, pp. 46–47).

3 Overview of India's Agricultural Policymaking and Development

In India, we had sporadic attempts at making agricultural policy, but none of these attempts culminated into any long-term policy document. These include committees set up by Government of India Gregory Committee (1943); Thakurdas Committee (1947); Maitra Committee (1950); Mehta Committee (1957); Venkatappaiah Committee (1966); Bhanu Pratap Singh Committee (1990a) and the Draft

Agricultural Policy Document prepared by Shri Sharad Joshi (Government of India 1990b), and Government of India (1999) under the Prime Ministership of Mr. Deve Gowda and Karnataka Agricultural Policy Resolution, by Government of Karnataka (1995). Most of these documents focused on the current problems, and a little was done to allow long-term thinking. The Agricultural Policy Document of 2000 (Government of India 2000) was the first completed attempt towards formulating a long-term policy for the sector. The NAP (2000) as reported in The Hindu sought to realise by 2020 the following:

“(a) vast untapped growth potential of Indian agriculture; (b) strengthen rural infrastructure to support faster agricultural development; (c) promote value addition; (d) accelerate the growth of agro-business; (e) create employment in rural areas; (f) secure a fair standard of living for the farmers and agricultural workers and their families; (g) discourage migration to urban areas and face the challenges arising out of economic liberalisation and globalisation” (GoI, NAP 2000).

The NAP aimed as stated in the document are to: (a) a growth rate of 4% per annum; (b) efficient use of natural resources and biodiversity; (c) growth with equity; (d) protect from economic liberalisation and globalisation by demand driven growth and catering to domestic markets and maximise agricultural exports; (e) environmentally, technologically and economically sustainable growth. However, the document is rather a collection and compilation of all the niches in the literature and does not attempt any phased or properly directed programme (GoI, NAP 2000).

A holistic approach to the development of the farm sector was brought out by the National Policy for Farmers in 2007. The broad focus areas of the policy as stated in the policy document broadly are:

- i. To improve economic viability by substantially increasing net income of farmers and measuring the progress only through this.
- ii. To protect land, water, biodiversity and genetic resources for sustained increase unprofitability and create economic stake in conservation.
- iii. To develop support services for inputs at affordable prices.
- iv. To strengthen biosecurity and safeguard the livelihood system and provide income security.
- v. To provide appropriate price and trade policy.
- vi. To provide suitable risk management measures with timely compensation.
- vii. To complete the unfinished agenda of land reforms and initiate comprehensive asset and agrarian reforms.
- viii. To mainstream human and gender dimension.
- ix. To pay explicit attention to sustainable livelihood.
- x. To foster community centred food, water and energy security systems in rural India and to ensure nutrition security for children and others.
- xi. To attract and retain youth in farming and processing of farm products.
- xii. To make India a global hub for production and supply of inputs for sustainable agriculture.
- xiii. To restructure the agricultural curriculum and pedagogic methodology to enable graduates in farm sector to become entrepreneurs.

- xiv. To develop a social security system for farmers.
- xv. To provide adequate and appropriate opportunities in non-farm sector.

(GoI, National Policy for Farmers 2007).

Above list provides only a gist of the intentions, but precious little was done to bring these intentions into reality. After a decade from the declaration of the policy, farmers are exactly at the same place. Notwithstanding this, it must be clear that largely our policy statements for the sector emerge from the Five-Year Plan documents and thus the genesis and process can also be traced through these. In the absence of a long-term policy paper, the experience based on the impact on ground gives us a fair idea about the policy directives. Therefore, we plan to review the policy experience over the five decades to understand the direction.

India's agricultural sector is presently at a crossroads with the advent of the forces of new economic policy. The sensitivity of aggregate growth of the economy to the fluctuations in growth trends of agricultural sector is undisputable. Thus, the onus of maintaining a good tempo of growth, provision of food security to the millions below poverty line, contributing to the overall development scenario and participating in the global trade are among the major expectations from the sector. The performance of agricultural sector during the 1990s has not failed these expectations. However, there are quite a few questions of specific nature, which have to be looked into while analysing the performance of the sector. First of all, it is necessary to review the question of sustainability of the process of growth in a medium-term perspective and the food security question in the background of performance during the last five decades. Any such analysis will require a long-term understanding of growth process of the agricultural sector in India. Secondly, the growth performance has to be viewed from two distinct perspectives, namely the resource use and institutional perspective. Thirdly, under the Indian Constitution agriculture is a subject assigned to provincial governments (state governments) for the purpose of policy. Therefore, the policy has to be viewed from the perspective of the states.

Table 1 Phases of development of agriculture sector

Phase	Time period	Specific characteristics
First phase	Pre-independence up to 1947	Problems inherited from the Colonial Rule
Second phase	1947–1966	Food Insecurity Community Development
Third phase	1967–1979	Period heralding the technological change (Green Revolution)
Fourth phase	1980–1990	Two distinct phases marking the fallouts of technological change and environmental debate
Fifth phase	1990–2001	Liberalisation process and its impact on agricultural sector. Complying with the WTO regime
Sixth phase	2001–2007	Adjusting to the WTO norms and making Indian agriculture globally competitive
Seventh phase	2007 onwards	Inclusivity Dominates with trade. Increasing distress

Source Deshpande et al. (2004 and updated)

The analysis of agricultural development in India essentially involves six important phases of development (Table 1). The first phase involves the period prior to independence of the country. This period was marked by the retrogression of the sector and ended by leaving the country with perhaps the world's most refractory land problem (Thorner and Thorner 1962). Quite a few unsurmountable problems were inherited from the colonial rulers. The second phase of development of the agricultural sector covers the initial years after independence, influenced by the indigenous thinking about growth/development strategies (Gandhian perspective) as also the western process of growth borrowed from the experience of the industrialised nations. This phase ended with the drought of the mid-sixties when food security became a prominent issue and acute poverty and meeting the famine conditions were among the major concerns for the planning bodies. By 1975, India not only met the domestic requirement of food but also became an exporter of foodgrains. This was the success of the technological change of the mid-sixties that was commonly known as "Green Revolution". This phase was followed by two distinct phases of growth, namely the immediate fallouts of technological change and the phase of new economic policy.

4 Agricultural Policy—An Experience of Seven Decades

The plan documents over the last five decades made it quite clear that policy for agricultural sector is of prime importance to the plan and the steps taken could be seen from Table 2. One expects a significant shift in the strategy during Tenth Plan. In keeping with this expectation, the Approach Paper to the Tenth Plan makes it clear that *"First, agricultural development must be viewed as a core element of the Plan since growth in this sector is likely to lead to the widest spread of benefits, especially to the rural poor including agricultural labour. Also, since the majority of women workers are engaged in agriculture, investments in this sector have enormous implications for gender equality and must be designed to have maximal impact on this dimension. The first generation of reforms concentrated on reforms in the industrial economy and reforms in the agricultural sector were neglected. This must change in the Tenth Plan"* (Approach Paper to the Tenth Five-Year Plan, GoI 2001).

India's Plan documents provide many ideas and initiatives to bring in development in the agricultural sector. In the process of planned development, we have achieved significant strides in the sector, but the experience of the earlier Plans rarely becomes a background for the policy. During the last three plans, the planning process has been revitalised incorporating specific working groups, drawing on the experience of the experts and circulation of the drafts for discussions. It is interesting that the First Five-Year Plan emphasised organisation of agriculture through a continuous extension process and the community development programme was the instrument. The development philosophy underlying this was to involve participation from below starting at the grass roots. Opening

Table 2 Agricultural policy formulation through five-year plans

Plan period	Major issues and policy thrust
First plan 1951–56	Severe food availability constraints. Maximisation of agricultural production. Making food available to masses. Food distribution network. Nationwide Community Development (CD) Programme Institutions for village development. National extension and community projects skewed land distribution, inefficiency in production and thus land reforms—abolition of intermediaries. Bringing the fallow lands under cultivation and increase in land use efficiency. Tenants to be given the rights to cultivate land
Second plan 1956–61	Concern about low land productivity and thrust on irrigated agriculture. Irrigation development for the rainfed areas. Land reforms enactment of laws. Tenancy reforms and ceiling on holdings. Soil conservation as an important programme. Co-operative Development Institutions, National Extension Service Blocks created. Training and extension work for the technology through Community Development network
Third plan 1961–66	Food security concerns continued to dominate. Technological Change and adoption of improved technology to increase land productivity. Cultivable wasteland to be brought under cultivation. Bringing the lagging regions under mainstream growth. Area development as an approach for development. Intensive Area Development Programme adopted for selected districts. Extension of non-agricultural activities in rural areas. An integrated land policy approach. Soil surveys were taken up
Fourth plan 1969–74	Emphasis on food security continued as minimum dietary requirements to be met. Deep concern about poverty. Regional inequality and correction of regional imbalances. Incentives created for diversion of land towards food crops and enhancing the capacity of such land. Increased emphasis on irrigation and soil conservation in dryland regions and technological change introduced. Higher cropping intensity was the concern. Emergence of agri-price policy. Concern about domination of large holding sizes and low allocative and technical efficiency. Second phase of land reforms with land ceiling acts and consolidation of holding. Encouragement to co-operatives. Institutional changes in credit, agri-extension and training
Fifth plan 1974–79	Twenty point economic programme. Concern to eradicate poverty intensified. Area development strategy continued. Drought prone areas attracted attention. Allocation on drought-prone area development programme, desert area development programmes, and soil conservation was enhanced. New impetus to dry farming. Problems of land degradation land management in irrigated command areas surfaced. Modernisation of irrigation in selected irrigation command areas
Sixth plan 1980–85	Minimum needs programme. Providing clean drinking water, elementary education and basic health facilities. Larger attention to unemployment and under-employment. Target group-specific programmes for poverty alleviation. IRDP, NREP and RLEGP programmes were undertaken for employment and income generation. Under-utilisation of land resources. Drought-prone areas continued to attract attention. Further attention for lagging areas on the backdrop of green revolution. Land and water management under drought-prone area programme in selected districts

(continued)

Table 2 (continued)

Plan period	Major issues and policy thrust
Seventh plan 1985–90	Direct attack on poverty, unemployment and regional imbalances continued. Soil erosion and land degradation surfaced as major issues. Larger share of land was going out of cultivation. Soil and water conservation was needed for averting land degradation. National Watershed Development Programme, Oilseed and Pulses Development Programmes, Wasteland Development Programmes, and long-term view of land management was initiated
Eighth plan 1992–97	Priority for employment generation, strengthening of infrastructure, liberalisation and globalisation in agricultural sector. Trade sector priorities by generating surplus of agricultural commodities for exports. Emphasis on oilseed sector increased. Agro-climatic regional planning approach was incorporated. Productivity enhancement schemes. Horticulture sector to be encouraged. Degradation of land in irrigated command areas attracted attention. People's participation surfaced as major issue in land management at village level. Emphasis on watershed development approach. Soil conservation merged with watershed programmes
Ninth plan 1997–2002	Priority to agricultural sector. Generating adequate productive employment through employment assurance. Renewed assault on poverty, accelerating growth with stable prices, food and nutritional security for vulnerable sections, providing basic needs for environmental sustainability, growth with social justice and equity, foreign trade to be tailored for accelerating growth, boost to agricultural research, development of infrastructure and increasing investment in infrastructure, export-oriented growth and emphasis on horticultural crops for exports. Land degradation increased significantly. Integrating Watershed Development Programme across various components. Rethinking on land reforms. Gap between potentials and actual crop yields need to be bridged. Need for a long-term policy document. Bringing the under-utilised land under cultivation. Management of waste lands. Maintenance of village commons. Decentralised land management system. <i>Panchayati Raj</i> institutions to manage the village lands. Rethinking on land legislation
Tenth plan 2002–2007	Creation of employment; improving pace of growth in agriculture; sustaining demand for labour; employment generation programme to concentrate in diversification of agriculture and agro-processing; land use policy; process-oriented programmes focussing on poor; universalisation of joint forest management or macro-management approach; precision farming; organic farming; wastelands to be brought under economic use; strengthening R&D for slow growth crops
Eleventh plan 2007–2012	Accelerating agricultural growth to 4% per annum; bringing technology to farmers by focussing on strategic research and increasing the accountability of ICAR and SAUs; improving efficiency in investments, increasing systems support, and rationalising subsidies; diversifying while protecting food security concerns; fostering inclusiveness through a group approach; introduction of the Rashtriya Krishi Vikas Yojana (RKVY) for promoting decentralized planning in agriculture

(continued)

Table 2 (continued)

Plan period	Major issues and policy thrust
Twelfth plan 2012–2017	Improving farm viability through securing economies of scale, better market access and returns; availability and dissemination of appropriate technologies depending on quality of research and extent of skill development; improved functioning of markets and more efficient use of natural resources; improved governance for better delivery of services like credit, animal health, seeds, pesticides, fertilizers and farm machinery

Source extracted from various plan documents, Planning Commission, Government of India. These are, however, not exhaustive statements but only indicative of the thrust. Also reported in www.egyankosh.ac.in

paragraph of the approach to the Ninth Plan reiterates our commitment admitting little achievement in the direction. Plan documents and successive appraisal reports stand testimony to our riverine policy (flowing like a river directed by mountainous constraints and flows of successes in terms of streams). It is during the Seventh Plan that a medium-term development perspective was evolved. The aim was “to create, by the year 2000, the conditions for self-sustaining growth in terms of both the capacity to finance internally and the development of technology” (GOI 1985, p. 8). The perspective plan for agriculture documented in the Seventh Plan emphasised on self-sufficiency, employment, technology, extension and bypassed regions (rainfed agriculture) (GOI 1985, p. 15). The emphasis was continued through the Eighth Plan. But in response to the NEP and liberalisation, the Ninth Plan had set the market participation and trade sector as the main diversions.

Over the last five decades we have learnt a good number of lessons in our planning exercise and appraisals of the plan programmes. Objectives have more or less stayed the same and revolved around poverty reduction, empowering poor sections, self-sufficiency and assimilating the bypassed regions and groups. But the instruments to achieve these have significantly changed. These together give varied choice and rich experience in framing policies.

4.1 *Federalism and Agricultural Policy*²

Globally, intervention in agriculture by different levels of government is well documented, so also in India. This is despite the fact that agriculture is a private activity in its content. But there has been a lack of coordination between the Centre and the states to achieve a well-defined set of policy objectives. There have been inconsistent policies in the economy—wide macro-policies such as foreign trade policies, industrial policies on the one hand and agricultural macro-policies on the

²This section is partially based on Deshpande (2013).

other. These have large and offsetting impact on agriculture (Srinivasan 1998). While determining the role of the Central Governments in formulating the agriculture policy, the views of the leaders at the time of independence were of great importance. In a memorandum to the Cabinet during 1947, it was stated that agricultural production policy, price control of agriculture products, the establishment of the central higher technical institutions, food distribution are vital problems and the Central Government should take steps to correct these by setting up of commissions for agriculture and industrial development. It was inherently accepted that the Central Government should have an authority of its own to coordinate agricultural production in the country as a whole and play an increasingly active role in the development of both industry and agriculture (Austin 1966). The objective of the framers of the constitution was to make states, primarily and directly responsible for all matters concerning the development of agriculture and rural poor, and at the same time, the Central Government owning the responsibility to oversee such arrangements. The powers over agriculture and the responsibility for its development were thus ambiguously divided between the Centre and the states. This exercise was quite fragile as the federal inaction in its own sphere can render the policy ineffective, either by the state or by the Centre. No wonder, neither the states nor the Centre could formulate a longstanding agriculture policy. The Twelfth Plan wanted more inclusive growth and its approach paper says *“To achieve inclusiveness in all these dimensions requires multiple interventions, and success depends not only on introducing new policies and government programmes, but on institutional and attitudinal changes brought about, which take time. A comprehensive assessment of outcomes on all these fronts during the Eleventh Plan is not possible at this point, because the data for recent years is still not available. However, available evidence suggests that there have been significant gains on many of these fronts, even though there are shortfalls in some areas on which further work is needed”* (GoI 2011, p. 2).

The functions directly undertaken by the Central Government and the functions that it coordinates may be listed as below:

- Providing financial assistance to the states for their agricultural plans through grants and loans;
- Overall planning and coordination of agricultural development in the country; coordinating state agricultural plans; ensuring the efficient implementation of development plans and their evaluation;
- Providing technical assistance to the states in planning and executing agricultural programmes;
- Assisting the states in ensuring timely supply of agricultural inputs such as pure seeds, fertilisers and pesticides;
- Providing credit; assisting the states in organising marketing, storage and transport facilities;
- Price stabilisation; enforcing incorporation with the states minimum and maximum prices for agriculture produce; regulating interstate trade and movement of the commodities;

- Laying down import and export policies in respect of agricultural requisites and products;
 - Providing cooperation to the states for betterment of extension services to farmers;
 - Coordinating programmes of land use and development; soil conservation and utilisation of water sources;
 - Fundamental and applied research in agriculture, biosciences, agricultural economics, fisheries, home science and nutritional problems;
 - Maintaining the standards of higher education in all agricultural sciences;
 - The administration of external assistance in the agricultural sector.
- (Based on GoI 2011 and Deshpande 2013, p. 158).

Agricultural plans of the states are not built from below, as it is often claimed. There is hardly any consultation either with the Panchayati Raj bodies or farming interests and farmers' bodies. Mostly, it is the Department officials who prepare the plans and these are usually the step-up plans with little innovative approach. Even within the Agriculture Department, there is hardly any machinery that can monitor the policy goals and exercise online corrections. Usually the plans are made at the headquarters, broken into district segments and later in turn split into local plans. The idea of farm plans built in the villages culminating into block-level, district-level and finally state-level plans, has never been practised and possibly may not be practised even after introduction of Article 243 of the Constitution of India. The states are hardly expected to plan realistically keeping in view their constraints and opportunities, and consultation down to the district or other tiers of governance is clearly a distant dream.

5 Farming in the Deccan Plateau: Characteristic Features

Deccan Plateau lies in the southern peninsula of India, marked centrally by a high triangular tableland. The plateau is bounded by two mountain ranges—Eastern and Western Ghats on the east and west coastal plains. The Vindhya and Satpura ranges in the north form its boundaries which separate it from the Gangetic plain. Its average elevation is about 2000 ft sloping towards the east. The principal rivers, Godavari, Krishna and Kaveri, flow eastwards to the Bay of Bengal originating from the Western Ghat. Depending on the geographical conditions, the plateau region can be divided into sub-regions, namely Maharashtra Plateau, Andhra Plateau and Karnataka Plateau. Of these the Karnataka plateau is the highest. The Maharashtra plateau, which is the north-western part, covers the whole of Maharashtra and parts of the states of Gujarat and Madhya Pradesh and is formed of volcanic rocks called the Deccan Trap. The climate in the Deccan Plateau is drier than in the east and the west coasts and is arid.

5.1 *Characteristic Features of Agro-climatic Regions in the Deccan Plateau*

Farming in the Deccan Plateau region is characterised by the peculiar geographic and climatic conditions (Table 3). Eastern and Central Plateaus and Hills regions (Regions VII, VIII) are generally characterised by vast extent of land and water resources with the predominance of subsistence crop. The region also has high proportion of problem soils. Water resource development through completion of ongoing major and medium irrigation projects, sinking of additional borewells to exploit groundwater, measures to conserve and harvest rainwater, introduction of modern agricultural practices and livestock improvement through upgradation of milch cows and buffaloes are some of the important strategies necessary to improve the agricultural sector in the region.

The Western and Southern Plateaus and Hills region have less favourable soil and water resources and low land productivity. Both the regions have experienced low irrigation development. The tanks, which are a major source of irrigation in Southern Plateau and Hill regions, have deteriorated over time reducing their capacity. On the other hand, Western plateau suffers from high soil erosion due to undulating land train and shallow soil covers. Livestock productivity is low in both the regions. Integrated watershed development for rainfed agriculture, renovation of tanks by desilting and groundwater development along with popularisation of water-saving devices such as sprinklers and drip irrigation systems are some of the

Table 3 Selected features of agro-climatic region

Region	Rainfall (mm)	Climate	Soil	Crops
Eastern Plateau and Hills	1271–1369	Moist sub-humid to dry sub-humid	Sandy, red and yellow, red loamy laterite	Paddy, linseed, wheat, jowar, gram, groundnut, maize, niger seed, ragi
Central Plateau and Hills	490–1570	Dry sub-humid, semi-arid to arid	Mixed red and black, red and yellow medium black shallow black, deep black, alluvial grey brown, desert soil	Wheat, guava, jowar, paddy, niger seed, maize, gram, linseed, tur, soybean, rapeseed, bajra and sesamum
Western Plateau and Hills	602–1040	Semi-arid to dry sub-humid	Medium to deep black shallowed red loamy	jowar, bajra, groundnut, cotton, wheat, tur
Southern Plateau and Hills	677–1001	Semi-arid to dry sub-humid	Medium to deep black red loamy coastal alluvium, laterite, red sandy, deltaic alluvium	Jowar, bajra, groundnut, ragi, paddy, cotton, castor seed maize

Source Basu and Guha (1996)

Table 4 Basic performance of agriculture in the states selected

States	Overall performance in agriculture
Andhra Pradesh	The agricultural growth rate was witnessing sharp acceleration throughout the 60s and 70s except for a slight deceleration during 80s. Along with the net sown area the area under foodgrains, especially that of coarse cereals, continuously declined. On the other hand, area under commercial crops like groundnut and sunflower were on the rise. The state has high levels of area under irrigation and the fertiliser use has been increasing tremendously
Gujarat	Agriculture witnessed a positive but low growth rate on the whole with moderately high growth rate of productivity. The extension of wheat and rice technology increased growth and productivity substantially during the 70s but for a stagnation during the 80s owing to the persistent droughts. The Net Sown Area declined continuously in the 80s with a moderate increase in cropping intensity. Coarse cereals like rice and wheat, which dominated the cropping pattern during the 70s, gave way to oilseeds during the 80s recording a decline in the area under coarse cereals. The fertiliser use increased considerably
Karnataka	A medium-to-high growth rate was attained in the agri-sector all through the period also recording very high growth rate in yield, in general. The growth in cropped area has been increasing right from the 70s, primarily because of changes in rainfall and remained reasonably high even during the 80s. The area under foodgrains, especially coarse cereals, declined with a shift towards oil-seeds and sunflower. There has been a tremendous increase in the use of pumpsets and fertiliser consumption
Maharashtra	Wide fluctuations were experienced in the growth of the agri-sector leaping from a negative growth in the 60s to a very high growth in the 70s and further a deceleration during the 80s owing to persistent droughts in the late 80s. Primarily, a higher growth rate occurred in the cropped area and later the 80s witnessed a decline. A decline in area under coarse cereals took place with a shift to oil-seeds especially sunflower. The use of all modern inputs was on the rise

Source Authors' own

important strategies recommended to boost agricultural growth on sustainable basis in these two regions.

This study begins with the premise that any attempt to frame agricultural policy must begin at the state level and there too constructed from below. Essentially, such exercise requires basic understanding at the state level and discussions with the stakeholders that include: policymakers, administrators, farmer leaders, farmers, traders and researchers in the field. As indicated earlier, the discussions were format free and were directed more towards finding out the strengths, weaknesses, opportunities and threats. These were to be located from the standpoint of the concerned state and not in the centralised perspective. Four states from the Deccan Plateau region—Andhra Pradesh, Karnataka, Gujarat and Maharashtra—are chosen for the study (Table 4).

Andhra Pradesh: Andhra Pradesh is one of the states that has scored well in the process of reforms, but mostly in terms of attracting capital investment. But in the process possibly the agricultural sectors took a back seat. The constraints that prevailed before setting in the reform process continued to dog the sector. But if

these are attended, then the agricultural sector of Andhra Pradesh can stand with resilience.

Gujarat: Gujarat is a proverbial dryland area of the country with large deserts spread across the coast. The state also has rainfed crops predominating their cropping pattern not by choice but as an adjustment process. Millets, cereals, pulses and oilseeds are the crops that dominate cropping pattern of this rainfed agricultural region. Incidentally, poverty is densely located in the rainfed regions of the state. One can see the face of acute poverty peeping out of the prosperity of the irrigated regions. The net income flow is depressed mainly because the prices of rainfed millets have always stayed lower than the other crops and the net income flow in real terms of the majority millet growers never crossed above the cost of living index. Therefore, getting proper prices for these crops would be a natural choice for any policy frame, however in order to achieve this one must tap markets outside the domestic economy. Gujarat has been traditionally the business class economies, and they have proved unequivocally their calibre by participating in all types of trade all over the globe. Therefore, it would not be difficult for these two states to participate aggressively in international trade with the commodities or products that they produce. At the same time, one must also note that there is good demand for these commodities in the world market but a large sector of these markets has remained untapped. But all that has to be done in the context of the constraints faced by the two economies in the agricultural sector.

Karnataka: Karnataka is one of the potentially high growth regions of the country. The state has participated aggressively in the process of reforms and agricultural trade. Productivity of major crops in the state has stagnated, but at the same time there are clear trends about increased commercialisation. New crops have entered the farmers' calculus and at the same time changes are taking place in marketing sector. **Maharashtra:** Agricultural sector of the state of Maharashtra has always remained neglected on policy front both due to increased attention attracted by the industrial sector and the natural constraint in the form of large share of drought prone areas in the state. Coupled with the presence of large rainfed steppe the state also has very low share of irrigated area. But still there are a few islands of great promise like sugarcane, grapes, fruits and fruit processing. However, the constraints are formidable.

6 Moving Towards a Policy

Policy has always been a response of the government to the pre-identified constraints. These emerge out of the political and administrative structure prevailing during that time. Policy should be connected across sectors and with the other segments of the economy and above all with the polity, bureaucracy and the outside pressure groups. Policies are interconnected, and therefore, their outcomes cannot be fully explored a priori, but their probable direction of impact can be visualised. Hence, any analysis of policymaking will require understanding of the institutions

involved and in order to analyse the emergence of the situation and the resolution of the cross-purpose implications. One of the important points of discontent and subsequent resolutions is the understanding between the central and the state governments, even keeping aside the other important players for a moment. According to the Indian Constitution, agriculture is in the state list. Nevertheless, there are many facets of the sector extend to central list and Concurrent list. Even being on the state list, the policies pertaining to agriculture are mostly initiated at the Center, sometime after consultation with the state. The only way of handling such a tricky issue is to understand the policy matrix through revealed juxtaposition. (These portions are possibly used in Bombay Chamber of Commerce report from my writing or my lecture delivered at Mumbai).

Therefore, an attempt was made to formulate policy for agricultural sector with active participation of the players at the state level (Deshpande and Prachitha 2006). Among the important interest groups, we included the polity, administrators, bankers, farm leaders, academicians, processors and traders, agricultural labour unions, NGOs engaged in agriculture and rural development activities, and other stakeholders. It was felt necessary that the policy statement emerge out of the felt needs and resource availability at these locales. Such policy statement will emerge, as a matrix having the states on one axis and the felt needs on the other. The cells will speak about the type of initiatives needed for handling the underlying issues. We have also attempted a SWOT analysis in the context of the states.

Plan documents both at Central and State levels should be reviewed. However, the intention here is to go beyond that in terms of preparing a policy document, as prevailing at the current moment, irrespective of the fact whether such policies or explicitly stated or not. The expected output from the first two stages of this exercise will be a systematic policy document for the concerned state. Although interaction with important stakeholders of state agriculture would be useful to get access to prevailing and pre-existing documents and thus to bring out the current policy status during the first two stages of the study, such interaction would be of crucial importance during the third and last stage of this exercise. Obviously, the spirit of this interaction would be positivist (i.e. to bring out the prevailing factual position without any ideological or normative preoccupation) during the first two stages, while it has to be essentially normative in nature (i.e. to bring out the desirable features as per the wishes and aspirations of various stakeholders) during the last stage.

The Andhra Pradesh and Karnataka states have been in the forefront of the economic reforms. A large number of initiatives were taken in these states by their respective governments to actively participate in the development process. However, the crop pattern and the other institutional support need to be put in proper place. Andhra Pradesh and Karnataka are facing the problem of deceleration in the output growth. It is essential to infuse a new technological phase in the agricultural economy of both the states. One of the major constraints in the three states is the presence of vast patches of rainfed agriculture, with meagre irrigation support. There are a number of incomplete irrigation schemes, and the watershed development programme is yet to make the required dent in the traditional

drought-prone pockets of the two states. Land degradation and marginalisation of the size of holding also appear to be the major constraints in addition to the slow pace of capital formation in these two states. In addition to meeting these challenges, market and information support infrastructure are some of the important intervention spots (Deshpande and Malini Tantri 2010).

These two states have shown a better promise in their participation in international trade. The process of strengthening and putting in place the institutional support is ongoing in Karnataka and Andhra Pradesh. It would be essential to build and support the forward and backward linkages for vigorous participation in the international trade. There are a good number of commodities, which have significant demand in the world market, and these commodities could be encouraged on the farms of small and marginal farmers. Horticulture, floriculture, sericulture and other sunrise sectors need to be promoted in order to enhance participation in the international trade (Deshpande and Prachitha 2006).

The Central Indian States located on the Deccan Plateau face continuously infrastructural crunch mainly due to the inadequate investment from the public resources. Maharashtra is quite constrained on the natural resources front due to its low level and variability in rainfall. This is compounded by the fact that despite huge investment, the state could provide protective irrigation only to a small proportion of net cropped area. It is well known that irrigation is quite inadequate to initiate growth drivers. Further, the cropping pattern is predominated with low-value, low-yield crops and gives meagre returns to the farmers. The state resources are largely spent in meeting the exigencies due to drought, and therefore, investment on concentration on infrastructure has been lacking for over several years. In addition to that, funds marked for infrastructure are gobbled up by the metropolitan cities like Bombay, Pune and Nagpur. That leaves very inadequate resources for the rural areas in the state.

Among the infrastructural indicators access to villages, availability of electricity in the villages, marketing facilities, warehouses and cold storages are quite inadequate and far from the normative level of need. In the absence of any forward linkages, there is hardly any incentive created for the farmer to go into new enterprises. Processing of agricultural products, and market chains to reach the international market, is the major inadequacy. There are parts of Maharashtra that have forest areas, and the concern of livelihood of the forest dwellers is one of the top priorities. The quality of life among these forest dwellers is a matter of policy concern. Many of the villages in both regions are not even accessible by road. Therefore, infrastructure should be one of the important moves of growth areas for policy planning.

Gujarat is known for its rainfed character as well as their traditionally acquired business skills. It has large area under severe drought-prone conditions and substantial area under deserts. Irrigation alone could not be the development policy trick Gujarat on two counts. First, there are limitations on availability of water, as well as irrigation potential, and even if irrigation is made available, the irrigated area may inflict negative externalities on the soils of the state. That would pose serious environmental problems. Watershed development and water conservation

programmes are being taken up in both the states. Given the speed and growth rates of these programmes in covering the land mass of the regions, it would take at least three decades to cover the most fragile ecosystems in the state. The cropping pattern of Gujarat is predominated by low-value millets and cereals. Oilseeds and pulses are traditional crops grown in the state. But all have low yields even though the quality of the produce is one of the best in India. Presently, the market conditions are such that the farmers cannot make the maximum out of their marketable surplus. Market margins are quite high, and there is a strong presence of traders from outside the state, who make most of the money. It is quite well known that demand for millets, coarse cereals, oilseeds and pulses in the international market is increasing. Therefore, it would be quite prudent to tap this demand, and the enterprising traders from Gujarat can certainly do that. In addition to tapping the export market, there is a large scope for processing units in the state. That will not only provide opportunities for the farmers to sell their products at a better rate but also employment opportunities to those who have basic skills for working in the processing sector. It is with this focus that we approach the policy frame for the state.

7 State-Wise Constraints and Initiatives Required

The calculus of policymaking requires understanding of five important dimensions for the region in question. First, it is necessary to understand the nexus between resource use and growth, for this full information about the stock of resources and their historical utilisation in the context of growth. Any trends in depletion of resources may vitiate computations based on growth. Second, this is followed by a clear understanding of the historical path of growth and development in the region keeping in view the population that participated in this process over generations and specifically during the preceding few decades. This enriches understanding of a reviewer to locate policy in the correct domain of acceptance and automatically internalises the aspirations of the stakeholders. We must, however, warn that reading of historical trends has to be done carefully keeping in view the negative externalities emerging in the process of growth and measures to avoid such eventualities. Third, the society also provides incisive information for understanding their needs, requirements and calculations for future development. These emerge out of the discussions and writings of the academics, administrators and critics, who have reviewed the material available on the development process of these regions. Such review helps in placing the objective function in the right perspective. Fourth, any process of policymaking requires full understanding of the constraints faced by the economy and these constraints have to emerge from the in situ discussions with the experts from the economy itself. Such discussions provide clear constraints faced by the stakeholders in the sectors and sub-sectors of the region concerned during the earlier phase of development. The policymakers' task is to assimilate these constraints to bring out cutting-edge solutions. Lastly,

one must understand the process of policymaking from a few broad sub-sectors of the concerned economy. Here, we have taken crop economy, land issues, input delivery system, infrastructure (marketing, processing, roads and institutions), horticulture and allied agricultural sector as the major components.

a. *Andhra Pradesh*

Andhra Pradesh is endowed with a wide range of agro-climatic conditions and natural resources conducive for the development of agriculture (Appendix Table 9). It has significant share of irrigated and rich delta lands in the coastal districts. The crop pattern changes in the state have been taking in favour of water-intensive crops and commercialisation (Appendix Table 10). This over-emphasis has posed a threat to the water levels and also the sustainability of agricultural sector. This calls for a policy intervention to regulate the cropping pattern taking into consideration the available resources and the existing conditions. But since it is difficult to dictate cropping pattern directly, a process of incentives/disincentives has to be put in place. Water pricing and water users' associations become quite crucial in this context. The growth of agricultural output in the state was contributed mainly by increase in yields in the 70s (Appendix Table 11; Fig. 2). Further, the increase in yields coupled with a shift from low-value crop to high-value crops was witnessed in the 80s. During the 1990s, the growth was contributed by yields and area had a negative effect. But during this period all prominent crops recorded deceleration in the growth of yields. As it is, the yield levels of these crops are relatively low in the state. For instance, the yield of rice in the state during the year TE 2014-15 was 2.9 tonnes per hectare as against 39.3 tonnes in Punjab, indicating a gap of 36.4 tonnes of ha. The yield gaps point out that there is substantial untapped yield potential in the state and it could be harnessed through proper interventions. The state has a huge advantage for the development of horticultural crops due to varied agro-climatic conditions. In backward region of Telangana and Rayalaseema, low-value millets could be replaced by horticultural crops. The care, however, needs to be taken while promoting horticulture for export, as it poses significant threat to the small and marginal farmers from fluctuations in the world commodity prices. The decline or fluctuations in agricultural prices have huge implications for income and investment capacity of the farmers as well as food security and employment of the poor landless population. In order to protect the poor from these effects, there is a need for better targeting of public distribution system.

Andhra Pradesh is endowed with a wide range of agro-climatic conditions and natural resources conducive for the development of agriculture. It has significant share of irrigated and rich delta lands in the coastal districts, backward and under-developed areas in Telangana, scant rainfall and drought prone areas in Rayalaseema and the hilly areas along the northern borders. The state faces continued threat of cyclones and floods in coastal districts and droughts in the rest of the area. However, the proportion of underutilised land that includes current fallows, other fallows and culturable wastelands is much higher in the state compared to all India average. The existence of higher proportions of under-utilised lands and

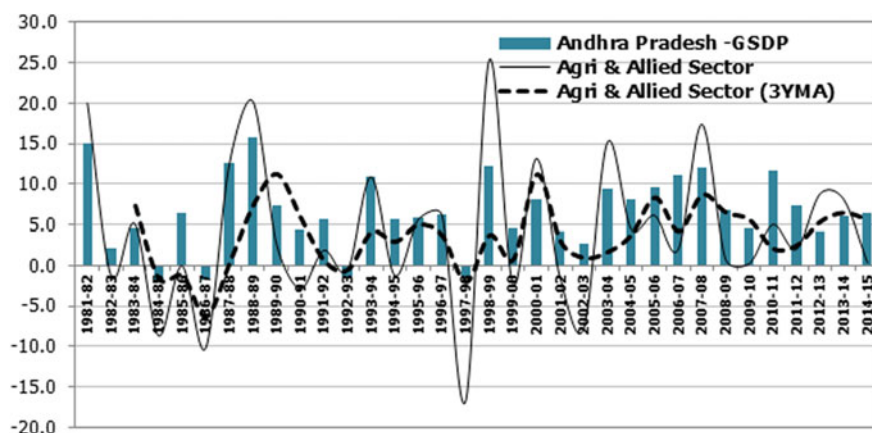


Fig. 2 Growth performance of agricultural sector and Andhra Pradesh economy during last four decades (at 2004–05 Base year prices). *Source* figures based upon various issues of state domestic products, CSO, New Delhi: Government of India

the increase in fallow lands is the most prominent constraint. Added to this, land degradation due to soil erosion, salinity, alkalinity and drainage problems complicates the issue. The existence of large chunk of under-utilised lands could be turned into a potential for agricultural development, and these lands if brought under plough with suitable policy interventions will provide livelihood support to many. Policy interventions are also needed for arresting further land degradation. Although there has been a continuous increase in the area under irrigation in the state over the last fifty years, rainfed agriculture still prevails in more than 60% of cultivated land. The minor irrigation programmes of the Government of India and NABARD was implemented aggressively in the state. It contributed significantly to the increase in groundwater irrigation but the exploitation of groundwater at a faster rate is now causing concern. Thus, there is an urgent need to improve the efficiency in the water use through new methods and also by desilting the minor irrigation tanks.

Low and erratic rainfall is a major impediment to the development of rainfed agriculture in the state. The frequency of occurrence of droughts in the state is very high and even now there is no long-term policy to deal with that. During the last 50 years, there were 12 drought years. For the development of rainfed agriculture, watershed management is the key approach. This involves a development package that includes creation of water harvesting structures, crop diversification in favour of less water-intensive crops and horticultural crops, livestock and fisheries development. This calls for government interventions on the lines of promoting people's participation in watershed management by establishing Farmers' Associations for Watershed Management like the Water Users Associations functioning in the surface irrigated areas.

Significantly, high variations are observed in the use of fertilisers across the irrigated and dry regions and within regions across crop varieties. These variations are due to excess use of fertilisers (more than the recommended dose) in some areas on some crops and deficient use in other regions and crops. In addition to this, there exists an imbalance in the ratio in which N, P and K are used. Although pesticide consumption is relatively higher in Andhra Pradesh, it has been declining over time with the promotion of Integrated Pest Management (IPM) and Integrated Disease Management (IDM) methods.

There has been a significant improvement over time, in the access to organised sources of credit to the farmers; yet, there exists a huge gap between demand and supply. Access to credit has been one of the major problems so also the interest rates and availability. The rates of interest charged by moneylenders are very high. During the process of reforms in the 1990s, there is a virtual breakdown of the extension machinery and decline in the access to institutional sources of credit. As a result, the small and marginal farmers are becoming increasingly dependent upon private traders for credit and extension services and often become victims of exploitation by unscrupulous traders and moneylenders interested in selling spurious materials, like pesticides. It will be a positive step to streamline the extension machinery.

The state intervention in the markets is quite visible in the product market. It appears that the product markets are functioning well, though the available market infrastructure is not adequate in the sense that each market has to cover wide area-handling large quantities of commodities with poor road and transport facilities. Also, the weighing machines used in the markets are of traditional type leaving the farmers complaining of under weighing of the product. The electronic weighing machines have not been introduced.

In the input market, private sector is playing a dominant role. About 90% of the seeds of HYV, fertilisers and plant protection chemicals, farm implements and machinery are being supplied to the farmers through private agencies. Seeds of HYV and agro-chemicals are supplied only to a limited extent by APSCDC and Agro-Industries Corporation. Most of the seed processing units are in the private sector. Further cold chains for storage of fruits and vegetables are also in the hands of private sector. Studies show that there are severe imperfections in the input markets and farmers are often exploited.

Present liberalisation and globalisation policies and W.T.O. are expected to promote exports and gain from trade. An exercise was carried out in the state to understand the competitiveness of crops and activities. Rice and pulse have been among the traditional crops that give significant competitive advantage to the state. The state has an advantage in marine fishing and aquaculture in coastal Andhra and horticulture in Telangana and Rayalaseema regions. The state can gain through the export of these products, though there are certain limitations which have to be dealt with effectively at policy level.

Andhra Pradesh has an advantage for the development of horticultural crops due to its varied agro-climatic conditions, especially in Telangana and Rayalaseema regions, where the low-value millets could be replaced by horticultural crops.

Promoting horticulture, for export, through change in cropping pattern, may have an adverse effect on the small and marginal farmers. As the horticulture crops are less labour intensive, it may cause decline in employment and erosion of wages of the landless agricultural labourers. A shift to horticultural crops may also cause decline in foodgrain production and increase in further market dependence and food insecurity. In order to protect the poor from these effects, there is a need for better targeting of public distribution system.

The need of the hour is to increase the incomes of the farmers. Given the small size of holding, it cannot be achieved merely through increase in crop yields and production. What is required is gainful employment in the activities allied to agriculture such as dairying, poultry, piggy, sheep farming, fish culture, bee culture, sericulture and mushroom culture. Andhra Pradesh has an advantage in the sectors of animal husbandry and dairying, fisheries and forestry, and it will be prudent to utilise these comparative advantages.

Andhra Pradesh has a great potential for harvesting marine fisheries and development of inland fisheries with a coastline of 974 km and with an area of 2.5 lakh hectares under inland fisheries. A number of programmes and schemes have been in operation in the state for the development of both marine and inland fisheries. There has been a drastic increase in the catch of marine fisheries and production of inland fisheries in the state. Many studies have shown that there is a vast unexploited potential in marine fisheries. It can be exploited only through the expansion in large-scale mechanized fishing, but a large number of fishermen are operating only through the traditional fishing crafts whose area of operation is low. Also, the mechanized fishing operations reduce the catch of traditional fishing. Thus, there is a need to increase the coverage by giving training to fishermen on modern techniques of fishing and support them in acquiring mechanized fishing boats. Another constraint operating in the development of marine fisheries sector is marketing. In fish marketing, role of middleman is quite strong and price spread is larger than that for any other crop products or livestock products. There is no organised marketing for fish, in the state, and the marketing infrastructure is very poor. In addition to the marketing problems, there are some constraints that the development of inland fisheries is experiencing. These are: (i) inappropriate use of technology and the consequent problem of the occurrence of diseases to fish and prawn and (ii) groundwater pollution. Inland fish culture also has an adverse effect on wage earning of small and marginal farmers, and agricultural labourers as fish and prawn cultures are less labour intensive than crop farming thus causing a reduction in employment.

b. *Gujarat*

Land is the essential base of agricultural sector in the state. Increased area under cultivation was major source of increased agricultural production in the pre-Green Revolution period, which almost reached its limits. Increasing cropping intensity is not feasible due to constraints in moisture availability. Increased irrigation can only bring about this change. Increased pressure on land resulted in fall in average size of operational holding from 4.11 to 2.93 in Gujarat by 1990–91. One thing is

interesting in this state: small and marginal farmers are not many, but the viability threshold is quite high up. The number of cultivators and labourers has been increasing, and the labourers are increasing at a faster rate than cultivators. That indicates increased pressure on the crop economy. But this is also accompanied by the stagnating yield rates of the major crops in the region. Technological innovations for these crops are not very supportive.

Irrigation is a major constraint of Gujarat (Appendix Table 9). Per capita availability of water in Gujarat is only 40% that of India's average. The position is dismal in north Gujarat, Saurashtra and Kutch. In this state, main reason for imbalance is inadequate water and lack of irrigation schemes. In short, system inadequacies, physical, institutional and financial constraints are all operating simultaneously and creating obstacles in improving irrigation water management. The overall irrigation potential is estimated at 63 lakh hectares, but by 1997–98, the potential created stood only at about 36 lakh hectares. Inefficiencies in irrigation management inhibit this further. Fertiliser is the most strategic input of modern agriculture. Fertiliser use was very low in Gujarat in 1960–61 (8.5 kg/ha per NPK), but by 2000–01, it reached 71 kg/ha. of NPK. If we compare this in 1997–98, then it shows declining trend. Although Gujarat's aggregate performance is satisfactory, there are high inter-district and inter-taluk variations in input use and there is fairly high level of wastages.

Adequacy and access to credit is one of the major bottlenecks. Commercial as well as cooperative credit system is not properly organised and executed to provide easy access. First, there are number of institutions and most of them are unable to reach a large number of rural people. These institutions failed to provide the required support to high-value, high-tech agriculture and non-crop agricultural as also non-agricultural activities. Besides their linkages with support systems of extension, research input supplies, marketing and processing have been weak. The legal and regulatory mechanisms are also found to be inadequate, and these adversely affect the financial and organisational health of the rural financial institutions.

Gujarat has a seaport at Kandla, and this helps to manage international trade. However, as far as agricultural commodities are concerned the port is put to least use. Roads, railways and extension are the major lacunae. Presently marketing facilities are not really a problem, but getting the proper price for the crops had been one of the major issues. Gujarat farmers being innovative are tapping even the distant markets, and therefore, warehouses and storage capacity at market yard have become the main issues. Irregularity of rainfall and insufficient irrigation are basic forces behind the weaknesses of agriculture overall growth of sector in Gujarat (Fig. 3). The reason for this is the insufficient research and communication efforts on the part of government and difficulties in marketing the tree and non-timber products. It is required that marketing and production activities are properly organized. Tribals in Gujarat are closely associated with forests and the cause for concern is that conflicts prevail between the forest department and the tribals.

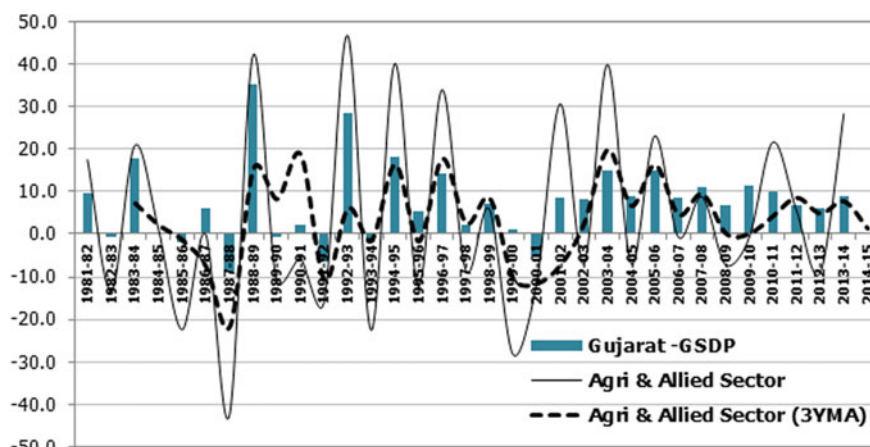


Fig. 3 Growth performance of agricultural sector and Gujarat Economy during last four decades (at 2004–05 Base year prices). *Source* figures based upon various issues of state domestic products, CSO, New Delhi: Government of India

Animal husbandry is another important allied agricultural activity in Gujarat. The major constraints related to animal husbandry are stated below:

- Present availability of green and dry fodder as also concentrates is very low.
- Due to unplanned development of villages and towns the availability of village pastures has shrunk and has given rise to the problem for cattle and buffalo rearing for the households mainly depending on this source.
- The quality of roughages of straw is low.
- The state suffers from drought of different degrees of severity every one or two years, during which fodder shortage gets worsened.

Gujarat has a long coastline, and fisheries have been a traditional occupation of many communities. In order to take full benefit of the situation, a lot of improvement will have to be made in respect of landing and berthing facilities, fishing harbours, terminal divisions and supportive facilities. In addition to these, attention will be needed towards boat building, processing ice, cold storages, dry and fish meal plants. The terminal and intermediate markets are situated far away from the scattered landing sites. Thus, a weak market link between landing sites and the terminals makes it difficult for producers to fetch a reasonable price for their products. This infrastructural bottleneck has been one of the hindrances in the progress.

c. *Karnataka*

There are three major impediments to growth in the agricultural sector of Karnataka, viz. the lagging Northern Karnataka regions due to large share of drought-prone area coupled with low private capital investment. Regional disparities, therefore, became quite sharp in the face of failure of initial investments in

these regions. Second, the agricultural sector of Karnataka is also facing impediments in the form of growth initiatives in the post-harvest processing as well as value additions in the production process. These impediments are emboldened by regional imbalances, frequent drought conditions and inefficiency in managing irrigated agriculture. Third, the institutional bottlenecks in the form of generation and transfer of technology to the rainfed areas have caused significant stagnation, and this is aggravated by the falling total factor productivity. The future vision, therefore, would require concerted efforts towards removing the regional imbalances in growth by promoting private as well as public initiatives in value addition focussed on the post-harvest sector, and picking up growth leads from the allied agricultural sector to participate proactively in domestic and world trade (Deshpande 2005).

In addition to meeting the above constraints, it is observed that the crop production sector faces alternative phases of growth and stagnation (Fig. 4). In the near future, the state is likely to confront a technological bottleneck in the coming decade as the yield rates have been reaching close to the technological optima. That would require placement of growth in the non-food crop sector, without neglecting the food security issues. Oilseeds, pulses, sugarcane, maize and other millets are the crops that need to be attended to on technological as well as trade fronts.

Issues pertaining to land take procedures over other issues in the state. There are quite a few problems concerning the land use policy and land reforms in the state. There exists a significant share of utilisable but wasted land resources that need to be brought under economic cultivation, and the process of urbanisation has to be carefully monitored. Marginalisation of the size of holding and increasing number of the small and marginal farmers is a problem that puts farming as non-viable enterprise. The issue needs to be attended with a fresh process of reforms. It can either be done by consolidating the small patches of holdings but probably better achieved through formation of informal cooperative groups among the small and marginal farmers in the production process. This has to be done for selected crops and crop groups by developing proper market chains or forward markets. Land augmentation by private irrigation could have been one of the strategies; however, in the present situation of over-exploitation of groundwater and limited availability of surface water resources, it will not be a prudent strategy to emphasise irrigation alone.

Rainfed agriculture is the sector in which growth initiatives should be located in the coming decade. This is justified on two counts, viz. efficiency of the production process and equity across region. Returns to investment in watershed development specifically under rainfed conditions are quite encouraging, and therefore, the future strategy has to be guided by investment towards selective watershed development projects specifically under rainfed conditions. It will be more pragmatic to transfer the resources towards enhancing productivity in rainfed agriculture by undertaking selective watershed development programme. This will also establish indirectly equity between the high-growth irrigated patches across the state and lagging rainfed regions specifically in the northern Karnataka. Watershed development strategy, however, is recommended to be selective in its approach, and the areas to

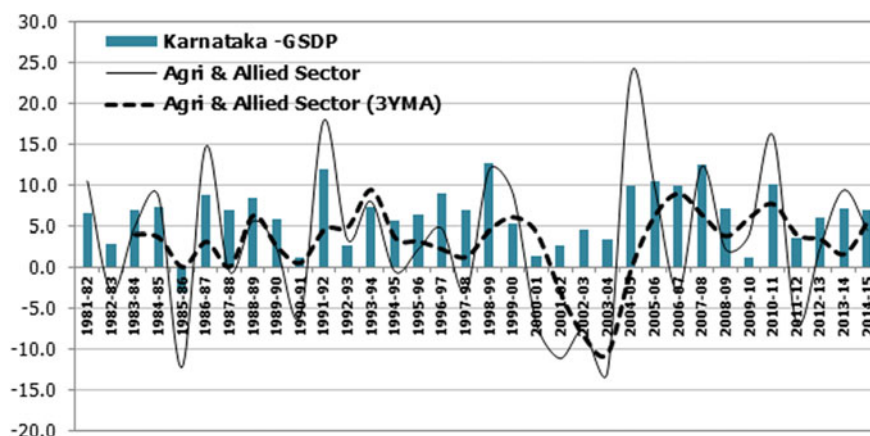


Fig. 4 Growth performance of agricultural sector and Karnataka Economy during last four Decades (at 2004–05 Base year prices). *Source* figures based upon various issues of state domestic products, CSO, New Delhi: Government of India

be focussed during the next decade have been indicated. Naturally, forestry is the major component in the natural resources management sector along with the watershed development. Forestry resources have to be utilised economically in order to supplement and enhance the aggregate agricultural growth. The investment portfolio for the forestry sector is indicated.

Under the input sector, the gap between supply and demand for seeds and fertilisers has been strongly felt. The presence of private sector in the production and distribution of seeds is a welcome feature; however, even with the requirements not met in terms of quality of seeds, typology of seeds and the quantum but probably the current initiatives on biotechnology will help in improving this situation in the coming decade. Integrated Pest Management (IPM) and Integrated Nutrition Management (INM) are the two major planks to deal with increased use of pesticides and managing the soil nutrition capabilities. These sectors have to be emphasised in terms of investment as well as extension network. The best way to achieve this is to strengthen the Krishi Vigyan Kendras and the Rayat Sampark Kendras and that has been recommended by three commissions analysing the constraints of agricultural sector.

Another important bottleneck identified through our analysis is the availability of agricultural credit. Unfortunately, credit has not been as supportive to agricultural sector as it had been during the seventies and the eighties. No doubt, the quantum of credit flow has increased, but the access has been difficult. More than that the demand for credit has increased, but the supply is not meeting the targets. This has a telling effect on capital formation and lack of infrastructure in the sector. It needs to be underscored that credit institutions have not been meeting immediate requirements stipulated even by the Reserve Bank for providing the credit to the agricultural sector. Similarly, investment in research and development and availability

of material for extension are also severely limited. These sectors are the deserving candidates for additional investment in the coming decade.

The availability of funds from public sources to initiate agricultural and rural development schemes in the fragile regions itself is a challenge. Therefore, it is required that private partnership initiatives could be encouraged either in terms of group contract farming or bulk forward purchase and trade facilities. The requirement of investment in the backward regions can also be met by siphoning the excess savings from well-endowed regions to the deserving backward areas. This can be achieved by floating low interest investment bonds to be purchased by the private contributors from developed regions of the state. Commodity Development Boards could be specially set up to guide the process of development of the selected commodities in specified regions.

Agricultural sector in Karnataka has also been severely constrained on the front of infrastructure specifically the road connectivity, markets, credit and investment in research and development. It has been noted that the density of markets is quite insufficient to deal with the requirements of increased production of various commodities. In addition to this, the process of globalisation has put forth a fresh challenge in the form of integrating domestic marketing system with the world markets. The marketing infrastructure in Karnataka needs to be readied for integrating with the global market and to participate effectively in the international trade. This is feasible only with the initiatives from private sector supported by state initiatives developing in the marketing infrastructure. Model APMC Act, if adopted, may ease a few problems of markets, but still the transfer of commodities to markets is impacted by quality of roads and other infrastructure.

Horticulture, floriculture, sericulture and fisheries are the allied agricultural activities which have been emerging very fast as new growth drivers are contributing to the aggregate economic growth (Appendix Table 10). These four sectors have opened up the new avenues for proactive participation in international trade. Karnataka's participation in international trade under horticulture, floriculture, sericulture and fisheries is quite laudable and increasing. However, this is constrained by investment, availability of infrastructure and proper exposure to the information about trends in the international market. Specific focus by specialised institutions (like KAPPEC) needs to be emphasised to promote the participation of these four vanguards of trade in the international sector.

d. *Maharashtra*

Despite various initiatives taken by the government to accelerate the growth of agriculture, the performance of agricultural sector in the state is not very impressive (Fig. 5) as compared to many states in India, owing to many constraints. The contribution of agricultural sector to the state's income has gone down from about 34% in 1960–61 to 16% in 2001–02 because of good industrial growth but also due to poor agricultural performance. But, on the other hand, the percentage of population relying on agriculture has declined only marginally between 1960–61 and 2000–01. There are quite a few factors, which limit the growth of agriculture over the years in the state.

One of the important reasons for the stunted growth of agriculture in Maharashtra state is the predominant of low-value crops in the cropping pattern (Appendix table 9). Though the cropping pattern has been shifting in favour of high-value crops in the state in the recent years as compared to the seventies and the eighties, this shift is not very impressive as compared to the national-level changes. Therefore, greater focus needs to be given to accelerate the availability of irrigation and moisture (through watershed development programme) in order to shift the crop pattern in favour high-value crops.

Over 83% of cropped area is cultivated under rainfed conditions in the state. Therefore, monsoon rain plays a critical role in the development of agriculture. Though the average rainfall of the state is higher than the national average, nearly one-third area of the state falls under rain-shadow region where rain is scanty as well as erratic. Meagre share of irrigation coupled with the erratic rainfall pattern often discourage the farmers to take up intensive cropping in many regions in the state.

Over-exploitation of groundwater is another important issue associated with the irrigation development of Maharashtra state. As per CWC data, the state has utilised about 30% of its groundwater irrigation potential (25.47 BCM per year), but the exploitation is high in the regions that have larger stress on groundwater resources. Moreover, these are the regions that provided growth initiatives. Unless steps are taken to reduce the exploitation of groundwater through legal, institutional and technological options, this will have serious implications on the future growth of agriculture in the state. Even the WDP have had very limited success in this respect as only 15.47% of potential area has been treated through WDPs since 1983, the year in which the state started implementing WDPs. The average treated area from 1983 to 2002 comes to only 0.166 mha per year, and the state has one of the largest targets to be treated under watershed. Substantial variation in the use of inputs (irrigation, fertilisers and HYVs) across different regions in the state is also one of the constraints for agricultural growth. The use of both fertilisers and HYVs significantly varies across regions in Maharashtra. Low use and inefficient application of fertilisers (N P K ratio) affected the productivity of crops and thereby growth in agriculture. It is essential to have an effective extension network and educate the farmers of the externalities of improper fertiliser use.

In addition to the above-mentioned constraints, farmers of Maharashtra state have been facing inadequate marketing and post-harvesting facilities over the last several years. Though the level of spread of regulated markets is relatively good in Maharashtra, it could not solve the problems of huge market margins faced by the farmers. Due to inadequate facilities in the market yard, the exploitation of farmers by middlemen and post-harvest losses to farmers has been continuing. As mentioned in the National Agricultural Policy 2000, the weekly markets under the direct control of Panchayati Raj institutions should be encouraged and strengthened. Producers' markets on the lines of "Ryatu Bazars" (as has been followed in Andhra Pradesh, Karnataka and Tamil Nadu) should be promoted across different districts in Maharashtra to reduce the exploitation of farmers by middlemen. In addition to

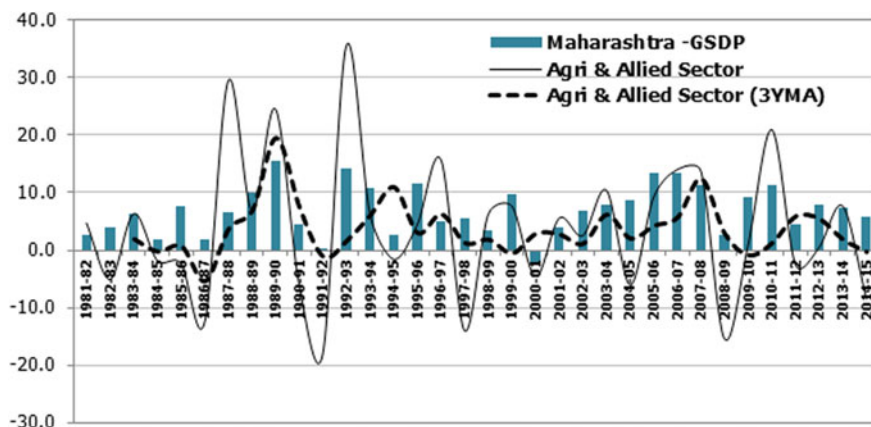


Fig. 5 Growth performance of agricultural sector and Maharashtra Economy during last four Decades (at 2004–05 Base year prices). *Source* figures based upon various issues of state domestic products, CSO, New Delhi: Government of India

marketing infrastructure, the state also lacks in other infrastructural facilities like road connectivity and extension network.

Though significant growth has taken place in area under horticultural crops in the state between 1980–81 and 1997–98, the horticulture sector is not free from problems. The major impediments that may restrict the growth of horticultural sector in Maharashtra are:

- Less diversification of crops in non-traditional regions and lower acceptance rate.
- Inefficient use of land and water resources.
- Deceleration in area and productivity of food as also fruit crops.
- Poor post harvesting infrastructure facilities.

Despite significant potential for horticulture crops in different regions in Maharashtra, the growth in area under horticulture crops in non-traditional districts is not quite expected. For instance, horticultural crops have been traditionally and also predominantly cultivated in districts such as Ratnagiri, Nasik, Jalgaon, Ahmednagar, Pune, Solapur, Satara, Amravati and Nagpur. These nine districts accounted for over 57% of the total area under horticultural crops in the state during 1966–67, and the same districts also accounted for the same share (nearly 56%) in 1997–98 as well indicating hardly any spread in the non-traditional area.

8 Conclusions

Policymaking in India has never been a serious academic concern for all the seven decades. There were no departments in the Government dealing with policies, and largely the policies were falling in the “Chaos Response Model”. Even in the academic institution public policy was not even discussed and the management institutions were no exceptions. It is only in the last decade that there have been some discussions on making of policies and the phrase “Policy Statement” made appearances in policy documents. The exercise that we have carried out here in the case of four states demonstrates the mechanism of making an agricultural policy for sustainable agriculture. We chose four states from Central India that have specific issues, seemingly of the same nature but that call for differential treatment in the policy.

The states of Andhra Pradesh and Karnataka have been in the forefront of the economic reforms. A large number of initiatives were taken in these states by their respective governments to actively participate in the development process. However, the crop pattern as well as the other institutional support needs to be put in proper place. Both the states have participated aggressively in the process of reforms and agricultural trade and scored well in terms of attracting capital investment. Karnataka, on the other hand, potentially high growth regions of the country has. The states show clear signs of increasing commercialisation as new crops entering in the farmers’ calculus, and at the same time, changes are taking place in marketing sector. These states, however, are facing the problem of deceleration in the output growth due to stagnation in the yield of major crops. It is essential to infuse a new technological phase in the agricultural economy of both the states. One of the major constraints in the three states is the presence of vast patches of rainfed agriculture, with meagre irrigation support. There are a number of incomplete irrigation schemes, and the watershed development programme is yet to make the required dent in the traditional drought-prone pockets of the two states. Land degradation and marginalisation of the size of holding also appear to be the major constraints in addition to the slow pace of capital formation in these two states. In addition to meeting these challenges, market as well as information support infrastructure are some of the important intervention spots. Degradation of land and overexploitation of groundwater irrigation have been the common problems of the states, and these need to be tackled on a priority basis. The constraints that prevailed before setting in the reform process continued to dog the sector. But if these are attended, then the agricultural sector in these states can stand with resilience (Government of Karnataka 2006).

These two states have shown a better promise in their participation in international trade. The process of strengthening and putting in place the institutional support is ongoing in Karnataka and Andhra Pradesh. It would be essential to build and support the forward and backward linkages for vigorous participation in the international trade. There are a good number of commodities, which have significant demand in the world market, and these commodities could be encouraged on the farms of small and marginal farmers. Horticulture, floriculture, sericulture and

other sunrise sectors need to be promoted in order to enhance participation in the international trade.

The Central Indian states located on the Deccan Plateau face continuously infrastructural crunch mainly due to the inadequate investment from the public resources. The agricultural sector in Maharashtra and Gujarat has always remained neglected on policy front both due to increased attention attracted by the industrial sector and the natural constraint in the form of large share of drought prone areas in the state. The states are quite constrained on the natural resources front due to its low level and variability in rainfall. Incidentally, poverty is densely located in the rainfed regions of the state. One can see the face of acute poverty peeping out of the prosperity of the irrigated regions. The net income flow is depressed mainly because the prices of rainfed millets have always stayed lower than the other crops and the net income flow in real terms of the majority millet growers never crossed above the cost of living index. Presently, the market conditions are such that the farmers cannot make the maximum out of their marketable surplus. Market margins are quite high, and there is a strong presence of traders from outside the state, who make most of the money. It is quite well known that demand for millets, coarse cereals, oilseeds and pulses in the international market is increasing. Therefore, getting proper prices for these crops would be a natural choice for any policy frame; however, in order to achieve this one must tap markets outside the domestic economy. It would be quite prudent to tap this demand, and the enterprising traders from Gujarat can certainly do that. In addition to tapping the export market, there is a large scope for processing units in the state. That will not only provide opportunities for the farmers to sell their products at a better rate but also employment opportunities to those who have basic skills for working in the processing sector. It is with this focus that we approach the policy frame for the state.

The problems of agriculture in Maharashtra are compounded by the fact that despite huge investment, the state could provide protective irrigation only to a small proportion of net cropped area. It is well known that irrigation is quite inadequate to initiate growth drivers. Further, the cropping pattern is predominated with low-value, low-yield crops and gives meagre returns to the farmers. The state resources are largely spent in meeting the exigencies due to drought, and therefore, investment on concentration on infrastructure has been lacking for over several years. In addition to that, funds marked for infrastructure are gobbled up by the metropolitan cities like Bombay, Pune and Nagpur. That leaves very inadequate resources for the rural areas in the state. Access to villages, availability of electricity in the villages, marketing facilities, warehouses and cold storages are quite inadequate and far from the normative level of need. In the absence of any forward linkages, there is hardly any incentive created for the farmer to go into new enterprises. Moreover, processing of agricultural products and market chains to reach the international market are inadequate. There are a few islands of great promise like sugarcane, grapes, fruits and fruit processing on which state can build its growth momentum. These can be done by investing into infrastructure and making it one of the important drivers of growth for policy planning (Tables 5, 6, 7 and 8).

Table 5 Constraints and policy initiatives: Andhra Pradesh

Area of concern	Initiatives required
<i>Crop economy</i> • Lower level of crop yields and the deceleration in the growth of yields in the 1990s. Decline in the rate of growth of total factor productivity • Increasing land degradation, Large size of under-utilised lands and its growth over time. Fragmentation of holdings and decline in the size of holdings • Inadequate irrigation facilities with the existence of untapped potential and over exploitation of groundwater resources • Crop diversification in favour capital-intensive high-valued crops • Excess and imbalanced use of fertilizer and pesticides. Supply of adulterated pesticides • Access to institutional sources of credit and higher dependence on non-institutional sources • Inadequate market infrastructure and low coverage of input markets • Decline in the investment in agriculture and its share in NSDP from agriculture	• Acceleration in the growth through area and yield expansion. Suggest area-specific crop pattern basing on the resource availability in the region and less capital-intensive crops in resource poor areas • Promote rice growing only in the Kharif and growing of I.D crops like groundnut, sunflower, soybean, gingelly, pulses and vegetables during rabi where irrigation water is limited in the irrigated areas, where no other crop than rice can be grown • Reduction in the fallow lands and bringing culturable wastelands under crop farming and fish farming • Renovate tanks especially in the Telangana and Rayalaseema regions, through the integration of rural employment programmes • Watershed development through public investments for creating new structures and maintenance of the existing structure through people's participation • Promote aquaculture on the coastal wastelands through the participation of fishermen and other weaker sections • To regulate the spread of aquaculture in the paddy-growing areas • Complete immediately the Priyadarshini Jurala project, Sriramsagar project, Kalyanivagu scheme under Nizamsagar, Sangeetham scheme under Telugu ganga project, A. Madhava Reddy canal project, modernization of Cuddapah—Kurnool canal project, modernization of Thungabhadra High Level canal project of the Rayalaseema region • Regulate the exploitation of groundwater. Promote micro-irrigation like drip, sprinkler and sub-surface pipe irrigation • Promoting • To promote crop systems involving horticultural crops, coarse cereal crops, and animal husbandry and dairying in the un-irrigated areas

(continued)

Table 5 (continued)

Area of concern	Initiatives required
<i>Horticulture</i> • Very high yield gap compared to demonstration plots • Inadequate infrastructural facilities for post harvest operations	• To increase cold storage facilities and the other related infrastructure like transport vehicles, handling equipment. Promote the development of agro-based industries in the rural areas • Development of skill of the people in agro-processing and handling of the products • To develop the entrepreneurship for agro-based industries by establishing an institution like IRMA in Anand
<i>Livestock and dairy development</i> • Low efficiency of work and milch animals, goats and sheep • Lack of suitable product diversification and handling of the product to tap the global market for milk and milk products	• Improving the efficiency through reduction in the size of work animals and improvement in feeding and management • To raise fodder on the wastelands using appropriate technology • Further upgradation of animals through cross-breeding programme and improving feeding and management practices • Selection of appropriate breeds and on the scientific feeding and management practices • Strengthen the cross breeding programmes of the government • Protect the grazing lands and regulate the grazing on these lands • To promote fodder cultivation in the water logging areas and on other wastelands • Establishment of units producing livestock products in the private sector along with the co-operative sector. R&D in handling of milk at the farmer level, suitable to local conditions. Improving marketing facilities • To bring livestock marketing under regulated marketing Act and reduce the middlemen exploitation of the shepherds
<i>Fisheries</i> • Low exploitation of marine fisheries • Exploitation by middlemen in marketing • Low efficiency and attack of diseases in Inland fisheries • Conversion of paddy fields into fish/shrimp ponds and their adverse effect on weaker sections	• Implementation of the programmes in operation for marine fishing • Increase the coverage of the scheme for providing mechanized fishing crafts • Create the market infrastructure and regulate the operations of traders through proper market management • Upgrade the technology for processing, handling and storage of fish • Provide the training to the fishermen to handle and process the fish on international standards to increase the share in global market

(continued)

Table 5 (continued)

Area of concern	Initiatives required
<i>Forestry</i> • Inadequate forest cover and fast deforestation • Deterioration in the livelihoods of tribals, who depend more on NTFP's	• Regulate the activities of the private traders involved in export business. Regulate the conversion of paddy fields into fishponds • Protection of the Forests and Improvement through social forestry. For this strengthen the effectiveness of the implementation of J. F.M. Programme • Train the tribals on scientific methods of collection so that the forest is not destroyed • Promote co-operative marketing eliminating the private traders/moneylender traders • Promote value addition and processing of NTFP for which there is an export demand of the products by co-operatives for better realisation of price

Source AERC Report, Andhra Pradesh

Table 6 Constraints and policy initiatives: Karnataka

Concerns	Initiatives suggested
<i>Crop economy</i> • Stagnated crop productivity in most of the crops. Insignificant R&D in coarse cereals • Large-scale land degradation and marginalisation of holdings. Prevalence of informal tenancy • Large areas under drought-prone conditions. Drought sets back the clock of development in northern Karnataka, twice in every five years • Crop diversification in favour capital-intensive high-valued crops • Underdeveloped credit market • Inadequate market infrastructure and imperfections in the market • Decelerating capital formation in agriculture	• Acceleration in the growth through area and yield expansion. Crop planning based on the resource availability in the region. Specific programmes for coarse cereals and millets • Concentrated R&D efforts for groundnut, sunflower, soybean, onion, tur, moong and urad and vegetables in northern Karnataka. Fruits and vegetables in south and coastal region • Tank rehabilitation and groundwater use regulation act • Integrate all Watershed development programmes and revisit their effectiveness • Complete the ongoing irrigation projects with one time budgetary support • Promote aquaculture in the coastal and malnad regions • Introduce and popularise micro-irrigation like drip, sprinkler and sub-surface pipe irrigation • Crop systems involving horticultural crops, coarse cereal crops, and animal husbandry and dairying in the northern drought-prone region

(continued)

Table 6 (continued)

Concerns	Initiatives suggested
	• Implement model APMC act and promote contract farming • Rejuvenate cooperative credit system and availability of credit to small and marginal farmers at concessional interest rates
<i>Horticulture</i> • Inadequate R&D. Lower yields. Inadequate infrastructural facilities for post harvest operations and unorganised marketing. Access to world market. Huge market margins	• Establish infrastructure including like transport vehicles, handling equipment, cold storage facilities. Organise fruit growers association to share purchase of inputs and joint marketing • Establish agro-processing and train farmers in handling of the products and training for entrepreneurship for agro-based industries • Focus on the districts of Northern Karnataka that have inadequate resource support
<i>Livestock, dairy and fisheries</i> • Low efficiency of work and milch animals, goats and sheep. Needed product specialisation and seek the global market for animal husbandry products • Low exploitation of marine and freshwater fisheries	• Improving the efficiency through better breeds of milch animals and improvement in feed and management cross-breeding programme • To raise fodder banks in the wastelands of the drought prone areas • vi. Managing the grazing lands and regulate grazing with the help of Panchayats • Encourage public-private partnership sector to handle R&D in the sector and provide marketing incentives • Livestock marketing under regulated marketing act and reduce the middlemen exploitation of the shepherds
<i>Forestry</i> • Inadequate and unprotected forest cover and fast deforestation • Impact on the livelihood of forest dwellers	• Protection of the forests and improvement through social forestry. For this strengthen the effectiveness of the implementation of J. F.M. Programme • Encourage eco-tourism and use the revenue for the forest dwellers welfare programme • Promote co-operative marketing eliminating the private traders/moneylender traders

Source Report from ADRT, Bangalore

Table 7 Constraint and policy initiatives: Maharashtra

Areas of concern	Suggested policy initiatives
i. Sharp reduction in plan expenditure since the third plan period ii. Productivity of most of the crops is low as compared to all India average iii. Wide variation in productivity of crops across districts iv. Predominant cultivation of low-value crops v. Predominant cultivation of rainfed crops	i. Increase the allocation of funds for agriculture and allied activities. Private investment in research and development activities concerning agriculture should be encouraged ii. Balanced use of fertilisers (NPK ratio) should be achieved iii. Through quality extension network, farmers should be advised to use recommended dose of various new technological inputs in crop cultivation iv. Location specific policies/programmes should be introduced in those districts where productivity is low v. Horticulture crops should be promoted in those regions where coarse cereals are cultivated predominantly vi. Low-water-intensive-cum-high-value commercial crops should be promoted vii. Through rainwater harvesting system and watershed development programmes considerable area can be brought under cultivation viii. Proper distribution of water among different crops would help to reduce area under rainfed cultivation
<i>Adoption of technology</i> i. Low and wide variation in the use of fertilisers ii. Imbalance in use of NPK iii. Mono-cropping	i. Extension network should be strengthened ii. Location specific programmes should be introduced iii. Importance of P and K nutrients should be disseminated to farmers through quality extension network iv. Proper pricing of N, P and K nutrients should be introduced with a view to reduce the imbalance in NPK ratio v. Crop rotation should be advocated through quality extension network
<i>Watershed development programmes (WDPs) and irrigation development</i> i. Slow coverage of area under WDPs ii. Lack of coordination among different departments in handling WDPs; low irrigation facility Improper use of water among different crops Over-exploitation of groundwater less importance for minor surface irrigation. Slow progress in forming WUAs. (f) Low water use efficiency. Inadequate coverage of micro-irrigation	i. Watershed development programme and rainwater harvesting system should be promoted in a big way to increase productivity ii. Required funds should be made available for WDPs. It should be treated as infrastructure development iii. NGOs with proven record should be encouraged to take up WDPs iv. Instead of top-down approach, bottom-up approach should be followed while implementing WDPs v. A single agency should be established for monitoring and distribution of projects for different regions

(continued)

Table 7 (continued)

Areas of concern	Suggested policy initiatives
	vi. Public investment on irrigation should be increased to complete all the on-going projects vii. No new projects should be sanctioned till the completion of all the on-going projects viii. Projected crop pattern in each command area should be strictly followed ix. Micro-irrigation (drip and sprinkler) should be made compulsory in all those areas, where over exploitation of groundwater is very high x. Groundwater users' association (GWUA) should be promoted Renovation activities should be carried out to restore the minor surface system. All minor surface systems should be handed over to water users' group under village Panchayat xii. After handing over the system to users group, the government should not withdraw its support to WUAs at least for five years xiii. Sugar industries should encourage the farmers to cultivate sugarcane under micro irrigation system xiv. Differential rate of subsidy should be introduced for different crops based on water consumption
<i>Horticulture development</i> i. Less diversification of crops in non-traditional areas ii. Deceleration in area and productivity in certain crops iii. Inadequate post-harvesting infrastructure facility	i. Age-old crops (trees/plants) should be replaced by new high yielding (better quality) varieties, wherever possible Tissue culture varieties should be introduced/ promoted, wherever possible ii. Studies need to be carried out to find out the reasons for deceleration iii. Biotechnology should be introduced wherever possible Infrastructure facilities like cold storage, cold chain, processing, packaging and marketing should be created by the state sector iv. Private sector should also be encouraged in this to reduce the post-harvesting losses. Contract farming in horticulture crops should be encouraged
<i>Marketing facility</i> i. Inadequate marketing infrastructure facilities	i. Weekly market under the direct control of Panchayat raj institution should be promoted ii. Producers market on the lines of "Ryatu Bazars" should be promoted. Rural road network needs to be strengthened

Source AERC, Pune

Table 8 Constraints and policy initiatives: Gujarat

Areas of concern	Suggested policy initiatives
<i>Crops sector</i> i. Low or negative growth in productivity, low value additions, Inefficiency in marketing	• Introducing new location specific varieties • Provide safety net and protection through remunerative prices • Investment in processing units—financial institutions to provide financial support • Necessary market support for exports by the government agencies • Opening of sea port and facilities for trade
<i>Horticulture sector</i> i. Low yield, low area, slow growth, difficulties in marketing – High post harvest wastages	• Expansion in area under fruit crops through wasteland development, ravines reclamation, fallow land development, plantation of field boundaries, inter-cropping and crop rotations dryland agriculture to combat with drought in arid and semi-arid areas • Full use of available production through efficient post-harvest handling of the produce. Government and co-operative institutions participation can provide appropriate help in this work • Identification of thrust areas and setting the fixed targets—short-term and long-term plans to be framed and practised • iv. Increased facilities for processing fruits and vegetables—making available finance and marketing arrangements
<i>Land and water</i> i. Marginalisation of size of holding, desertification, fast degradation of land ii. Wider inter and intra and temporal distribution of rainfall iii. Adverse water balance iv. Groundwater over exploitation in many districts	• Soil and water conservation through establishment of vegetative barrier along the contour • Rapid development of watershed programme along with fast work on farm and social forestry can stop soil degradation • Adoption of organic farming can help maintain soil fertility • Increased intensity of land use through expansion of irrigation, increased use of strategic inputs like fertilizer, fast spread of HYVs, etc. • Rapidly tap the available irrigation potential. Development of Sardar Sarovar project and its allied aspects. Time bound plan framework for the implementation of Kalpasar project. Inter-linking of the rivers south of Tapi with Narmada anal system as long-run schemes • Introduction of water saving devices like drip and sprinkler systems on large scale • Rainwater harvesting through watershed programmes. Recharging of wells

(continued)

Table 8 (continued)

Areas of concern	Suggested policy initiatives
	• Action in respect of pricing policy of water, appropriate operation and maintenance framework • Restricting over exploitation of groundwater by enacting and administering required law by government
<i>Fertilizer</i> i. Low efficiency in use, unbalanced use of fertilizer (inter-region, intra-crop and inter-farmer)	• Continuous monitoring of factors determining fertilizer use • Balanced use of fertilizer nutrients. For this wider use of soil testing laboratories is necessary • Entry of private sector in the field of soil testing laboratory is required • Extension agencies should try to create awareness of the importance of soil testing labs. Financial resources to be made available for equipping soil-testing laboratories • v. Need for a shift in a policy of subsidising inputs like fertilisers, irrigation, etc., to subsidy for equipments and materials that are conducive to increased input use efficiency at farm level
<i>Credit</i> i. Low institutional coverage ii. Lack of institutional support to high-value, high-tech agriculture Weak links of credit institutions with support systems. Linking credit with marketing of crops and trade	• Adequate supply of institutional credit for marginal and small farmers. ii. Increasing credit needs arising out of further diversification of agriculture towards horticultural crops and non-foodgrain crops, finance various requirements of allied agricultural sector • Credit institution must support declining public investment • Revitalisation of co-operative-operative credit structure is required • Devising new institutions in risk management such as formation of joint liability groups will help to mitigate risk
<i>Animal husbandry</i> i. Low-yield, low-quality breed shortage of feed and fodder supply <i>Fisheries</i> i. Inefficient landing and berthing facilities, weak market link between landing sites and terminals	• Developing synergies between feed production and feeding animals • Research in disease control, feeding efficiency, breeding and management • Efficient extension network to guide livestock keepers • Dairy development—developing market chains • Efficient harnessing of marine and inland fisheries resources • Harbor development, dredging infrastructure, modernization of craft and gear seed production and rearing etc. on large scale

(continued)

Table 8 (continued)

Areas of concern	Suggested policy initiatives
<i>Forestry</i> i. Recurrent droughts affecting efforts to contain the loss of forest cover	• Encouragement for farm forestry (FF). Research to establish financial viability of FF and extension on wider scale • Privatisation of a part of new proposed forest cover—to develop and to maintain. NGOs to take up the work on a wider scale • Marketing arrangements for sale of forest produce by govt.
<i>Agricultural research</i> i. Inadequacy against local requirement with meagre financial allocation	• Continuous evolution and production of new region specific HYVs for all crops grown in location specific conditions in Gujarat • Research in respect of dry farming to be activated • Evolution of effective and low value pesticides to control pests and diseases. Increased attention to organic farming • Use of remote sensing for planning watershed/water resource development, groundwater targeting and sites for recharge, crop condition/loss assessment, coastal area management • Post-harvest technologies to promote value addition through agro-processing industries

Source AERC, Gujarat

Appendix

Table 9 Resource availability and input use in Deccan Plateau states

States	Crop groups/years ^a	1962–63	1972–73	1982–83	1992–93	2002–03	2010–11
AP	% cultivable land	58.9	57.5	57.7	56.6	57.6	57.8
	% net cropped area	41.0	41.4	40.2	38.3	37.8	38.8
	% gross cropped area	45.4	46.5	46.3	46.3	46.0	49.6
	% net irrigated area	27.0	27.2	32.3	40.2	39.8	43.9
	% gross irrigated area	29.4	30.3	35.5	41.5	42.3	48.1
	% cropping intensity	110.8	112.3	115.1	121.0	121.6	127.6
	% irrigation intensity	120.6	125.0	126.7	124.8	129.2	139.7
	Per ha fertiliser consumption ^b	—	20.9	51.7	117.0	146.0	256.7

(continued)

Table 9 (continued)

States	Crop groups/years ^a	1962–63	1972–73	1982–83	1992–93	2002–03	2010–11
KAR	% cultivable land	67.2	66.9	67.1	67.9	67.8	67.6
	% net cropped area	54.8	53.3	53.6	55.8	53.0	54.4
	% gross cropped area	56.7	56.6	57.8	64.0	62.1	67.0
	% net irrigated area	8.8	12.0	14.8	20.8	25.3	32.5
	% gross irrigated area	9.3	13.3	16.9	22.5	25.9	32.2
	% cropping intensity	103.6	106.2	107.8	114.7	117.2	123.2
	% irrigation intensity	110.0	116.9	123.3	124.5	120.1	121.7
	Per ha fertiliser consumption ^b	–	18.7	34.4	70.0	101.2	168.3
MAH	% cultivable land	69.6	68.3	68.6	69.7	70.0	68.7
	% net cropped area	58.5	54.9	59.0	58.4	56.6	56.6
	% gross cropped area	61.6	58.1	64.6	68.5	68.8	74.9
	% net irrigated area	6.1	7.9	10.6	15.0	18.4	18.7
	% gross irrigated area	6.6	8.7	12.2	15.6	17.9	19.6
	% cropping intensity	105.4	105.9	109.5	117.3	121.6	132.4
	% irrigation intensity	–	113.8	116.8	127.1	121.9	118.6
	Per ha fertiliser consumption ^b	10.3	24.3	55.0	74.6	140.6	10.3
GUJ	% cultivable land	60.0	61.6	66.1	65.6	66.1	66.4
	% net cropped area	52.0	50.0	51.2	49.9	50.8	54.0
	% gross cropped area	54.5	53.4	56.3	56.4	56.6	61.1
	% net irrigated area	7.4	14.7	22.1	26.5	31.0	41.1
	% gross irrigated area	7.4	15.1	23.5	28.3	33.2	45.3
	% cropping intensity	104.9	107.0	109.9	113.1	111.5	113.1
	% irrigation intensity	105.7	110.2	116.8	120.5	119.3	124.6
	Per ha fertiliser consumption ^b	–	17.5	36.4	69.7	79.3	159.0

Note ^aYears in Triennium ending averages; ^bAmounts in kg units

Source Based on various issues of Land Use Statistics, Ministry of Agriculture & Farmers' Welfare, Government of India

Table 10 Cropping pattern change in Deccan Plateau states (percentage to gross cropped area)

States	Crop groups/years ^a	1962–63	1972–73	1982–83	1992–93	2002–03	2011–12
AP	Total cereals	65.7	59.7	58.8	45.4	39.9	39.3
	Total pulses	10.8	10.8	11.4	22.1	15.6	15
	Total foodgrains	76.6	70.5	70.2	56.7	55.5	54.3
	Total oilseeds	11.4	16.8	15.3	25	19.7	14.8
	Sugarcane	0.7	1	1.3	1.4	1.8	2.6
	Cotton	2.8	2.5	3.5	5.5	7.7	14.9
	Total fruits and vegetables	–	2	2.6	4.2	6.7	7.5
	Condiments and spices	–	2.7	2.7	2.6	2.8	2.3
	Commercial crops ^b	3.5	8.2	10	13.8	19.1	27.3

(continued)

Table 10 (continued)

States	Crop groups/years ^a	1962–63	1972–73	1982–83	1992–93	2002–03	2011–12
KAR	Total cereals	59.7	55.3	52.4	45.7	45	42.4
	Total pulses	11.9	10.9	13.2	13.8	16.9	20.3
	Total foodgrains	71.6	63.1	61.7	65.4	61.9	62.4
	Total oilseeds	9.7	11	12.3	22.7	15.9	12.1
	Sugarcane	0.7	1	1.6	2.2	3.4	5.3
	Cotton	9.3	9.2	8.9	5	4.4	4.4
	Total fruits and vegetables	–	1.4	1.9	2.3	4.2	5.1
	Condiments and spices	–	1.9	2.5	2.3	3.3	3.5
	Commercial crops ^b	10	13.5	14.8	11.8	15.3	18.2
MAH	Total cereals	55.6	54.4	56.6	50.2	44.8	38
	Total pulses	12.5	11.9	13.6	22.6	16.6	15.9
	Total foodgrains	68.1	66.4	70.2	72.8	61.4	53.9
	Total oilseeds	7.7	9	10.1	12.2	11.7	16.5
	Sugarcane	0.8	1	1.5	2.1	2.7	4.3
	Cotton	13.8	14.4	13.5	12.6	14.1	18.2
	Total fruits and vegetables	–	1.1	1.3	2.1	4.3	4.5
	Condiments and spices	–	1	0.9	0.8	0.7	0.6
	Commercial crops ^b	14.6	17.5	17.2	17.6	21.9	27.6
GUJ	Total cereals	41.7	43.7	37.7	31.7	24.2	28.3
	Total pulses	5.3	4.1	6.1	11.8	6.5	7
	Total foodgrains	47	47.8	43.8	43.5	30.6	35.2
	Total oilseeds	22.8	19.6	24.3	26.7	26.3	22.3
	Sugarcane	0.2	0.4	0.8	1.1	1.7	1.7
	Cotton	17.6	17.4	14.5	10.1	15.7	21.3
	Total fruits and vegetables	–	0.8	1.4	1.9	2.9	3.7
	Condiments and spices	–	0.9	1.2	1.5	1.9	2.9
	Commercial crops ^b	17.8	19.5	17.9	14.6	22.3	29.7

Note ^aYears in Triennium ending averages; ^bSum of cotton, sugarcane, condiments and spices and total fruits and vegetables

Source Based on various issues of Land Use Statistics, Ministry of Agriculture & Farmers' Welfare, Government of India

Table 11 Predominant crops and their growth performance in major states

States	Predominant crops (based on CCR TE 2010–11)	Growth rate of output of major crops		
		Crops	1970–71 to 1989–90	1990–91 to 2011–12
AP	Groundnut (3.82); sunflower (3.36); castor seed (2.84); cotton (2.20); tur (1.97); rice (1.38); maize (1.36); gram (1.04); total fruits (2.54); condiments and Spices (1.34); total pulses (1.16); total oilseeds (1.15)	Groundnut	3.04	–3.41
		Sunflower	5.76	1.25
		Castor seed	0.89	1.15
		Cotton	6.40	6.30
		Tur	3.40	5.42
		Rice	3.61	1.73
		Maize	2.82	9.60
		Gram	–0.43	17.45
KAR	Ragi (9.26); sunflower (7.96); safflower (3.61); tur (2.84); jowar (2.68); maize (2.19); groundnut (2.19); gram (1.60); sugarcane (1.18); cotton (0.70); rice (0.53); condiments and spices (2.03); total pulses (1.56); total fruits (1.13); total oilseeds (1.02)	Ragi	2.68	–0.32
		Sunflower	25.33	–0.40
		Safflower	2.59	–3.73
		Tur	1.97	5.82
		Jowar	–0.03	–1.15
		Maize	3.02	8.17
		Groundnut	2.65	–4.00
		Gram	2.38	9.06
MAH	Safflower (5.59); jowar (4.57); cotton (2.90); soybean (2.58); tur (2.56); sugarcane (1.56); sunflower (1.38); gram (1.29); total fruits (1.59); pulses (1.23); oilseeds (1.12); total fruits and veg (0.98)	Rice	0.91	1.70
		Safflower	1.48	–4.68
		Jowar	5.27	–2.60
		Cotton	1.50	6.91
		Soybean	–	14.11
		Tur	4.15	3.15
		Sugarcane	4.54	3.60
		Gram	5.65	6.22
GUJ	Castor seed (9.05); groundnut (5.28); cotton (4.04); sesamum (2.15); bajra (1.38); tur (1.20); maize (1.0); small millets (0.90); total oilseeds (1.67); total condiments and spices (1.80); Total fruits and veg (0.72)	Maize	8.30	13.30
		Sunflower	32.97	–4.39
		Castor seed	10.72	2.86
		Groundnut	–0.62	4.71
		Cotton	–0.93	10.47
		Sesamum	–2.09	1.99
		Bajra	–1.38	–0.08

Note Crop Concentration ratio is a ratio of crop share in state gross cropped area to that at the country level. Abbreviations used above are: *AP* Andhra Pradesh (Before reorganization), *KAR* Karnataka, *MAH* Maharashtra, *GUJ* Gujarat

Source Author's calculations based on data from various issues of "State-wise Area, Production and Yield Statistics (1966–67 to 2011–12)", DE&S, Dept. of Agriculture & Cooperation, Ministry of Agriculture, Government of India, accessed from http://eands.dacnet.nic.in/APY_96_To_07.htm, Jan 20 2013

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Make in India: Policy Drives and Challenges



Gopal K. Kadekodi

Abstract The mission of Make in India is in place in India since 2014. It is a macroeconomic industrialization drive with programs and projects within in India, by the people of India, and for India. It is also a program to show case the world that Indian manufactured goods are as good as made anywhere in the world, if not better. A large number of products and services are conceived under this mission. ‘Make in India’ is an invitation to foreign and Indian manufacturing firms to invest and produce in India, with or without foreign but modern technologies and capital investment flows, using domestic labour force. The program demands several major shifts in policies and strategies at public and private sector levels, and government administrative structures, such as emphasis on drastic shift to high level of productivity, pushing programs on job skill developments, promoting labour-intensive production systems, creating an atmosphere for boosting exports purely on a competitive basis with several reforms on ‘ease of doing business’, creating opportunities for infrastructural development with reforms in FDI regulations, and providing congenial financial and credit facilities with several fiscal and monetary policy reforms such as gradual withdrawal of subsidies, or reducing lending interest rates. This paper concentrates only on the economic aspects of Make in India mission. After explaining the economic logic and reasons for this mission, the paper in several sections points out to the major challenges to operationalize the mission. It ends with issues in implementing the mission and possible policy guidelines towards implementation.

1 Preamble

On 15 August 2014, the Prime Minister of India, Shri Narendra Modi launched a new mission of ‘Make in India’ from the rampart of Red Fort in New Delhi (www.pmindia.gov.in). He further declared that India should have ‘Zero Defect Zero

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Effect’ production mechanisms wherein products have no defects, and the process through which they are made has zero adverse environmental and ecological effects. But, it was quite widely known by then, that industrial development in India in the past 65 years of planned development was not a free rider.

Does ‘Make in India’ mission have an operational policy? This is one question that most policy makers, social and natural scientists have been asking since that date. Let us recount. The thrust of the program is to combine four major macro-objectives—skill enhancement to move the nation from jobless to full employment, to push productions in as many as 25 major economic sectors with technological shifts, to meet both domestic and export windows on a path truly of Inclusive growth, and making India a globalized economy (DIPP 2015; www.makeinIndia.com). Several specific programs were also announced on the same lines from time to time. Notable ones are: Skill India, Digital India, Swatch Bharat, Smart City India, and Start-up India.

Interpreted in economic terms, ‘Make in India’ is an invitation to Indian and foreign manufacturing firms to invest and produce in India, with enhanced direct foreign investment (FDI), with or without foreign but modern technologies with a hand-held transfer of technology (TT), and improved governance in making business (GoI 2015b).¹ The policy has a specific thrust on using domestic labour after training and retraining on skills, as embedded in the Skill Development Program (<http://www.nsdcindia.org>). Equally important to note is the fact that there are increasing national security issues at Indian borders, making heavy demands on our defence forces, for which ‘Make or Made’ in India be targeted, to make the defence sector free from ‘Buy’ options in the long run (Cowshish 2015; Behera 2015a).

In one sentence, it can be said that the program is most comprehensive—sectorally, financially, technologically, and administratively. A separate department under the title: Department of Industrial Policy and Promotion (DIPP) was created to administer this policy (<http://dipp.nic.in/>). The annual Union Budget makes specific resource allocations for Make in India programs. The program called for several major shifts in strategies and policies at the public and private sector levels, and the government administrative outlooks. Some of them in brief are: emphasis on drastic shift to high level of productivity; pushing programs on job skill developments; promoting labour-intensive production systems; creating an atmosphere for boosting exports purely on a competitive basis; creating opportunities for infrastructural development; providing congenial financial and credit facilities; ease of business with 100% FDI allowed in several sectors such as telecom, civil aviation, single-brand retail railways, construction, plantation, pharmaceuticals, e-commerce, medical devices and such others²; validity of industrial license

¹Several variants of this mission are: ‘Buy and Make’, or ‘make within India only’ as against ‘Total Buy’ option. These are self-explanatory alternative options to be tried out. The ‘Buy and Make’ option stands for buying some intermediary equipments and materials and making further processing and assembly within India by Indian firms.

²Several specific conditions are however in place.

extended to seven years; introducing a system of self-certification for all non-risk, non-hazardous businesses; making online process of obtaining environmental clearances and many more.³

2 Timing of Make in India Mission

2.1 *Economic Rationale*

It is all history now. But, with early planning era in India (i.e., from 1951 till recently) when the country had adopted import substitution and self-reliance as major macro-policies, notable successful outcomes then were the green and white revolutions in agriculture and food sufficiency. Subsequently, the major globalization policy shift of 1991 was intended to take India to its next phase of ‘Take-off’, with industrialization in a big way.

But, going by the indicators of economic performance, by 2014 it was noticed that, India did not go through the desired growth path of moving from agriculture to industry, to service sector, but jumped from agriculture directly to service sectors in the long run. In the context of Make in India policy drives, the question of ‘whether this jump is the most sustainable one for a country such as India’ needs to be debated (Rostov 1960).

Apart from this theoretical impasse, some macro- and micro-political economic compulsions in the country prevailing in 2014 can be recounted. There were compulsions on three fronts to change its direction of growth and development. First, there was an increasing recognition to make Indian economic development more and more ‘Inclusive’ (GoI 2008). This was all the more obvious with about 65% of population of India in the age group 15–64 falling in the category of Demographic Dividend now (and also reaching its peak; UN 2006; GoI 2017), or about growing prime creative age group of 15–24, currently adding up to about 20%. Second, the most compelling social demand was to turn the economy from ‘Jobless to full employment growth’ (Raveendran and Kannan 2009). Third, the country was continuing to be import dependent and not export oriented (Behera 2015b; Golder 2015; http://www.sipri.org/research/armaments/milex/milex_database). These economic lessons prompted to reverse the growth process by ‘Make in India’ mission, to backtrack the growth process go through industrialization in a big way.

Some statistics may be cited to substantiate all these three arguments. Prior to the planning era of 1950s, India was substantially an agricultural country with its contribution to the GDP of over 50%, with over 80% of labour force engaged on it. Driven by self-sufficiency and reliance policy drives, the plan strategies worked substantially for food sufficiency. Total food grain production went up from

³See: www.makeinindia.com for sectoral spreads, new initiatives, policies, skill development, etc.

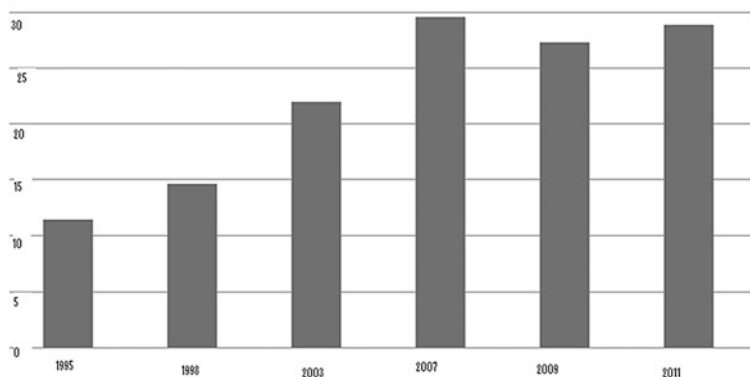


Fig. 1 Imported materials as % of total materials in manufacturing. *Source* Golder (2015)

75 million tonnes in 1950s to a peak of 265 million tonnes per year by 2013–14, expected to reach 273 million tonnes in 2016–17 (GoI 2015a, 2017). Per capita food (cereals plus pulses) availability went up from 394.9 g per day in 1951 to over 510 g in 2014 (which is much above the ICMR’s recommended dietary requirements for an average adult Indian).

The story about industrial development was, however, quite different. Though the manufacturing sector grew from its contribution of about 15% of GDP in 1950–51, to about 28% by 2014–15, it did not absorb all the surplus labour from agriculture to manufacturing (GoI 2015a, Statistical tables-A7-8, 55). The total factor productivity of formal and informal manufacturing sectors was growing at about 8.6% per year during 1990–2000; but dropped to a negative of (–)1.54% during the subsequent period (Kathuria et al. 2013). The growth rate of Industrial production has been stagnant since 2011–12 (GoI 2015a).

Did the industrial sector meet the import substitution objectives? One did not see much of this happening in India’s growth process during the forty years of development. Industrial production continued to remain dependent on imported technology and materials and equipments as can be seen from Fig. 1. Imported material inputs as a ratio of total material inputs in fact increased during the last twenty-five years from about 11% in 1985 to nearly 30% in 2011 (Golder 2015).⁴

Among the many reasons, something about bad industrial management be mentioned, particularly about project monitoring and implementations, and overly crowded public sectors. Share of public sector gross capital formation was of the order of 25% in 2014 as against 30% in 2000–01; that of private sector 26 and 20%, respectively. Attributes such as ill-designed projects, delays in project

⁴Indian Current Account Trade Balance has been negative all through the last 50 years, negatively declining in recent periods at the rate of about Rs. 135 billion annually. The trade deficits currently are of the order of US\$22 billion, and multi-lateral, bilateral, and IMF debt outstanding is of the order of US\$84 billion in 2014–15.

Table 1 State of infrastructure implementation in India

Sector	No. of projects delayed	Delay period (in months)	Cost overrun in INR billion (% escalation)
Transport	78	2–101	22 (8)
Power	47	1–83	146 (12)
Oil and gas	31	4–120	83 (10)
Railways	27	2–204	302 (137)
Urban	1	24	52 (82)
Coal	17	9–48	31 (27)
Shipping and ports	10	2–93	8 (10)

Source Ernst and Young (2012), quoted in Agrawal (2015)

implementations, and subsequent cost over runs can be mentioned. As can be seen from Table 1, a large number of transport, power, oil and gas, or railway projects were lagging quite behind their planned target dates. Apart from its impact on other production and delivery systems, the cost over runs add up to the overall costs and hence inflation.

The growth story took a dramatic shift from 1990. GDP contribution from service sector started growing very rapidly from a low of 3% during 1950–51 to 10–14% per year since 1990s. It touched the highest of 14% during 2006–07 with a 60% share in GDP (GoI 2015a; see also Figs. 2 and 3).

There were three specific reasons for launching Make in India mission, mainly from the recent globalization experience. The world suffered from a global financial crisis during 2009–2013, and now again with recent financial crises in Greece, Brazil, Japan and China. Many of these countries are looking inward for their internal consumption than on external trade dependency. China has already announced its downward growth rate to around 7%. The net result then was low growth and projected export pessimism in most of the European, US, Japan, and other developed countries (who cut down imports substantially). Figure 4 taken from UN depicts the gloomy growth scenario at the global level. The FDI flows into India initially went up from 2009, but started dropping due to various difficulties in doing business in India.

3 Operationalizing Inclusive Growth

Seconds in the mid-2000s, India initiated an Inclusive Growth strategy, in which both labour absorption and skill development were emphasized (GoI, Planning Commission 2008). However, between 1990 and 2014, employment growth has never been more than about 2% annually (GoI 2015a, vol. 1, p. 11). To quote from the 2015 Economic Survey of GoI:

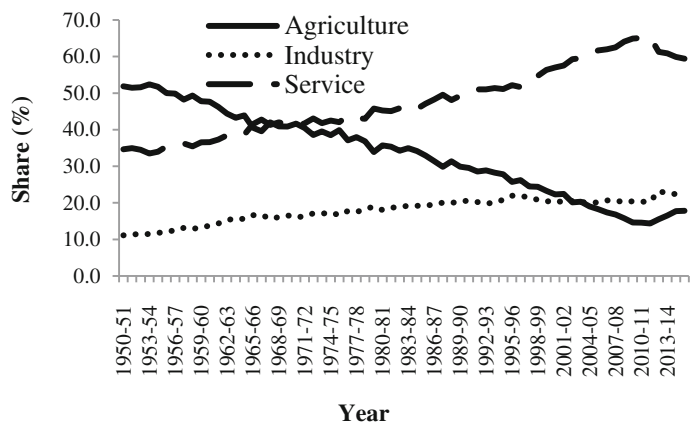


Fig. 2 Sectoral contributions to Indian GDP (1950–2016)

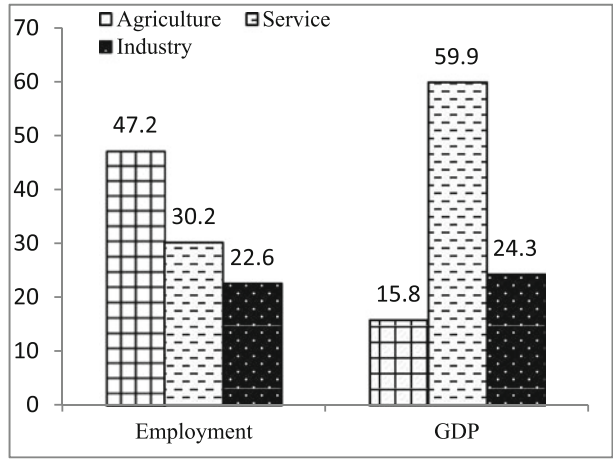


Fig. 3 GDP and employment shares of agriculture–industry–service sectors (2011–12, in percentages)

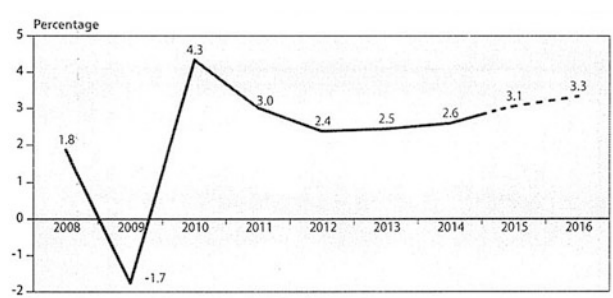


Fig. 4 Recent trends in growth in global gross products

“offer an alternative way of thinking about transformational sectors beyond the traditional distinction based on manufacturing versus services....the shortcoming that these sectors are highly skill intensive in their resource requirements, which is out of kilter with the skill profile of the Indian labor force. Their potential to generate widely shared or inclusive growth is thus likely to be limited” (vol. 1; p. 114). The Economic Survey goes on to say: “... should it (government) try to rehabilitate unskilled manufacturing or should it accept that that is difficult to achieve, and create the groundwork for sustaining the skill intensive pattern of growth?” (opcit, p. 115).

A major shift in Inclusive Growth strategy was called for. As per the available statistics, in the years of 2014, the lop-sided development scenario (Fig. 3) affirms the industrial contribution as a meager 24% of GDP with only 23% of labour employment share. The Economic Survey of 2016–17 reports of declining employment in traditional labour-absorbing sectors such as leather, gems and jewellery and handlooms. The inclusive process was viewed far from being in place.

4 Recent Export Pessimism

Third is about overcoming export pessimism ever since the 2009 global financial crisis. In the year 2013–14, Indian export to Gross National Income ratio was 17.0% (GoI 2015), whereas China however had been retaining over 25% of its GDP as exports (UN 2015).

According to the UN data (Fig. 4), most European countries like UK, Sweden, France, Germany or USA are experiencing from negative to less than 1% growth in GDP during 2012 onwards. In the same period, India had registered about 5.1% on average, while, China also slowed down to 7.8% from its two-digit growth rates (World Bank 2015). The projections are also pointing at India to be neck to China, at 6.3 and 6.8% growth rates, respectively, for 2016 (UN 2015).

Global merchandise trade has never crossed 5% growth rate, but more often negative from 2006 onwards (<http://unctadstat.Unctad.org/wds/TableViewer/tableView.aspx>). Such a grave global situation prompted the ‘Make in India’ strongly address to this export pessimism.

5 Need for New Strategies

Therefore, by 2014–15, it was clear that India has to take a reverse turn in the development phase of the country. The first lesson is that it is not just enough to seeing labour force shifting from rural to urban for industrial jobs (Lewis 1954).

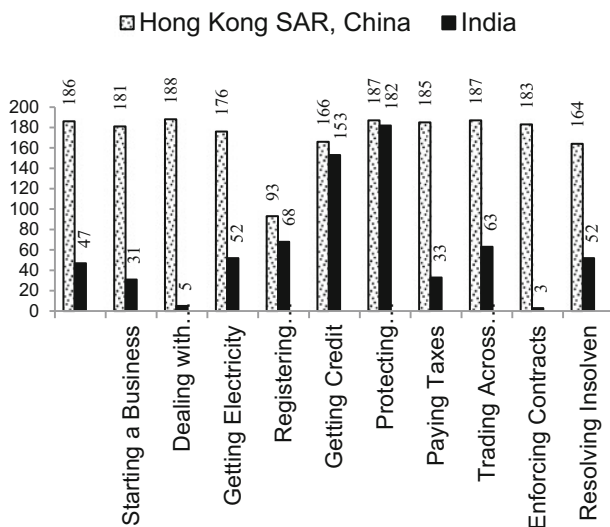


Fig. 5 Ease of doing business: India and China (2014). *Note* these are ranks (highest being 189, lowest being 1; on comparative basis among 189 countries)

It requires a major thrust on skill development to absorb them without compromising productivity, for which some major strategies are required on skill development and industrial licensing, etc. Second, on investment front the flow of Foreign Direct Investment needs to be boosted up. India was always lagging behind China in bidding FDI flows.⁵ So, the second lesson was to create an environment to attract FDI on a large scale, for which new strategies are called for. Third, it was realized the need to ease the climate on doing business on investment and trade front. As can be seen from Fig. 5, compared to China, in 2014, India is far behind in attracting business to India. Particularly, India has to create good business climate in areas such as construction, enforcing contracts properly, in paying taxes or in starting business itself. Transparency and wide publicity, and creating infrastructures ahead of investment and business interests are a must. Therefore, though in many ways as compared to China, India is quite ahead in infrastructural development, an urgent need was felt to improve the implementation and project delivery systems.

⁵The share of FDI in GDP in India was 1.29% in 2012, as against a significantly higher 3.08% in China.

6 Policy Challenges on Make in India

6.1 *Tending to Domestic Production*

Let me go over the domestic scenario first. According to the Global Competitiveness Report for the year 2014–15, in terms of the ‘domestic market size-driven production potential’, India ranks third and continues to maintain the same rank in 2016–17. That is a healthy sign for designing developmental activities. But, the production performance has not stood by its potentials.

There are four ways of assessing the domestic production economic scene. They are: the overall growth rate; the sectoral growth rates; looking at the changes in the shares of the major production sectors; and looking at our domestic performance in comparison with the world economy.

India liberalized its trade and manufacturing sectors since 1991 with a globalized reforms policy. It is a sad story to tell that on all the four counts mentioned above, Indian manufacturing sector has not come up to the expectations. Between 2007–8 and 2013–14, the annual industrial growth rates have come down heavily from 9.7 to 0.4% (GoI, CSO 2014). Second, GDP contribution of manufacturing sector has dropped from 29 to 26%, and service sector has jumped up from 54 to 60% now, perhaps for the wrong reason (GoI, CSO 2014). On comparison, China’s industrial growth rate, which touched 12.7% in 2010, has dropped to 7.9% by 2014, but consistently maintained its industrial share of GDP at 47% continuously till date (Mehrotra et al. 2015). Third, while Indian share in global manufacturing rose merely from 0.9 to 2.0 in the last two decades, that of China rose from 17.3 to 24.1% (CII 2014, p. 4).

Keeping all these measures of poor growth performance, it was time to set up policies to boost the industry sector first, to be followed by service and agriculture.

6.2 *Raising Growth Rates*

From the point of growth stimulants, there are indications that Indian savings rates also have come down (as a ratio of GDP from 33.7% in 2009–10 to 30.6% in 2013–14; GoI 2015a). Therefore, policy drivers to raise the savings rate as well as control of inflation need to be put in place first (Rajan 2015). On the production and demand side, there are two avenues—(a) to widen and raise the investment and production base; (b) to raise the productivity rates. The latter requires a major thrust on skill development among the workforce, be they the migrant from rural areas or fresh entrée into labour force due to ‘demographic dividend’.

India’s organised manufacturing during the period 1999–2000 to 2011–12 was found to be growing at about 8% per annum (Golder 2015). As per the target set by the National Manufacturing Policy of 2012, manufacturing growth rates have to be raised to over 15% by 2022. This seems to be a gigantic task at this stage, unless

Make in India program makes major policy changes (some of which are listed by DIPP in: www.makeinIndia.com/national manufacturing, and new initiatives). Given the preparedness, in the coming one decade India can set, at best a growth rate for the manufacturing sector at about 10%. For this, production sectors like textile and leather apparel, furniture, automobiles and its components, electronics, chemicals and chemical products, defence and aerospace sectors could be the drivers (CII 2014).

6.3 Widen the Base for Industrialization

Under Make in India, there are alternatives. It is time to increase the scope for small and medium enterprises (SMEs) as well. About two decades back, SMEs have undeniably been a vital part of Indian economy employing close to 40% of our workforce and contributing to nearly 45% of India's manufacturing. The share of SMEs in the National GDP was almost 9%. But, to raise finance has always remained still uncannily difficult for them. Indian innovations are not necessarily product-centric. SMEs should key in for meeting higher value and consumer-driven expectations.

With Make in India in the horizon now for three years, things should not be just about manufacturing but also about designing, developing and selling various hardware and software products within India and abroad. In addition, we should emphasise on building products and global brands through components, and device system and software-level innovations. The country is yet to produce a strong global technology brands like Samsung or Xiaomi or IBM.

6.4 On Agriculture Diversification

I want to get back to agriculture once again focusing on raising its productivity. The GDP growth rate in agriculture was less than 1%, till about 1990s but rose marginally to 1.3% by 2014–15. This is very strange for India, being predominantly a land-, forest- and water-based country. There are still enormous opportunities to make the agricultural sectors to grow.

More specifically product diversification should become the required policy *mantra* now, taking crop agriculture to poultry and meat industry, to food processing, horticulture, floriculture, plantation, and commercial agriculture. All these activities require introducing alternative irrigation systems (drip and lift irrigation, etc.); development of cold storages; infrastructure for quick transport up to the ports; use of solar energy in food preservation, processing, packaging, establishment of consumer-friendly food parks and so on. Agricultural policy changes such as removing restrictions on inter-state mobility in marketing agricultural products, and easing land acquisition are some of the policy drives. Many FDI investors like

Kellogg, Nestle, Kraft, Tetrapak and others have tried their hands in India and found that the processing standards in India are not up to the international marks. According to the Global Competitive Report, on 'local supply of quality and quantity of materials', India stands around 72–78 in rank out of 189 countries, indicating not too attractive business environment for bidding FDIs competitively (WEF 2015). If only improvement in doing business in India, processing quality standards are established, packaging, and fast transporting infrastructure are developed, India can capture the world market with considerable value additions and employment growth in agriculture. Skill development in processing, and FDI flows and transport infrastructure development are also the major avenues on this front.

6.5 *Raising Investment Rates*

On the investment front, Indian industries have been lagging far behind other competing countries like China and S. Korea. For instance, China has consistently maintained 45–46% of GDP as the rate of gross capital formation, whereas for India it had dropped from 36% in 2011 to 31% in 2014. It is, therefore, a major challenge for India to boost investments as part of Make in India package. Even after introducing a globalization and privatization process since 1991, the private corporate sector in India has not picked up their responsibility to raise industrial growth in India. The gross fixed capital formation by private corporate sectors was of the order of Rs. 6450 billion in 2009–10; rose marginally to Rs. 6617 billion by 2012–13 ([www.Indiastat.com](http://www.indiastat.com)). The GDP share of gross fixed capital formation by private sectors in India stood at about 22%, as against the total share of 33% (World Bank 2015).

There are some reasons for this. Because of major focus on controlling the inflation rates the RBI raised its repo rates gradually from 5.5% in July 2010 to 7.25% in 2015. Correspondingly, the Bank rates also increased from 6.0% in 2009 to 8.25% in 2015. Now that both the wholesale and retail prices have been brought under control (EPW, September 19, 2015, p. 77), following these healthy indications, RBI has brought down the Bank rate to 6.5% and Repo rate to 6.0%, as of April 2017. In response to such incentive measures, the private sectors should raise their shares in investments, taking away the responsibility from the public sectors.

6.6 *Foreign Direct Investments*

Next to raising the industrial base and targets, the major issue is about changing the input structures. Two major input streams are FDIs and labour. With recession the world over, topping up by enhancing FDI flows into India is an opportunity now. So far, India has been very poor in attracting FDI flows; could attract FDI to the

tune of about 1.7% of GDP only, whereas China has consistently been receiving about 3.7% (World Bank 2015). Between 2000 and 2014, Indian FDI inflows went up from 18 to 29 US\$ billion. Taking clues from the Chinese experience, this rate needs to be doubled, taking the annual flows to about 60 US\$ billion for the next ten years.

Several major policies on this front have been announced recently in the budgets of 2015–16 and 2016–17. Enhanced FDI approvals up to 49% of investment have been permitted in the sectors like defence, petrochemicals, cable networks, private security agency; 74% as the cap in air transport services, satellite establishment and operation, credit information; 100% in construction, railways, telecom, single-brand retail, insurance, pharmaceuticals, petroleum refining by PSUs, courier services and so on (GoI 2015c). Apart from creating opportunities for FDI inflows, a fair business climate has to be created. India's business rankings are as low as 142, with its rank going down, and that of China at 3 (World Bank Group 2015). It is high time to make the business climate transparent, accountable to efficiency and fairness.

6.7 *Employment Creation*

Talking about employment, India has been labelled as having a jobless growth (Raveendran and Kannan 2009, 2012). While labour force growth rate is about 2.5%, the employment growth rate in the recent period has been less than 1.5%. India's labour force will grow by almost 10 million workers per year for the next 10 years. Industrial off take has been about 7.5 million per year. But, the agricultural employment has been falling at a rate of about 5 million workers per year for the past decade (NSSO, 68th Round).

With the proportion of workers engaged in agriculture going down to about 47%, (from 80% during 1960s then contributing about 50% to GDP) the sector is now contributing 16% to GDP. The migration of labour force to urban areas in search of jobs has added many new problems, apart from the rate of unemployment. Currently, the share of employment in manufacturing is about 13%, with its contribution to GDP at 26% (IHD 2014). The employment elasticity of GDP growth rate has been coming down from a range of 0.35 to 0.44 in the 1990s to close to 0.2 in the 2000s (GoI 2015a, vol. 1, p 11).

The overall labour force work participation rate is just about 40% in India, indicating a grave situation on employment front. Of the 474 million Indians who are gainfully employed, only 100 million do manufacturing jobs compared to 232 million who work on farms and 142 million employed in the business services. On comparison, the employment share of industry in Korea and China were of the order of 30%, whereas it is much less than 23% in India, in manufacturing still much less (World Bank 2015).

What should be done about this pathetic employment situation under Make in India? Some lessons from China are important here. Ever since her reforms since

1978, China has brought in flexibility to its labour markets and handed in much freedom to the management at the local and decentralized level. Secondly, way back in 1980s China realised the potential benefits from skill development reforms with technical and vocational education, and training system. China has a strong program on vocational and educational and training at the secondary level in higher education institutes, vocational training in training centres, adult training and retraining, training of vocational trainers, and financing as well as industry participation (Sahoo and Bhunia 2014). At the end of junior-secondary level, students have to take a senior high school entrance examination called the '*Zhongkao*'. This score determines the entry into general or vocational streams (Mehrotra et al. 2015). Moreover, the involvement of enterprises is mandated by the 1996 Vocational Education Law. In China, between 1980 and 2001, the proportion of secondary vocational school students among total secondary students increased from 19 to 45% (Mehrotra et al. 2015).

Employment and labour policy in India, should therefore, aim at three job market reforms. The first is to accommodate the continued shift of workers out of agriculture. Second, Indian labour laws are very rigid on closure, or laying off, and about restrictions on female labour employment, etc. Industries are, therefore, opting for downsizing the employments, and going for temporary and contract labour instead of permanent labour, also to overcome labour union problems. Outsourcing rates have increased over the years. A move has been initiated recently to consolidate as many as 44 labour laws into just five, so as to bring more ease, flexibility in hiring and firing, and transparency in employment creation (GoI 2015c). A major reform in this direction is necessary now.

The third most important reform required about employment creation is on skill development among the labour force in India. According to the Economic Survey of 2015 (vol. 1, p. 110), the share of labour with average skill levels (i.e., with a minimum of secondary education) has been only 24.8% in manufacturing and 47.8% in service sector. In a recent report from Karnataka government, an estimate of the stock and flows of youths to be brought under some skill or other was made (Government of Karnataka 2017). By 2030, the total challenge on this front to promote adequate skills is estimated to be of the order of 75 lakhs. Clearly, the existing school and vocational training system cannot handle this magnitude human resource development. Several alternatives, such as identifying the existing skills early in age (say by age 12–14), arming gram panchayats and clustering of villages for establishing skill training centres, are needed.

According to a recent report from UNESCO (2012), India is lagging behind on many attributes of skill levels (such as years of schooling, scores in mathematics (Fig. 6);

A recent survey by PeopleStrong (2015) indicates the preferences of potential employers being most for integrity and values (39%), followed by domain expertise (22%), as can be seen from Fig. 7. Some of these employment quality aspects be kept in mind in redesigning the education system. 'Skilling India' has the potential to make India a Lewisian economy with more skilled labor to raise the productivity along with labour absorption (GoI 2015a, vol. 1, p. 115).

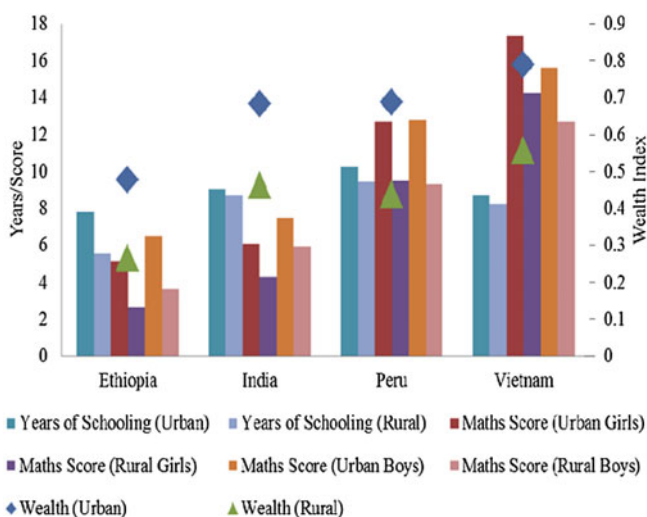


Fig. 6 Comparative picture of India, Ethiopia, Peru and Vietnam in schooling and cognitive skills. *Source* Rolleston and James (2011)

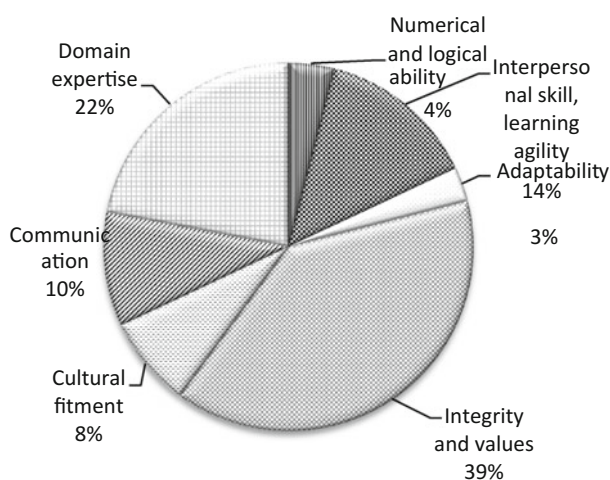


Fig. 7 Skills desirables. *Source* PeopleStrong (2015)

Before shifting them from agricultural sectors to the industrial job markets, incentives be created on some job training, and certification should be introduced (Rusell 2014). Reforms in educational curriculum with involvement of the industries in school education, training and retraining and timely guidance to parents and guardians are the major steps in this direction. On employment front, the lessons for India are clear:

- First, to reap the benefits of the demographic dividend, available to India. It is crucial that a skill development program for the workforce is introduced.
- Second, it is not sufficient to make education free for all till the age of 14. But, it is also necessary to introduce a vocational, educational and training, as a component in secondary education through an Act, as done in China.
- Third, industry should be compulsorily involved in vocational training and retraining.
- Fourth, as recommended in the twelfth Five-Year Plan, fellowships and stipends should be reserved mainly for such vocational trainees (GoI 2013).
- Finally, a National Training Fund be created out of professional taxes being collected by the state and central governments (see, GoI 2013: Chap. 22: Employment and Skill Development).

Summarily, on the domestic production front, the major challenges for the Industry sector, therefore, are: boosting manufacturing by over 10–15% growth rate and creating additional employment to a tune of 60–78 million over a decade, and raising the share of manufacturing in GDP to over 25% (CII 2014, p. 6). These, according to CII, are achievable targets by 2030. Doubling the FDI flows to a tune of US\$60 billion for the coming ten years needs to be built to take advantage of global recession for investments in India.

6.8 *Take-off on Export Front*

Next to domestic production front, one should look at the external trade for the success of Make in India mission. According to the Global Competitive Report of 2014–15 and 2016–17, India ranks fourth in terms of its export market opportunities. But Indian actual exports have been performing quite poorly with her exports as a % of GDP rank at 112–113 out of 148 countries. Clearly, India has not been able encash her full export potentials.

History of export trade is worth examining. During the early phase of planning in India, as a policy, it was ‘import substitution’ that dominated, and not export promotion. China on the other hand, right from the beginning of their planning era in the 1950s, focused mainly on capturing exports as an avenue for development. As can be seen from Fig. 8, China was always much ahead of India on exports (as a % of GDP). In a way, during the periods when India was concentrating on boosting domestic manufacturing (as part of Import substitution policy), China used the economic logic of ‘Take-off’ by using its export potentials.

The second major lesson for India from her trade patterns is missing a grand opportunity to boost exports when the world was going through major recession during 2009 onwards. Then, India had an edge over most of the exporting countries in terms of Terms of Trade. But after picking some additional export trade in the year 2009–10, India’s terms of trade deteriorated subsequently, with no major shifts in annual exports (see Fig. 9).

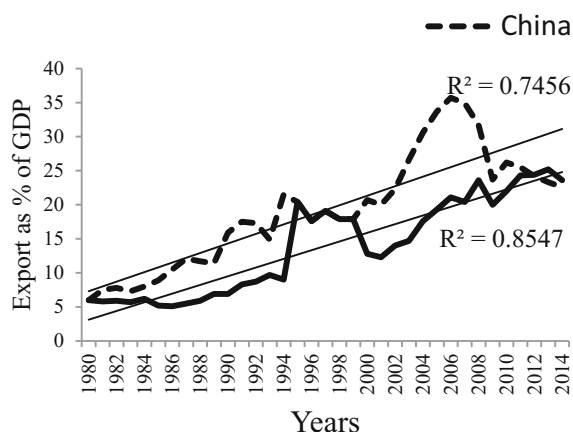


Fig. 8 Export as percentage of GDP of India and China from 1980 to 2014. *Source* World Development Indicators, 2015

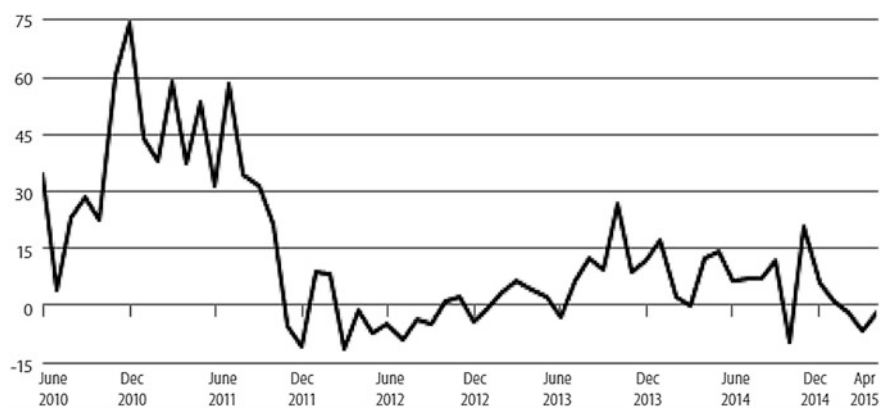


Fig. 9 Indian manufacturing exports: 2010–2015. *Source* CMIE Data and CPR. And EPW Aug. 22, 2015, p. 22

Thirdly, over the years since 1990s, Indian basket of exports has changed, with its manufacturing share coming down from 81 to 61% in recent years (see Table 2).

Within manufactured export products, the composition has undergone a significant change from traditional labour-intensive products like textiles and readymade garments, leather, and gems and jewellery to more modernised, mechanized engineering goods like automobiles, auto parts, capital goods and polyester yarn. The share of traditional exports like textiles (including readymade garments and leather products has come down from 33% and 5% in 1999–2000 to 17% and 3% in 2014–15, respectively (Dasgupta and Kumar 2015).

Table 2 Product composition of export goods (% share)

	1999–00	2004–05	2008–09	2011–12	2012–13	2014–15
Total exports	100	100	100	100	100	100
Petroleum	0	8	15	18	20	18
Agricultural and allied	15	10	10	12	14	13
Ores and minerals	2	6	4	3	1	1
Manufactured goods	81	73	67	61	63	67
Other commodities	1	3	4	6	2	1

Source CMIE Data and CPR. And EPW Aug. 22, 2015, p. 24

Given its long-standing experience, and also the labour potentials, it is high time India returns back to the labour-intensive exports listed above. Labour-intensive segments like garments and leather also require significant job skill trainings. Skill development is also most needed in export packaging, shipping trade services. Though a member of WTO, India remains isolated as a trading partner, with little prospect of a free trade deal with ASEAN and SAARC countries, and the European Union.⁶

7 Make in India for National Security

Talking of national security, there is a specific reason for driving policies under Make in India. Next to agriculture, perhaps defence sector is the largest single homogeneous sector in terms of its capital investments and manpower deployments. It may be recollected that defence activities comprise of providing national security, acting as a repository of state power, and meeting strategic and operational requirements in international relations. Added is its character as a public good, rather the largest public good at the national level.

Adam Smith, the founding father of development economics, in his celebrated book: *An Enquiry in the Nature and Causes of Wealth of Nations* (1776, Book 5, Chap. 1, part 1), has a chapter on ‘Of the expenses of Defence’, where he argued:

The first duty of the sovereign that of protecting the society from the violence and invasion of other independent societies can be performed only by means of a military force. But the expenses both of preparing this military force in time of peace, and of employing it in time

⁶Economic Survey, 2016–17 warns that, “Given that India’s growth ambitions of 8–10% require export growth of about 15–20%, any serious retreat from openness on the part of India’s trading partners would jeopardize those ambitions” (p. 6). Chapter 8, Table 7 shows negative growth in most of the traditional exports.

of war, is very different in the different states of society, in the different periods of improvement. (Smith, Adam 1776, Vol. II, Book 5, p. 182)⁷

Therefore, Make in India Mission has rightly included this sector as a target sector (GoI 2015c). India spends about 2.06% of GDP on defence, whereas it is 3.1% in Pakistan and China with 2.5% (SIPRI 2015). During 2014–15 as a share of central government expenditure, defence expenditures in India during 2014–15 were at 12.8%, whereas it was 19.5% for Pakistan. It should also to be noted that Indian defence expenditures as a share of total central government expenditures has been declining from 16% during 1980s (GoI 2015a, Statistical Tables 2015).

Much before the 2014 Make in India Mission, as back as in 2006 Ministry of Defence had introduced the spirit of Make policy for defence purposes (Cowshish 2015). Both the establishment of DRDO and promoting potential of SMEs in indigenization and to broaden the defence R&D base of the country are only some examples to cite.

There are several major challenges to adopt Make in India specifically for defence sectors (GoI 2015c, p. 141).⁸

First, being a strategic sector, it is time that India pursues more planned and faster import substitution policy. For this, 'Buy and Make' option with FDI flows should be pursued. According to Stockholm International Peace Research Institute (SIPRI), currently India is the world's largest arms importer, accounting for 14% of global arms import during 2009–13, amounting to about 0.30% of the GDP of India during those years, or 1.93% of Central government expenditures (development and non-development expenditures) (Behera 2015b). Second, the global arms trade is increasingly becoming a two-way process. Instead of the traditional off-the-shelf procurement involving goods/services being exchanged for money, more and more arms buyers are now demanding that some form of work should also directly flow from the contracts they sign with foreign entities, known as 'Offset policy'. Offsets include co-production, investment and technology transfer (Behera 2015c). The Indian offset policy (which stipulates the mandatory offset requirement of a minimum 30% for the procurement of defence equipment in excess of USD48 millions) will enable domestic manufacturers an opportunity to grow on competitive basis.

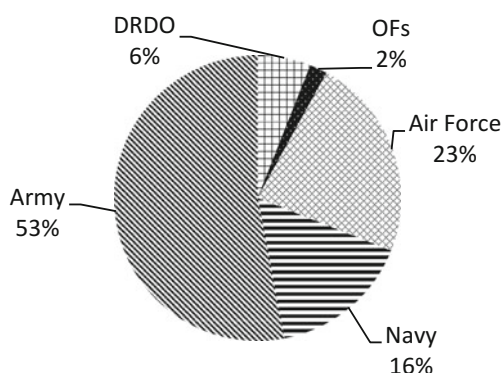
Several reforms are needed to fulfil these obligations:

- There is a need to make premier institutions like DRDO (established way back in 1968) and eight other defence public sector undertakings fully responsible for defence research and design and preparedness on a war footing. DRDO's own

⁷Later, in the same book he argued for the need of 'military personnel and establishment as a separate entity from citizenry and other civilian activities' (a distinct societal arrangement from ancient system of hunters and gathers also being warriors). According to him, 'Evolution of Army as a separate from Civilians, and delegating responsibility for civilians to pay taxes and soldiers to protect the citizen' are the institutional framework for promoting the wealth of nations. That certainly is an economic argument of paying for national security and integrity.

⁸Several options under 'Make in India' on defence procurement requirements, namely Buy, Buy and Make, and Make are known.

Fig. 10 Share of defence services in defence budget 2015–16. *Source* Behera (2015a, b, c)



budget share in total defence budget is around 5–6%, as can be seen from Fig. 10. This needs to be raised substantially to about 10% to maintain both long-term and short-defence researches. There are serious concern about skilled and trained scientific manpower in defence research and production. According to Behera (2015a), the number of scientists in DRDO has not increased since 2001, although the number of projects has increased exponentially. According to one estimate, the aerospace industry in its three verticals—R&D, manufacturing, and maintenance, repair and overhaul (MRO)—alone will require an additional manpower of over 185,500 by 2022, justifying the necessity to set up a dedicated defence technology university (Behera 2015a).

- Second, delay in completion of the project (e.g. Light Combat Aircraft (LCA)), continued dependence on external inputs, low R&D base, cost over runs, incompetent skilled technicians, lack of business compliances and governances are cited to be the continuing ills (Behera 2009, 2013). Major reforms on all these fronts are the need of the hour.
- Finally, and this is important, that the Indian defence sector operates in a hostile financial framework. While the defence budget allocations hover around 12–13% of central government budget, the total subsidy budget at the central government level is about 16–17%. As noted earlier, Indian ratings on ‘access to financing’ have been extremely bad (WEF 2015). Considering defence economics and national security aspects, the budgetary provisions should meet at least the anticipated rates of escalations.

While re-emphasizing the need to take on reforms in the defence sectors, I can recall what a Chinese thinker, Sun Tzu wrote in the book: *Art of War* (written in 544–496 BC, in 512 BC): ‘All warfare is based on deception; The highest form of generalship is to balk the enemy’s plans; Do not repeat the tactics which have gained you one victory’.

Therefore, defence sector requires continuous reforms within Make in India Mission.

8 A Policy Package on Make in India

Perhaps, it is time to summarise some of the major policy thrusts to take Make in India to its logical end.

Something about governance structures is to be said first. Some lessons from China are relevant here. Decentralisation and regional governments helped China grow rapidly in many ways (as sources of best informed, faster processing of information on local issues). Decentralisation allows institutional changes on an experimental scale, thus sparing disruption to the rest of the economy. Though India has adopted Panchayat Raj institutions at the district, taluka and village levels, their limited success and failures are due to lack of vigilance and monitoring (Dutta et al. 2014). Identifying the skills at the grass root level and designing production and development activities should be made flexible, to be monitored by village *panchayats* and *gram sabhas*. A cluster approach can be tried out to fix the responsibilities to different villages from a *gram panchayat* on production, processing and marketing of the products and skill concentration.⁹

Make in India should be treated as a Reform Policy, some of which are summarily listed below.

- At the infrastructural level, physically linking every corner of the country to domestic and international markets through roads, railways, ports and airports is the first and foremost step. DIPP has already identified several specific programs such as Identification of National Investment and Manufacturing Zones (NIMZ). Strict project monitoring should be in place on these. The FDI as well private sectors should be fully explored on this front. A geographical cluster approach can be deployed to identify the mega, major, minor and nucleus cities, towns, villages, and linking them with good transport networks.
- Furthermore in infrastructure, ensuring the availability of inputs such as power, minerals and water at competitive prices is the second most important step. Decentralised material supply centres are to be created. Successful Chinese experience including on solar energy development is to be looked into.
- Financial linking everyone, be they householders, business persons, traders or managers to the broader system through mobiles, broadband, and intermediaries such as business correspondents. Some major steps on this have already been initiated, by linking the entire population of India through *Jan Dhan Yojana* and Digital India.
- Development of public institutions such as markets, warehouses, regulators, information aggregators and disseminators, more and more at decentralised levels should be expedited. Once again, FDIs may be invited to share their knowledge and experience on this.

⁹Some successful stories on these are ceramic and pottery making hub in Khurja in Uttar Pradesh; textile and knitwear hub development in Tirupur in Tamil Nadu; or dairy development in Khairat district of Gujarat and so on.

- On human capital front, skill development should be given the priority, at the very early stage of school education. Industries should be involved in identifying and vocational training for employment directly in the enterprises. The scope of the National Skill Development Corporation should be expanded fast, to cover village- and town-level studentships.
- Make in India requires a reduction in the transactions costs of buying and selling throughout the country. Tax reforms such as GST and computerized tax collection, refund of export subsidies should be fast expedited.
- The best form of financing is long-term equity, that is, Foreign Direct Investment (FDI), which has the additional benefit of bringing in new technologies and methods. More flexibility can be added.
- Currently, the world is growing more slowly and is more inward looking, than in the past. But India has a large domestic market to be tapped first for our growth—to Make in India primarily for India (Rajan 2014).
- Onerous labour laws pose insurmountable barriers to the creation of good jobs in the manufacturing sector. The process is on in some states, but many others are yet to follow.
- The recently modified LARR should be fully informed and made transparent to the concerned stakeholders-highway construction groups, urban housing groups, so as to make all land acquisition processes smoother.
- Smart City projects should be viewed holistically as welfare and eco-friendly efficient habitats.
- Fiscal and monetary reforms such as introduction of GST, Demonetization of Rs. 500 and 1000 currency notes, extensive drive on ‘non-cash economy’ are some of the macro-measures speeded up to its logical need to support Make in India.

In the end, it is time to summarise that Make in India to be fully explored as an avenue for reintroducing a ‘Take-off’ with industrialization as a priority. In a recent address, Dr. Kaushik Basu of the World Bank stated: It is expected that India will top the world’s growth rates table of major economies this year. This has not happened before. It is possible for India today to consolidate its position in a way that it never could before. A 10% growth seems unlikely, but a sustained 8% per annum growth is possible. And that will transform the nation in twenty years, with per capita income breaching the \$10,000 mark.... I would tell the Prime Minister – and in fact I did tell him, during a very good meeting I had with him on the Indian economy – that India is on the cusp of a major Take-off and we must not miss this opportunity. Interview to the Hindu on 8th September 2015.

Time is ripe for India to Take-off.

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Glimpses of the Literature on International Inequality and Catch-Up



K. L. Krishna

Abstract The objective of this chapter is to review the literature on trend in International Inequality in Per Capita Incomes in recent decades. The chapter first reviews the International Comparison Program (ICP) and Penn World Tables (PWTs) with special reference to ICP 2011 and the next-generation PWT. The evidence from the reviewed studies for the period 1960–2011 varies with the group of countries considered: convergence among OECD countries and lack of convergence worldwide. The chapter draws heavily upon Deepak Nayyar's analysis of catch-up achieved by developing countries in the world economy during 1950–2010. Several other recent studies have also been reviewed. One major finding is that international inequality has been on the decline, although intranational inequality has been on the rise. In the New World Order, highlighted recently by Jorgenson, the ranking of the seven largest economies in terms of size of the economy is China, the USA, India, Japan, Germany, Russia and Brazil. However, India's per capita income is the lowest among these countries.

This paper originated when the author made short visits to the Centre for Multi-Disciplinary Research (CMDR), Dharwar, Karnataka State, during 2013–2015, under the Dr. G. M. Namjundappa, Chair. The author thanks the participants at his seminar talk in CMDR in June 2014, for their comments. He expresses his gratitude to Prof. P. R. Panchamukhi, Chairman, CMDR, Prof. Pushpa Trivedi, Director in 2014, Prof. Vinod Annigeri, Current Director CMDR and Prof. Gopal Kadekodti, Honorary Professor, CMDR. The author thanks Ms. C. Kalai Selvi of MIDS and Mr. Rajesh Papnai of CDE, DSE and Mr. Jaya Thirth of CMDR for type setting the manuscript.

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1 Introduction

Research on inter-country inequality in living standards measured by GDP per capita in purchasing power parity (PPP) terms and the extent of catch-up to the frontier country, the USA, has received considerable attention during the past three decades or so. The extant literature is quite vast and varied in scope. The purpose of this paper is to review the major contributions on the broad theme of international inequality in income levels and catch-up. The phenomenon of “Great Divergence” highlighted towards the end of the twentieth century has given way to a process of catch-up and decline in inter-country inequality in the early twenty-first century.

The plan of the paper is as follows: Sect. 2 of the paper discusses the nature, scope and quality of the data sets constructed since 1970 for international comparisons. These data sets are referred to as Penn World Tables (PWTs). The section describes some recent developments with regard to PWTs. Section 3 summarizes and reviews two contributions before 2010, namely the analysis of Barro and Sala-i-Martin (2004), and the World Bank appointed Commission’s Growth Report (2008).

Barro (2012) on beta-convergence and sigma-convergence, Jones (2016) on the facts of growth, Nayyar (2013) on catch-up, Crafts and O’Rourke (2014) on the twentieth century growth, Jorgenson (2016) on the New World Order, Vu (2013) on Dynamics of Economic Growth in Developing Asia and Wolff (2014) on productivity convergence are summarized and reviewed in Sect. 4. Piketty (2014) on Wealth and Income Inequality, and Acemoglu and Robinson Why Nations Fail? Are taken up in Sect. 5. Concluding remarks are offered in Sect. 6.

2 Data Sets for International Comparisons

2.1 *The International Comparison Program*

The International Comparison Program (ICP)¹ collects data on prices for the same or similar goods in countries around the world and uses the data to calculate price index numbers or purchasing power parties (PPPs) to measure how much local currency is needed to buy as much as does the currency in the numeraire country, usually the US dollar. The “as much” refers to gross domestic product (GDP) or to one of its components, such as consumption or investment. PPPs can be thought of as averages of prices, or cost of living. They are used to deflate nominal currency measures to obtain “volume” measures expressed in common currency unit, such as current US dollars for the year of comparison. Adjusted for inflation in the

¹Penn World Tables are the definitive source for real national accounts data. These tables are constructed by Robert Summers and Alan Heston of the University of Pennsylvania, together with the late Irving Kravis. Accessed from <http://pwt.econ.upenn.edu/>.

numeraire country, the ICP yields real GDP measures in constant internationally comparable dollars.

By the late 1980s, the Penn World Table (PWT), compiled at the University of Pennsylvania, had evolved from a set of illustrative calculations begun in 1968 into a multi-country panel, particularly Mark 5, which contained up to 39 years of data on 138 countries. These data facilitated development of new growth economics, with theoretical development rooted in evidence. As highlighted by Deaton and Heston (2010), there has been a huge explosion of work since then, dealing with the explanation of growth, linking growth and politics, and an integration of macroeconomics, economic development and economic history. The long-run historical statistics compiled by Angus Maddison has been extensively used for empirical analysis of economic growth and development, and in particular of inter-country disparities. Pritchett (1997) has highlighted the big divergence in income levels across countries.

The ICP is a huge undertaking requiring a vast amount of resources. A substantial proportion of the needed resources are provided by the national governments. The control and responsibility for the ICP have changed over time, and the World Bank assumed responsibility for the latest ICP 2011. The Bank published a comprehensive report on the results of ICP 2011 in 2015.

The PPP data given in the PWT, on the one hand, and the World Bank's World Development Indicators (WDIs), on the other, are the most familiar data sources used in the inter-country analyses. Eurostat and OECD compile and publish time series data back up to 1980 for countries in OECD, Europe and Commonwealth of Independent States (CIS).

Deaton and Heston (2010) provide an overview of the ICP 2005 data and attempt an explanation of why different sources give different numbers and suggest some health warnings in their use. They pay particular attention to PWT because it is the only source that gives long time series of national accounts for a large number of countries.

2.2 ICP 2011²

ICP 2011, the latest round of the ICP, is the eighth phase of the program. For the first time, it has achieved truly global coverage by including 199 countries from all the seven geographic regions of the world. The eighth region comprised the economies that were participating in the PPP program run by Eurostat, the statistical arm of the European Union and the OECD. World Bank's (2015) comprehensive report on ICP 2011 provides details of the conceptual framework and the methodology employed by the ICP, along with detailed results of the 2011 round

²World Bank (2015). Accessed from <http://siteresources.worldbank.org/ICPEXT/Resources/ICP-2011-peport.pdf>.

and a brief analysis of those results. ICP 2011 is a significant improvement over ICP 2005.

Some of the distinguishing features of ICP 2011 are:

- (1) For the first time, China fully participated in ICP 2011.
- (2) India and Indonesia, the two other populous economies, also covered both rural and urban areas in their collection of prices for consumption goods and services.
- (3) 17 economies in Latin America participated in ICP 2011 compared to 10 in ICP 2005.
- (4) The Caribbean region with 22 economies participated in ICP 2011.

From the methodology standpoint, because of the global coverage of ICP 2011, there was little need for the extrapolation of PPPs and real incomes for non-participating economies, as undertaken in the earlier ICP rounds.

Deaton and Aten (2014) and Inklaar and Prasada Rao (2014) compared the ICP 2011 estimates of GDP per capita and the extrapolations for the year 2011 based on the ICP 2005 data. The conclusions are that the ICP 2011 estimates are the most accurate so far and there are other major improvements in ICP 2011.

In view of several methodological improvements and innovations, the ICP 2011 results can be considered more reliable than those for ICP 2005, especially when accounting for inconsistencies between ICP 2011 benchmark results and extrapolations from ICP 2005.

Some major results from ICP 2011:

(1) Distribution of World GDP

Per cent share in world GDP	PPP terms	Exchange rate terms
High-income economies	50.3	67.3
Middle-income economies	48.2	32.0
Low-income economies	1.5	0.7

(2) Ranking of economies by size in GDP

(a)	The USA	17.1%
(b)	China	14.9%
(c)	India	6.4% (fifth rank in 2005)

(3) Ranking of some major economies by per capita GDP

(a)	The USA	12
(b)	China	99
(c)	Indonesia	107
(d)	India	127

Although China is close to the USA in terms of the size of the GDP, it is very far below the USA in terms of per capita GDP. India is farther. Both India and China may take long time to catch up with the USA, even if their high growth rates are sustained.

(4) Inter-country inequality in income declined

The population weighted Gini measure of inter-country inequality in real per capita income in PPP terms declined to 0.49 in ICP 2011 from 0.57 in ICP 2005. In exchange rate terms, the decline was from 0.71 to 0.64. Such a sharp fall in inequality would have significant implication for the estimates of poverty incidence in the world.

2.3 *An Assessment of PWTs*

In a recent paper on Penn World Table (PWT) Revisions and their impact on growth estimates, Johnson et al. (2013), on the basis of careful analysis highlight two problems in PWT GDP estimates. First, these estimates vary substantially across different versions of the PWT. This variability matters for cross-country growth literature; while growth studies that use low frequency data remain robust to data revisions, studies that use annual data are less robust. Second, the PWT methodology produces GDP estimates that are not valued at PPP prices. Johnson et al. focus their analysis on PWT versions 6.1 and 6.2. The authors propose an alternative approach to calculating a chained growth estimate.

2.4 *The Next Generation of PWT*³

Feenstra et al. (2015) present the theory and practice of real GDP comparison across countries and over time, based on the new generation PWT version 8 which expands on previous versions in three respects.

- (1) In addition to comparison of living standards using components of real GDP on the expenditure side, a measure of productive capacity called real GDP on the output side is provided.
- (2) Growth rates are benchmarked to multiple years to cross-country price data, so they are less sensitive to new benchmark data.
- (3) Data on capital stocks and productivity are (re) introduced.
Applications including the Balassa–Samuelson effect and Development Accounting are added.

³Robert C. Feenstra et al. “The Next Generation of the Penn World Table”, NBER Program(s): economic Fluctuations and Growth, International Trade and Investment, NBER Working Paper no. 19255, July 2013. Accessed from <http://admin.nber.org/xsearch?q=nber+working+paper+no.+19255&whichsearch=ftpub>.

From PWT version 8 onwards PWT development has moved to the University of California at Davis and University of Groningen, while the PWT initials are retained, and the input from Heston at the University of Pennsylvania continues.

With the incorporation of a new data set of quality-adjusted prices of exports and imports, real GDP on the output side or real GDP, which is intended to measure the productive capacity of an economy, is now reported in PWT8.

Feenstra et al. (2015) argued that a measure of the productive capacity of countries could be obtained by combining the ICP data with prices for exports and imports. These two approaches lead to measures of real GDP on the expenditure side and real GDP on the output side, respectively, both of which are included in the PWT version 8.1.

The second contribution of PWT 8 is to improve upon the measure of growth of real GDP previously reported in PWT, which is based on national accounts data. Johnson et al. (2013) criticized the growth rate estimate as being dependent on the benchmark year of the ICP data, and thereby dependent on the version of PWT being used. That problem is resolved in PWT 8 by using multiple ICP benchmarks for all measures of real GDP. The growth rate will not change in between existing benchmark year and new benchmark.

Incorporating multiple ICP benchmarks also ensures that relationships such as Balassa–Samuelson effect remain apparent in the data set, rather than disappearing when going back.

Another important contribution of PWT 8 is the reintroduction of a measure of capital stock and for the first time inclusion of a measure of relative TFP across countries. It has been shown, compared to standard finding in the literature, that cross-country variation in factor inputs can account for more of the cross-country variation in GDP per capita. This is mostly because PWT 8 incorporates new estimates of the labour share in GDP that vary across countries and over time.

Taken together, these contributions show that PWT 8 breaks new ground in providing a cross-country data set that is closely linked to the theoretical concepts of welfare and production, more consistent over time and more transparent in its methods.

The release of the 2011 ICP provides new prices for final expenditure which, in conjunction with updated, quality-adjusted prices for exports and imports, will be used to compute real GDP on the expenditure side and output side in PWT version 9.

Early analysis on the 2011 ICP prices suggests that they differ quite substantially from extrapolated prices using the 2005 benchmark (Deaton and Aten 2014; Inkjar and Prasada Rao 2014).

2.5 *The Maddison Project*

Bolt and Van Zanden (2014) introduce the Maddison Project and its first set of results. The Maddison Project was initiated in 2010, the year the eminent economic historian of national accounts passed away at the age of 84. The project builds on

the illustrious legacy of Maddison. His estimates of GDP and population in the world economy and different countries of the world economy between Roman times (beginning of the first millennium) and the present have been of immense value to the economic profession. The project involves cooperation between scholars who are specialists on different regions, topics and periods.

The main goal of the project is to continue Maddison's work by creating new generation of estimates of GDP, population and GDP per capita in the world economy between Roman times and the present. Maddison built on the pioneering work of scholars, such as, Clark, Kuznets and Bairoch.

Most new work relates to the period before 1820, and it leads to a reassessment of level of GDP per capita in Western Europe in the early modern period and to a confirmation of Maddison's previous estimates of real income for Asian economies.

The inclusion of more recent PPPs in the Maddison Project data base will have major implications, mainly for rapidly growing developing countries such as China and India as more recent PPPs from ICP 2005 and ICP 2011 will change the levels of their income significantly.

3 Major Contributions to the Literature Before 2010

In this section, we review two major contributions on international inequality and catch-up. The first is by Barro and Sala-i-Martin (2004), and the second is World Bank's (2008) Growth Report.

3.1 *A Comprehensive Study by Barro and Sala-I-Martin for the Period 1960–2000*

3.1.1 Basic Facts

Barro and Sala-i-Martin or BS, for brevity, (2004), is a major, comprehensive study of economic growth in the world economy during the 40-year period 1960–2000. The book outlines a brief history of modern growth theory, presents the Solow and endogenous growth models in different chapters, attempts an empirical analysis of economic growth in a cross section of countries for the period 1960–2000, using the PPP (purchasing power parity) GDP data from PWTs (PENN World Tables) version 6.1.

Three informative histograms for the period 1960–2000 are presented: histogram of per capita GDP in 1960 for a sample of 113 countries; histogram of per capita GDP in 2000 for a sample of 150 countries; and a histogram of growth rate of GDP from 1960 to 2000 for 112 countries. For 1960, the highest/lowest GDP per capita ratio is 39, and the coefficient of variation (CV) is 89%.

For 2000, the highest/lowest GDP per capita ratio is 69 and the CV is 112%. Thus, the gap in per capita GDP across countries widened considerably over the period 1960–2000.

The average growth rate of GDP over the period 1960–2000 is 1.8% per year, and the standard deviation is 1.7%. The range is from –3.2% per year in Congo to 6.4% per year in Taiwan, indicating sharp divergence in long-term growth rates.

BS (2004) identify 20 loser countries and 20 winner countries in terms of economic growth over the period 1960–2000. Of the losers, 18 are from sub-Saharan Africa (SSA) and 2 are from Latin America. The winners include 9 from East Asia, 4 from Western Europe and 2 from SSA.

The main regressions, presented in Chap. 12 of the book, for per capita growth rates apply to the three 10-year periods, 1965–75, 1975–85 and 1985–95. The correlations of growth rates across the 10-year periods are positive but not high: 0.43 between 1975–85 and 1965–75 and 0.42 between 1985–95 and 1965–75. Thus, although there is persistence over time in which countries are slow or fast growers, there are considerable differences over time in these groupings. The correlations are much weaker for the seven 5-year intervals, from 1960–65 to 1995–2000. The average correlation for one period growth rate with the previous period is only 0.17. The last 5-year period 1995–2000 is noteworthy for being unrelated to history, the correlation of growth rates in 1995–2000 with those in 1990–95 being only 0.05.

3.1.2 Analysis of the Empirical Determinants of Economic Growth and Convergence

BS attempt an econometric analysis of the determinants of economic growth using data for 87 countries (241 observations at 10-year intervals, 1965–75, 1975–85 and 1985–95) for which data are available on explanatory variables. The sample includes both developing and developed countries. For the 112 countries with the requisite data, the correlation between growth rate of per capita GDP over the period 1960–2000 and log per capita GDP in 1960 is 0.19, positive, indicating absolute divergence. However, the neoclassical growth theory predicts conditional convergence rather than absolute convergence: the theory predicts a negative partial correlation between growth and initial level of income, holding constant variables that proxy for the steady state. The regression results in the table below provide the details in regard to explanatory variables, their estimated coefficients, their signs and statistical significance.

BS use an empirical framework that relates the real per capita growth rate to two kinds of variables: first, initial levels of state variables, such as the stock of physical capital and the stock of human capital in the form of educational attainment and health; and second, controls such as the ratio of government consumption to GDP, the ratio of domestic investment to GDP, the extent of international openness, movements in the terms of trade, the fertility rate, indicators of macroeconomic

stability, measures of the maintenance of the rule of law and democracy and so on. Human capital is represented by average years of educational attainment.

Regression Results for the Growth Rate of Per Capita GDP

For the basic regression, data for 72 countries for 1965–75 for 86 countries, for 1975–85 and for 83 countries for 1985–95 are used. Instrumental variable (IV) method of estimation is used. The regression disturbances are assumed to be uncorrelated and homoscedastic across countries. Allowance for heteroscedasticity and serial correlation of errors across time is made. The 3 SLS (three stage least squares) regression results are presented in the table below:

Dependent variable: growth rate of per capita GDP

Explanatory variable	Coefficient	Standard error
Log GDP per capita in 1960	−0.025	0.003
Educational attainment (male upper schooling)	0.0036	0.0016
Reciprocal life expectancy at age one log	−5.0	0.9
Log total fertility rate	−0.012	0.005
Government consumption ratio	0.062	0.023
Rule of law indicator	0.0185	0.0059
Democracy indicator	0.0079	0.028
(Democracy indicator)	−0.074	0.025
International openness ratio	0.0054	0.0048
Change in terms of trade variable	0.130	0.053
Investment ratio	0.083	0.024
Inflation rate	−0.019	(0.010)
Constant terms	−0.0078	0.0026
(Dummy coefficients for periods)	−0.0128	0.0034

R square = 0.60, 0.49, and 0.51 for the three ten-year periods, 1965–75, 1975–85 and 1985–95. NOBS = 72, 86 and 83 for the three ten-year periods.

The coefficient of log GDP per capita in 1960 is significantly negative lending support to the hypothesis of conditional convergence.

BS undertake and report robustness tests of the regression results and find the results to be robust. They discuss the issue of model selection and apply the state-of-the-art procedures.

3.2 The Growth Report

World Bank—Commission on Growth and Development (2008): The Growth Report—Strategies for Sustained Growth and Inclusive Development. The Commission was chaired by Michael Spence, Nobel Laureate in Economics and Professor Emeritus, Stanford University. The mandate of the commission consisting of 19 experienced policy makers and two Nobel Laureates was to gather the best

understanding about the policies and strategies for rapid economic growth and poverty reduction. The Commission's audience was the leaders of developing countries.

The Growth Report attempted to identify key insights and policy levers to help developing countries achieve high, sustainable and inclusive growth.

The Report's salient findings/recommendations are:

1. Growth Dynamics and the Global Economy
Growth rate of 7% a year sustained over 25 years in 13 economies was unheard of before 1950. According to the Commission, this was possible only because the world economy was more open and integrated.
2. Leadership and Effective Government. Successful cases were associated with "capable, credible and committed" governments.
Effective political leadership is required over a long planning horizon for inclusive growth.
3. Selected Policy Ingredients
For sustained rapid growth, high rate of public investment in infrastructure, education and health are recommended.
4. Income inequality at the bottom and top ends of the income distribution should be contained.
5. Growth strategies should take into account the cost of pollution from the outset.
6. Identification of categories of countries facing special challenges
 - A. African countries
 - B. Very small countries
 - C. Countries rich in natural resources
 - D. Middle-income countries requiring skill upgradation as service sector gains in importance
7. New global challenges
 - A. Global warming and climate change
 - B. Changing relative prices of manufacture versus commodities
 - C. Demographics
 - D. Global governance

The Report draws attention to the issue of catching up in 25 largest developing countries out of about 150 developing countries in the world. The 10 largest account for about 70% of developing countries GDP and the 25 largest for about 90%. The growth performance of these 25 countries has been uneven. Because industrialized (OECD) countries' secular growth rate per capita is about 2%, developing countries need to grow at much higher rates to catch up. Between 1960 and 2006, only six countries grew faster than 3% in per capita terms. India achieved a per capita growth rate of only 2.8% during 1960–2006. However, Indian per capita growth rate was 4.1% during 1980–2006. The other giant, China, was far ahead with a per capita growth rate of 8.6% during 1980–2006.

In Table 1.2 of the Report for each of the 25 largest developing countries, the per capita GDP in 2006 based on purchasing power parity in 2000 international dollars, average growth rate during 1997–2006, projected growth rates needed to catch up in 2050, in 2100 and the number of years needed to catch up with per capita GDP of OECD group are presented. India needs 50 years from 2006 to catch up, while China needs 23 years, Russia needs 17 years, Pakistan needs 159 years and Bangladesh needs 163 years.

The Growth Report based on the informed deliberations of 21 eminent scholars and policy makers and containing authentic data with valuable policy implications for different categories of economies in the world deserves careful study.

4 Major Contributions to the Literature Since 2010

In this section, we will cover eight major contributions to the literature since 2010, those that throw light on between country income inequality and catch-up. Barro (2012) revisited his original theme of convergence/divergence and reported new estimates for a much longer period than 1960–2000. Jones (2016) in *Facts of Economic Growth* covers a variety of sub-themes under Growth at the Frontier and The Spread of Economic Growth. Nayyar (2013) analyses divergence in the pre-1960 period, and the convergence tendency after 1960, in economic historical perspective in the countries of the developing world in Africa, Asia and Latin America. Sachs (2015) in his book *The Age of Sustainable Development* has a lot to say on international inequality and its mitigation. Crafts and O'Rourke (2014) analyse catch-up, falling behind in economic history perspective. Jorgenson (2016) presents the New World Order, and the dominant positions China and India acquired by China, following the “Asian Model” of growth. Vu (2013) takes up Developing Asia for analysis, with focus on the factors for sustainable growth in China and India in the coming decades. Wolff (2014) analyses productivity convergence and the contributory forces.

4.1 Barro's (2012)⁴ Tests of Beta- and Sigma-Convergence

Barro (2012) uses data for 80 countries for the period 1960–2009 to investigate the issues of beta (β)-convergence and sigma (σ)-convergence. The dependent variable is the annual growth rate of real per capita GDP for 10 periods: 1960–65, 1965–70 to 2005–09. Log per capita GDP for 1960, 1965, ..., 2005 are the respective explanatory variables.

⁴Barro (2012). Access from <http://www.nber.org/papers/w18295>.

Barro and Sala-i-Martin (2004). Accessed from <http://piketty.pse.ens.fr/files/BarroSalaIMartin2004Chap1-2.pdf>.

Values for 1959, 1964, ... 2004 are used as instruments. Other regressors are averages over periods, with lagged values used as instruments. The error terms are allowed to be correlated over time within countries.

The convergence rate of per capita GDP is found to be around 1.7% per year. This beta-convergence is conditional on an array of explanatory variable that hold constant countries long-term characteristics. In a much longer time frame—28 countries since 1870—estimation with country fixed effects is more appropriate, and the estimated convergence rate is around 2.4% per year. Combining the point estimates from the post-1960s and post-1870s panels suggests the conditional convergence rate of between 1.7 and 2.4% per year, an interval that contains the “iron law” rate of 2.0%.

A measure of dispersion—the standard deviation of the log of per capita GDP across 25 countries is reasonably stable since 1870. This lack of “sigma-convergence” is consistent with the presence of beta-convergence. For 34 countries—including China and India—observed since 1896, dispersion of per capita GDP declines since the late 1970s, especially when the country data are weighted by population, suggesting sigma-convergence.

According to the “iron law of convergence”, advanced by Barro, countries eliminate gaps in levels of real per capita GDP at a rate of around 2% per year. Convergence at a rate of 2% implies that it takes 35 years for half of an initial gap to vanish and 115 years for 90% to vanish. Convergence rate parameters are important because they provide guidance on how fast countries like China and India are likely to catch up to richer countries.

Different strands of the literature on inter-country inequality in economic growth have been reviewed above. Liberalization and globalization are expected to result in convergence. The overall evidence from the review is that there is lack of convergence and that the rate of convergence is slow. Countries such as India and China in recent times have achieved high rates of economic growth and the catch-up in terms of growth rates is quite impressive although it will take a long time, two or three generations for the gaps in income levels to be eliminated.

4.2 Jones (2016)—*The Facts of Economic Growth*⁵

Jones documents the facts that provide answers to two questions:

- A. How much richer is the world today than say 100 years ago?
- B. How large are the income gaps between countries?

⁵Charles I. Jones, Paul M. Romer, the New Kaldor Facts: Ideas, Institutions, Population, and Human Capital, *American Economic Journal: Macroeconomics*, Vol. 2, no. 1 (January 2010). Accessed from <http://www.nber.org/papers/w15094>.

Jones (2016). Accessed from http://economics.sas.upenn.edu/~jesusfv/FVRS_Handbook.pdf.

As noted by Jones, Kaldor (1961)⁶ formulated a few key stylized facts that growth theory should explain, and Jones and Romer (2010) updated Kaldor's list to incorporate what was learnt since 1961. Jones in this essay draws on the "renaissance" of growth economics to present the empirical knowledge on growth. The essay is in broad parts. Part I documents the facts related to growth of the "Frontier" over time—the growth patterns experienced by the richest countries in the world.

Part II deals with the "Spread of Economic Growth" across the countries in the world: the facts regarding catching up, falling behind or staying in place, and the characteristics of the countries in the three groups.

4.2.1 Growth at the Frontier

Jones considers both modern economic growth and growth over the very long run. With regard to the former, it is noted that for nearly 150 years GDP per person in the USA (Frontier) grew at a remarkably steady average rate of around 2% per year. With regard to growth over the very long term, it is noted that sustained growth in living standards is a post-1820 reality. Evidence suggests living standards were comparatively stagnant for thousands and thousands of years before the Industrial Revolution.

A variety of growth models have been proposed to explain the transition from stagnancy to modern growth. The models combine the Malthusian diminishing returns and increasing returns associated with ideas. Galor (2005)⁷ labels the new growth theory as "Unified Growth Theory".

Jones discusses the spread of economic growth in the world and the extent to which countries are catching up, falling behind or staying in place. Furthermore, he identifies the characteristics shared by countries in the three groups.

Jones first highlights the key fact about the spread of growth over the very long run, since about 1200 AD, is that it occurred at different points in time, something in the "The Great Divergence" after 1600 AD. The Maddison Project data are used to depict the GDP per person (in multiple of 300 \$) over the period 1200–2010 is presented in a Fig. 2 the paper. GDP per person differs only modestly prior to the year 1600. For example, it ranges from a high of \$1620 in the Netherlands (in 1990 \$) to a low of \$610 in Egypt.

⁶Kaldor (1961). Accessed from <http://admin.nber.org/xsearch?q=Jones%252CKaldor++growth+theory+&whichsearch=ftpub>.

⁷Galor (2005). Accessed from <http://www.sciencedirect.com/science/article/B7P5F-4HP4N1P-9/2/f8bd7e7e61680f35ffa370bf29c8836a>.

4.2.2 The Spread of Economic Growth

Pritchett (1997)⁸ pointed out that the poorest countries in the World in 1950 had an income of about \$300—less than one dollar per day. This figure seems close to the minimum wage income likely to prevail in any economy at any point in time. In 1300, the ratio of richest country to the poorest was of the order of $\$1620/\$300 = 5.4$

The long-time trend since 1200 AD in GDP per person for a sample of six countries, the USA, the UK, Japan, China, Argentina and Ghana is compared. The Great Divergence in incomes occurs after the year 1600. The ratio of the richest to poorest rises to more than 10 by 1830 (for the UK) and then to more than 100 by 2010 (for the USA). Rapid growth occurs at different points in the sample of countries.

Argentina was relatively rich by 1870 and growth took off in Japan after World War II. In 1950, China was much poorer than Ghana, by more than a factor of two. Rapid growth since 1978 raises China's living standards to more than a factor of 25 over the benchmark level of \$300 per year.

Jones highlights the heterogeneity of growth trend across a sample of countries (the USA, the UK, France, Japan, Argentina, S. Africa and China) since 1870. Some countries like the UK, Argentina and South Africa experienced substantial declines in the income relative to the USA, reflecting the fact that the growth rates over long periods of time fell short of the 2% growth rate of the frontier, the USA, other countries like Japan and China witnessed large increases in relative incomes.

Some facts on GDP per person relative to the USA during 1980–2010 period using PWT 8.0 data countries/regions: W. Europe, Russia, Brazil, China, India, sub-Saharan Africa are as follows, as stated by Jones:

- (1) W. European income has been stable, around 75% of the US level. Work hours per adult were substantially lower in W. Europe, and GDP per hour was much closer to the US level.
- (2) After rapid growth in the 1980s (and before), Japan peaked at an income relative to the USA of 85% in 1995. Since 1995, Japan fell back to around 75% of the US level as a result of rapid growth.
- (3) China, after 1980, improved its relative level from 5% in 1980 to about 20% in 2010.
- (4) India improved its relative level from 4% in 1990 to about 8% in 2011.
- (5) In the case of SSA, the income relative fell from 7.5% in 1980 to 3.3% in 2001.
- (6) Since 2000, several of the countries and regions display catch-up to the US level.

Next, Jones plots GDP per person relative to the USA for 2011 against the relative for 1960 for a sample of 100 countries.

⁸Lant Pritchett, *The Journal of Economic Perspectives*, Vol. 11, No. 3 (Summer, 1997). Accessed from <http://www.jstor.org/stable/2138181>.

There are more middle-income countries above the 45 degree line than below, indicating that countries in the middle of the distribution showed a catch-up tendency. Low-income countries displayed the opposite tendency.

Convergence among OECD Countries:

The plot of the growth rate of GDP per person during 1960–2011 against GDP per person in 1960 for the countries in the OECD as of 1970 shows the catch-up behaviour of the group since 1960. The countries that were relatively poor in 1960—Japan, Portugal and Greece—grew rapidly while those that were relatively rich in 1960—Switzerland, Norway and USA—grew more slowly. Other studies also reported convergence among OECD countries.

Lack of convergence worldwide

The plot of growth rate during 1960–2011 against the level in 1960 for the sample of 100 countries does not indicate absolute convergence.

4.2.3 Development Accounting

Jones proceeds to discuss the theme of Development Accounting which has received much attention of researchers during the past 20 years or so. It can be shown, under plausible assumptions, that GDP per worker is a function capital–output ratio, human capital worker and TFP measured in labour augmenting units.

The Penn World Trade (PWT) starting with version 8.0 contains all the data needed to conduct a simple version of Development Accounting. That data set contains measures of the economy's stock of physical capital and measure of human capital that is based on educational attainment data from Barro and Lee (2013) and measures of returns to education: 13.4% for the first 4 years, 10.1% for the second 4 years and 6.8% for all additional years. The Development Accounting assumes that the share of capital in output of TFP is based on the Translog index (see Feenstra et al. 2015).

Jones carries out a Development Accounting Exercise for a sample of 128 countries for the year 2010. Table 6 in the chapter gives the calculations for 18 countries including China and India, relative to the USA. Some key findings are:

- (1) The capital–output ratio is stable across countries. Its average value is very close to one.
- (2) The contribution from educational attainment (human capital) is larger, but quite modest.
- (3) The differences in TFP are the largest contributor to income differences.

For the sample of 128 countries for the year 2010, the correlation between GDP per worker ($US = 1$) and TFP (factor-augmenting, $US = 1$) is as large as 0.96. The differences in TFP are very large.

We present below Development Accounting calculations of Jones for UK, South Korea, China and India, for 2010, assuming the elasticity of output with respect to capital to be 0.33.

Countries	TFP (1)	GDP per worker (2)	Capital/GDP (k/y) (3)	Human capital (4)
The USA	1.000	1.000	1.000	1.000
The UK	0.925	0.733	1.015	0.780
South Korea	0.564	0.598	1.146	0.925
China	0.168	0.136	1.137	0.713
India	0.217	0.010	1.014	0.533

Note Col 2 = Col 3*Col 4*Col 1

It may be noted that the China excelled India in regard to human capital per worker. But India excelled China in regard to TFP. For both countries however, their TFP was far below that of the UK and South Korea.

There is a lot to learn from the detailed exposition of Jones on the two questions posed by him at the beginning of his essay on the Facts of Economic Growth. His account of Development Accounting is particularly insightful. In his conclusion, he mentions a number of facts not covered by him in the long essay.

4.3 *Nayyar (2013)⁹ on Catch-Up: Developing Countries in the World Economy*

4.3.1 Basic Facts

[This following account draws heavily upon Chap. 9 of Nayyar (2013)]. Much of it is admittedly a virtual reproduction of the chapter.

This highly acclaimed monograph authored by Deepak Nayyar (2013) analyses the evolution of developing countries in the world economy through long history, but with particular focus on the recent six decades 1950–2010. It compares the three continents, Asia excluding Japan, Africa and Latin America including Caribbean with the West comprising Europe, North America, Australia and Japan, in terms of shares of world GDP and population and GDP per capita. Various aspects of globalization such as international trade, international investment and international migration are also covered.

Part I of the monograph sketches the decline and fall of the developing countries during 1820–1950. Part II, covering the period 1950–2010, analyses in detail the extent and nature of catch-up of the developing countries.

One thousand years ago, Asia, Africa and South America or Latin America taken together, accounted for more than 80% of world population and world income. This was attributable in large part to Asia, where China and India accounted for nearly 50% of world population and world income.

⁹Deepak Nayyar, “The West and the Rest in the World Economy: The Next Transformation?”, Challenge, Volume 57, 2014—Issue 2. Accessed from <http://www.tandfonline.com/doi/abs/10.2753/0577-5132570202>.

The overwhelming significance of these three continents continued for five centuries until 1500.

The beginnings of changes are discernible from the early sixteenth to the late eighteenth century. The voyages of discovery and the colonization of the America were critical turning points.

In the middle of the eighteenth century, demography, technology and institutions were broadly comparable between Europe and Asia.

The Industrial Revolution in Britain during the late eighteenth century, which spread to Europe over the next 50 years profoundly influenced the economies. Yet in 1820, less than 200 years ago, Asia, Africa and South America still accounted for almost three-fourths of world population and two-thirds of world income. The combined share of China and India was 50% even in 1820.

“Dramatic Transformation” of the World Economy between 1820 and 1950: In 1950, the share of Asia, Africa and Latin America (AALA) in world population was two-thirds and in world income about one-fourth. The decline and fall during 1820–1950 were concentrated in Asia, much of it attributable to China and India, while Latin America was the exception as its shares in world population and income were not only symmetrical throughout but also rose over time.

The “Great Divergence” in per capita incomes in 130 years, during 1820–1950: As a ratio of GDP per capita in Western Europe and Western Offshoots, GDP per capita in Latin America dropped from three-fifths to two-fifths, in Africa from one-third to one-seventh and in Asia from one-half to one-tenth. Between 1830 and 1913, the share of AALA in world manufacturing output fell drastically from 60 to 7.5%.

The industrialization of West Europe and the de-industrialization of Asia during the nineteenth century led to the great specialization, which meant that Western Europe followed by the USA specialized in and exported manufactured goods while AALA specialized in and exported primary products.

Progressive integration of AALA into the world economy during the century from 1850 to 1950 took place through international trade, international investment and international migration which resulted in a division of labour between countries that was unequal in its consequences for development. The outcome of this process was the decline and fall of Asia and a retrogression of Africa, although in its post-colonial era, LA fared much better except for the divergence in per capita incomes, so that by 1950 the contrast between rich industrial countries and poor under developed countries was enormous.

Welcome changes in the period 1950–2010 were witnessed in the share of developing countries in world output and in levels of per capita income relative to industrialized countries. The share of developing countries in world output stopped its continuous decline around 1960, when it was about 25% to increase rapidly after 1980, so that it was almost 50% by 2008, while divergence in GDP per capita also came to a stop in 1980 and was followed by modest convergence thereafter.

Sub-period 1950–1980: GDP growth rates in developing countries as a group were somewhat higher than in industrialized countries experiencing unprecedented

rapid growth (during the Golden Age of Capitalism). For developing countries, it was a sharp contrast with their performance in the preceding hundred years.

Sub-period 1980–2008: GDP growth rates in developing countries as a group were almost double those in industrialized countries. Until 1980, growth rates of GDP per capita in developing countries were lower than in industrialized countries because of high population growth rates, but this was reversed after 1980 as their GDP growth was so much higher and population growth rates slowed down. These differences underlie the end of divergence in per capita incomes. C.1980 followed by the beginning of a very modest convergence that is discernible in the 1990s and more visible in the 2000s.

4.3.2 Catch-Up in Industrialization Since 1950

The catch-up in industrialization beginning around 1950 gathered momentum in the early 1970s with implication for structural changes in the composition of output and employment, leading to a decline in the share of agriculture and increase in the shares of industry and services. There was a dramatic transformation in four decades from 1970 to 2010. The share of developing countries in world industrial production increased from one-twelfth to one-third in constant prices and from one-eighth to two-fifths in current prices. Similarly, their share in world exports of manufactures, in current prices, rose from one-fourteenth to two-fifths.

Industrialization also led to pronounced changes in the composition of their trade as the share of primary commodities and resource-based products fell, while the share of manufactures (particularly medium and high-technology goods) rose in both exports and imports.

The role of the state in evolving trade and industrial policies, developing institutions and making strategic intervention, whether as a catalyst or a leader, was central to this process. Policies for import substitution through protection or export orientation through promotion were followed. In either case, external markets became increasingly important. Internationalization of production and the rise of global value chains since the late 1990s were also important factors.

Uneven Nature of the Distribution of the Catch-up between the constituent regions of the developing world: The significant rise in the share of the world output and the modest convergence in per capita income were both attributable almost entirely to Asia, as Latin America witnessed neither, while Africa experienced a continuous decline, although the distribution of foreign investment was less unequal.

The catch-up in industrialization was most uneven between regions. Asia led the process in terms of structural change, share in industrial production, rising manufactured exports and changing patterns of trade, while LA witnessed relatively little change and Africa made almost no progress. An overwhelming proportion of the

increase in the share of developing countries in world manufacturing value added (MVA) and manufactured exports was attributable to Asia, while the share of Latin America recorded a modest rise and the share of Africa remained unchanged.

Higher Degree of catch-up in Industrialization among countries within region: The “Next-14” group of countries: China, India, Indonesia, Malaysia, South Korea, Taiwan, Thailand and Turkey in Asia (8 in number) Egypt and South Africa in Africa (2) Argentina, Brazil, Chile and Mexico in Latin America (4).

The economic significance of the “Next-14” in the developing world is overwhelming in terms of their size (GDP and population), their engagement with the world economy (trade, investment, migration, MVA and exports).

The determinants of the observed concentration appear to be size, growth and history. There is also enormous diversity within the “next-14” group. The emerging significance of China in the “Next-14” is particularly striking. The success of these countries was characterized by specificities in terms of economic, social, political and historical contexts. Initial conditions, enabling institutions and supportive governments were the factors that put them on the path to industrialization.

4.3.3 Catch-Up, Inequality and Poverty

Nayyar highlights that the process of catch-up is associated with high levels of inequality between countries and citizens. While inequality between countries is due to the wide gap between rich and poor nations, inequality among people in the world, which increased sharply during 1820–1950 as a result of the Great Divergence, persisted at high levels during 1950–2000. There is an exclusion of countries and regions within countries in the developing world from the process of catch-up. Massive divergence in per capita incomes between the least developed countries (LDCs) and the rest of the developing world and an exclusion of regions within the “Next-14” countries from the convergence process was also in evidence.

Nayyar emphasizes an important fact: catch-up in the terms of aggregate income has not led to a commensurate improvement in the well-being of ordinary people. During the period 1981–2008, the proportions of the population in the developing world below the specified international poverty lines (\$1.25 and \$2.00 per day PPP) declined but these proportions remain significant, and the absolute number of people below both poverty lines remains large, while the number of people between the two lines, who are vulnerable, doubled over this period.

In 2008, 75% of the poor in the world, below both poverty lines lived in Asia despite its rapid economic growth, rising share of the world income and catch-up in industrialization. This is because economic inequality has been high or rising in countries, particularly the “Next-14” that have led the catch-up process. Thus, catch-up is not sufficient to improve the living conditions of people even in the Next-14” group of countries.

Nayyar's painstaking and meticulous documentation of the catch-up process in the developing countries and regions of the world economy in the long term with focus on the period 1950–2010 is most insightful and revealing. The progress in catch-up has not resulted in commensurate improvement in the living conditions of the extreme poor in South Asia and Africa which constitute a large proportion.

4.4 *Sachs (2015) on the Unequal World*

Sachs (2015) in his book, the Age of Sustainable Development, provides an insightful narrative of convergence and divergence in a long-term historical perspective using Angus Maddison's historical data series (2006) supplemented with data from the Maddison Project. The attractive feature of Sachs narrative is: the issues and processes are presented in the light of Sustainable Development Goals (SDGs) of 2015, with emphasis on the end of extreme poverty persisting in Sub-Saharan Africa and parts of South Asia. In Chap. 1: Introduction to Sustained Development, Chap. 2: Unequal World, Chap. 3: A Brief History Economic Development, Chap. 4: Why Some Countries Developed, While Other Stayed Poor, Sachs presents a variety of data and its implications for inequality.

Some of the main points made by Sachs are:

1. Modern economic growth during the past 250 years was a diffusion process, starting from England and gradually diffusing and evolving all over the planet.
2. Many different types of factors have been at play during the past 250 years, and the relative importance of these factors has changed as technologies evolve.

Section V: Convergence or Divergence of Chap. 2—Unequal World states that the first phase of modern economic growth roughly from 1750 to 1950 was characterized by divergence and since about 1960, the forces of convergence have tended to gain the upper hand.

Until the Industrial Revolution in the second half of the eighteenth century most of the World was poor and rural and so the gaps between the rich and poor countries were quite narrow initially, GDP per capita took off in small parts of the World, starting in England then spreading to Great Britain, much of Western Europe, the USA and Canada, Australia and New Zealand. Very few other countries experienced early industrialization.

Then came the imperialism practised by Western Europe in Africa, Asia and the Middle East, with a big political setback to the potential of convergence. The industrialization of the “West” and the de-industrialization of the rest resulted in divergence.

After the end of imperialism during 1950–1970, newly independent countries started industrialization with domestic and foreign investment. The five decades 1960–2010 displayed a tendency towards convergence.

4.5 *Economic History Perspective—Craft and O’Rourke (2014) on the Twentieth Century Growth*

Crafts and O’Rourke (2014)¹⁰ survey the worldwide experience of economic growth during the period 1870–2007 with a focus on technological change at the frontier together with issues relating to successes and failures in catch-up growth. Evidence on sources of growth is revisited. The key feature of the analysis of divergence in growth are “directed” technical change, intutional quality and geography. Case studies of the experience of several individual countries are presented to illustrate these points.

The authors state that their work is an interpretative essay highlighting some of the ways in which economic history can contribute to the study of economic growth. The long-run implication of the industrial revolution for the world economy is traced.

The authors first look at the legacy of the industrial revolution and its nineteenth century aftermath. There was a big shift in the centre of gravity of the world economy 1900 was different from that of 1700 in terms of its technological capabilities, the income levels in leading economies, the extent of globalization and the degree of international specialization in production.

The proximate sources of growth, lessons from the ICT (Information and Communication Technology) revolution are presented in one section of the essay. Three sections are devoted to detailed case studies on the nature of catch-up:

Case Studies I: Initial success and subsequent disappointment, (a) European Golden Age (1950–73) and subsequent slowdown.

Case Studies II: Success at least for now, (a) The East Asian Miracle (b) China and (c) India.

Case Studies III: Failures, (a) Failed catch-up in USSR (b) Post-Colonial sub-Saharan Africa and (c) The natural resource curse.

According to Crafts and O’Rourke,

The convergence of countries is a process whose roots lie in the Great Divergence of the nineteenth century. The Great Divergence was due to new industrial technologies implemented in some regions/countries of the world but not in other. It was magnified by the globalization of the period which, due to technological augmented division of labour between an industrializing “West” and a deindustrializing “Rest”.

Regional inequalities have been reduced as a result of the spread of modern industrialization. However, convergence has not been as smooth as simple growth models assume: the economic history of the twentieth century growth points to

¹⁰Crafts, Nicholas and O’Rourke, Kevin, Twentieth Century Growth (September 2013). CEPR Discussion Paper No. DP9633. Accessed from SSRN: <https://ssrn.com/abstract=2322728>.

Crafts and O’Rourke (2014). Accessed from <https://www.sciencedirect.com/science/handbooks/15740684>.

various frictions that impede the process. Besides successes in convergence, there have been a variety of failures.

Innovation reflects the economic situation of the leader or frontier economy of the time. This was the U.K. in the late nineteenth century and the USA thereafter. European economies and even Britain itself found themselves at a disadvantage in the twentieth century in regard to the adoption of American techniques that had been developed in the context of American factor prices and the American market. Social capability matters for growth and not all countries have it. Intuitions are path dependent and can be an impediment to growth.

Geography is another factor for convergence. It may matter in different ways at different points in time: resource abundance may be a blessing in some time period, but a curse in others, depending on the tradability of resources and on their nature.

Economic historians emphasize the importance of Wars, technological revolutions, financial crises and other events that are treated as exogenous shocks in economic models, but which are elements in the evolution of the World. The WWI, the Russian Revolution, or the Great Depression were not mere complications in the history of twentieth century economic growth, but a part the evolution. Even short run episodes, it handled badly, can have a long-run impact on economic growth.

Crafts and O'Rourke offer a new and detailed perspective on the economic history of convergence and divergence since 1820, with a focus on the twentieth century. The essay adds a different dimension to the vast literature on the subject.

4.6 Jorgenson (2016)¹¹ on India and China in the New World Order

Jorgenson of Harvard University has recently analysed the sources of economic growth for the G7, the G20 and the world economy for the period 1990–2012 and projected the growth for the period 2012–22. He focuses on 14 major economies—the G7 economies including the USA and seven emerging economies of the G20, including India and China.

Jorgenson notes that the USA was the World's largest economy throughout the twentieth century. According to this empirical growth analysis, in the twenty-first century the balance of the world has shifted from industrialized economies, led by Europe, Japan and the USA, to the emerging economies of Asia, especially China and India. In terms of purchasing power parity (PPP) estimates based on the World Bank's 2011 International comparison program (ICP 2011), the new economic order is China, the USA, India, Japan, Germany, Russia and Brazil.

¹¹Jorgenson, Dale W., and Khuong Minh Vu. "The Emergence of the New Economic Order: Growth in the G7 and the G20", Journal of Policy Modeling, 2013. Accessed from <http://dx.doi.org/10.1016/j.jpolmod.2016.05.010.0161-8938/>© 2016 the Society for Policy Modeling. Published by Elsevier Inc.

According to Jorgenson, world economy growth has accelerated during the twenty-first century and rapid growth will continue. While Chinese economy growth has already slowed, Indian growth will accelerate. As China and India rise in relative importance in the twenty-first century the accelerated growth of the world economy will be maintained.

In Jorgenson's informed assessment, the "Asian Model" of economic growth relies on globalization and investment in human and nonhuman capital, rather than innovation. This new growth paradigm of the "Asian Model" emphasizes skilful management by public and private authorities.

Jorgenson analyses the performance of the world economy during the period 1990–2012. With GDP as a measure of output and total factor productivity (TFP) as output per unit of a combination of capital and labour inputs, he presents output, input and TFP for the World economy and major groups like the G7, and the G20, and individual economies of the G7—Canada, France, Germany, Italy, Japan, the UK and the USA and the seven emerging economies (EEs) Brazil, China, India, Indonesia, Mexico, Russia and South Korea. He refers to the EEs as the extended BRICs.

For his analysis of the growth of the World Economy, Jorgenson utilizes the Total Economy Database (TED), originally developed by Maddison at the University of Groningen and maintained now by the Conference Board. This was expanded in collaboration with Jorgeson and Vu (see Jorgenson and Vu 2013)

Jorgenson proceeds to present projections of economic growth for the major groupings of economies mentioned above for the period 2012–2022. His major findings are: the future growth of the World economy will accelerate, relative to the historical period 1990–2012; the advanced economies of the G7, the OECD, and the European Union (EU) will grow more slowly, while the growth rates of the extended BRICS is almost the same as during 1990–2012; the acceleration in world economic growth is due to the increasing importance of the more rapidly growing economies like China and India.

The driving forces in the future growth of the World Economy are demography and technology. Projections of labour productivity incorporate projections of improvements in capital and labour composition or quality and total factor productivity.

The attractive feature of the Jorgenson exercise is that it provides a panoramic view of economic growth and productivity in the world economy and a comparison between the advanced economies and the emerging economies during 1990–2012, building projections for the period 2012–2022 using a suitable data set, and leading to a statement of the New World Order, with China and India holding the first and third positions in the second decade of the twenty-first century, if not beyond.

4.7 *Vu (2013) on Developing Asia in the World Economy*

Vu has collaborated with Jorgenson in his research on the growth and productivity on the different country groups in the world economy for the closing decades of the twentieth century and the first decade of the twenty-first century.

Vu's (2013) book, *The Dynamics of Economic Growth: Policy Insight from Comparative Analysis of Asia*, with a Foreword by Jorgenson, presents a comparative analysis of Developing Asia, comprising 16 countries, in the global dynamics of catching up and falling behind during 1990–2010, and ends up with a catch-up policy framework for sustaining high economic growth (chapter 5 of the book). One attractive feature of the book is special attention to the comparative analysis of the two giant economies in Asia, China and India, spanning the reform period 1990–2010.

Vu notes that Developing Asia, in spite of relatively high growth in recent decades has a long way to go before several nations in the region can escape from poverty and attain prosperity. Using the income relative to the USA in purchasing power parity (PPP) terms as an indicator of development, in 2010 this indicator was at 13% for Developing Asia, as a whole 11% for ASEAN-6, 5% for the SAC-4 consisting of Bangladesh, Nepal, Pakistan and Sri Lanka, 16% for China and 8% for India.

With the exception of the four Asian Tiger economies and Malaysia, the developing Asian Countries, especially the South Asian nations, are much below the world's average income level. The income level relative to the world average in 2010 was only 67% for China, 30% for India and 11% for Nepal, the poorest country in the group. It is essential that most of the developing Asian economies have to achieve sustained high economic growth for many decades to come, for them to catch up with the world average.

Vu argues that the Asian growth model is the outcome of a strategic policy framework that focuses on fostering and sustaining high marginal product of capital, MPK. The policy framework pays attention to enhancing the attractiveness of the capital investment.

Vu's empirical analysis in the book confirms that the economic growth of Developing Asia in the two decades 1990–2010 far exceeded that of industrialized countries and other developing economies. As a result many economies in Developing Asia made substantial progress towards catching up in per capita income, while the group as a whole has become a major driver of world economic growth. The growth patterns of developing Asian economies during 1999–2010 is consistent with the growth model followed by successful East Asian economies in earlier periods, which is characterized by sustained high growth driven by intensive capital accumulation. Vu infers that the impressive performance of China and India during 1990–2010 indicates that this growth model works not only for small or mid-sized economies but also for large economies, not only for East Asia but also for South Asia.

The evidence reviewed in the book also indicates that the secret of the Asian growth model lies not in achieving high TFP growth but in sustaining reasonable TFP growth despite intensive factor accumulation over extended period.

The strategic policy framework highlighted by Vu facilitates the achievement of sustained moderate TFP growth accompanied by intensive capital accumulation, focuses on the enhancement of the marginal product of capital. This framework comprises three strategic directions: (1) exploiting the backwardness' advantage; (2) upgrading the absorptive capability; and (3) creating favourable conditions for investment, structural change and efficiency improvement.

Vu presents much empirical evidence for China and some evidence for India to show that both China and India made significant progress on all the three strategic dimensions. He attributes the better catch-up performance of China to its greater efforts compared to India.

China and India face different type of challenges in sustaining their remarkable growth in the post-2010 period. The nature of specific policy initiatives for sustained economic growth in India require attention to macroeconomic stability, infrastructure development and competitiveness of the manufacturing sector.

4.8 Productivity Convergence Literature

Wolff (2014) is one recent and comprehensive narrative on convergence. In the ten chapters of the book various issues relating to the empirical analysis of convergence of income levels and productivity levels are discussed. The essentials of modern growth theory, beginning with the 1956 Solow–Swan growth model, its modification by Mankiw, Romer and Weil (MRW model) of 1992, the Lucas (1988) and Romer (1990) growth models and Aghion–Howitt endogenous growth theory model are outlined in Chap. 2. The definitions of sigma convergence and beta convergence, econometric issues, early data sources and methods are also presented in this chapter. The theory and estimation of productivity growth at the industry level and country level and the associated measurement issues are the subject matter of Chap. 3. Chapters 4–8 are devoted to various aspects of the growth and productivity performance of advanced industrial countries. Chap. 4 on the long-term record, reviews studies on convergence in per capita income, labour productivity and total factor productivity in the long term, 1870–1979, and in the very long term, year 1 to 2006.

Strong evidence of convergence in labour productivity levels was found among this group of 16 advanced countries. Between 1870 and 1938, the CV (coefficient of variation) fell almost by half. However, as a consequence of the destruction of capital stock during World War II, the CV in 1950 increased close to its 1890 level. A high degree of convergence was observed in the post-war period, 1950–1979, with the CV falling by three-fifths. The correlation between 1870 labour productivity level and annual rate of productivity growth from 1870 to 1979 was—0.93, pointing to unconditional convergence in the long term.

The evidence on very long-term convergence in per capita income from year 1 to 2006 AD for sixteen OECD countries (the “Maddison 16”) is not as unambiguous as for the period from 1870 to 1979. In the year 1, Italy (the Roman Empire) was the leading country. However, between the year 1 and 1000, with the break-up of the Roman Empire, there was a sharp decline in the Roman Empire’s per capita income resulting in dramatic convergence in GDP per capita among the sixteen countries. By the year 1500, there was again a sharp divergence in per capita incomes led once again by Italy. Further divergence was in evidence from 1500 to 1700 with the emergence of mercantile capitalism in countries such as the Netherlands and the beginnings of Industrial Revolution in the UK. With industrialization spreading to other countries in Western Europe and to the USA, there was a clear convergence in per capita income from 1700 to 1820. With the progress of industrialization in selected countries, the dispersion in per capita income increased from 1820 to 1870. The pattern for the post-1870 period was similar to that for labour productivity described above. Over the very long term and the more recent long term, no clear pattern of convergence even among this relatively small group of countries was found.

Wolff notes that several studies went back as far as 9000 BC, Galor (2005), for example, considered the long transition process from thousands of years of Malthusian stagnation through the demographic transition to modern growth. Galor (2012) presents a unified growth model to capture the transition among three regimes that historically characterized economic development. The first regime is the Malthusian regime, which is characterized by slow technological progress and high enough population growth resulting in stagnation in income per capita. The second regime is called the post Malthusian period, in which technological progress accelerates and population continues to increase. The third regime is the modern growth regime, when the positive association between income growth and population growth is reversed. This modern regime is characterized by sustained income growth and lowered population growth.

In Chap. 9 of his book, Wolff (2014) reviews the existing evidence from several studies on the convergence hypothesis for advanced and developing groups of countries for the period 1970–2003 and on the factors that affect the convergence process. The catch-up effect, measured by the coefficient of the initial level of per capita output in the growth regression, acts as a strong force among wide range of countries of the world.

Three other strong forces have been identified:

1. Investment rate
2. Level of education of a country’s population (particularly primary and secondary education)
3. Good institutional framework: rule of law, stable polity, “good government” and developed social infrastructure.

Many other factors have been suggested in the literature. These, however, produce mixed or weak results. There are degree of trade openness, FDI, investment in R&D, degree of financial development, foreign aid, natural resources, product market and labour market regulations.

Wolff refers to the central arguments on convergence in terms of Gerschenkron's notion of the advantage of relative backwardness. The argument is that countries that are far behind the technology frontier have the best potential to gain from technology transfer and should grow most rapidly.

Wolff notes that today's industrialized (OECD) countries provide clear evidence of the power of the catch-up effect. Between 1950 and 1980 the CV (coefficient of variation) in average LP (labour productivity) fell by half among this group of 24 countries. Some countries, namely, Greece, Ireland, Japan, Portugal and Spain, achieved high growth rates in productivity.

By 1980, the catch-up effect had generally petered out. The USA began to pull ahead of the EU in the 1990s and early 2000s, thanks to the IT revolution. The first Asian Tigers and later the New Asian Tigers achieved high growth rates since 1960s.

Wolff concludes that even the least developed economies have a latent potential to catch up in terms of GDP per capita, provided the above mentioned conditioning factors are created and exploited.

5 Related Contributions

5.1 *Piketty (2014) on Wealth and Income Inequality*¹²

Piketty (2014) in his magnum opus, *Capital in the Twenty-first Century* analyses a unique collection of data from 20 countries, including India, ranging as far back as 1700 to analyse between country and within country inequality of wealth and income. He shows that modern economic growth and the diffusion of technology, knowledge and skills have allowed mankind to avoid inequalities on the apocalyptic scale predicted by Karl Marx in the eighteenth century. But the deep structure of capital and inequality have not been modified as expected in the optimistic decades after World War II. The main driver of inequality—the tendency of return on capital, r , to exceed the rate of economic growth, g —threatens to generate extreme inequalities that stir discontent and undermine democratic values.

The World Top Income Database (WTID), based on the joint work of some 30 researchers around the world, is the largest historical database available concerning the evolution of income inequality is the primary source of data for the book.

¹²Thomas Piketty Translated by Arthur Goldhammer, *Capital in the Twenty-first Century*, the Belknap Press of Harvard University Press, Cambridge, Massachusetts London, England (2014). Accessed from <https://dowbor.org/blog/wp-content/uploads/2014/06/14Thomas-piketty.pdf>.

The second most important source data concerns wealth, including both the distribution of wealth and its relation to income. For this, Piketty relies on three distinct sources of data and methodology, each of which is complementary to the others.

Piketty notes on the basis of his analysis that the process by which wealth is accumulated and distributed contains powerful forces pushing towards divergence. Forces of convergence also exist, and in certain countries at certain times, these may prevail, but the forces of divergence can regain the upper hand as in 2010s.

The book relies primarily on the historical experience of five leading developed countries, namely the USA, Japan, Germany, France and Great Britain.

With regard to empirical results, Piketty begins by examining the evolution of the global distribution of production. He documents that from 1900 to 1980, 70–80% of global production of goods and services was concentrated in Europe and America, which dominated the rest of the world. By 2010 the European–American share had declined to roughly 50% approximately the same level as in 1860. Piketty remarks that it is likely to fall further to 20–30% at some point in the twenty-first century. He further remarks that the phase of divergence in per capita output is over and that a period of convergence has set in. However the resulting “Catch-up” phenomenon is far from over.

Piketty then proceeds to discuss the distribution of world GDP by region (Europe, America, Africa and Asia, including major countries in each region) in the year 2012 (Table 1.1, page 63) and sums up current global inequality:

Per capita income in PPP euros is on the order of 150–250 € per month in sub-Saharan Africa and India. It is as high as 2500–3000 € per month in Western Europe, North America and Japan, that is ten to twenty times higher. The global average, which is roughly equal to that China is around 600–800 € per month.

Piketty states that historical experience suggests that the principal mechanism for convergence at the international level as well as domestic level is the diffusion of knowledge, the effectiveness of which depends on the presence or availability of enabling factors.

After a detailed and critical examination of the state of wealth and income inequality between countries and within countries in the world in 16 chapters of the book, Piketty presents a summary evaluation at the end of the book the historical knowledge concerning the dynamics of the distribution of wealth and income since the eighteenth century and has attempted draw from this knowledge lesson for the century ahead. The sources of which Piketty draws are more extensive than any previous author has used. Piketty caution that his conclusion are “tenuous”.

Piketty highlights the central contradiction of capitalism in the form of the inequality $r > g$, where r is the private rate of return on capital and g is the rate of growth of income and output. The overall conclusion of the study is that a market economy based on private property, contains powerful forces of convergence, associated with the diffusion of knowledge and skills, but it also contains powerful forces of divergence, which are inimical to democratic societies and to the values of social justice.

The inequality $r > g$ expresses a fundamental logical contradiction, according to Piketty's analysis. The entrepreneur inevitably tends to become a rentier, increasingly dominant over those who own nothing but their labour. The divergence in the wealth distribution is occurring on a global scale.

There is no "simple solution" to the big problem. Increase in the growth rate can be achieved by investing in education, knowledge and non-polluting technologies. But reaching a growth rate of 4 or 5% a year is difficult. History shows that only countries that are catching up with more advanced economies such as Europe during three decades after World War II or China and other emerging economies to day—can grow at such rates. For countries at the World technology frontier—and ultimately for the World as a whole the growth rate is unlikely to exceed 1–1.5% in the long run no matter what economic policies are adopted.

With an average return on capital of 4–5% the inequality $r > g$ is likely to become the norm in the twenty-first century as it had been throughout history until the eve of World War I. In the twentieth century, it took two World Wars to wipe away the past and reduce the return on capital, resulting in the illusion that the fundamental contradiction of capitalism ($r > g$) had been overcome.

Piketty advocates progressive annual tax on capital, for avoiding an "inegalitarian spiral" while preserving competition and incentives for accumulation. Progressive tax on capital would contain the unlimited growth of global inequality of wealth, which is increasing at a rate that cannot be sustained in the long run.

5.2 *Acemoglu and Robinson (2012)¹³ on the Importance of Inclusive Institutions*

The book *Why Nations Fail?* authored by Acemoglu and Robinson has attempted to show that while economic institutions are critical for determining whether a country is poor or prosperous, it is politics and political institutions that determine what economic institutions a country has. The theory for world inequality advanced in the book shows how political and economic institutions interact in causing poverty or prosperity and how different parts of the world have different sets of institutions. Once a society gets organized in a particular way, this tends to persist. This persistence makes it difficult for poor countries to become prosperous.

The book argues that most of the other hypotheses proposed by social scientists to explain the origins of poverty and prosperity fail to convincingly explain the poverty patterns across the globe. In this connection, three hypotheses are mentioned:

¹³Acemoglu and Robinson (2012). Accessed from <http://norayr.am/collections/books/why-nations-fail-daron-acemoglu.pdf>.

1. The Geography Hypothesis claiming that global inequality is due to geographical differences is refuted by evidence for a number of real world examples.
2. The authors concede that to the extent that social norms related to culture matter, the culture Hypothesis is useful in understanding world inequality.
3. The Ignorance Hypothesis which states that world inequality exists because citizens or their rulers do not know how to make poor countries rich. This hypothesis attributes poverty to “market failures”, which policy makers do not know how to remove. The authors argue that this hypothesis is partially valid.

The institutional view of comparative development highlighted in the book builds on a number of important earlier contribution.

Acemoglu and Robinson’s on institutions theory of World inequality and its historical origins has been used in the book to explain the main contours of economic and political development around the world since the onset of the Neolithic Revolution some 10,000 years ago. The theory makes a distinction between “extractive” and “inclusive” economic and political institutions. It also attempts an explanation for why inclusive institutions emerged in some parts of the World and not in others. Central to the theory is the link between inclusive economic and political institutions and prosperity.

The book states that nations fail economically because of extractive institutions. These institutions keep poor countries poor and prevent them from embarking on a path of economic growth. This is true now in Africa, in countries such as Zimbabwe and Sierra Leone, in South America in Colombia and Argentina, in Asia in North Korea and Uzbekistan and in the Middle East in Egypt. There are notable differences among these countries. Some are tropical some are in temperate latitudes. Some were colonies of Britain; other of Japan, Spain and Russia. They have very different histories, languages and cultures. What they all share is extractive institutions. In all these cases, the basis of these institutions is an elite who design economic institutions in order to enrich themselves and perpetuate their power at the expense of the vast majority of people in society. Institutions that create poverty generate negative feedback loops and endure—a vicious circle.

As the various vicious circles played out in different parts of the world over the past 250 years or so, world inequality emerged and persists.

According to the authors, the solution to the economic and political failure of nations is to transform their extractive institutions to inclusive ones. This is not easy. But is not impossible. Examples of cases that have managed to break the mould and transform their institutions for the better, even after a long history of extractive institutions, are Botswana in Africa, China in the post-Mao period and the US South after the Civil Rights Act of 1964. China broke the mould even if it did not transform its political institutions and reaped huge benefits in terms of growth and poverty reduction. The authors show in several chapters of the book how their institutional theory works and illustrate the wide range of phenomena it can account for.

Acemoglu et al. (2011, 2002) attempt econometric analysis of the role of institutions, geography and culture and show that institutions dominate the other two types of explanation in accounting for inter-country differences in per capita income.

6 Concluding Remarks

We have reviewed a wide range of literature on international inequality, catch-up and related aspects. The total number of contributions reviewed is twelve. While some of the contributions reviewed are very comprehensive in terms of the issues covered or temporal coverage, all have said something new. All have provided considerable evidence on the relevant issues.

The salient findings are that international inequality is on the decline, although intranational inequality is on the rise. A large proportion of countries are catching up in the sense of reduction in the gaps with rich economies though, the process is slow. Even high growth developing economies, such as China and India will take a long time to eliminate the gap. According to Barro's "Iron Law" the rate of convergence is only 2.0%. This is confirmed in his recent study reviewed in Sect. 4.

The factors behind catch-up are investment Rate, Level of Education, especially primary and secondary education, infrastructure, physical and social, good governance and inclusive institutions.

Most of the empirical studies have made use of different versions of the Penn World Tables (PWTs) based on price data collected for the same or similar products in different countries across the globe in a benchmark year, for constructing purchasing power parity (PPP) cost of living index numbers. In recent assessments of the PWTs, some limitations have been highlighted. Some caution has to be exercised in the use of PWTs.

ICP 2011 is the eighth and latest exercise. It has been funded and monitored by the World Bank. Leading researchers have commented that ICP 2011 is an improvement over ICP 2005 on which PWT 8 is based. PWT 8 has expanded on previous versions in three respects, as noted by Feenstra et al. (2015). PWT Version 9 will be based on ICP 2011. It should be an improvement over PWT Version 8.

The essay by Jones reviewed in this paper has covered wide ground in empirical growth economics as well as the new area of Development Accounting with a small illustration based on Jones (2016).

Nayyar's comprehensive narrative of catch-up in the countries of Africa, Asia and Latin America is profoundly insightful and informative. The study on Developing Asia has offered useful policy suggestions for sustainable growth in China, India and other developing Asian economies. In the New World Order, Jorgenson has empirically established that the ranking in terms of size of the economy is China, the USA, India, Japan, Germany, Russia and Brazil. At the same time, India's per capita income is the lowest among the seven nations.

Other works reviewed in this paper have thrown up several interesting findings. Several studies reviewed provide separate data for China and India to facilitate a comparison between the dominant economies.

In our review, because of space considerations, we have not been able to cover the recent contributions of Atkinson (2015), Atkinson and Bourguignon (eds 2015) and Milanovic (2011) on intra-country inequality and global inequality. Some very recently published Handbooks and monographs contain valuable material.

The literature is too vast and diverse for a single survey of the kind attempted in this paper, to cover more than what has already been covered.

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Holistic Development: The Strategy for the New India



V. R. Panchamukhi

Abstract The development discourse has undergone various changes from time to time. Thinkers who proposed various strategies include complete state control on the one hand and to the complete market intervention on the other. India did follow a in-between path right from its first plan onwards. However, learning from our experiences and from the other countries, one can try to evolve more humane and holistic approach of development. The Indian version of economics as propagated by Koutilya can be a rich source of inspiration in this regard. The paper tries to present historical thinking on development and the present needs of such development with a humane face.

1 Shifts in Development Paradigms in India

There have been several paradigms of development, which have been conceived and implemented in the history of development experiences, over the past 5–7 decades (Bhagavati and Desai 1970; Brahmananda et al. 1986). In the early fifties, when Independent India launched its development process, the nation debated a number of options of development paradigms. Conceptually, these alternative paradigms could be captioned as follows: Central Planning Paradigm, or State-driven development Paradigm, Market-driven development Paradigm, Private Sector-focused development Paradigm and Public Sector-focused development Paradigm, Import substitution-oriented development Paradigm, Export-oriented development Paradigm, Agriculture-focused development Paradigm, Industrial Production-focused development Paradigm, Consumption-goods-oriented development Program and Capital goods-oriented development Paradigm, etc.

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In the fifties, there was not enough of the history of the development experiences of the economies of the world. Essentially, there were two Models of development. One was the centrally planned, public sector-oriented development paradigm of the erstwhile Soviet Union and the other was the market-driven, private sector focused development paradigm of the Western world. It is very well known that India under the leadership of Jawaharlal Nehru and as advised by the well-known statistician, viz. Professor P. C. Mahalanobis, adopted the middle path of what became known as the Mixed Economy Paradigm of development. Under this paradigm, there was a blend of the private sector and public sector, as also that of the market and the state. In due course of time, this mixed economy paradigm of development became a *Model* in itself.

There have been many shifts in the paradigms of development in the history of development experience in India, as also in the world. The paradigm of focus on import substitution, adopted in the 1950's, was modified in the 1960's itself when export orientation was explicitly introduced in the development strategy. The strategy of physical controls on imports and domestic industrialization was further modified in the late 1970's and early 1980's, when import controls were partially replaced by fiscal measures and liberalization was inducted in regard to imports and industrial licensing system. The period of 1978–79 constitutes one watershed in the shift in the paradigm of trade policies and development, when import controls were replaced by tariffs and export promotion became an explicit part of the trade policy regime, thanks to the recommendations of the well-known Alexander Committee Report on Import and Export Policies and Procedures. (I had had the privilege of being the member secretary of this Prestigious Committee, which heralded the beginning of a new era of Trade Policy Regime.) This phase of the Policy Reforms, which may be duly called as phase one of the reforms process was launched at a time when the Foreign Exchange Reserves position of the country was very comfortable, agricultural performance was superb and the overall economic situation was very comfortable. Thus, these reforms were prosperity-driven reforms for rationalizing the then policy regime.

The late 1980's and the early 1990's saw a global shift in the paradigms of development. The paradigms of *inward orientation and/or protectionism* were replaced by the paradigms of what has come to be known as *Liberalization, Privatization and Globalization (LPG)* strategy. This LPG paradigm of development pervaded all through the world as a wild fire and was projected as the *panacea* for all the challenges of development. The LPG paradigm was first imposed on the developing countries, almost, uniformly without the considerations of the stages of development, in which different countries were located. The seeds of this paradigm were sown in the form of conditionalities for structural adjustment imposed by the World Bank and the IMF while sanctioning loans and financial assistance to the developing countries. This strategy took the shape of a development paradigm through the medium of what was known as "Washington Consensus" in the debate on development paradigm. This shift in the development paradigm at the global level was further strengthened by the *collapse* of the Soviet Union, in the late 1980's, which was interpreted as the collapse of the paradigm of Centrally Planned

development and the triumph of the Market-driven Paradigm of development. The world embraced the paradigm of globalization in the fields of Trade in Goods and Services and also in regard to Capital flows.

2 Global Shifts in International Economic Order of Trade and Development

The oil price hikes of the 1970s and the consequent emergence of the stagflation in the developed world had led to radical shifts in the patterns of international economic relations and the consequent shifts in the development paradigms of the different countries (Pieterse et al. 2000; Rist 2009; Robertson 2002). The collapse of the fixed exchange rate regimes in the world, earlier imposed by the disciplines of the IMF, had led to a new exchange rate regime and capital flows order. The induction of floating exchange rate regimes had paved the way for the collapse of the world financial system. The establishment of the World Trade Organization in the mid-1980s and the imposition of the new world trade order in a liberalized framework had given impetus to a new Trade-Driven Paradigm of development. The trade regime imposed by the rules of WTO had also the effects of the emergence of the various forms of Non-Tariff Barriers and subtle forms of protectionism in the world trade order. This period also coincided with a new wave for many regional and sub-regional trading arrangements, resulting in some sort of collapse of multilateralism of the world trading order.

The waves of North–South Dialogue and those of South–South Cooperation that had taken roots at the national and the international levels, in the late 1970s and the whole of 1980s, and the debates on *new International Economic Order* of the mid-1970s had brought about many shifts in the contours of the Economics of development and international economic relations. But these dimensions of the debates and actions survived only until the onslaught of the *Globalization Wave*, which swallowed all other initiatives for changing the world economic order.

In the context of paradigm shifts in India, 1991 stands out as another watershed, in bringing about a radical shift in the paradigm of development and international economic relations. This watershed is characterized as the beginning of a new era of liberalization, globalization and privatization in the politico-economic scene of India. All these shifts are captioned under a single phrase of *Economic Reforms*.

Now during the past 5–6 years, since 2012–13, there has been a trend of what one may call as reverse globalization, which process is aggravated by the recent outbursts of what one may call as Trumponomics (if that can describe the most radical thoughts of US President Trump). Now, the world order seems to enter into a state of chaos and uncertainties. The IMF had been rendered ineffective due to the emergence of flexible exchange rate systems some years back and also due to the continuation of the unmonitored and uncontrolled system of international capital flows. The world trading order once seemed to have been monitored and regulated

by the disciplines of the World Trade Organization (WTO). But now, that is also being threatened, by the open flouting of the WTO disciplines by the powers that be. The time has now come for the search of a New Paradigm of development and Trade Strategy.

While reflecting upon these shifts in the development and Trade Paradigms, one is reminded about the perceptive analysis, presented by the famous economic historian, Robbie Robertson, in his celebrated book titled, “Three Waves of Globalization: A history of developing a Global consciousness”. Robertson perceives that the waves of globalization were all prompted by the “*struggle for survival and well-being*”, as is perceived by quite a few knowledgeable among the humanity. The First Wave of Globalization was the processes of international migrations, international conquests and international commerce—all induced by *the concerns of some for security and well-being*. When this wave collapsed due to the internal pressures and conflicts of interests, the Second Wave of Globalization began with the advent of Industrial Revolution of the UK and Europe, and the emergence of new relations between Colonies and Colonial Masters. The widening of the disparities between the haves and the have-nots became the cause for the collapse of this wave. The process of decolonization and the growth of “*American Corporatism*” and *the emergence of New Technologies* have heralded the Third Wave of Globalization.

With the emerging symptoms of the collapse of this Third Wave of Globalization, it seems that the world is poised to search for a new paradigm of development and world economic order.

3 Fundamentals Factors Behind Crisis Leading to Crisis

Thus, there have been several shifts in the paradigms of development and those of international economic order. These shifts have been characterized by a series of crisis situations of different kinds. We would name only a few of them. We had two Mexican crisis situations in the 1980s. Then, there was the East Asian Economies’ crisis. This was followed by Southeast Asian Economies’ Crisis, Latin American Economies’ Crisis, European Euro Crisis, subprime crisis of USA, Japanese Estate Price collapse, India’s Financial Crisis of 1991, etc.

The causes for the emergence of different crisis situations and the steps taken for their solutions have been analyzed with great intensity in the analytical literature. Most of the studies touch upon the peripheral causes and deal with symptomatic remedies to the challenges of crisis situations. They do not touch upon the fundamental causes that are responsible for the generation of the crisis situations and their perpetuation. The cycle of crisis leading to paradigm shift which invites new crisis has been perpetually going on since the basic factors responsible for the crisis situations are not well identified and dealt with squarely.

The fundamental factors for the different crisis situations can be identified as follows: the crisis situations are caused by the mismatch between the perceptions of

different groups of people. If the gap between the rich and the poor widens, if the craze of some for excessive profit making goes beyond tolerable limits, if the problem of unemployment gets aggravated to serious proportions, if the livelihood security of some is threatened, if the perceived levels of empowerment of some sections of the society fails to materialize, if the struggles for security and survival become unevenly spread, then the crisis situations would emerge. It is puzzling and interesting to note that the very causes which prompt the search or selection of a new paradigm of development become the causes for a new wave of crisis situations.

4 Man as a *Holistic Man* and *Holistic Goals of Human Activity*

We have to look for the fundamental causes for the failures of every paradigm of development and for the generation of new waves of crisis situations. The fundamental cause lies in the conceptual basis on which the Modern Economic Science is conceived and the premises on which the models and strategies are worked out.

Modern Economic Science (MES) is based upon the premises that *Man is a rational Economic Man and all his decisions are aimed at optimizing Economic Benefits*. As per the Indian Classical Economic Science (ICES) (Panchamukhi 2012, 2014, SVBC), Man is a combination of Materialistic aptitudes and what one may call as Spiritual aptitudes. The blend of the two aptitudes makes Man a Holistic Man. The Modern Economic Science (MES) considers only the partial dimension of *Man* and thus defines only material benefits as the contours of the human welfare.

Viewed in the framework of a *Holistic Man*, as per the ICES, the concepts of happiness, well-being, individual and national welfare will all have to be redefined. Happiness of a *Holistic Man* is not a function of materialistic possessions or income levels, as in the case of a rational economic man. Happiness of a *Holistic Man* is a function of income *plus* some values, like contentment, sacrifice, sharing, which are induced in him by his *spirituality dimensions*. National Domestic Welfare Product needs to be defined as a sum of National Materials Domestic Product *plus* National Values Product, in whatever measurable fashion, the latter could be defined.

The holistic framework of the goals of a *Holistic Man*, as per the ICES, is characterized by the four goals, viz. *Dharma*, *Artha*, *Kama* and *Moksha*. *Dharma* has been wrongly conceived as Religion and Religion means *Rituals*. The concept of *Dharma* has a much wider connotation. *Dharma stands for the Values of life*, *Artha stands for the materialistic achievement in terms of capital formation*, *Kama signifies consumption demand* and *Moksha stands for freedom from all prejudices, biases and negative attitudes of life*. Interpreted in this way, *Moksha* stands for a state of highest efficiency, which is realisable in a setting of freedom from *Biases, Prejudices, Negative attitudes*, which act as a binding on the realization of full potential of an individual's capabilities. Thus, the four *purusharthas*, viz., *Dharma*,

Artha, *Kama* and *Moksha* provide a holistic framework for the goals of life. As per the ICES, they together mean, *Optimum Capital Formation so as to satisfy the minimum basic needs of all, realized in the most efficient manner in a Values-based framework*. As against this, the Modern Economic Science talks about only *Artha* (Capital Formation) and *Kama* (Consumption Demand). Thus, the models based on the Modern Economic Science cannot provide the basis for the analysis and the solutions for the Challenges of development and human transformations for better welfare. Further, the MES treats *Consumption Demand* as the engine of *growth*, thereby creating a scenario for excessive consumerism, which has its own negative fallouts on the process and the pattern of development.

Before considering the contours of Holistic development, we will devote some time to bring out some of the typical distinctions between the approaches of MES and those of ICES.

5 Focus on Human Resource as Against that on Capital and Technology

The MES gives emphasis on the role of Capital and Technology in the process of economic transformations (Panchamukhi 2012, 2014, SVBC). As against this, the ICES gives emphasis on the role of Human Resources. Again, the concept of Human Resource as per the ICES is not confined to the concept of labour as considered in the MES. In ICES, Human Resource means *Labour* of MES combined with the attributes, such as aptitudes of commitment, dedication and selflessness, duty-consciousness, to ensure highest levels of productivity. Labour in the MES is measured by the number of workers and the extent of their qualifications on paper. In ICES, however, the human resource is measured by the extent of the attributes which the Labour possesses. In ICES, the human resource is classified as *Satvika*, *Rajasa* and *Taamasa*, depending upon the nature and the intensity of the attributes that each labour unit possesses. For example, a *Satvika Human Resource* is the one who possesses the following attributes: He should be totally committed to his Duty; He should be such as not to say, “I did it”; He should be full of enthusiasm and courage; He should be unruffled during great successes and utter failures. A Human Resource is called as *Rajasa*, if the labour is endowed with qualities, such as highly selfish, always mindful of the results, always crazy, always pursuing unfair means. Similarly, Labour, which always adopts nefarious means, which is mean in its attitudes, would be considered as *Taamasa Human Resource*.

The above fundamental difference in dealing with the factor of production, labour, as between MES and ICES, brings out, the imperatives of adopting a *holistic approach* in dealing with the challenges of human resource transformations in the country. As of now, we think that expanding the opportunities for skill generation, for creating additional number of engineers, doctors, skilled labour, is necessary for strengthening the human resources levels of the nation. We do not

consider the compulsions of inducing proper attributes in the so-called *skilled labour* that would make the same as a useful *human resource*. These observations should be useful in designing a Holistic Policy Framework in the matter of evolving a truly productive Human Resource in the Economy, so that the crisis situations do not arise in the nation.

Unless a *productive human resource* is generated, as discussed above, any amount of Capital and any nature of Technology would not be useful, in generating the desired impact on the development process of the economy. This mismatch between the nature of human resources available in an economy and the induction of huge amount of capital and technology could be the source of failures, in regard to the use of the latter resources in an effective manner. Crisis situations become imminent when such mismatches occur in great intensity and wide canvas. Unfortunately, this factor is not recognized in the debates on the causes and remedies of crisis situations.

6 Focus on Duties as Against that on Rights

The debates on development paradigms in the MES focus on the *rights* of the different segments of the society women, the poor, scheduled castes and scheduled tribes, etc (Panchamukhi 2012, 2014, SVBC). While the emphasis on the fulfillment of the rights of the different segments of the society is well taken, the analysis of the causes for the non-fulfillment of such rights should be done in a *holistic framework*. There is a one-to-one relationship between the fulfillment of the *rights* of some and the performance of *duties*, by the same or the other segments of the society. *Rights* and *Duties* are two sides of the same coin. While adjudicating on the issues of violation of *rights*, we hardly adjudicate on the failure in the performance of *duties*. We have *Human Rights Commissions-National Human Rights Commissions, State Human Rights Commissions* and *United Nations Human Rights Commission*. But we are not aware of any *Human Duties Commissions*. Even in our Constitution, a Part on *Fundamental Rights* was enshrined to begin with, while that on *Fundamental Duties* was inducted much later-after twenty-five years. Thus, there is a fundamental error in our perception about the issues of Rights violations in the framework of *Duties Violations*.

Our ICES has laid emphasis on the matter of *Duties first and Rights as a corollary to come later*. There is a famous principle laid down in the *Bhagavad Gita* that says “*you care for your duties and the rights would follow automatically*”. Unfortunately, this fundamental principle of work culture laid down in the ICES, has often been misinterpreted to mean that in the Indian Classical setting, work culture is exploitative in the sense of emphasizing only on the hard work by the labour without caring for the rewards. This has been an erroneous interpretation of the ICES work culture, which has aimed at providing a holistic framework for matching fulfillment of rights with the performance of duties by one and all.

The above observations also pertain to the need for considering the Human Resources in the Nation, in a Holistic Framework, in which commitment to one's own duties is required for ensuring the evolution of a fully balanced Human Resource in the economy.

7 Sustainable Development as Perceived in the ICES

Sustainable development, as per the MES, refers to the development pattern, which implies less pollution of earth, *water, air, space and energy sources*, and in the present times for a better future (Panchamukhi 2012, 2014, SVBC). The concept of *environment* as per the ICES is much wider. It refers not only, to the five elements of the material world, viz. *Prithivi, Aap, Tejas, Vayu and Aakaasha*, but also to four more elements, viz. *Kal (Time), Dik (Direction), Aatma (Conscience) and Manas (Mind)*. Even if you keep the five elements of the material world pollution free, as per the strategies dictated by the MES, *environmental pollution* becomes a repetitive aspect of life if *Kala, Dik, Aatma and Manas* are polluted. Pollution of time means not maintaining the discipline of timeliness and completion of projects in the prescribed time limits. Pollution of *Dik* means not following the principles of *Vastu Shastra*, so as to ensure control over the emission of negative energies in the system. Pollution of *Aatma* means not acting as per the dictates of the inner conscience. Pollution of *Manas* is the most dangerous factor for perpetuation of pollution in all the spheres of life. The ICES framework in the matter of *Sustainable development* is more *Holistic* and hence superior to the framework considered in the MES.

Moreover, MES is based on the premises of excessive consumerism, which is a corollary to the approach of treating consumption as an Engine of Growth. Unless the principle of *Sustainable Consumption* is inducted in the system, sustainable development becomes a mirage. In contrast to this, the ICES prescribes, *Restraint on Consumption* as an engine of growth process with equity and sustainability and hence provides a better scope for the prospects for sustainable development.

8 Growth: Not Enough for Holistic Development

In the recent years, we have been over-obsessed by the single parameter *Growth Rate of GDP* in assessing the nature and magnitude of the development performance of a country (Panchamukhi 2012, 2014, SVBC; Rao 1953, 1964). We make historical comparisons in a given country and also between-country comparisons of growth performances, by using the single parameter of *growth rate of GDP*. Professor VKRV Rao, a famous economist of the country and a pioneering researcher on national income issues, had expressed a categorical view that

inter-country comparisons of growth rates of GDP are meaningless in drawing inferences about the levels of the well-being of the peoples. For the same reasons, as put forth by VKRV Rao, historical comparisons of growth rates of GDP are also meaningless in regard to the question of drawing inferences about the well-being of the peoples.

An interesting study by UNDP, on Human development, has argued that five types of growth are not useful in drawing inferences about the quality of development. They are listed as follows: *Job-less Growth*, *Ruth-less Growth*, *Voice-less Growth*, *Future-less Growth* and *Rootless Growth*. It is useful to mention briefly about each of these terms. *Job-less Growth* refers to that pattern of growth, which does not create additional jobs or which reduces the quantum of available jobs. *Ruth-less Growth* is that pattern of growth, which increases the inequities in the system. *Voice-less Growth* refers to that pattern of growth, which does not improve the voice of the disempowered segments of society, such as women, other deprived sections like tribals. By *Future-less Growth* is meant that pattern of growth is such that destroys the environmental and ecological balance of the economy. Finally, *Root-less Growth* refers to that pattern of growth, which ends up in destroying the basic foundations of *Values, Traditions, Life styles, Faiths and Social norms of life*.

Thus, the above discussion makes it clear that the recent focus on Growth Rate of GDP as a signal of development, in the current paradigm of globalization and development is highly misleading. It provides only a partial measure of the nature and the intensity of the development process. This leads us to present the contours of what one may call as Holistic development as a new paradigm of development.

9 Contours of Holistic Development

We define the contours of Holistic development as consisting of three interrelated dimensions as given below:

1. Economic Aspects focusing on Growth Rate of GDP in overall and per capita terms;
2. Social Aspects, covering dimensions such as employment, reduction in inequities, empowerment, environmental sustainability, social infrastructure—including education, health facilities, rural development and human resource development;
3. Cultural Aspects, preserving and fostering of values, conserving cultural roots, maintaining life style, traditions and faith, etc.

The objective of high growth rate of GDP is a must, so that the cake for distribution of the benefits of development is fairly large. But this dimension cautions one against the temptation of aiming at high growth rate for its own sake. But content and quality of growth are even more important than the mere quantity of growth.

Further, in order to avoid the pitfalls of the growth alone strategies, as pointed out earlier, we have added a second dimension viz. Social Aspects of development and a third dimension which deals with values, norms, and civilizational roots, etc. Thus, the paradigm of Holistic development would consist of the three dimensions of the development process. The strategies for Holistic development should be worked out in such a manner that all the three dimensions are fulfilled in the most appropriate manner.

The series of crisis situations, described earlier, have been largely caused by the neglect of the second and third dimensions of the concept of *Holistic development* and by focusing on growth alone strategies of development.

9.1 Delineation of Values and Cultural Roots for Holistic Development

We propose to list out some of the values that have been eroded from our midst and which need to be preserved and fostered for ensuring a Holistic development process to become a reality. We would only list some of them, for the purpose of illustration, with brief notes appended on each of them (Panchamukhi 2012, 2014, SVBC). These are the following:

- Value of Contentment and Value of Restraint on Consumption: At present, there is a tendency of desiring more and more without contentment. The corollary of the *Value of Contentment* is the *Value of Restraint on Consumption*, which is prescribed in the ICES. This craze for more and more for consumption leads to a situation of excessive consumerism leading to a situation of ecological imbalance and environmental pollution. The craze for more and more should be curtailed by proper control over consumerism.
- Value of Cooperation: Presently, viewing every activity in the framework of competition has generated a tendency of using the principle of competition to destroy all avenues of cooperation and cooperative tendencies. Unhealthy competition would generate forces of destruction rather than avenues for higher efficiency. In a developing society, cooperation rather than competition should be the modality for organizing economic relations.
- Value of Caring and Compassion: In a globalizing world with cut throat competition, there is little scope for caring and compassion. In the ICES, there is prescription for caring, compassion and sharing of the resources for optimum social welfare. The principle that the world is like a family and that we should all share the resources and distribute the benefits of development in an equitable manner is advocated in the ICES.
- Principle of managing oneself before thinking of managing others: The ICES has laid emphasis on the need for managing oneself before thinking of managing others. Each one should be an optimum performer, by conforming to certain principles of self-control, ethical living and caring for others, and setting norms

for public behaviour. Bhagavad Gita is a treatise on optimum management of oneself for ensuring optimum social benefits. The ICES prescribes that each one should follow the principle laid down in the Bhagavad Gita for stress management, self-control, efficient work culture, etc.

- Principle of using Trust/Faith as the basis for Human Relations: The ICES prescribes that all human relations should be based on the principle of using Trust/Faith. The aptitude of Love and Affection is based upon the approach of mutual trust. The trust of the management in the employees and the faith of the employees in the management are the guiding principles for optimum management.
- Principle of Consistency, Competence and Commitment: The theory of Karma Yoga, as prescribed in Bhagavad Gita, puts emphasis on the principle of Consistency, Competence and Commitment. The concept of Yoga is defined as the tendency of being efficient in a consistent manner with commitment. These three C's are supposed to define the contours of what is known as the Japanese Industrial Culture. In so far as Bhagavad Gita provides the basis for the Indian Classical Economic Science (ICES), these principles define the contours of efficient governance of the self and inter-human relations.
- Value of Composure: The ICES prescribes the attitude of composure, during situations of prosperity and those of depletions. Both at the individual level, and at the societal level, the approach of proper balance in the reactions and responses helps in maintaining a situation of harmony, peace and happiness. Bhagavad Gita prescribes the practice of *Samatvam-Equanimity*, for realizing *True Happiness* in a *Stress-Free environment*.

The above list of values is illustrative, only to bring forth the point that maintenance of proper *Values System*, as prescribed in the framework of *Holistic development*, discussed here, is very important in ensuring a proper quality of growth and development in the system.

10 The Holistic Model of Human Welfare

Finally, let me present the contours of a Holistic Model of Human Welfare as enunciated by Kautilya, the well-known social scientist of fourth century BC, and author of the famous Treatise on Statecraft and Social Science, entitled, “Artha Shastra” (Panchamukhi 2012, 2014, SVBC). It runs as follows:

Sukhasya Mulam Dharmah; Dharmasya Mulam Arthah: Arthasya Mulam Raajyam: Raajyasya Mulam Indriya Jayah; Indriya-Jayasya Mulam Vinayah; Vinasya Mulam Vruddhopa sevaa: Vruddhopa sevayaah Mulam Vijnanaanah; Vijnanaena Atmanam Vindet.

A proper *Values System (Dharma)* is the cause for optimum Human Welfare (*sukhasya*); proper capital accumulation (*Artha*) should be utilized for generating a

Values-based System; for suitable capital formation (*Arthasya*), one requires proper governance and political system (*Raajyam*); for proper governance and political system, one requires a group of leaders who are free from corruptive tendencies (*Indriya-jayah*); for developing tendency for self-control, one should have the aptitude of being modest (*Vinayah*); for developing a tendency of being modest and service-oriented, one should have the aptitude of respecting the elders and the scholars (*Vruddhopaseva*); for developing an aptitude for serving the elders and the scholars, one should possess the faculty of analytical and mature thinking (*Vijnaanam*). It is only through an analytical reasoning that one can realize the status of being an accomplished person.

Thus, here is a Holistic multidisciplinary Model—encompassing *Moral Science, Economic Science, Political Science, State Governance and Administration, Sociology, and Philosophy*—for realizing the *True State of Happiness and Human Welfare* (*Sukha*). If the messages of this Holistic Model of human welfare are expanded in the jargons of the modern sciences of economics, political science and other social science disciplines, one would get a model which is much more meaningful than the Models of Social Welfare, enshrined in the Modern Economic Science.

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Historicizing Development Discourse and Higher Education Policy in India



Naregal Veena

Abstract Taking its cues from the sub-discipline of development economics, policy discussions have largely been premised on indicators of economic growth, or have proceeded along sectoral lines. Alongside, notwithstanding their centrality to the exercises of nation-building in the Nehruvian era, the ‘soft’ sectors such as education, culture, and labour have remained under-analyzed fields within both policy studies and the social sciences. Conformity with such antecedents, I argue, can only serve to limit the methodological canvas and analytical tools available to delineate and critically evaluate links between processes of marginalization in the contemporary moment on the one hand, and the formulation/analysis of public policy priorities and outcomes, on the other. How indeed may we reorient discussions of public policy beyond their primary allegiance to the terrain of development economics, assumed as a given within state discourse and discussions of policy within civil society? Recognizing that social policy initiatives in the Indian context predate the post-1950s development project, and share a longer history with contestations over colonial reform through efforts to create new codes, institutions, knowledge forms and practices, this paper posits alternative frames of reference drawing on the larger domain of the human sciences to explore aspects of post-1947 social policy, and its over-reliance on human capital theory.

1 Introduction

Invoked by colonial intellectuals since the late nineteenth century as a way of envisaging their rightful place within world history, by the late 1940s, the idea of economic development became a world-wide framing rubric to think about unequal relationships in the era of decolonization. In the early 1950s, development theory presented itself as a radical discourse about coming to grips with prospects and dangers of the post-World War II scenario that, on the one hand, helped to think of

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social change on a far wider/international scale, and on the other, to bring together interventionist policies and metropolitan finance; thus, development became simultaneously an international and state concern.¹ With poverty reduction and modernization as twin objectives, social sectors of education, child welfare, health emerged, in addition to agricultural productivity, as key components and targets of early development aid, world-wide. The adoption of these agendas at national and international levels opened up unprecedented avenues for the linking of trained expertise to aid organizations, government and business sectors. Inevitably, this impacted significantly on the discipline of economics as had been practiced hitherto. The emergence of the sub-field of development economics as the dominant face of the discipline not only radically redefined orientations and agendas within the discipline but, more broadly, changed the way economic thinking had worked until then with possibilities of societal transformation.

2 Political Modernity, Development Discourse, Social Transformation

Echoing these trajectories, in post-1947 India, Please confirm if the section headings identified are correct. planned development and industrialization were envisaged as the primary paths through which the 'imagined economy' would propel the requisite social change to catapult the nation out of poverty and its low agricultural productivity.² However, due skepticism over the tenability of 1947 as an inaugural marker is handy as we recall that the acceptance of development agendas as national mission had a well-known pre-history going back at least to the 1870s.³ The discourse of economic drain put forth through the concerted efforts of public intellectuals such as Dadabhai Naoroji (1825–1917). M. G. Ranade (1842–1901). R. C. Dutt (1848–1909) and others had been an important foundational tenet of the Indian National Congress. Through an elaborate use of facts and figures, drain theory had made an unequivocal case for economic control and self-government by linking the destruction of

¹Ravi Kanbur, 'The Development of Development Thinking', lecture delivered at ISEC, Bangalore, July 2005, accessed on 04-06-2017. <http://www.arts.cornell.edu/poverty/kanbur/ISECLecture.pdf>; see also Arturo Escobar, *Encountering Development: The Making and Unmaking of the Third World*, Princeton: Princeton University Press, 1995.

²Echoing Anderson's notion of the nation as imagined community, it has been argued that the political upheavals of 1992–93 in India were a critical watershed that saw a reversal of the articulation of the nation with an idea of the economy as a community of producers, Satish Deshpande, 'Imagined Economies: Styles of Nation-building in Twentieth century India', *Journal of Arts and Ideas*, Nos. 25–26, 1993.

³For initial work in this field, see Ben Zachariah, *Developing India: A Social and Intellectual History 1930–1950*, Delhi, Oxford University Press, 2005. See also C. A. Bayly, 'Indigenous And Colonial Origins Of Comparative Economic Development: The Case Of Colonial India And Africa' in C. A. Bayly, Simon Szreter, Vijayendra Rao eds., *History, Historians and Development Policy: A Necessary Dialogue*, Manchester: Manchester University Press, 2011.

manufactures, the ruin of the peasantry, and the ensuing impoverishment of India to economic enslavement advanced through colonial policy. After provisions for provincial autonomy through the Government of India Act 1935 led to the formation of Congress governments in eight provinces, in August 1937, the Congress Working Committee passed a resolution proposing an inter-provincial committee of experts to consider urgent and vital problems, the solution of which is necessary to any scheme of national reconstruction and social planning. The National Planning Committee was the precursor of the Planning Commission. And yet, partly as a self-aggrandizing gesture, theories and narratives of Indian development, within which policy discussions are embedded, prefer to treat these well-known historical facts as of little more than picturesque consequence.

Further, however, in tracking this conflation between the emerging nation and the redemptive logic of development, we note a significant sequence: the embracing of developmental agendas within the freedom movement in the 1930s was prefaced by full, formal political acquiescence, 1920 onwards, to the logic of linguistic territorialisation within constitutional debates, political discourse and Congress organizational structure. However, actual linguistic reorganization of states had to wait till 1960, a whole decade after economic planning became the centre-piece of the national mission. While further work is needed to unpack the full range of implications of the conceptual-political shifts noted above, the broad timeline and sequence establish: (i) the late colonial period saw territorial reorganization being rapidly linked to the possibility of linguistic provinces, and (ii) this somewhat incongruous imaginary of monolingual territorial entities within a polyglot setting rapidly lent itself to being discursively recast as target of an ahistorical developmental vision. This linking of territorial demarcations within the federal structure to the logic of monolingual units had major implications for the nature and meanings of Indian democracy.⁴ Furthermore, the simultaneity of its elaboration with the adoption of the developmental vision created conditions for a strong identification of development, first with the emerging nation, and soon, its simultaneous use as key legitimizing principle of the nation state. This strong overlap between narratives of the nation and its development in the Indian context thus that they worked in mutually self-reinforcing—and legitimizing fashion—have rendered it difficult to discuss and debate what either concept of development or post-colonial nation have meant. The great prestige and visibility of that accrued to development economics as the primary face of the discipline since the 1950s, no doubt contributed to the making of this tautological scenario.

For our purposes here, one outcome of this intellectual impasse has been that discussions of national policy in India have largely remained almost strictly circumscribed along sectoral lines, and within the terms of its ‘home ground’, development economics. Thus while other disciplines such as history, anthropology and political science have offered perspectives on the development project in terms

⁴See Veena Naregal and Madhav Prasad, Introduction, *Language Movements and the Democratic Imagination in India*, Orient Blackswan, Delhi, 2017, forthcoming.

of its ideas, genesis, claims, experience and outcomes, these perspectives and critiques have been largely regarded as beyond the purview of policy analysis or design. While our public discourse ‘commonsensically’ acknowledges the links between politics and electoral prospects, on the one hand, and policy priorities, announcements of welfare schemes and such like, on the other, these links remain acknowledged only at the level of *realpolitik*, while policy design and analysis proceed about their business treating such details as peripheral or, at best, as information that can be noted in preliminary fashion purely for contextual value. Somewhat belatedly, political analysis at the level of electoral outcomes has recently been seen as worthy of attention for an understanding of macroeconomic priorities.⁵ And yet, despite the perspectives of social and intellectual history on early development thought, colonial social reform and state policy, development economics in India remains quite strongly ensconced in its pursuit of ‘hard economic facts’ that are apparently impervious not just to historical change but also apparently transcend ‘non-objective’ nationalist/culturalist perspectives tied to specific geographical locations.

3 Contemporary History and Social Policy

Beyond the Indian context, there seem to be significant signs of change. Even as the logic of economic austerity comes under question and the positing of a ‘pure’ depoliticized economic rationality seems increasingly unsustainable, questions of social policy have acquired renewed visibility on academic and political agendas, with respect to both developed countries and the developing world. With this, on the one hand, the discipline of economics is being called upon to renegotiate its relationships, internally, with the sub-field of development economics, and with respect to the other human sciences, on the other.⁶ In comparable vein, recent discussions of social policy in East Asian contexts too have borne out these trends in very interesting ways: alongside studies that highlight the new visibility of welfare and social policy agendas, interesting work from within departments of economics to historicize modern economic ideas in those contexts has emerged.⁷

⁵Kunal Sen and Sabyasachi Kar, *The Political Economy of India's Growth Episodes*, 2017.

⁶An important body of work in this direction has been the contribution of A. W. Coats, see his *Collected Papers: Volume 1: The History of Economic Thought*, Routledge, 2005; *Volume 2: The Sociology and Professionalization of Economics: British and American Economic Essays*, Routledge 2005; *Volume 3: The Historiography of Economics: British and American Economic Essays*, Routledge 2015.

⁷See Karen Baehler and Douglas J. Behler, ‘Introduction’, *Chinese Social Policy in A Time of Transition*, Oxford University Press, New York, 2013; Cheng-Chung Lai ed., *Adam Smith Across Nations: Translations and Reception of Wealth of Nations*, Oxford, Clarendon Press, 2000; Susumu Takenaga ed., *Ricardo and the History of Japanese Economic Thought: A Selection of Ricardo Studies in Japan During the Interwar Period*, Routledge, 2016.

Simultaneously, an initial willingness to look beyond the neoclassical orthodoxy of mainstream economics may be discernible in the Indian context.⁸ However, it is reasonable to say such moves are yet to methodologically challenge the tautological scenario arising from the identification between nation and development as self-evidently reinforcing categories, which as noted above, has made for a peculiar and persistent un-criticality surrounding public engagements with policy.

Against this, building upon valuable accounts that political economists have offered, this essay is an effort to argue for an urgent need to historicise discussions on social policy in India as a way of questioning their continued and exclusive embedding within the parameters of development discourse. Rather, it needs to be emphasized that linkages between modern economic thought and efforts to re-inscribe the social imaginary through institutional interventions and/or notions of collective good tied to representative sanction go back at least to the mid-nineteenth century. Importantly, these efforts towards social re-inscription, forging of representative discourses and advancing transformative agendas all went hand-in-hand, even as they centrally drew upon the framing of new social categories such as upper caste, middle class, Hindu, Muslim, non-brahmin shudra/ati-shudra, that pointed to the consolidation of identities and new vectors of social belonging being wrought through colonial modernity.

Highlighting this, my arguments towards a re-opening of policy discussions beyond the terrain of development economics rests critically upon a brief initial account here to show how, even for the 1947 period, core arguments around Indian development have implicitly hinged upon changing meanings of social categories such as ‘backward’, labour, poor, peasant and minority. While intuitively we know the meanings of these terms have been far from constant, it seems evident we lack the analytical frameworks and tools to factor in their mutations into the design or assessments of policy agendas and formulations. At one level, that public or official discourses can maintain a seemingly safe distance from factoring in these mutations seems tied to the hegemonization of certain analytical and social categories within certain disciplines—such as economics—labour; sociology—caste, history—minority/identity. In other words, a persistent motif here is to argue that examining the underpinnings of our public/official discourses points *equally* towards questioning their repercussions on the formulation, design and evaluation of social and economic policy interrogating the limits of our disciplinary formations as to, post-1947.

Proceeding from here, the last section of the essay is a brief effort to ‘apply’ these reflections to the field of higher education policy, towards a framework for a possible delinking of its discussion from an exclusive embedding within the field of

⁸S. M. Ravi Kanbur, ed., *Q-squared, Combining Qualitative and Quantitative Methods in Poverty Appraisal*, Orient Blackswan 2003; Bardhan and Isha Ray eds., *The Contested Commons: Conversations between Economists and Anthropologists*, Wiley, 2008; Kaushik Basu et al. eds., *Interdisciplinary Approaches to Literacy and Development*, Routledge, 2013; Simon Szreter, Vijayendra Rao eds., *History, Historians and Development Policy: A Necessary Dialogue*, Manchester: Manchester University Press, 2011.

development economics. Here, my arguments will show that the trajectories of institutionalization within the field of Indian higher education since the late colonial period have a critical bearing on contemporary challenges. Clearly, these linkages are not highlighted out of any opportunistic or limited intention of resting blame for our present ills on the colonial past, but rather to seriously reorient policy discussions towards historically-driven understandings of trajectories of exclusion and marginalization.

4 Historicising Development and Key Social Categories

Importantly, even as we acknowledge that development still retains its status as a dominant state-society interface, evidently its meanings and core arguments have hardly remained static. However, both state and civil society discourse implicitly and sometimes explicitly recognize that the peasant, the worker, the Muslim or the backward caste of today is not the same peasant, worker et al. of fifty years ago. To take one example, if the three major initiatives of the early 2000s, the Sachar Committee Report (2006), the NCEUS Reports (2006–07) and NREG Act (2005) and ongoing scheme, alongside the simultaneous re-opening of the questions of reservation and affirmative action since then, have been anything to go by, recent decades have thrown up several indications that deep changes have occurred in the structure, logic and idiom of domination, exclusion and resistance in India.⁹ Alongside, the Nehruvian imagination of social change propelled through planning, development and industrialization has given way to new understandings of the links between political and social equality and developmental benefits. Arguably, the earlier logic that development and economic opportunities would eventually lead to social and political equality has been now reversed, so that 1990s onwards, assertions of political and democratic equality have appeared as the precondition to groups eventually being able to access the fruits of development and growth. The earlier use of meta-categories such as labour, peasant, poor was implicitly based upon a feudalism to capitalism to socialism narrative. Since the 1990s, however, the language of politics has changed, and this narrative has been inflected and transformed by a plethora of seemingly identarian categories such as dalit, OBC, Muslim, Christian, women, adivasi. The latter narrative is no longer that of economic transition, but rather of a political transition to an ostensibly perfect democracy of the future—that is a narrative of ever-expanding and ever-deepening democratisation, which encourages and then accommodates/incorporates competing claims upon the polity and government. The 1980s rhetoric of sustainable development, of human rather than economic development, of gendered development

⁹This account draws upon ideas discussed at an ICSSR-funded workshop, The 2000s: Rethinking Social Categories and the Contemporary, collaboratively organized at the Institute of Economic Growth in March 2009 by myself and Prathama Banerjee.

and so on may be plotted as intermediate moments of this transformation. Against these developments, the montage-like account below analytically highlights, the mutations in meanings of core categories around which both policy discussions and our wider social science discourse are premised. Such an account must perforce proceed by drawing on conceptual frameworks beyond those mobilised through the foundational tool kit of development discourse and mainstream economics, and their claims to work outside of 'non-objective' cultural or specific historical and geographical coordinates. The discussion below is also an attempt to address the unproductive 'division' of academic labour alluded to above via the exclusive 'allocation' of certain key categories to specific disciplines, in order to simultaneously emphasizes the need to historically thematise continuities and linkages between the domains of policy design and social science discourse.

Consider, firstly, how the figure of the peasant within policy/academic discourse. Originally linked to notions of property relations (as in post-1947 questions of zamindari abolition, land-reform, usury, cooperativisation, etc.), when do categories such as the 'peasant' become absolute economic/income categories, placed in relation to a universal poverty line and other absolute criteria of 'backwardness'? What were the implications of this 1950s–60s transformation in the story of the peasant and what happens by the 1970s, in relation to both Naxalbari kind of peasant movements and the late 1970s rise to power of 'backward castes'? How do we rewrite the story of the peasant today in the light of the earlier narrative: from the Gandhi/Kumarappa imagination of the Indian peasant as civilizational core to the Nehruvian and the early communist imagination of peasant as pre-proletarian to the 1960s reinstitution of the peasant as Maoist revolutionary vanguard to the Green Revolution imagination of peasantry as rural entrepreneur to the 1980s onward imagination of peasant as primarily the urban migrant and/or the backward caste/dominant peasant of India's 'passive revolution' to 1990s imagination of the peasant as suicide prone, besieged by the colonising imperative of SEZs, big dams, global markets, etc. a la Narmada, Nandigram, Singur and Lalgarh to the eruption of the angry 'demonetized' target deprived of support and minimum procurement price for his/her labour? How do we revisit our sociological tradition with its caste mobility and kinship studies, or our historical tradition and its hallowed stories of peasant resistance, or our economic traditions housed centrally within the transition debate or development narratives?

Similarly, apropos the category of labour: how can we thematise its trajectories, caught between disparate referents such as artisan vis-à-vis factory worker, peasant vis-à-vis proletariat, proletariat vis-à-vis unorganised/informal labour, labour vis-à-vis urban poor, free vis-à-vis unfree labour? How do we rethink our history of earlier industrializing and now globalising efforts, our early nationalist import-substitution mode and later export-oriented mode, our earlier imagination as a manufacturing economy and later imagination of service economy alongside the related histories of imagining productivity, labour and service? How have public discourses changed from questions of unemployment to questions of 'right' to work, from agitational labour movements to bargaining/negotiating modes? How have legal and juridical notions of contract evolved in the light of debates about

labour laws and unemployment and now 'self-employment'? How do we revisit the 1960s, the 1970s, the JP movement and the emergency in terms of urban politics and the labour question? How do we rethink our presumptions about the urban–rural divide today, in the light of questions of large-scale migration, seasonal and otherwise, and question the earlier reduction of the countryside to pure agriculture and cities to industry? How do we reconnect questions of menial and manual work and unfree, untouchable labour to labour history and labour economics in the light of say, anti-slavery movements undertaken by the untouchables of Kerala in late nineteenth and early twentieth centuries? What are the implications of the contemporary realisation that capitalism does not necessarily 'free' labour but indeed creates new forms of unfree, devalued and cheapened labour in most parts of the world? How do we rethink the growth of managerial discourses in tandem with governmentality discourses today?

Moving on, how has the category of 'minority' changed from the time of the Constituent Assembly debates to now? How has the earlier position on secularism as disentangling politics from religion changed into the later statist position of equal respect and 'protection' of religious 'rights', reduced to primarily the question of personal laws? What are the implications of dealing with what is called 'religious' violence through parameters of 'criminal' law and evidence? Is there a possibility of thinking of other constitutional, civil or juridical parameters in our engagement with violence against minorities? How has the category of minority been implicated in and reshaped by the history of development in India, as shown by the Sachar Report, which amply documents the economic introversion, ghettoization, and informalization of most Muslims in India? How does this put the minority question beyond the standard 'communalism' historiography and sociology of religion? What are the implications of the economic invisibility of the Muslim in India vis-à-vis the political hypervisibility that the Muslim is burdened with? How do we rewrite the history of representation of Muslims—both cultural and political representation—in the light of the apparently closed debates about federalism? How has the Muslim emerged as a kind of nationalised, united category of analysis, defying all evidence of Muslims being regionally differentiated and quite in contrast to the caste category, which has been consistently disaggregated, regionalized, and which has emerged as the basis of the post-1989 coalition era?

And lastly, how did the deployment of caste as category change, again from the time of the Constituent Assembly debates to today? What were the implications of Ambedkar's seeing the caste question as linked to the minority question, as well to the question of family and marriage reform? How did the SC/ST category become a stand-alone category while the 'backward classes' question, despite an early Backward Classes Commission, get deferred as a moment till the late 1970s and the coming to power of the backward caste/middle peasantry? What were the implications of the fact that while Ambedkar saw the dalit question as deeply conditioned by the question of Hinduism and majority rule, the caste question and the communal question came to be seen as distinct problematics in the Indian social sciences? How do we revisit the connections between the caste, communal and language questions of the late 1920s–60s? How did this history reconfigure

post-Mandal as the question of regional politics? How do we rethink the question of urban politics vis-à-vis dalit movements—say, through the Shiv Sena-Dalit Panther encounters? How has the question of violence per se been thought through legal categories such as atrocity and social scientific categories such as exploitation, exclusion, subalterneity? How has the question of labour and culture been recast through the question of caste? How do we narrativise the changing history of categories such as ‘depressed’, ‘untouchable’, harijan, scheduled caste, dalit, dalit-bahujan? What are the implications of recent efforts at generalizing/universalizing the dalit moment through categories such as the bahujan in terms of the earlier histories of particularizing caste identities?

In the light of these analytical ‘snapshots’, the continuing use of these labels of peasant, labour, minority, caste in seemingly stable ways within policy discourse and/or the social science can only hide the deep changes that have already occurred through the ways planning and the exigencies of electoral democracy have simultaneously contained and complicated the contours of deprivation, discrimination and exclusion in the post-1947 period. In other words, if indeed policy discourse and the social sciences must rise to the challenge of being responsive to the complexities of the contemporary, we need to also ask how far our social/analytical categories within knowledge forms were adequate to grasping the deep transformations in the contemporary that have already occurred in the structure, logic and idiom of domination, exclusion and resistance in India.

5 Policy Analysis Beyond Development Economics?

The demarcation of analytical categories, disciplinary agendas and boundaries have been key motifs in the foregoing discussion. In the same vein, we note that despite the emergence of new sub-disciplines and research fields within the Indian social sciences since the late 1980s, as a whole, policy studies in India remain a strangely neglected, even stigmatized field. Valued efforts by political economists notwithstanding, this neglectful distance between the Indian social sciences and policy studies has allowed the links between politics, contemporary histories of marginalization and policy assumptions to remain un-thematized and poorly grasped. Further, these trends are clearly compounded by the fact that, despite their centrality to the exercises of nation-building in the Nehruvian era, and (or because of) their subsumption under rational choice paradigms/human capital perspectives, ‘soft’ sectors such as education, culture and labour have remained under-analyzed fields both within policy studies and the social sciences. Allowing the sub-discipline of development economics to assert a hegemonic hold over policy discussions has meant that these have been premised on indicators of economic growth and have proceeded in piecemeal fashion along sectoral lines. Conformity with such antecedents, I argue, has only served to seriously limit the methodological canvas and analytical tools available to delineate and critically evaluate links between processes of marginalization in the contemporary moment and the

formulation/analysis of public policy priorities and outcomes. Additionally as policy-making apparatuses themselves have become the object of neoliberal deregulation, the challenge then is to seek frameworks that enable policy analysis and social science to jointly move beyond the use of social and analytical categories in seemingly stable ways that are at odds with trajectories of contemporary change and exclusion. Against these shifts in political and conceptual contexts within which evolving policy imperatives are defined, how indeed may we reorient discussions of public policy beyond their primary allegiance to the terrain of development economics?

Working from the vantage points of several disciplinary perspectives, there is an urgent need to explore agendas and outcomes of public policy in the contemporary against a wider canvas of institutional, economic and political histories and disciplinary genealogies in ways that are mindful of processes of exclusion and changing structures of marginalization since the colonial period. Recognizing that social policy initiatives in the Indian context predate the development project, through a final focus in the final section on some key features of Indian higher education policy discussions between 1950 and the early 2000s, I argue for a greater investment in positing alternative frames of reference drawing on the larger domain of the human sciences to explore aspects of post-1947 social policy. Against these contours, and in keeping with the larger argument here, the cumulative emphasis in the last section will be on drawing linkages between the figuring of policy questions, public debates and the shape of disciplinary agendas with respect to the Indian social sciences.

An important field within official and development discourses until recently, simultaneously education has been seen as the road to empowerment by many excluded groups and caste movements. Hinging upon the exclusion and inclusion of peoples in educational and professional institutions, clearly such demands echo the ways in which colonial education functioned to structure access to proximity to opportunities for social mobility. Since the 1980s, the relative popularity of the human development index compared to poverty measures also put the question of education back at the centre of economic thinking. However, echoing emphases within development aid parameters, research in education studies in the Indian context have been largely slanted towards elementary/school education. Stemming from this, until recently, discussions on higher education were often dismissed outright for showing an elitist bias.

6 Human Capital Theory, Historical Imperatives, Institutional Perspectives

Not surprisingly, then, in the face of the feverish pace of change since the early 2000s, comprising a slew of parliamentary Bills, Commissions, Committees, and a rapidly changing landscape in university education, the neglect of higher education

policy as a field proved particularly disabling. As one commentator put it, caught off guard, as producers of knowledge, it was strange to find that the “very institutions we inhabit and reproduce have hardly figured in our research agendas.”¹⁰ How indeed may we regard this seeming blind spot? Ironically, many of these institutions alluded to here had been established through the post-1950s phase, when modernization agendas were led by the top intellectual brass of the country, channelled through major state agencies and endorsed at various levels via higher education institutions. Alongside, the 1960s and 70s saw Indian university campuses swept by huge ferment and widespread, radical student mobilisations. While cinema and literature registered these mobilisations quite prominently, at best, the academic response to these developments was fragmentary and desultory. It is only in the last decade or so, after a second round of OBC quotas were introduced in 2006 (popularly dubbed as Mandal II), that a space for preliminary academic interrogation of the processes of social marginalization via the institutional frameworks of higher education seems to have been opened up. Given the core value placed on education within development discourse, particularly, as a measure to alleviate poverty and inequality, it is important to ask how we may grapple, firstly, with the paucity of studies that thematise marginalization with respect to Indian higher education, post-1947, and how we move beyond these glaring gaps.¹¹

Within development theory, education policy discussions have focused around the key term, human capital—defined as the stock of knowledge addition of education, skill and training¹²—as a significant vector in contributing to aggregate economic growth and to mobility of households/individuals. In itself, the linking of economic growth to the development of talent and education was not new and could be traced back to the emergence of modern political economy and the writings of Adam Smith. What was new and unprecedented, however, was the ubiquitous currency the terminology of human capital gained since the early 1960s, described in the words of another renowned economist, Fritz Machlup, writing in 1970, and who observed how even though ‘the literature on the subject of education and economic growth is some two hundred years old, but only in the last ten years has the flow of publications taken on the aspects of a flood’.¹³ An important contributor to this perspective, and writing of the hegemonizing presence that his own work

¹⁰Mary John and Janaki Nair, ‘Commissions, Reports and the Difference they Make’, *Seminar* 694 August 2011, pp. 24–28.

¹¹A small body of work that looks either directly or indirectly at education as site of discrimination and reproducing social and economic disparity, see Ashwini Deshpande, *The Grammar of Caste: Economic Discrimination in Contemporary India*, OUP, 2011; Satish Deshpande and Usha Zachariah, *Beyond Inclusion: The Practice of Equal Access in Indian Higher Education*, Routledge, 2013; Samson K. Ovihegan, *Faces of Discrimination in Higher Education in India: Quota policy, Social justice and the Dalits*, Routledge, 2015.

¹²Alan Burton-Jones and J. C. Spender, *The Oxford Handbook of Human Capital*, OUP, 2012.

¹³Fritz Machlup, *Education and Economic Growth*, University of Nebraska Press, 1970, p. 1.

along with the that of his colleagues acquired, Gary Becker recalls in his 2012 foreword to *The Oxford Handbook of Human Capital*:

The human capital ‘revolution’ began in the 1950s and early 1960s with the research of Theodore W Schultz, Jacob Mincer and myself. Schultz’s most influential piece among others on human capital is his presidential address to the American Economic Association (Schultz 1961). Mincer’s pioneering work was his dissertation published in the *Journal of Political Economy* in 1958 (Mincer 1958)...Becker’s most famous human capital studies are the various editions of his book *Human Capital* (Becker 1964, 1975, 1993).¹⁴

Further, however, their influence was not limited to influencing educational discourse. Just as importantly, theories about the economic importance of human capital were instrumental in legitimizing the claims of efficacy in applying rational choice theory to all aspects of life by purportedly upholding correlations between rational choice investments in human capital and improvements in labour productivity, economic growth, health and the overall betterment of life. Continuing, Becker writes:

I do not use the word ‘revolution’ casually because the emphasis on investments in education, training and other human capital radically changed the way economists and others interpreted many economic, social and policy issues. In this foreword, I discuss three of the most important fields affected by the human capital approach: the analysis of labour markets, explanations of the determinants of economic growth and evaluations of the benefits from improved health and of the determinants of longer life and a better quality of life.¹⁵

Significantly, one index of the dominance of human capital paradigms has been that both demands from hitherto excluded groups, and the literature on the capabilities approach, have cast education largely as a question of appropriation, or of adequate dissemination of knowledge. Neither has necessarily led to a critique of knowledge forms per se, primarily because knowledge-production has been discussed within the framework of expertise and skill, related to questions of upgrading human capital through increased access as way of supposedly reducing poverty and inequality, rather than to questions of self-reflexivity, critique and transformation of how issues relating to knowledge and marginalization have been thematised within the social sciences.¹⁶ Clearly, the connections between emerging forces and structures of marginalization, and the evolving trajectories of higher education policy urgently require to be thematised and thought through, but these linkages can be plotted in tandem only by moving beyond the frames of reference

¹⁴Gary Becker, ‘Foreword’, *The Oxford Handbook of Human Capital*, p. 1.

¹⁵*Ibid.*

¹⁶Initiatives like the Dalit Intellectual Collective have begun to rethink questions of alternative epistemologies and local knowledges, etc.; other efforts to map the politics of knowledge in relation to the politics of exclusion have also emerged, including two recent workshops held at the Institute of Economic Growth on Indian Social Sciences and the Vernacular/s: Disciplinary Histories and the Politics of Knowledge, [ICSSR-funded, February 2017]; ICAS-IEG workshop on Language, Region, Knowledge: Colonial Disciplines to Indian Social Sciences [4–5 May 2017].

of development theory. It is useful to underline here that the above-noted trends also point to overlaps between the ways issues around higher education have figured within policy discourse and the Indian social sciences. Raising questions around policy discussions is thus in equal measure to examine how the politics of marginalization may relate to the framing of agendas within political science, economics, sociology and social anthropology, the disciplines mean to grapple with the contemporary. How then do we rethink our location as policy-makers, intellectual and academics today in the light of all this? Clearly, there is room for both domains of policy-making and the social sciences to open themselves to a range of questions: how can we develop a self-reflexive and self-critical mode of historicising the politics of knowledge forms such as economics or sociology or history and policy agendas in India? How do we make visible the complicity of knowledge norms, techniques, modes of subjectivity, genres of writing, forms of pedagogy/training, deployed with respect to the social sciences and policy formulation, to post-independent India's history of exclusions and resistances?

Commentators both in India and elsewhere have noted that the human capital 'revolution' of the early 1960s mainly oversaw a mounting campaign for the laissez-faire finance of education, the imposition of direct charges and the establishment of private institutions.¹⁷ Rigour in manpower planning and returns on education became a concern with US policy-makers in the face of post-World War II anxieties over whether their country had the resources to compete in the military-technological race with the Soviet Union, particularly, after the launch of the Sputnik in 1957. Simultaneously, this juncture saw an unprecedented expansion of higher education on a mass level across developed societies and the developing world. A pioneering and influential voice for a laissez-faire policy in education was put forth in 1962 by Milton Friedman, who proposed not only that 'individuals should bear the costs of investments in themselves', but also that the existing state schools should be denationalised, with a view to reaping potential benefits (e.g., optimum allocation of resources, competition between educational institutions, and parents' freedom of choice for school/college) purportedly contingent upon free play of market mechanism. In the parlance of mainstream economics, education since the early 1960s thus began to be increasingly seen as a private good, calling for private investment expenditures by parents and thereby weakening its existence hitherto as a state-funded public good or service. Seen in this vein, the casting of educational discourse into the terms of human capital theory was already to clear space for the invasion of the educational universe by neoliberal ideals that in recent years have been instrumental in reshaping the norms and procedures governing academic life almost globally.

Seen thus, and making due allowance for its unprecedented dimensions, neither the assumptions nor consequences of human capital theory come as the slightest

¹⁷ Arup Maharatra, [2014]. 'Invasion of Educational Universe by Neo-liberal Thinking: A Civilisational Calamity?' *Economic and Political Weekly*, 13 September 2014 Vol XLIX (37): 61–70; Joel Spring, *Economization of Education: Human Capital, Global Corporations, Skills-Based Schooling*, Routledge, 2015.

surprise to anyone who has studied the discourse of colonial education policy. As is well known, the project of colonial education sought to mould social aspirations, cognitive perspectives and ideological preferences towards *laissez-faire* ideas through the promise of a tightly regulated access to an elitist and alienating educational structure, financed through outlays that included significant contributions through private subscriptions from wealthy natives and colonial officials. In all these respects, colonial education needs to be acknowledged as the pre-eminent precursor and template for the financialization and economization of educational thinking, elaborated more than a hundred years before the human capital paradigm was advanced by the Chicago school economists.

Surely then, our inquiries into post-1947 educational policy in India must be built around a range of core questions that need to include the following: in what relations of discontinuity and continuities may we thematise the trajectories and agendas of higher education policy after 1947 to the project of colonial education, the creation of colonial-modern intelligentsias, and nationalist resistance to colonial education policies? What role did the beginnings of private investment in creating 'independent' higher education institutions since the late nineteenth century have in the creation of regional elites and structures of domination, and the imagination of regional universities and knowledge, through the late colonial period? How did this pre-1947 history influence the resistance to transfer of education to the Union List, after 1947, for administrative purposes, or the corresponding stand-off between the Vice-Chancellors Conference [staffed by regional elites] and the Central Government over the latter's attempts to create the University Grants Commission as an overarching centralized regulatory authority?

Similarly, what insights would a reading, in tandem, of key documents, such as the Calcutta University Commission Report (1917); the various provincial-level Reports towards expanding the university network in the 1920s; the University Education Commission Report (1948); Kothari Commission Report (1964–66) hold for a discussion of subsequent agendas in higher education? We know of the beginnings of state support for social science research, post-1947, via the setting up of the Research Programmes Committee, within the Planning Commission, and the subsequent setting up of the Indian Council for Social Science Research, with the economist D. R. Gadgil as its first Chairman, after he had fallen out of favour at the Planning Commission: how do we map the direct and definitive, and yet complicated and fluid links through all these instances, between planning objectives, institutional arenas and research agendas? And indeed, what light will such a re-thematization of policy initiatives and priorities in the decades following Independence, throw upon the seemingly contradictory implications of the National Knowledge Commission discussions (2005–10) and the Yashpal Committee Report (2011), in the lead up to the radical restructuring of higher education scenario envisaged through the XII Plan period (2012–17).

The Role of the World Bank in Middle-Income Countries



Ravi Kanbur

Abstract This paper asks, how should the World Bank and (MICs) relate to each other? What do the MICs get from the World Bank, and what does the World Bank get from the MICs? It should be immediately clear from the discussion in the paper that the MICs are a very diverse category—ranging from those that have been MICs for a long time, including some that are in IBRD-graduation territory, while others have just entered this category and face issues of transition into the category. India is one such country, and the focus is on India in this paper.

1 Introduction

According to the World Bank, as a country crosses a (2008) gross national income¹ threshold of \$995, it moves from the category of “low-income” to “lower-middle-income.” As it further crosses \$3,945, it is classified as “upper-middle-income.” Finally, at \$12,195, it crosses into the “high-income” group.² A related classification

T. H. Lee, Professor of World Affairs, International Professor of Applied Economics and Management, and Professor Economics, Cornell University. The paper was partly written when I was a Visiting Fellow in the New Delhi Office of the World Bank, and presented at a seminar there in 2010. I am grateful to the staff of the World Bank for productive discussions during my stay, and for helpful seminar comments. I was also thinking about these issues during my visits to CMDR in the early 2010s. I have not updated the paper since then, but it should be clear that the issues raised are as relevant as ever. “The paper came out in working paper form in ‘<https://www.kanbur.dyson.cornell.edu/papers/The%20Role%20of%20the%20World%20Bank%20in%20Middle%20Income%20Countries.pdf>’ and ‘<https://pdfs.semanticscholar.org/0756/be993626b475b1ceabe91181dd244d64f67.pdf>’”.

¹Using the Atlas method: <http://data.worldbank.org/about/country-classifications/world-bank-atlas-method>.

²<http://data.worldbank.org/about/country-classifications/country-and-lending-groups> (as of 8.10.10).

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is that which identifies eligibility for IDA (concessional) loans and IBRD (non-concessional) loans. Using 2008 values, \$1,135 per capita income is the operational cutoff for IDA-eligibility and the start of IBRD terms, and \$6,725 is the trigger for initiating the process for graduation from IBRD lending (but this can take a long time). There are some “blend” countries that have both IDA and IBRD lending as a transitional arrangement. In this paper, I take middle-income country (MIC) to be one that is eligible for IBRD borrowing from the World Bank.

Some country cases illustrate the different categories. Ghana, with a per capita income of \$630 is low-income status and IDA, and some way from crossing either threshold. South Africa, at \$5,820, is lower-middle-income and IBRD. Brazil, at \$7,300, is decidedly in the upper-middle-income category and an IBRD borrower, as is Mexico at \$9,900 (indeed, Mexico is a member of OECD). China began its relationship with the World Bank in low-income status and IDA eligibility. With rapid economic growth, it crossed the thresholds into blend status and now IBRD only status, as it transitioned from low income to the upper reaches of the lower-middle-income category, with per capita income touching \$3,000. India also began in the low-income status and IDA eligible category. It languished in this status for a long time because of its low rate of growth, but the sharp increase over the past two decades, and especially over the past decade, has taken it into the IDA–IBRD blend category, and now into the lower-middle-income category, at a per capita income of \$1,040 in 2008. At current growth rates, India’s IDA eligibility will stop soon, and it will become a pure IBRD country.

This paper asks, how should the World Bank and MICs relate to each other? What do the MICs get from the World Bank, and what does the World Bank get from the MICs? It should be immediately clear from the above that the MICs are a very diverse category—ranging from those that have been MICs for a long time, including some that are in IBRD-graduation territory, while others have just entered this category and face issues of transition into the category. India is one such country and I will pay particular attention to India in this paper.

The plan of the paper is as follows. In Sect. 2, I establish some general principles of the rationale for development assistance in MICs. Section 3 applies these principles to the operations of the World Bank. Section 4 gets even more specific, by considering the case of India. Section 5 concludes the paper.

2 Why Development Assistance for Middle-Income Countries?

The threshold for middle-income country status is annual per capita income of \$995, or \$2.7 per person per day. The operational cutoff for IDA eligibility is \$3.1 per person per day. Clearly, such a country has, on average, crossed internationally recognized poverty lines. At the top of the middle-income range, income is in

excess of \$30 per person per day. What is the rationale for the use of scarce public resources as development assistance to such countries?

There appear to be three main arguments for continuing development assistance to countries that have on average crossed the \$2 per person per day poverty line —“pockets of poverty,” “spillover effects,” and “knowledge transfer.” Let us take each one of these in turn.

It is obvious that averages deceive. There are many people below \$2 per day, even if the national average is well above this line. According to one estimate, for example, 70% of the world’s poor by the \$2 per day line live in MICs (of course, China and India account for the lion’s share of these).³ Thus, clearly, there is sufficient inequality in the MICs that there are indeed pockets of poverty. In some countries, like India, the term “pockets” may mislead. Poverty is widespread despite the country attaining middle-income status and the international status that might go with it. If the objective of development assistance is to help poor people rather than just poor countries, then there is a rationale for continued developed assistance despite the fact that the country on average is no longer poor.

The difficulty arises because, one might well ask, why should northern taxpayers channel resources to the government of a non-poor country in order to help the poor of that country, when on the face of it the country itself does not appear to be willing to help its own poor—as shown by the fact that poverty persists despite middle-income status? But this might be too stringent a line to take. A more realistic line is that while the government of the non-poor country would like to help its poor, the political economy makes it difficult to release resources for this task—an external flow of funds could ease this constraint and thus lead to greater flows to the poor. A second argument in this vein is that the government has good intentions but lacks the knowledge on how best to tackle its pockets of poverty. Development assistance in the form of knowledge transfer (which requires financial resources, of course) helps in this regard.

Finally, even if these arguments are accepted, it is not immediately clear what the financial and technical assistance should be targeted to, in order to help the poor in non-poor countries—encouraging further growth in per capita income, or encouraging better distribution of the per capita income? This is of course a major debate in the literature. To the extent that there is a conventional wisdom in this area it is the balanced view espoused by the Growth Commission:

In short, we take the view that growth is a necessary, if not sufficient, condition for broader development, enlarging the scope for individuals to be productive and creative....The Commission strongly believes that growth strategies cannot succeed without a commitment to equality of opportunity, giving everyone a fair chance to enjoy the fruits of growth. But equal opportunities are no guarantee of equal outcomes. Indeed, in the early stages of growth, there is a natural tendency for income gaps to widen. Governments should seek to

³Independent Evaluation Group (2007, endnote 1.2, p. 119).

contain this inequality, the Commission believes, at the bottom and top ends of the income spectrum. Otherwise, the economy's progress may be jeopardized by divisive politics, protest, and even violent conflict. Again, if the ethical case does not persuade, the pragmatic one should. (Commission on Growth and Development 2008, p. 7)

Even if only averages mattered, so that there was only concern about low-income countries, there would be a case for development assistance to MICs if what happened there had the potential to affect negatively the prospects of low-income countries. Assistance to MICs to prevent such spillovers would be akin to development assistance to the poorest countries, even if it was not given directly to them. Thus, assistance to MICs (for example, Brazil, India, and China) to reduce emissions of greenhouse gases would help on climate change, whose impacts, it has been argued, can affect the poorest in poor countries (for example, in Bangladesh). But notice that this is no longer an argument for general development assistance to aid general development in MICs. Rather, it is an argument for identifying specific spillovers and deploying targeted assistance to prevent them or to mitigate their consequences (unless it is argued that general development in MICs will indeed achieve these objectives).

Knowledge transfer is the third reason why development assistance may have a rationale in a country which has crossed a poverty threshold in per capita income. Since countries below the poverty line might wish to emulate the success of those countries who have crossed this line, how this was done, and how the higher level of income is being maintained and enhanced, might have lessons for low-income countries. There are many ways of achieving this knowledge transfer. One of them is continued engagement of development assistance agencies in the middle-income countries, to garner and transmit these lessons to low-income countries. Given the vast range of per capita incomes in the middle-income category, this argument can be also marshaled to support engagement in upper-middle-income countries—this time to help lower-middle-income countries.

The above is of course a variant of the spillover argument, couched in terms of positive spillovers. But the key transmission channels are not development in MICs and their consequences for poorer countries. The key transmission channel is the development agency. The argument requires the agency to be geared toward learning the lessons from MICs and using them in targeted fashion to help poorer countries. Moreover, the argument requires that the development agency be able to do this better than alternative mechanisms such as official bilateral exchanges as part of diplomatic relations, or private sector managed exchanges.

3 The World Bank and Middle-Income Countries

My focus in this paper is the role in the MICs of the first and largest of the five components of the World Bank Group, the International Bank for Reconstruction and Development (IBRD). As is well known, in contrast to the International Development Association (IDA) part of the World Bank, IBRD does not make

concessional loans—at least not at the deep level of concessionality of IDA.⁴ IDA resources come from triennial replenishments of grant funds to a pool from donor nations. IBRD uses its financial strength, in the form of its reserves, its paid up and callable capital, and its effective senior creditor status, to borrow favorably in financial markets and onlend to its developing country members. In this sense, IBRD lending and assistance may not constitute development assistance on the spectrum from pure grants to pure market rate loans. Indeed, this is a point of some discussion and debate, it being argued that IBRD's role as a financial intermediary has been "tainted" by the presence of the soft loan arm IDA. Indeed, was not that the role for which John Maynard Keynes and Harry Dexter White created the World Bank alongside the International Monetary Fund (IMF) at Bretton Woods in 1944?

Some of this discussion is to be seen in light of the recent responses of the international community to the financial needs of the two Bretton Woods institutions—a commitment of close on a trillion dollars increase in support for the IMF, compared to a capital increase of only 5 billion dollars for the World Bank, and the latter having been much more difficult to achieve politically. Of course, there are many reasons for these difficulties, including the reluctance of northern governments to give up voting power in return for capital injections from southern nations such as China and India. But the whole process and its outcome may strengthen the idea that northern governments view their capital contributions to IBRD through the same lens as they view their contributions to IDA.⁵ If this is the case, then support for an institution which in turn supports countries like India, China, and Mexico, seen now as competitors rather than deserving financial assistance, may be politically problematic. Continued support to IBRD may indeed then depend on the three pillars discussed in the previous section as justifying development assistance to MICs.

The lack of expansion of IBRD's capacity to lend, and growth in MICs, has meant that IBRD flows are an ever small share of the MICs total investment—down from 1.2% in 2005 to 0.6% in 2005.⁶ However, whatever the debate on the extent to which IBRD is or is not development assistance in the same fashion as IDA, IBRD's own self-evaluation is based on these same three pillars—pockets of poverty, negative spillovers and global public goods, and knowledge gain and transfer.⁷ Here is how the latest Financial Statement of IBRD begins:

⁴The other three parts of the World Bank Group are the International Finance Corporation (IFC) which engages directly with the private sector, the Multilateral Guarantee Agency (MIGA) and the International Center for the Settlement of Investment Disputes (ICSID). I will not discuss these components, nor the (important) issues of coordination across the World Bank Group.

⁵As a comparison, IBRD's equity is around \$40 billion, which is about the same as a three year replenishment of IDA.

⁶Independent Evaluation Group (2007), p. xiv. Of course there was a spike in IBRD lending in 2008–9 because of the global financial crisis, but I believe the pre crisis trend capture the medium term prospects for IBRD better.

⁷This line of defense is also mounted by De Ferranti (2006), in a riposte to "right wing" attacks on the World Bank and specifically the operations and even the *raison d'être* of IBRD.

IBRD's main goals are promoting sustainable economic development and reducing poverty in its developing member countries. It pursues these goals primarily by providing loans, guarantees and related technical assistance for projects and for programs for economic reform. (IBRD 2009, p. 3)

Here is how a recent evaluation of the World Bank's operations in MICs defines the additional scope of the evaluation over and above development and poverty reduction:

[The Report] also spotlights three growing dimensions of the Bank Group's role—sharing knowledge across countries, engaging countries in global programs, and combining support to the public and private sectors. (Independent Evaluation Group 2007).

Accepting, then, the three dimensions of the rationale for World Bank engagement in MICs—poverty, spillovers, and knowledge, how has the Bank actually done in this engagement? This question was asked and answered by the Independent Evaluation Group (IEG) of the World Bank in its 2007 report, which focused on Bank support to MICs over the decade 1995–2006. It is the most systematic assessment available of this issue, and one that is based on a range of quantitative and qualitative empirical evidence.⁸ The sources of evidence include: (i) a review of IEG's own country assistance evaluations (CAEs) of the Bank's programs in 43 MICs, (ii) a review of the its own evaluations of 1,500 Bank projects in MICs, (iii) filed assessments in seven countries based on in-depth interviews with stakeholders in seven MICs, and (iv) a client survey with over 600 respondents from 12 MICs.⁹ Based on this evidence, IEG's "headline conclusions" are as follows:

The World Bank's support in fostering growth and reducing poverty has been appreciated by MICs and made a contribution to their considerable success in these major areas. But the Bank must become more effective on issues where its work has not yielded pronounced advancements, notably dealing with inequality, combating corruption, and protecting the environment....The Bank's quality stamp—reflected in technical expertise, project design and supervision, and advisory services—has been a key strength. Its advisory work has been strong on diagnostics but would have greater impact if it concentrated more on specific local needs. The Bank could have done better in finding ways to increase synergy across the Bank, the International Finance Corporation, and the Multilateral Investment Guarantee Agency.... Looking ahead, the Bank should continue its engagement with MICs, but it must depart from business as usual. To produce greater development benefits, it has to become more agile and needs to draw upon MICs' own capacity much more systematically, connecting such capabilities to help low-income countries and to tackle global challenges. The Bank's work has to more clearly demonstrate best practice to deliver impact beyond its limited direct role. (Independent Evaluation Group 2007, p. xxx).

Of all the sources of evidence used, the client survey is novel and innovative, and I look at that evidence in some detail in what follows. The survey is of 656 respondents from 12 MICs: Brazil, China, Jamaica, Jordan, Kazakhstan, Mexico, Morocco, Peru, Russia, South Africa, Thailand, and Turkey. The response rate is

⁸I was an adviser to this report.

⁹See IEG (2007, Box 1.2).

Table 1 World Bank client response: overall effectiveness

	Highly ineffective	Ineffective	Moderately ineffective	Moderately effective	Effective	Highly effective
Overall (%)	1	4	12	53	28	2

34% (range 20–50%), which is in the acceptable range for a survey of this type.¹⁰ The respondents are from Government (40%), Private Sector (20%), CSO (16%), Academia (10%), Media (9%), and Donors (4%). As will be seen below the sample size is too small for some finer grained questions, at a general level it is the first comprehensive perspective of WB engagement in MICs from the perspective of the countries themselves.

At the most general level, client responses to World Bank effectiveness paint a fairly favorable picture. As is seen from Table 1, over 80% of the respondents find the Bank to be “Moderately Effective,” “Effective,” or “Highly Effective.”¹¹ However, the absolute levels of these numbers are less informative than their variation across categories of engagement. Thus, Table 2 shows that client satisfaction with Bank engagement declines as we go from “Fostering Growth” to “Poverty Reduction” to “Addressing Inequality” to “Reducing Corruption.” Indeed, for “Reducing Corruption” IEG rates the bank’s performance, on the basis of the full range of evidence as “moderately unsatisfactory.”¹²

However, these findings are focused on the Bank’s *absolute* performance. For a MIC facing multiple sources of finance and advice and for the Bank’s owners deciding on where best to allocate their resources, what is perhaps equally important is the Bank’s *comparative advantage*, relative to alternative sources of finance and advice. It is of course important to know that the Bank’s overall value added is positive, which these client surveys and other pieces of IEG evidence seem to strongly suggest. It is also important to know whether the Bank’s value added is greater in activity A than in activity B. But the really assessment is how the bank compares with the best alternative in these two activities. Especially in a context where IBD resources are limited, if alternatives to the Bank in activity B are non-existent, whereas there are adequate substitutes in activity A, this would be an argument for deploying the Bank’s resources in activity A.

There is some, limited, evidence on comparative advantage in the client survey. Table 3 shows how the Bank compares to alternative sources of finance and advice (official and private), by dimension of performance. Clearly, the Bank does well on quality in a general sense, but not as well on fit to country needs, and not as well

¹⁰For a detailed discussion of the methodology, see Appendix B of Independent Evaluation Group (2007).

¹¹The Tables in this section are all derived from the detailed numbers given in Appendix C of Independent Evaluation Group (2007). In Table 2 I have aggregated the categories Moderately Effective, Effective and Highly Effective.

¹²Independent Evaluation Group (2007), p. xv.

Table 2 Effectiveness by objective

	Moderately effective or better (%)
Fostering growth	69
Poverty reduction	59
Addressing inequality	44
Reducing corruption	35

Table 3 Bank versus others by type of performance

	Worse (%)	Same (%)	Better (%)
Quality	7	34	60
Fit to country needs	18	39	43
Responsiveness when country needs change	28	34	38
Ease of access to support	32	37	31

again on responsiveness to change and ease of access to its support. Table 4 disaggregates as between different types of alternative sources, but at the expense of disaggregation on type of performance. It shows how the Bank is rated overall compared to other official agencies (regional development banks and bilateral development agencies) and compared to private capital. Again, the relative comparison is perhaps more informative than the absolute numbers. Clearly, the Bank has a stronger advantage relative to official agencies than relative to private capital.

It would have been useful to have had the comparative advantage assessment disaggregated by alternatives to the Bank, by sector and dimension of performance. But information was not collected at this detailed level, and in any case the sample size would have been inadequate to get meaningful comparisons. However, the comparative advantage question was indeed asked for a specific type of Bank activity—Knowledge Services. Table 5 shows that the comparative advantage rankings are the same for Knowledge Services as for Overall—the Bank does better relative to official agencies than it does relative to private agencies.

Let me thus pose the question again: Given limited IBRD resources, how should a MIC think about how to deploying them, by sector and by function, and how should the Bank's owners think about deploying them in that country? For a country, the answer is clearly: engage the Bank in those locations/sectors/activities/where the Bank's contribution *relative to the best alternative* is greatest. This is of course country specific, but on an a priori basis I want to advance the hypothesis that it is in lagging regions/social sectors/ground-level activities supporting the

Table 4 Bank versus official and bank versus private

	Less effective (%)	Same (%)	More effective (%)
Bank versus other official agencies	21	33	45
Bank versus private capital	43	20	37

Table 5 Bank versus official and bank versus private for knowledge services

	Less effective (%)	Same (%)	More effective (%)
Bank versus other official agencies	10	35	55
Bank versus professional advisers such as consultants and academics	24	31	45

poorest that MICs do not have alternative sources of finance and technical support. Environmental issues are another example of such a class of activities. The Bank is likely to be better than alternative official sources in these, and the private sector is unlikely to be a viable alternative to the Bank in these areas. Again, these are not hard and fast conclusions and the specifics may point in other directions, but they are a start to a discussion about the nature of the Bank's contribution—what is important is to pose the question.

The above hypothesis resonates with the first of the reasons for continued engagement with MICs—"pockets of poverty." But it may need to be modified when the other two reasons are taken into account. The knowledge gain and transfer argument is potentially a powerful one for continued engagement in an activity even if the Bank does not have a strong comparative advantage in that country in that activity—because the knowledge gained could help the Bank support another country where the alternatives are not better than the Bank. The IEG client survey found that 40% of respondents thought the Bank was "Moderately Effective" in "Sharing experiences from different countries," 26% thought it was "Effective" and 9% thought it was "Highly Effective."¹³ But this is knowledge transfer into MICs. On knowledge transfer from MICs to Low-Income Countries (LICs), there is little in the way of direct evidence, although work on Conditional Cash Transfers is often mentioned as one example.

The spillover and global public goods argument also points to a broader engagement than might be indicated by comparative advantage as seen by the country, on issues such as environment and finance, where there are strong spillover effects globally. Here is how the IEG evaluation summarizes its findings:

Significant global programs, in which MICs account for half of participants, have received growing emphasis as part of the Bank's engagement with MICs....Bank involvement in global programs is not always highly recognized at the country level; nor is it particularly well integrated into its country programs....Having an insufficient voice in global program governance is still a concern for MICs and may inhibit their enthusiasm for and engagement in such programs. (Independent Evaluation Group 2007, p. 45).

Thus the Bank does not get very high marks for using its engagement with MICs as a vehicle for advancing the cause of global public goods. Further, there is an issue which is not raised in the IEG report because it deals with truly global programs. Sometimes, however, a multi-country issue confined to a few countries

¹³IEG (2007), Table 4.1 on p. 38.

within a region is claimed by the World Bank. The principle of subsidiarity would suggest that the first port of call should be a regional institution, perhaps a regional development bank (RDB), rather than the World Bank. There may be a case for temporary use of the World Bank because the RDB does not have the capacity to do so, but this is only an argument for strengthening the capacity of the RDB over the medium term, as argued in Kanbur (2005). The World Bank should be used for truly global, cross-regional spillover issues, and its engagement in MICs should be assessed in light of the contribution of the engagement to the global public goods objective.

4 An Application to India

India is an interesting country in which to apply the general global-level reasoning of the previous two sections. Indeed, when the IEG assessment was done, during 2006, India's gross national income per capita was just below the middle-income country cutoff at that time, so it did not make the cut for inclusion in the study, although it was a "blend" country receiving both IDA and IBRD support. But all that has changed. As stated in the introduction, India has now crossed the dividing line from LIC to MIC, and in fact has now crossed the IDA operational cutoff. IDA lending will be phased out over the next three years, leaving India as a pure IBRD country.

The transition out of IDA is only one aspect of the current conjuncture in the relationship between the World Bank and India. Earlier this year, India approached the so-called single borrower limit (SBL) with IBRD, a total exposure of \$15.5 billion dollars of outstanding debt. This ceiling has now been raised to \$16.5 billion, but the basic issue will resurface when this ceiling is hit, or even before it is hit. With an exposure limit, net flows must be close to zero, and gross flows can only be as high as repayments. Thus, India has in its own hands how much to generate in the way of gross flows—by accelerated repayments! Doing this, however, means that India sees a benefit in the gross flows that outweigh the costs of earlier repayment. In any event, gross flows are likely to be curtailed relative to the past.¹⁴

The third and final aspect of the current conjuncture is that net flows from the World Bank have been an ever-shrinking share of India's economy, India's budget and India's current account. In India's trillion dollar economy, an annual current account deficit of around 30 billion dollars, no binding foreign exchange constraint because of private capital inflows, and central government expenditures well in excess of 200 billion dollars per year, the net flows and even the gross flows that

¹⁴Another option, which is being discussed but whose future is unclear as of now, is for the Reserve Bank of India to invest in IBRD bonds, creating equivalent headroom for gross in flows. The same question would arise in this case—the benefits of the gross flows would have to exceed the opportunity cost of investing in IBRD bonds.

IBRD can generate for India are small indeed. This is very different from 20 years ago when the Indian economy was much smaller, IBRD net flows were larger, and there was a binding foreign exchange constraint.

Each of these features has an implication, for India and for the World Bank. First, both have to be careful of a mindset that is typical of IDA/IBRD blend countries, namely “soft money for soft sectors, hard money for hard sectors.” This is indeed the division that is typically used, but the danger is that as the soft money runs out the mindset penalizes the social sectors, even when there is no soft money in play. Countries that have been IBRD for a long time do not have this issue—for them all money is hard and they do use some of it for the social sectors. Whatever else determines the amount going to social sectors, it is not the transition out of soft money. Presumably in ten years time that will be the Indian mindset because India will have been a pure IBRD for a decade borrower for a decade, but a bias against social sectors is one to watch in the near term period immediately after the transition out of IDA.

The cap on IBRD gross flows will force greater scrutiny on tradeoffs. Up to now, loosely speaking, there has been room for more of everything. And the smallness of IBRD gross flows relative to the total will mean that a “seat at the table” will come from technical excellence rather than financial clout. How might the Indian decision makers react to these new realities? How should they use IBRD resources, in which sectors, for what activities, and through which instruments—development policy loans (DPLs), which support government budget directly, investment loans which disburse against project expenditures, or technical assistance (also known as analytical and advisory activities, AAA). Indications are that they are increasingly engaged in thinking through how best to respond (other than working vigorously for a raise in the cap). Here are two possible models for them to consider as medium-term targets: Mexico and China.

For Mexico, a member of OECD but also an IBRD borrower, the overall relationship is well captured in the most recent Country Partnership Strategy (CPS) document:

The Bank and the government have agreed on an approach that would enhance the Bank’s effectiveness and responsiveness through a streamlined IBRD lending program, and an expanded program of analytic and advisory activities (AAA). Most lending would be consolidated into an annual Development Policy Loan (DPL) that supports the government’s own national development strategy. The AAA program will be carefully tailored to country demands and would respond rapidly to emerging opportunities. (World Bank 2008, p. i)

An alternative approach is the one followed for the Government of China (GoC):

“IBRD AAA and lending will apply international expertise to helping the GoC to complete the transition to a market economy, improve the welfare of the poor and near poor, and develop and implement sustainable resource-management practices.... Over the CPS period, it is expected that the Bank Group’s overall exposure to China will remain stable or grow slowly. IBRD lending is expected to range over \$1.0 billion to 1.5 billion a year....” (World Bank 2006, p. vi). For China, the overall gross flows are also very small, but they have decided to take the flows across a range of even smaller projects. The staff time and oversight that comes with the gross flows are deployed across a range of activities where

the Chinese think the technical input of the World Bank can have most benefit. Mexico has decided to take the gross flows together in the form of a direct injection to the budget, and access World Bank expertise through the AAA program, with some of these on a fee for service basis.

Before discussing which model might suit India best, let me first of all characterize what I see as the contours of the Indian economic policy discourse which will frame these decisions. In the Indian policy-making community, a concern for fast increases in average income (high growth) exists simultaneously with a concern about distribution around the average (equity, poverty). But the two concerns are *separate*, and instruments for each are also seen as being *separate*.¹⁵ Distributional concerns often flow from political imperatives; there is nothing wrong with that—large sums are now being devoted to these concerns. With this background, I believe that Indian economic policy makers will push simultaneously, *but separately*, for interventions and expenditures they believe to be pro-growth on the one hand, and pro-distribution (“inclusion”) on the other. I would include environmental issues under the latter. Specifically, this will translate into a simultaneous, *but separate*, push for things like high-end infrastructure, finance, research, and development (including higher education) on the one hand (under the “growth” heading) and things like rural livelihoods, basic health, and urban slums on the other (under the “inclusion” umbrella).

It is of course for the Government of India (GoI) to decide how best to deploy limited IBRD resources, judging the relative return to India from using the technical expertise embodied in the Bank’s gross flows, in location/sector/activity A rather than B. But here are some issues that will surely arise. With each issue, I will also propose a hypothesis that might help to structure the discussion as we go forward.

- Is the WB’s comparative advantage (relative to alternative sources of finance and technical assistance) greater under the “growth” umbrella or under the “inclusion” umbrella?
 - Hypothesis: There are fewer credible alternatives to the Bank under the inclusion umbrella.
- Is this comparative advantage a function of how big the Bank’s financing is relative to the overall outlay in the project?
 - Hypothesis: Yes, size matters, with the implication that the comparative advantage will be less in large high end infrastructure and finance deals at the national level, and greater at the level of states focusing on the lives of the poor.

¹⁵I should say that I believe this characterization holds for economic policy makers in other countries, and in the economics profession more generally. See Kanbur (2001, 2002).

- Is the WB best used as a partner in small pilots to test out innovative ideas, rather than as a partner in implementing nationwide or statewide programs?
 - Hypothesis: Alternative sources are unlikely to have such cross-country experience. If the WB's claimed advantage is transference of international experience and lessons, surely this is best done through pilots, to first test if and how those lessons translate to the Indian context.
- On AAA, is the Bank better used (relative to alternative sources) in doing "major" pieces of work with sustained in-depth analysis addressing fundamental medium-term issues, or is it better suited to doing short sharp pieces responding to policy issues of the day?
 - Hypothesis: For Indians, high-quality sustained in-depth analysis, mobilizing analysts In India and outside, would be the Bank's comparative advantage relative to alternative sources in the private sector.
- Question for WB: If the disconnect between the growth and the inclusion streams in Indian discourse is accepted, and if the Bank thinks this connect is important, should the Bank more strongly advocate AAA and pilots that explore this linkage specifically for India?
 - Hypothesis: Yes, but receptiveness from the Indian policy-making elite may be limited in the current mode of discourse.

Two final points. First, the directions suggested by the hypotheses above are just that—directions. This is not a simple either-or issue. Rather, it is more a question of the stance or the tilt that the Indian government might or should take in its dealing with the World Bank. Second, to the extent that any of these country-specific activities have a positive spillover for the world as a whole, it is unlikely that the Indian government would internalize that external benefit. This is something that the Bank itself will have to do, and encourage the adoption of these activities through effective subsidization in one way or another.

5 Conclusion

In this paper, I have considered the World Bank's engagement with MICs from the perspective of development assistance, emphasizing comparative advantage. After exploring a general framework at the global level, I have presented an application to the specific case of India, which has a long-standing relationship with the World Bank and has just transitioned into MIC status. Here are the five major conclusions of this paper:

- Whether or not IBRD is "development assistance," the rationale for its engagement in MICs flows from the objectives of poverty reduction and global spillovers.

- The key issue in deploying limited IBRD resources is not just its value added, but value added relative to the best alternative source of finance and technical assistance.
- Survey evidence suggests that MIC countries are aware of alternative sources and have assessments of comparative advantage.
- My hypothesis, a gross generalization of course, is that the Bank's comparative advantage is stronger the further away the location is from the center, and the closer the activity is to the poor. I include environmental dimensions under this heading.
- Finally, to the extent that the Bank's global objectives indicate a different pattern of engagement than country-specific comparative advantage might suggest, then, effectively, these activities will have to be subsidized relative to others.

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Education Accounts: A Tool for Managing Educational Finances *Prototype for Discussion*



Vinod B. Annigeri

Abstract A detailed picture of financing of any sector especially like education assumes prime importance especially in a country like India. We have been talking about spending 6% of the GDP on education for a long time but have not been able to do so. This question needs to be understood in a broader perspective. The efforts on financing education in the Indian context usually have considered the public financing with some sporadic attempts which have taken into account the private spending as well. The total resource envelop has not been given its due share. Thus, the resource flows to education from different sources like public, private (both for profit and not for profit), households, and the external sector need to be considered. In case of health sector, the researchers have developed a tool called 'Health Accounts' which tries to track resource flows into the health sector from such sources and would also tell us on what kind of services such flows would reach in the ultimate analysis. Such tool seems to be missing as far as education sector is concerned both within and outside India. In this background, it is the opportune time to consider the possibility of developing Education Accounts in the Indian context. Education Accounts would basically answer three set of questions, namely

Who Pays?—Sources of Funding

How Much?—Quantum of Funding and

For What?—Functions on which such funding would be made

The proposed paper would try to place the prototype of Education Accounts for discussion. The modalities of evolving Education Accounts can be discussed in the conference and once we firm up the methodology of such accounts, we can think of developing Education Accounts. In this background, the paper does not present any data but an attempt is made to present the tool of Education Accounts. Recently, UNESCO and IIEP Paris are keen in developing a methodology for arriving at the Education Accounts estimates across the globe. In this background, the proposed paper would be a pointer for such attempts in future.

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1 Introduction

Importance of investment in education has been well recognized both by researchers and policy makers. The benefits accruing from education especially primary education in developing countries have been well documented in a number of studies both within India and from outside. India's commitment to the spread of knowledge and freedom of thought among its citizens is reflected in its constitution. The directive principles in the constitution state **"the state shall endeavor to provide within a period of ten years from the announcement of this constitution, for free and compulsory education for all children until they complete the age of fourteen years."** Other provisions of the constitution with regard to any citizen having a distinct language, script, special care of economic, and educational interests of the unprivileged sections, particularly scheduled castes and scheduled tribes are laid down as an obligation. Though education is currently in the concurrent list of the constitution, the state governments play a very important role in the development of education, especially in the primary and secondary education sectors. Educational policy and progress have been reviewed in light of the goal of national development and priorities set from time to time. In its resolution of the National Policy on Education in 1968, an emphasis on quality improvement and a planned, more equitable expansion of educational facilities and the need to focus on the education of girls was stressed. More than fifteen years after this policy, the National Policy on Education (NPE) 1986 was formulated which provided for a comprehensive policy framework for the development of education up to the end of the century and a Plan of Action (POA 1992) which spelt out specific responsibilities for organizing, implementing, and financing its proposal of NPE. India is committed to the goal of Education for All (EFA), the commitment which received international recognition at the World Conference on EFA held at Jomtien in 1990.

From 1968 onwards, it has been decided to set apart 6% of National Income on education. Para 11.4 of NPE, 1986 states "that the investment on education be gradually increased to reach a level of 6% of the National Income as early as possible. Since the actual level of investment has remained far short of that target, it is important that greater determination is shown now to find the funds for the programmes laid down in this policy. While actual requirements will be computed from time to time on the basis of monitoring and review, the outlay on education will be stepped up to ensure that at the time of commencement of the 8th Five-Year Plan and thereafter, it will uniformly exceed 6% of the national income."

2 Need for Education Accounts

In this background, it would be useful to track the resource flows into the education system of the nation from different sources. Usually, the research on educational finances has concentrated on the flow of public funds alone which would give a

truncated view of such resource flows. There were some sporadic attempts to ascertain the total spend from the private sources as well including the household expenditure on education. In the recent past, the actors in the education system have changed so drastically that there is a need to have a complete flow of resources from both public and private sources.

Taking a clue from the National Income Accounts which stems from the System of National Accounts (SNA) and Health Accounts that borrows the methodology of System of Health Accounts (SHA), one can attempt to sketch the Education Accounts also. The methodology in this regard is yet to appear on the scene, and the paper tries to put in place the schema of such methodology for the consideration of the scholars working on educational finances.

The task of Education Accounts would be to answer three questions viz,

Who Pays?—Sources of Funding

How Much?—Quantum of Funding and

For What?—Functions on which such funding would be made

Separating “who” from “what” would be the crucial information which would assist the policy making in fine-tuning the financing mechanism. In so doing, we would also be figuring out the actors, activities, and transactions in the education system of any given region. Thus, the Education Accounts would give the resources that flow in the education sector from all sources, i.e., public, private (both for profit and not for profit including household expenditure), parastatals, rest of the world (ROW) or the external sources. This would give us the complete resource envelop that can help us to understand the total quantum of resources toward any level of education in any region. The information on such resources would be presented in the form of matrices and that would constitute the Education Accounts.

2.1 Education Accounts

We are also required to develop standard protocols for identifying different actors, activities, and other related functions in the education system. In view of the shortage of time, we would not be able to populate the matrices at this juncture. As the focus would be on arriving at the methodology of Education Accounts, the paper would present such methodology. We look forward to the suggestions/comments during the conference so that the same can be used to accommodate the methodology for taking up studies to test it on ground and to develop Education Accounts for India in the days to come.

2.2 Scheme of Education Accounts

Both national income accounts and national Education Accounts are similar, in the sense that, what national Education Accounts describe for the education sector is done by national income accounts for the economy as a whole. Both these estimates agree to the fact that money payments or transfers should not be double counted and a distinction to be maintained between capital and current expenditures.

Better understanding on the information on financing of education sector is a sine qua non for most of the developing countries. This is because it acts as a basis for wise policy change in the area of education sector reforms. Any attempt in analyzing education financing should have sound estimates of national education expenditure. In other words, it should take into account total spending, the contributions to such spending from different sources, and the claims on spending by different uses or activities.

The need is to develop the System of Education Accounts (SEA) to develop Education Accounts for any given region. This exercise would address main questions as stated below.

- Where does the money come from? (Sources of funding)
- Where does the money go? (Providers of education services and goods)
- What kinds of services are performed and what types of goods/services are purchased?
- In what way the funds are distributed across different levels of education?
- Who benefits from such spending?

2.3 Major Entities of the Education System

The first step in developing Education Accounts would be to identify the entities which are engaged in the provision of educational services. The following can be considered in this regard.

- Entities which act as ultimate sources of funds
- Entities which transfer the resources between the funding entities and the actual providers of educational services
- Providers of educational services
- Beneficiaries who receive educational services—need to bifurcate different socioeconomic groups

2.4 Sources of Funds Can Be Grouped into the Following Major Categories

- 1. Public sector—Government ministries and administrative departments.
- 2. Public sector—Other government agencies.
- 3. Private sector—Firms and private educational providers.
- 4. Private sector—Non-governmental organizations (NGO)—National and International.
- 5. Households—Out of Pocket Spending (OOPS).
- 6. Foreign sector—Government and non-government sources.

Following Chart 1 gives the details of different entities that can be observed in the education system.

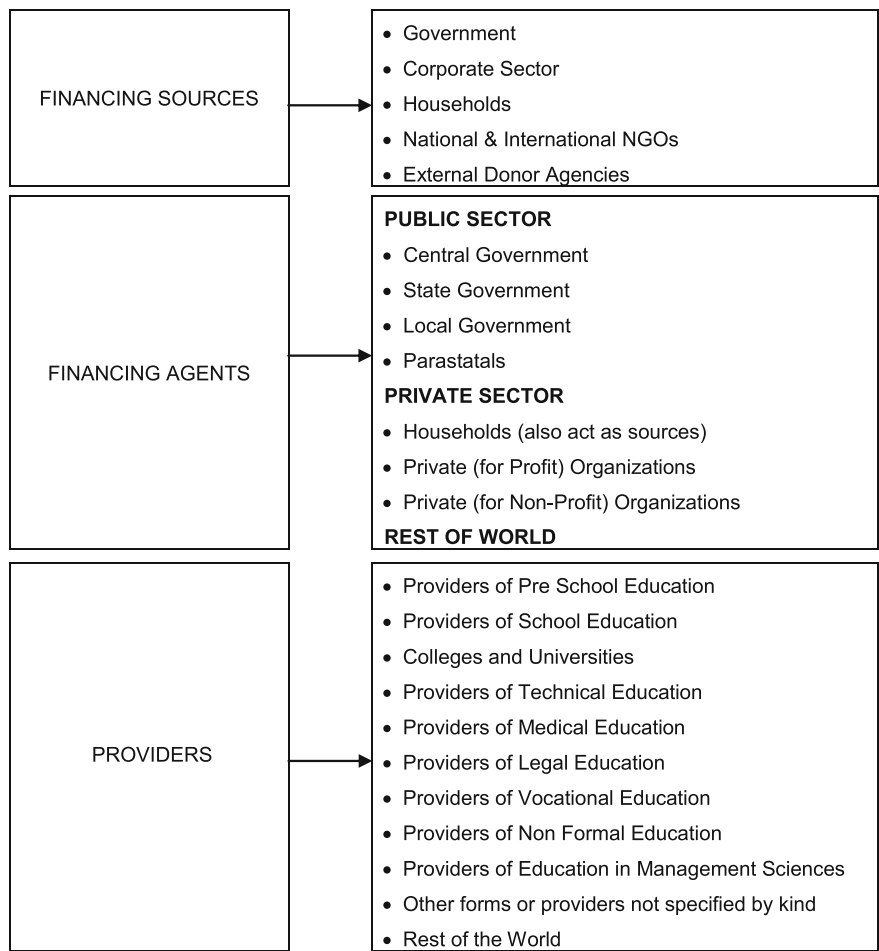


Chart 1 Sources of funds. *Note* a detailed list of entities needs to be developed—draft template in Appendix

3 Boundaries and Classifications

The next task of building Education Accounts would involve fixing boundaries as discussed below.

3.1 Time Boundary

Setting the time boundary of Education Accounts requires that a choice be made about the period (fiscal/calendar year) for which the expenditure data would be presented in the accounting matrices and, secondly, the accounting practice (cash/accrual accounting) to be followed. One can consider the financial year in the Indian context as most of the organizations follow the same principle. As far as the second issue is concerned, we can follow the accrual basis for considering the fund of flows.

3.2 Space Boundary

At the outset, it would be better to know the broad activities which are covered under the System of Education Accounts (SEA). One can consider the following activities which may be considered as understood and not exhaustive in nature.

- Teachers' salaries
- Teacher training
- TLE, laboratory equipments
- Direct/Indirect household expenditure on education
- Capital expenditure
- Educational institution's administrative costs
- Expenditure on private tuitions by HHs

The following Chart 2 would give a broad picture of the space boundary of Education Accounts.

3.3 Functional Boundaries

Following the framework of the space boundary, the functional boundaries in the education system can be considered as indicated below.

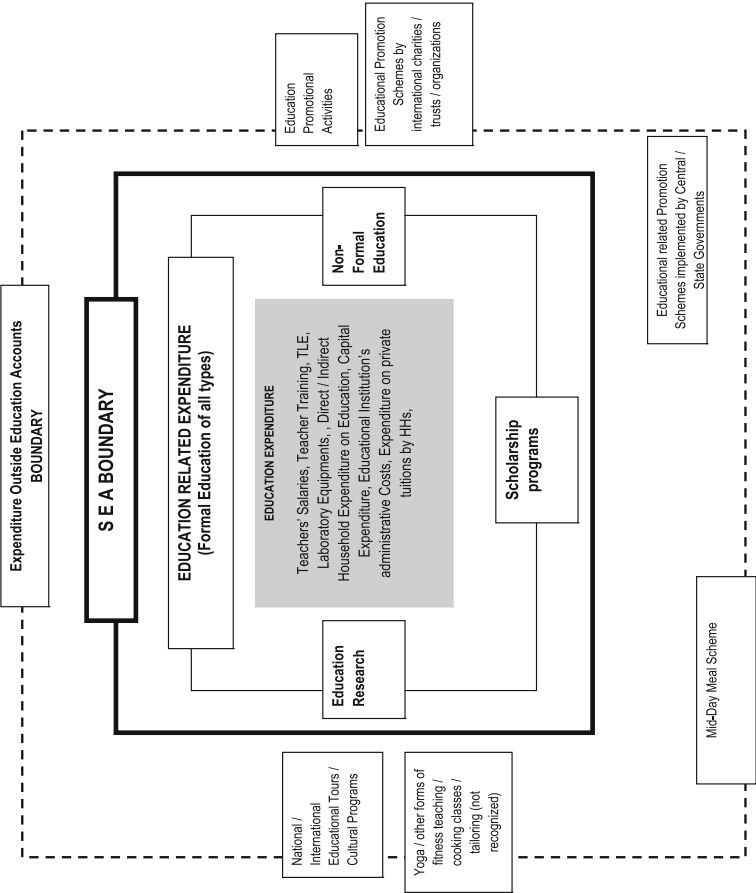


Chart 2 Boundaries of proposed Education Accounts

1. Teaching

- At the primary level
- At the secondary level
- At the higher secondary level
- At the graduation
- At the post graduation level
- At different kinds of education (medical, legal, technical, and the like)

2. Teacher training at different levels and kinds of education as stated above

3. Curriculum development

4. Research

5. Consultancy

6. Non-curricular activities

7. Examination-related activities

8. Any other (not specified by kind)

After the data is collected for any given region and for a given year, one can attempt to develop Education Accounts Matrices.

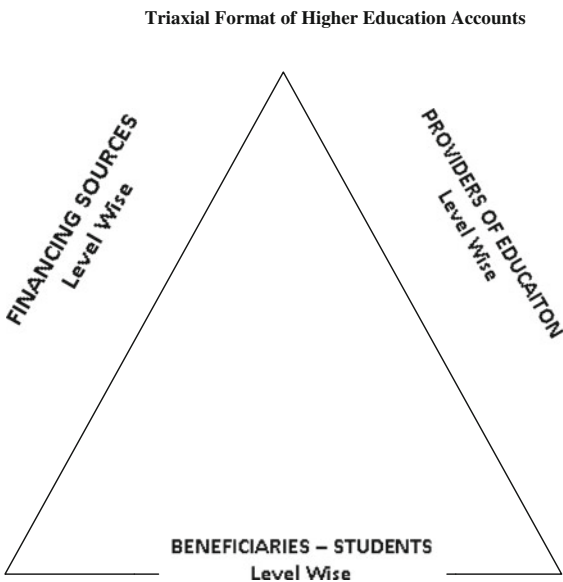
4 Utility of Education Accounts

The national income accounts would give the broad economic indicators as well as economic transactions within the economy. This kind of information would not be straight away useful to the managers of the education sector. The fund flow analysis and the kind of transactions within the education sector would be more relevant for the effective governance of the education sector. Thus, Education Accounts would give us user-friendly information for understanding educational finances in a better way. Such information would give us the details of major sources of funds who are shouldering the responsibility as far as provisions of educational services are concerned. Such information at different levels of education could probably throw light on the issue of policy correctives in financing education. The Education Accounts would tell us on what kind of activities the resources are spent. If one wants to change the pattern of spending at a given level of education and among different levels of education, the Education Accounts would be helpful.

Appendix

See Charts 3, 4, 5 and 6.

Chart 3 Triaxial format of higher Education Accounts



Draft Template

Code	Descriptor	
HEFS.1	PUBLIC	
HEFS.1 .1	Central government	
HEFS.1 .2	Regional government	
	HEFS.1.2.1	State government
	EF S.1.2.2	Local government
	EF S.1.2.3	Parastatals (Public Undertakings)
HEFS.2	PRIVATE	
	HEFS.2.1	Households
	HEFS.2.2	Contributions from Communities, NGOs, Managements etc. (In Cash)
	HEFS.2.2.1	Community contributions
	HEFS.2.2.2	Management contributions
	HEFS.2.2.3	Corporate Sectors' contribution
	HEFS.2.2.4	NGOs contribution
	HEFS.2.2.5	Parents-Teachers Association contributions
		Contributions from Communities, NGOs, Managements etc. (in Kind)
	HEFS.2.2.6	Community contributions
	HEFS.2.2.7	Management contributions
	HEFS.2.2.8	Corporate Sectors' contribution
	HEFS.2.2.9	NGOs contribution
	HEFS.2.2.10	Parents-Teachers Association contributions
	HEFS.2.3	Other private funds
	HEFS.2.3.1	Interest from Endowments
	HEFS.2.3.1	Interest from Endowments
HEFS.3	REST OF THE WORLD (ROW)	
	HEFS.3.1	Public external funds
	HEFS.3.1.1	Bilateral & Multilateral donors
	HEFS.3.1.2	Development Banks
	HEFS.3.2	Private external funds
HEFS 9	NOT SPECIFIED BY KIND (NSK)	

Chart 4 Classification scheme for financing sources of higher education

Draft Template

Code	Descriptor			
HEFA.1	PUBLIC SECTOR			
	HEFA.1.1	Central Government		
		HEFA.1.1.1	Ministry of Human Resource Development	
			HEFA 1.1.1.1	All India Council of Technical Education (AICTE)
			HEFA 1.1.1.2	Council of Architecture (COA)
			HEFA 1.1.1.3	Indian Council of Historical Research (ICHR)
			HEFA 1.1.1.4	Indian Council of Philosophical Research (ICPR)
			HEFA 1.1.1.5	Indian Council of Social Science Research (ICSSR)
			HEFA 1.1.1.6	University Grants Commission (UGC)
		HEFA.1.1.2	Other Ministries/Departments	
	HEFA.1.2	State Government		
		HEFA.1.2.1	Department of Higher Education	
			HEFA. 1 .2.1.1	Department of Higher Education
			HEFA. 1 .2.1.2	Department of Social Welfare
		HEFA.1.2.2	Other Departments like Ministry of Labour etc.	
	HEFA.1.3	Local Government		
HEFA.2	PRIVATE SECTOR			
	HEFA 2.1	Households' Out of pocket payments		
	HEFA 2.2	Communities, Foundations, NGOs etc		
HEFA.3	REST OF THE WORLD (RoW)			
	HEFA.3.1	Multi-lateral & Bilateral Organizationsand agencies		
	HEFA.3.2	Development banks		
	HEFA.3.3	International Non-Governmental Organizations		
HEFA.9	NOT SPECIFIED BY KIND (NSK)			

Chart 5 Classification scheme for financing agents of higher education

Draft Template

Code	Providers	
HEP.1	PUBLIC PROVIDERS	
	HEP1.1	Central Universities
	HEP1.2	IIMs
	HEP1.3	IISc. Bangalore & IISERs
	HEP1.4	IITs
	HEP1.5	IIITs
	HEP1.6	Institutions related to Hindi and other Indian Languages
	HEP1.7	Languages
	HEP1.8	NITs
	HEP1.9	NITTTRs
	HEP1.10	National University of Educational Planning and Administration (NUEPA)
	HEP1.11	Educational Consultants of India Limited (EdCIL) - PSU
	HEP1.12	Sanskrit & Vedic Institutions
	HEP1.13	Institutes Supported by Rest of the World
	HEP1.14	Other institutes of higher learning (distance education)
	HEP1.15	Providers of Medical Education
	HEP1.16	Providers of Para Medical Education
HEP.2	HEP.2.1	State Universities
	HEP.2.2	Colleges owned and managed by State Universities
	HEP.2.3	Government Colleges in different disciplines (General Education, Medical Education and Technical Education)
HEP.3	PRIVATE PROVIDERS (FOR PROFIT)	
	HEP.3.1	Providers of General Education
	HEP.3.2	Providers of Medical Education
	HEP.3.3	Providers of Para Medical Education
	HEP.3.4	Providers of Technical Education
	HEP.3.5	Providers of Management Education
	HEP.3.6	Providers of Any other Specialised Education
HEP.4	PRIVATE PROVIDERS (NOT FOR PROFIT)	
	HEP.4.1	Education Providers of General
	HEP.4.2	Providers of Medical Education
	HEP.4.3	Providers of Para Medical Education
	HEP.4.4	Providers of Technical Education
	HEP.4.5	Providers of Management Education
	HEP.4.6	Providers of Any other Specialised Education
HEP.9	NOT SPECIFIED BY KIND (NSK)	

Chart 6 Classification scheme for providers of higher education

Myth, Science and Writing: A Valediction to Social Sciences



G. N. Devy

Abstract This chapter, a revised version of a public lecture given at the Indian Institute of Rural Management, presents the genesis of Social sciences within the context of continuously changing forms and meaning of knowledge. It discusses the essential character of knowledge as ‘production’ related to the material and cultural conditions within which it is produced. After presenting a detailed account of the shift in episteme from the ancient Greek era to the medieval times in Europe, this chapter takes up the question of ‘truth’ in sciences. It argues that sciences aim at describing ‘truth’ of the world, of matter and of existence, or what the German philosopher Immanuel Kant described as ‘the phenomenal world’ Sciences grapple with the phenomena, the multiplicity of events and objects that constitute existence, and try to fathom their integrated meaning, to locate the recurrent patterns, to make a sense out of their syntax. I am hesitant while using the term ‘truth’. But if sciences aim at describing the ‘truth of matter and existence’, they alone can never construct the complete narration of the truth of the world. Every established view of ‘truth’ gets modified every few centuries, and the foundation of scientific thought too undergoes a change every few centuries. An established body of myth too similarly undergoes radical changes. Since all of these are open to change, is there any durable foundation for Social sciences? It further presents a brief account of the concept ‘truth’ in Indian tradition and argues that formal knowledge keeps inevitably moving away from freedom, and new shifts in forms of knowledge become necessary to bridge once again the gap caused by the alienation between truth and knowledge. The chapter presents a perspective on the biases ingrained within the Social sciences from the beginning of the nineteenth century in Europe, and as they are practiced in post-colonial cultures.

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I

I should state at the outset that I do not know much about Social sciences. The observations I present on this field of study will be of tentative. I should have chosen to speak either in Hindi or in Gujarati; however, I am using the English language. Perhaps, that was suggested by the manner in which I was introduced to the audience in English. I would have felt happier speaking in an Indian language. When I speak English, please remember that it is a second language for me. My final prefatory comment is that 'valedictory' or 'valediction' was a form of poetry developed in early medieval times, and that genre of poetry was employed to depict lovers bidding goodbye forever to their beloveds. I know that it is not in that spirit that I am speaking to you, but with a desire to gain from your knowledge in the areas where I am ignorant.

I believe that scientific theories change. Now this is not something new that I am saying, but theories may change from age to age, and they change so radically that what was held as scientific theory at one time starts appearing like either blasphemy or a complete lie, something very remote from truth, in another time. For example, in the Western tradition of knowledge, the Greeks believed that the entire universe is constructed in the form of a box. They believed that this box is covered from end to end, and the lid on top of the box-like universe is what we call the sky. They believed that there are perforations in the lid, and through those perforations we see some light percolating down, and we call these gaps as 'stars'. Just as today, we believe that the stars are actually there in the sky, the Greek believed that they were holes, that they indicated absence rather than the presence of anything; the proof of this 'scientific theory' was that in the world above there is permanent light. They held that during the day, of course, one saw light which came from the 'up there', but even during night too, when in our world there is darkness, there is light in the world above. So they called it the 'universe of permanent light' which will not tolerate any shadows. The argument was, 'if there is absolute light there will be no shadows "up there"'.

The phenomenon of shadow troubled the Greek mind a lot. So they spent a huge amount of philosophical energy, scientific energy, in interpreting what shadow is. Then they proposed that underneath the box-like universe, there is bound to be another world, which, they imagined, to be full of darkness, absolute darkness. They called it 'Dis'. The term '*dis*' means 'total darkness', darkness which cannot be lighted up. It was 'darkness forever', 'Dis' was the Greek term for describing that quality of darkness, and they felt that the combination of the darkness and light creates shadow in human life. How to segregate this shadow from the body became a big philosophical problem for the Greek thinkers.

Plato's description of the surprised man standing at the face of the cave, looking at his own shadow and suddenly realizing that the shadow is not somebody else, but he himself in a way, an externalized, though not dissociated completely, *him* in some other form, is at the heart of the Greek sciences. The search for the meaning of this other form, the search for the meaning of the relationship between shadow and the object that the *being* is, formed the foundation of Greek knowledge and Greek

sciences, whether it was geometry, mathematics, understanding of law or of literature, all of it was based on this philosophical perception.

I will add some examples in passing. Socrates, Aristotle and Plato—absolutely wonderful minds—incomparable in philosophical profundity—disagreed between themselves on most issues. Plato claimed that poets should be banned from the ideal Republic as they could influence the imagination of the people, turning them potentially dangerous to the State. Aristotle defended poetry. Aristotle's defence of poetry proposed that poetry is able to recreate 'the world of all light' within language. He argued that even if a poet is making copy of an object already existing in the world, it invokes the 'ideal' of the object, 'the Idea in the world which is full of light'. Since there is no death in that world, there is no decay, one does not have to have multiples of anything, only *one* of everything would be enough, only one, the unit, the Idea, only the Idea was enough. So Aristotle proposed that a poet brings us closer to the *Idea*, Idea in the Greek sense, the never-dying thing in that supernatural world; he takes us away from the real, and by real he meant that which diminishes, that which disappears that which perishes. The perishable was the real, the non-perishable was ideal.

The Greeks constructed sciences around this kind of Idea of the universe. The moment this Idea of the universe changed into Ptolemy's world view, the universe ceased being seen as a static box within which humans are placed and came to be perceived as being dynamic, which revolves around something else, and all the sciences in medieval Europe started changing. When we move further down in history and move away from Ptolemy's Idea of the cosmos, we notice that the earth comes to be seen as being at the centre of the universe, with seven heavens above it, and a comparable seven hells beneath it. And as we move further ahead, the earth becomes only part of a larger planetary system, the solar system. So once again the sciences get redefined radically. Call this an epistemic shift if you like. Of course, this kind of shift in knowledge is not enough to qualify for being an epistemic revolution. An epistemic shift means a real earthquake, a complete tsunami, in the field of knowledge. The epistemic change is not just a shift in the world view. There is a lot more to that.

When we move further down, we notice an 'atomistic' view of the world operating behind all sciences, in which the entire cosmos is explained in terms of particles and energies, related or unrelated, or generally related and specifically unrelated. Then once again all sciences start afresh building theories. During most of such epistemic shifts, some of the established sciences become non-sciences, they drop out. In our own tradition, we have, for example, the case of *vyotish*, which was considered as a science at one time. It is no longer considered a science, or it is science which is out. Certain shades of ideologies get promoted at one time in history as sciences, and later, they come to be seen as non-science, though at one time they were seen as sciences. And in the history of science, there is a good chance for every science to become a non-science, as new theories replace them as sciences.

Sciences aim at describing, if one may tentatively use the term, 'truth'. They try to grapple with the truth of the world, of matter and of existence. The German philosopher Immanuel Kant used the term 'the phenomenal world' to indicate the scope of what I have called 'matter and existence'. Sciences grapple with the

phenomena, the multiplicity of events and objects that constitute existence, and try to fathom their integrated meaning, to locate the recurrent patterns, to make a sense out of their syntax. I am hesitant while using the term 'truth'. But if sciences aim at describing the 'truth of matter and existence', they alone can never construct the complete narration of the truth of the world. They can only talk about what is; but they rarely talk about what is not, and the truth about the world generally reveals itself, becomes evident, when one puts together the narration of what is together with a conceptualization of what is not.

In early form of the English language, there was a competing term for 'is', 'to be', and it was actually 'ought'. That term dropped off from the English language as the English speaking society accepted a certain view of the world and a corresponding paradigm of science. 'Ought', therefore, did not find much continuity in the English language. If we use the Sanskrit term *astitva*, what *is* as well as *what is not*, and think of the description of both as the true objective of science, we notice that science and myth are closely interrelated. The talk about the '*what is not*' part of *astitva* is done by myth. Myths do not present facts, phenomena, events and objects; yet they place all these in a sharper focus. They articulate a collective understanding of the world. Myths have a lot more meaning than one normally reads in them. For the Greek box-like world view, the corresponding myths were interested in divining what was outside the box. When Ptolemy spoke of seven heavens and seven hells, myth became interested in exploring the relationship between hell and heavens, but without the earth. Hence, when Dante wrote an epic in Italian he conceptualized seven paradises and seven hells, and the mythical places which cleanse one's soul of 'the objects, events and facts'.

Let me give another example. There was a French scientist who said, 'Give me but a place outside the earth and a pole long enough, and I shall tilt the planet earth', explaining the principle of fulcrum. The greater scientist, to put it metaphorically, always tries to find this *place outside the earth* so that he can *tilt the earth*. That was what Dante was doing in his *Divine Comedy*, and constructed myth, though ideally he should have built a scientific theory as some of his intellectual successors did. Medieval Italy saw a great intellectual ferment and produced intellectuals who combined science with myth, exploration of *what is* as well as *what is not*. For describing truthfully, it becomes necessary to construct a scientific statement about it as well as a mythical narrative; it is then that we arrive at an understanding of the world which qualifies for the term 'truth'. I was hesitant earlier in using the term, now I will proceed to briefly comment on it.

Think of truth or *satya*, as in *satyam eva jayate*, or *satyam shivam sundaram*, which seems in common perception to be associated with what is relatively permanent. Science does not undergo a radical change with every new class of students, nor in every of century, but once in a millennium. Myth undergoes a change, likewise, when the description of *what is* changes, or the articulation of *what is not* undergoes a change, and *vice versa*. When there is an enormous amount of thinking done in the area of myth, sciences of the time undergo a change; similarly, when fascinating new work takes shape in scientific fields, the corresponding myth undergoes a change. Such epistemic shifts are known to have occurred in the

tradition of knowledge in India, just as they have occurred in the history of knowledge in the West. In all those shifts, science and myth have moved together. For the scientific foundation of one kind, predictably there will be myth of a kind that corresponds. Change the foundation, and you will have a mythology correspondingly transformed. While *truth* does not appear to be rapidly or radically changing, it keeps changing perpetually.

One of the theories of truth in India presents the understanding of the universe in terms of an essence which was described as '*Tat*' or sometimes as 'that', 'nameless', at other times as 'that which can never be captured by the intellect', or as 'that which is forever'; and for 'that-forever' the term of reference was *sat*, *nasathe vidyato bhava na bhavo vidyate satah*, as stated in the *Gita*. In this theory, *that*, which is all that exists, defines the entire range of the human imagination. There is nothing outside *that* or *sat*. In some versions of the theory of truth, *sat* was seen as a permanent attachment to everything or every thought and every being, as if it is the underbelly of phenomena. One just cannot separate that *sat* or *that nameless* from the phenomena. Philosophers in the ancient Indian tradition devised the term *Brahman* for that. *Brahma* came to be seen as being indestructible; it had to be there wherever there is existence. There is an aphoristic statement *jagan mithya, brahman satyam*. In this statement, *brahman* is not god and it is the underbelly of things. The Greeks wanted to see if the body and the shadow could be separated and how one can understand the slippage between the two, or ways of segregating them. Indians thinker, on the other hand, was more interested in seeing if the shadow and the body could be united and how one could read the act of the union. The meaning of the unity is at the heart of some of the Indian traditions of intellectual inquiry. The *Brahmasuthra*, the *Upanishadas* and the *Geeta*—the three philosophical statements, scientific because they were mythical, were interested in exploring how the shadow and the body are to be seen as being essentially true in their unity. Therefore, to see the two as disunited came to be perceived as *avidya*, ignorance. However, the philosophers conceptualized ignorance too as a positive substance, or rather a condition of being, and not as an absence. This was an early theory of truth in the Indian intellectual tradition(s). This view of truth was not the only one to have emerged in Indian philosophical schools. There were other schools, and these were numerous. For example, there were profound and engaging debates on the question of the human ability to perceive 'brahman', debates on whether this truth could be stated in language or whether it was beyond the expressive abilities of language and debates on the formal aspects of 'truth'—if it was necessarily logical or if it had elements of arbitrariness, etc. Just as there were, the Buddhist, materialists and Jaina views of 'truth' proposed along with the view stated above, and, during the first millennium, the 'grammarians' and the 'logicians' proposed their variety of understanding of 'truth', and there was a more 'subjectivized' view of truth circulated through the Bhakti school of literature.

Any established view of 'truth' gets modified every few centuries, and the foundation of scientific thought too undergoes a change every few centuries. An established body of myth too similarly undergoes radical changes. Since all of these are open to change, do we really have any durable foundation for creating what at

present we call Social sciences? Or, are we merely sporting in a field where defeat is already declared by the umpire? It is a disturbing question for any thinker in the Social sciences. Let us, however, not assume that Social sciences existed in all periods spanning the history of Ideas. It is true that Plato had a theory of social organization, the Republic, and there were others after him who proposed theory related to the human existence in the social sphere. But, it was not until the beginning of the nineteenth century that the disciplines now recognized as Social sciences started emerging with any degree of a clear self-consciousness.

In Europe, the Social sciences started gaining a sense purpose at the beginning of the nineteenth century as the consciousness of European peoples as being 'countries' started acquiring a greater cultural justification. Napoleonic wars brought such 'countries' in a situation of conflict, and the cultural confrontation between them provided themes for their intellectual pursuits. European countries and cultures started discovering that there were *other* countries and cultures and that the 'otherness' of such cultures was posing a problem in 'understanding man'. The rise of Nationalism further accentuated the need for defining and describing various cultures. To begin with, the understanding of the 'other' was no more than an aggregate of stereotypes. During the very initial phase of the rise of the Social sciences, these 'sciences' were thinly veiled intellectual ways of 'hating the other *systematically*'. Previously, European cultures, in their division between the Catholic peoples and the Protestant peoples, had engaged in this pursuit by inventing a theory of 'race and genius', dividing themselves between the Celtic and the Teutonic. With the rise of the Social sciences, the activity of grouping or regrouping of 'stereotypes' started receiving a greater academic acceptance. Hanna Arendt has analysed how the stereotyping of 'other' cultures in Europe eventually led to racial violence through the nineteenth century and the first half of the twentieth century. For a science to come into existence, a catalysis that brings reason together with imagination needs to take place. The foundations of the modern Social sciences, within the framework of reason, point to the quest for understanding what is peculiarly human, in contrast to what is Natural and what is Divine in the human existence. However, it is a disturbing thought for social scientists that the foundations of their intellectual pursuits, within the framework of the imagination governing their field, lie in stereotype, caricature and lampooning.

Jacques Lacan describes how during infancy one acquires the ability to look at one self through the perspective of one's 'mirror image'. When this engagement between one's subjectivity and the external world starts developing, together with the engagement comes the child's ability to verbalize the mental transaction. Language is the human means of relating oneself, the subjective consciousness, to the objective world. We grasp the objective world through language while naming things. For example, as you look at me at this moment, you do not know whether I have a back or not, but you assume that it is there because you have at your disposal the mental concept and the word 'back'. It is by naming things that humans can speak of things absent. Let us recall what we said earlier: science describes that which exists, myth that which is absent. Human language allows us to make a scientific statement, as well as to construct a mythical story. The ability to construct

a mythical story and a scientific narrative comes to us through language, and the capacity for language is born in a person's recognition of the 'self' as being distinct from the 'other'.

Social sciences require for their coming into being as disciplines an acute sense of the other, which enables them to view a community as an object. This perspective is what we call in the academic parlance a 'subject', a 'discipline'. There is one more requirement for the rise of a perspective as a science. We require institutions that allow space to the new 'knowledge'. In modern times, all knowledge institutions represent 'the surplus of script'. It is language which initially allowed human beings to communicate; then subsequently in history, owing to the complexity of economic relationships, they started making marks on the rock surface, wood or similar objects. These marks slowly became conventions and codes of representations. That is how scripts are born. Scripts are born through economic activities. They are not born because somebody is inventive, or there is a great writer who invented scripts due to some divine inspiration. A minimum of certain economic transactions is necessary for the birth of script. But the print technology is different. Print technology does not have the same genealogy as of script. Scripts are not of essence to the print technology, and they are merely the substance 'produced' by that technology. If it had not been scripts, the print technology would have printed things like pictures. It is only a business of ink and pressure. We put letters there. When the print technology got tied up with the business of scripts, people had a facility for the use of language in a non-conventional way, and it is this new possibility of using language that can be described as the surplus of script. It leads to creation of institutions for Social sciences. I hope you do not think that I am dismissing the whole business of Social sciences. That is not what I intend to do. I am only constructing the sociology of Sociology.

Within this framework, scientific Idea change, myths change, truth also changes, perspectives on truth change. It is necessary to have a certain degree of otherness or alterity for conceptualizing Social sciences. The period during which the European Social sciences emerged as disciplines was also the time for Europe's colonial expansion. Since institutionalized Social sciences were born during the colonial times and after the rise of print capitalism, they have on them a deep imprint of the colonial mindset. I will give a couple of examples. Take, for instance, Psychology. Is psychology seen as a social science, because it talks about the human beings as a 'subject'? It is said that Freud's description of the unconscious as dark seductive, rebellious, sexually overcharged, dreaming, non-synchronous, uses descriptive categories used by the colonial Anthropology for African people. It is primarily the description of the unconscious on which Freudian psychoanalysis is based, as also several related branches of medical sciences. It is this 'scientific foundation' that is employed for a description of society in sociology of crime or abnormal psychology and, therefore, in history of violence. Thus, a part of the Social sciences has at their root the colonial 'understanding' of African countries. Similar is the case of Anthropology. It was not devised as a method of study of the immediate social contexts, not for the study of the British society or the French society. It was always some community in the coastal area in Australia or New Zealand or Papua New

Guinea, or similarly 'remote' places that interested Anthropology. It had to study the *other* people, mainly the colonized, those who were seen as 'a little less than human', and those who could be subjected to study but did not grumble when they were 'subjected'. They allowed being photographed naked. At present, Anthropology all over the Western world is very uneasy about itself and about the skeletons in the cupboard of Anthropology. Whether it was Anthropology, Psychology, Political Science or Economics, all Social sciences, as we understand the field now, initially developed as disciplines during the colonial context, and they carry a clear colonial imprint of colonialism. Thanks to the history of knowledge India over the last two centuries, we have been carrying out research which is based on the 'knowledge' inherited during the colonial times. Here, in the first place, the method of knowing is colonial, and moreover, the matter that is accepted in these disciplines is also colonial.

The description of Indian society as available to us has come mainly through the colonial sources. When we look at the *People of India* series (edited by K. S. Singh), we will find that colonial sources are quoted in plenty without any hesitation. 'Scheduled Caste', 'Scheduled Tribes', 'de-notified tribes', 'nomadic people', 'urban', 'rural', etc., such are the conceptual categories that we are still using to describe the Indian society. These labels did not exist prior to the colonial times. It would be interesting to find out if there were descriptive or conceptual categories of the pre-colonial times, or the procedures of formulation of those categories, that could throw light on the evolution of social knowledge in India. It may be interesting to see if those categories could be used to describe the Indian society of those times, even if they are no longer relevant to use to discuss today's Indian society.

India has produced over the last century highly talented sociologists, economists, political scientists and jurists; and yet if one were to look for a dozen books which should tell us the story from any credible Indian perspective, we still do not have a fully satisfactory crop with us. Though in recent times, India has produced distinguished scholars Ashis Nandy, M. N. Srinivas, Romila Thapar, Partha Chatterjee and others inspired by them; I do not think we have a sufficient number of scholars who can leave the Social sciences transformed altogether and place them beyond their colonial moorings. Therefore, I submit that a lot of our research needs to be taken out of the disciplinary boundaries and base it on experience itself. A certain kind of knowledge receives validity from the existing traditions of knowledge and from which we gather concepts, notions theories, and our habits of thinking, attitudes and stereotypes. There is another way of knowing given to us because we are human, because the consciousness continues to function, because we have senses, and through the sensory perceptions, through our direct contact, and through accumulation of the experiences in the consciousness, we continue to articulate our thoughts.

My submission to you is that perhaps a time has come when we need to find ways of providing a greater legitimacy to our disciplines through knowledge cultivated with reference to the lived human experience, which is codified in terms of proverbs and folktales, and accessible through collective memory. We need to go

beyond the false dichotomy between 'knowledge' and 'non-knowledge' based on the distinction between 'literacy' and 'illiteracy'. If the community is seen as the institution of knowledge, and what has been the institution is seen as the co-curator for the community's knowledge, our Social sciences will gain in depth. The illiterate sections of the society have no access to or control over institutions which are representation of a surplus of scripts. If we allow that have knowledge worth our attention, we can achieve the transition towards becoming a knowledge society, for knowledge linked to experience is more there and less in the colonized and institutionalized habits of thought. I am not trying to dismiss all the valuable work a great many people are doing in good many institutions. Out of those inclusive institutions can emerge some relevant social science in our time. This has happened in the past. After all, the Socratic dialogues gave rise to the famous Academy of Plato; and the Gandhi's *satyagraha* gave rise to Gujarat Vidyapeeth. This too was the case of Rabindranath Tagore who proposed that a surplus of emotion is very valuable and pitted it against the surplus of print capitalism. Probably that is why Tagore is greater in songs than in the cold print. The Social sciences need to bring the social enquiry that Socrates, Gandhi and Tagore brought to the society in their times if the social science pursuit has to have a future in the new context.

II

Sensation accumulates in human experience, finds a place in human memory and becomes what is known as knowledge. Sometimes imagination excites the intellect, unites with it and becomes knowledge. It is always sensation and memory or intelligence that comes together in any production of knowledge. Knowledge is of two types, or rather it is two distinct entities.

One is the knowledge inside the human mind. The other is knowledge as a system. A knowledge system has a certain prerequisite, and that prerequisite is script. In order to carry the knowledge produced by one generation to the next, human beings have come to use documents committed to scripts. It is through script that the collective accumulation of human experience moves forward, from one generation to the next, and acquires the status of a knowledge system. Since a knowledge system requires carriers, both givers and receivers, every knowledge system tends to become a tool of giving and receiving power.

Those who can give or receive knowledge tend to acquire a certain authority in a given society, and what should really have been a means of knowing becomes a means of social control. While one likes to believe that knowledge is enlightenment, knowledge as a system becomes an object which can be owned, possessed, controlled and even manipulated. The manipulation of this object is probably the worst of human inventions.

In a given society those who are in a position of power or domination always like to make what they alone know, as knowledge. What the others not in a position of power know ceases to be knowledge. The Barbarians do not have knowledge, the Romans have it. Those who speak or recite Sanskrit have knowledge; those who speak Prakrit have no knowledge. Those who speak English have knowledge, those

who do not have any knowledge worth the name. Such is the political context of every knowledge system!

Owing to this history of class possession of knowledge, knowledge becomes a means of exploitation. On the one-hand knowledge is an inevitable and necessary human condition—the human mind just will not stop reacting to every new phenomenon and, therefore, acquiring knowledge—on the other, when human beings find themselves within social structures or communities, they tend to use knowledge for exploitative purposes.

The source of this paradox is in the biological peculiarities of the human animal. The human being is created as a vertebrate animal. Standing erect becomes a metaphor for being fully human, and a stigma is attached to bending. In all languages in the world, many abuse words are related to the bending of the human body. To stand erect is a thing of pride. Since human beings are so reluctant to bend down, they have created a tremendous aversion for labour which other animals do not have. Other animals do all the activities that are possible for them and which they are required to perform for their survival and well-being. It is the human animal alone that has an aversion towards activities it needs to carry out.

Knowledge is used as a means to avoid labour. The emergence of the Brahmin class—initially emerging out of labour-inequality and subsequently transformed into a caste—is an example of how knowledge is used to avoid labour. The rise of the middle class in the Western world is another such example, whereas knowledge should be the path to freedom and enlightenment, and knowledge as a system has been the path towards inventing slavery and perpetuating it.

I am not trying to argue that all inventions are used to perpetuate slavery, and all technologies are created to perpetuate class discrimination and class distinction. Possibly man's discovery of fire, which is shared by all human beings equally is a discovery which did not split human society (though a lot of gender injustice has originated in associating woman with the hearth!). Perhaps the discovery of a medicine such as penicillin was useful for all human beings. But, whether we like it or not, any invention—even one that is of benefit to all of humankind—becomes an object to be manufactured at profit, allowing some people to accumulate wealth and preventing some other people from enjoying the fruits of human advancement in equal measure. When one says that knowledge as a system tends to become the monopoly of a class, a tool of exploitation, one would definitely like to exclude from this description, knowledge which is brought to us by persons who are imaginative, who have developed thoughts which contributed to the greater freedom of the entire human race.

So, while knowledge itself is not something undesirable, one would like to point to the tendency that knowledge has to allow it to be used as a means of exploitation. If this kind of simplistic bifurcation of knowledge, into the domain of the individual consciousness, and knowledge as a social institution, is accepted, it is very logical to argue that we should all strive towards reaching that condition of knowledge which is not a system but a knowledge which exists in the consciousness of individuals, exists within a small community, marginalized, thanks to its not having a share in the monopoly of the mainstream knowledge. When knowledge becomes

a system, it develops rhetoric of self-justification. This is the source of marginalization of communities.

Marginal communities are not born out of economical inequality alone. They too are born, and perhaps in equal proportion, out of this strange definition that we have accepted of knowledge as a system. Think of medicine: if one accepts a given system of medicine, then another system of medicine becomes non-knowledge, though it could be an equally effective system. Since some system of medicine comes to the centre stage, all communities who subscribe to other systems of medicine automatically become marginalized.

This is true of technology as well. Now, if this be the human situation and if we want to move forward in history rather than just drift along, we will have to think of how knowledge can be freed from the monopoly of a class, from the confines of a system, from the operation of the demand of logical consistency with the rest of the knowledge, and how it can once again be linked with what is knowledge inside the mind of individuals.

Human beings have made themselves supposedly superior to other animals, since human beings alone claim to have superior knowledge. In reality, the superiority is not in knowledge that human beings have but merely of script. It is in the creation of script that we have come to think that we are superior to other animals. If we really have to become superior to other animals, we will have to think of a way of acquiring and preserving knowledge in which social discrimination will be absent.

It is generally assumed that knowledge will bring freedom to everybody. A paradox inherent in the concept of knowledge is that the experiential truth may have very little to do with what exists in the knowledge systems as a universal truth. As against this, with regard to freedom, it exists only in the mind and not outside. It is a relatively more subjective notion, and that is its strength. The objective and impersonal knowledge, the so-called timeless knowledge, has been unduly privileged in the evolution of the human race. As against this, freedom which is often seen as a comparable ideal, and at times even mutually linked as in the Sanskrit expression, '*sa vidya-yavimuktaye*', has not been similarly institutionalized. It has still remained closer to Nature than to Culture. While knowledge has come to be seen as an exclusively human prerogative, freedom is still seen in association with the more natural and, therefore, akin to all animal species. For example, democracy is a reflection of our collective desire for freedom; but fortunately democracies are bound to the Idea of nations, of different geographical locations, and there is no universal Idea of democracy.

One may say that rather than pursuing paths of knowledge it is better to pursue the path of freedom, so that an individual can have his perfect place as a creative thinker and a creative actor in the human race. Reality is much larger than human thought. The human mind has not yet found a way of grasping reality. Today, in order to be civilized, a person has to be enlightened, rational; such a norm came up through the economic domination of Western societies over other cultures. This norm spreads over the world and was accepted out of a sense of fear of annihilation of culture and society. We have taken to thinking that knowledge brings freedom to

people, that if we spread literacy, exploitation will stop. We do not think even for a moment, that this is a questionable Idea. What one should have asserted is that it is freedom, which brings knowledge to people, not the other way round.

It is not the metaphysical freedom of *moksha*, or the freedom of scientific progress, or the Idea of freedom, which will make the body painless. It is the freedom of experiencing reality. By reality, one may simply mean an aggregate of all objects surrounding us, all that happens around us, in a completely neutral sense. This use of the term 'reality' has nothing to do with truth and untruth. Reality surrounding an individual brings knowledge.

In order that knowledge becomes knowledge, two individuals should have the freedom to say 'this is blue', 'this is green' without anybody trying to prove one of them wrong, maintaining that the notion of blue and the notion of green are objective and can coexist. That will bring knowledge, and it is through such interpersonal communication that knowledge will exist, momentarily, between two persons or within a small community but not beyond that. In our developmental logic, we believe that people should be made literate, so that they will become free and happiness will come to them.

We believe that thought has to progress further, so that we will know more, and what we know out of thought should be taught to people so that they become free. This will not happen. It is not at all logical. What should happen is that people must start believing in their own knowledge traditions and start acting in their own situation. Institutions that are building knowledge blocks must be loosened up, shaken up, and we must learn to recognize many knowledge rather than a single knowledge. Knowledge becomes possible because its plurality is acknowledged. It is then that the human race will attain the concentrated and unified experience of life that has so far been possible only for animals. Then the human being will become the equal of animals and know what freedom is. It is then that the knowledge stock in the threatened languages will start contributing to the stock of creative Ideas that knowledge is supposed to explore.

Integrating Ethics into Economics



M. V. Nadkarni

Abstract By insisting on small-scale production and decentralisation of economic activity including production, Gandhiji sought to prevent accentuation of inequality, so that we do not have to depend on the altruism of the rich. It is wrong to characterise the Gandhian approach as relying on the altruism of the rich. The trusteeship principle comes only where some centralisation and large-scale production are inevitable. It was the uncontrolled tendency to increase the scale of productivity and to centralise production which created most of the evils of competition, according to Gandhiji.

I am immensely honoured to be invited to deliver this year's Founder's Day Lecture, instituted by CMDR to honour the memory of the late Vidyaratna Shri R. S. Panchamukhi. Besides being a great Sanskrit scholar, the Vidyaratna was a historian of high repute and developed the Karnataka Historical Research Society and Kannada Research Institute at Dharwad, as the Director of both. As a historian, he was interested not merely in the past, but also in the present from a historical perspective. He thus cultivated an eclectic perspective, which recognised the role of social sciences and philosophy too. CMDR is a product of his rich eclectic vision. It is to the great credit of his sons, particularly Professor P. R. Panchamukhi and Professor V. R. Panchamukhi, their friends and colleagues, associates of Vidyaratna and Professor D. T. Lakdawala, to have given a concrete shape to his vision and dream by starting the Centre for Multi-disciplinary Development Research at Dharwad. Thereby, they responded to the felt need for a research institute in social sciences of high calibre in the North Karnataka region, which had remained

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economically backward in spite of being culturally very rich. Today, CMDR takes a place of pride among ICSSR Institutes, with faculty, facilities and infrastructure to carry out multidisciplinary development research of high quality. Thus, CMDR stands now in a position to pay homage to the memory of the late Vidyaratna with a sense of pride in its achievements and also with a credible promise to do even better.

I am immensely grateful to CMDR, its Chairman, Professor P. R. Panchamukhi, its Director, Professor Pushpa Trivedi and others concerned for the honour bestowed on me by asking me to deliver this lecture. I have accepted your invitation with humility, being well aware that it was due more to your affectionate friendship and trust than to my deserving it.

For my lecture, the topic I have selected is '*Integrating Ethics into Economics*', which I think is highly relevant today not only in India but also in the world at large. I am dividing my lecture into four sections. In the *first*, I discuss the untenability of separating economics from ethics. In the *second*, I take up the philosophical basis of such a separation and offer a critique of this basis. In the *third* section, I discuss the philosophical basis for integrating ethics into economics, including the Indian approach to it. In the *fourth* and final section, I discuss the Gandhian approach to integrating economic with ethics and its relevance for today's world.

1 Untenability of Separating Economics from Ethics

Much before Amartya Sen argued about the dangers and irrationality of separating economics from ethics, Mahatma Gandhi had asserted in 1941: 'Economics which departs from or is opposed to ethics is no good and should be renounced' (CWMG Vol. 81: 436). If and when economics and ethics do not go together, it is the economics that is opposed to ethics that has to be rejected, and not ethics. We cannot afford to sacrifice ethics for the sake of economics, in Gandhiji's view.

Separation of economics from ethics can occur at three levels: (i) at the level of actual economic behaviour of individuals, enterprises and institutions; (ii) at the level of economic policies of the state; and (iii) at the level of economic analysis by economists. The process of separation of economics from ethics at the three levels may well be interrelated, influencing each other. Gandhiji's concern was at all the three levels, not excluding the last, but particularly with the first two.

A moment's reflection will show how an economic behaviour, which flouts all ethical norms and is unjust, can make the functioning of the economic system impossible. Say, I go to a hair cutting salon, I get a haircut, a shave, an oil massage and a shampoo, and then simply I walk out of the salon without paying for the services rendered. The barber will naturally raise a hue and cry, which will make quite a few people catch me and force me to pay. Now these people will do this only if everyone believes that one must pay for services enjoyed or goods purchased. And that is how an economy would function on the basis of mutual trust and honesty. In a system where there is no such thing, no salon can open for

business, no enterprise can work, and no economy can function. Take the issue of credit. A system of banking operations collecting deposits and making loans can run only on the basis of trust and honesty on the part of both the bankers and borrowers. If an economic system offers no monitoring and regulation of banks, and if banks can simply collect deposits offering high rates of interests, only to vanish from the system leaving the depositors in the lurch, it would be impossible to have a functioning banking system. Similarly, if borrowers are not honest in repaying loans regularly, we will have the same difficulty. In the global economic crises of 2008, the trigger was indiscriminate lending to subprime borrowers knowingly, who could not repay loans. A few days back, I read in the newspapers that a truck was caught transporting fake *paneer* (made from urea, palm oil and some chemicals which can damage the kidneys). This can destroy the faith of customers in the quality of any *paneer* in the market—genuine and fake. The same thing can happen in the case of medicines. If there are spurious medicines in the market with fake labels, how would customers know which medicines are genuine? How will the economy of medicines function in such a case?

You may feel that all this is common sense which needs no retelling. But it needs retelling because cases such as fake milk and milk products, spurious medicines and corruption by officers and politicians occur in India with such frequency and scale that public consciousness about morality in our economic system can be aroused. It is not often realised that an economy can function and grow only if the level of moral integrity of all economic agents is at least tolerably good. Otherwise, both economic growth and just distribution of gains from growth would badly suffer. It is a complete misunderstanding to believe that some wile and dishonesty are needed for attaining prosperity. On the other hand, a strong economy and economic growth require a strong moral base too. This means among other things that the goods and services produced meet the expectations and requirements of buyers without cheating, that all promises are kept and that there is mutual trust between all economic agents.

The separation of economics from ethics at the level of business enterprises can occur at subtle levels, which may even be convincing to some economists. For example, the eminent economist Milton Friedman once famously observed that the primary responsibility of the management of a business corporation was towards its shareholders, and it need not worry about social responsibilities to others and the larger economy. Mercifully, he added that the management should not breach the law of the land in serving the interest of the shareholders. This small mercy would mean, however, that a multinational operating in a country with inadequate legal protection to employees, customers and environment can flout ethical norms and social responsibilities in order to enhance its profits and share values.

In contrast to this shareholders' view, there is the stakeholders' view of the role of business, which integrates economics with ethics, advanced by economic philosophers like Norman Bowie. In terms of this view, business management has to take care of the interests of all stakeholders in business—that is of customers, employees, suppliers, people in the neighbourhood who can be affected by air pollution or other form of pollution, and even the public at large, in addition to the

interests of shareholders. Bowie insists that the manager should focus ‘less on profit’ and ‘more on doing the right thing’ (quoted in Green and Donovan 2010: 24–25). Let me clarify that this need not be just altruism, but enlightened self-interest on the part of business enterprises. A ‘moral firm’ known for moral integrity in business relations and concern for environment would have a high brand value and would thus actually favour shareholders. Integrating economics with economics would, therefore, be good economics in the long run, whereas economics which is directed by temptations of short-term gains and interested merely in making a ‘killing’ at the next opportunity would be self-destructive in the long run. This applies to politics as well, and to political economy of formulating economic policies.

The necessity of integrating ethics into economics is even more obvious and strong at the level of economic policy. It is actually the role of the state to ensure that economics both in intent and practice *is* integrated with ethics. The objective of any economic policy is to ultimately enhance the welfare of the people in the country, of course without harming international relations and vital interests of the people in the world at large. Economic policies, however, are not always formulated in welfare-enhancing ways, though lip sympathy may be offered for such objectives. This happens when the state is not impartial but is biased in protecting the interests of the elite, acting, as the Marxists say, as the tool of the bourgeoisie. For example, there is pressure on the state in India to follow the US model of ‘hire-and-fire’ in labour relations to attract FDI and enhance economic growth, in the name of ‘labour reforms’. I read about a proposal before the Central Government to set up a National Investment Board to quickly clear investment proposals to bypass environmental assessment by the concerned Government wings, again in the name of raising investment and the rate of economic growth (see EPW November 10, 2012, pp. 10–17). The welfare impacts of such policies and the costs imposed thereby on the economy are thereby ignored, being satisfied with a rise in the overall growth rate of GNP. Such policies actually mean promoting hollow prosperity and dubious growth. An integration of economics with ethics at the policy level would require full and genuine attention to the welfare of *all* and to the distributional impact of policies; elimination of poverty, hunger and illiteracy; promotion of full employment, and taking care of the environment. This itself would require honesty and commitment on the part of both political leadership and bureaucracy. We cannot afford to hide under a belief that by taking care of economic growth, we take care of everything else without extra effort. Though there is always a temptation to set aside ethical issues in the ‘larger economic interests’ of the country as a whole, it is simply unethical and unwarranted to ride roughshod over human rights and environmental costs. According to Gandhiji, even noble ends cannot be justified by immoral means. But there could at times be a conflict between ethical values themselves in a particular situation, which can be resolved, relying again on Gandhian viewpoint, by unprejudiced and utterly unselfish analysis of which ethical value would secure the welfare of the people the most.

Now we come to the third level—that of economic analysis by economists, both in the theoretical and empirical aspects.

Amartya Sen took up the theme of the relationship between economics and ethics in his Royer lectures at the University of California at Berkeley in 1986, published as—*On Economics and Ethics*, in 1987. Sen looked at the issue mainly from the point of view of how the discipline of economics itself suffered as a result of distancing between the two, apart from the harm it has done to policy, derived from such an artificial construct of economics. Sen is particularly uncomfortable with the narrow view of human motivation in neoclassical ‘positive’ economics, which assumes that maximisation of self-interest is not only rational, but is also the only motivation governing economic behaviour and that this also governs actual behaviour. Self-interest is assumed to be maximised in modern economics in the form of utilities or happiness in a narrow short-term sense, taken to be both actual and rational behaviour. There are several fundamental questions here. Is self-interest the only motivation governing human behaviour, even in the economic sphere? Does it really maximise the happiness of even individuals? Can exclusive focusing on self-interest alone be considered as rational? Can the summation of optimum happiness of all individuals of a group or society considered as the maximum happiness of the society, even after allowing for interaction between individuals on the basis of assumed self-interest exclusive of other motivation? If the answer to these questions is ‘No’, then the whole foundation of neoclassical economics is considered as shaky. Economics based on such assumptions cannot be considered as reliable either for predictive purposes or for policy formulation. Sen observes incisively: ‘Universal selfishness as *actuality* may well be false, but universal selfishness as requirement of *rationality* is patently absurd’ (ibid: 16). He rightly points out that human motivations are more complex than assumed in modern economics, ignoring which economics lost a good deal of both its *descriptive* and *predictive* capacities (ibid: 78). Rational human beings normally take a broader and long-term view of *happiness*. Not recognising this fact and treating any deviation of actual behaviour from narrow self-interest as irrational amounts to denying any role for ethics in social or economic behaviour, which is untenable.

There has always been some tension between economics or economic behaviour and ethics, especially since increase in world trade and the Industrial Revolution. But separating economics from ethics in such stark, formal and explicit ways is a recent happening, particularly since the publication of Lionel Robbins’s *An Essay on the Nature and Significance of Economic Sciences* in 1935, and in the wake of an obsession to make economics a science and even a ‘*positive*’ science like physics. Sen observes that it was not so bad earlier, tracing the origin of economics (in the West). Actually he traces two origins of economics, one ancient and another recent.

The first goes back to Aristotle’s *The Nicomachean Ethics*, where Aristotle related economics to human ends—unlike modern economics which declared that ends are given and economics had nothing to do with them. Ethics is intimately related to ends. There are two aspects to this, as Sen explains—one is the moral status of human motivation, connected to the basic question of how we should live, and the second is about assessing social achievement which has to be in terms of ethical criteria and not narrowly in terms of ‘efficiency’.

Adam Smith straddles between the two origins of Economics, which Sen mentions. Though Adam Smith has been a darling of economists particularly because of his book, *The Wealth of Nations*, published first in 1776, he also wrote *The Theory of Moral Sentiments* published in 1759. Indeed, in *The Wealth of Nations*, he sang the praise of self-interest as ultimately benefiting the society as a whole, but in his earlier book of 1759, he was deeply concerned with moral sentiments which guided human conduct, such as sympathy, propriety, prudence and benevolence. In it he also developed a theory of rights and a theory of Government as the upholder of justice primarily. There is little to suggest that he disowned what he wrote earlier or that, in Smith's view, self-interest can override moral sentiments, human rights and justice. However, his second book on *The Wealth of Nations* paved the way for amoral economics in the hands of subsequent economists, who exaggerated Smith's emphasis on self-interest to a point where they viewed it in isolation from 'moral sentiments'. Ironically, it was Smith who spoke of unintended but beneficial consequences of intended self-interest, and it was Smith again who ended up unintentionally as the father of amoral economics.

The second origin, according to Sen, is the 'engineering' approach, concerned mainly with logistic issues rather than with human ends. The ends are taken as given, and economics is supposed only to find the appropriate means to serve them (Sen 1987: 3, 4). I hasten to clarify that the focus on the means or the alternative ways in modern economics has nothing to do with the Gandhian focus on the means, where he emphasised the morality of the means. In modern neoclassical economics on the other hand, the rightness of the means or choice of the means is decided on the basis of only efficiency, and not morality. It is because of such narrowness of neoclassical economics, that Krishna Bharadwaj termed this as a shopping bag economics. It is the economics of a housewife with given money who has to allocate it among different goods so as to maximise her utility or of a producer who has to maximise profits through an optimum combination of inputs and outputs. Nothing more. No wonder then that Gandhiji called it as dismal science.

This has affected empirical research also in economics. An economist handling empirical research faces a peculiar dilemma. If one wants to be rigorous and analytical and uses neoclassical economic theory either at the micro-level or macro-level in empirical research, one has to ignore or sidetrack ethical and human concerns and concentrate only on the issues like economic growth, productivity and efficiency. On the other hand, if one wants to focus one's empirical research on issues like inequality, poverty and illiteracy and social justice in general, one would have to ignore economic theory! Faced with this dilemma, much of our empirical work in economics is either unguided by ethics and non-relevant, or non-theoretical and uninformed by theory. In either case, economic policy suffers as a result—it is either blind, unguided by the light of ethics, or lame without a theory to walk upon. Economists' recipes for maximising growth and FDI usually fall in the former category, and policies for removing poverty and deprivation usually fall in the latter category. There is need to save both economic research and policy making from such an impasse by integrating ethics into economics both in research and policy.

2 Philosophical Basis of Economics Separated from Ethics

What went wrong with economics is its economism which served as its philosophical basis. In the pursuit of making economics a rational and objective science, claiming value neutrality, it was made to embrace economist or foolish rationalism, making economic agents or decision-makers and economists alike 'rational fools' as Amartya Sen called them (Sen 1977).

What is economism? We can find it both at the individual and collective or national level. At the individual level, it means a value perspective which regards earning income or power as the supreme goal of our life, disregarding other values like human rights, character building, love, compassion and altruism. A company forcing its employees to work for more than twelve hours a day (paying officially for an 8 h day) and even on holidays in abysmal, unhygienic and even risky working conditions, at less than fair wages, treating them like slave labour, is a conspicuous example of economism. We have to distinguish economism of the rich from the economism of the poor. The poor may be compelled to work all the day to earn a bare livelihood, their bargaining power and remuneration being so low that they have no other choice. This is not the case with economism of the rich. They may pretend to believe that they too have no choice, but it is self-imposed.

Having a profit motive for an economic enterprise is by itself not economism. What transforms a legitimate profit motive into an obsessive economism is the tendency to somehow make excess profits, including cheating, hoarding, speculation. Such narrow short-term view of economism may not be in the long run interest of the firm itself, because to be in business in the long run, a firm has to cultivate its moral image and credibility. Narrow economism, however, does not take such long-term and holistic view and is tempted by opportunities to make a quick buck even at the cost of ethics. If the country is full of only such businessmen, they become serious liabilities to the country, damaging its moral image and economic prospects in the world economy. Even within the country, let alone export markets, investment climate would suffer and economic growth would decline.

Economism at the collective or national level means designing economic policies aiming merely at maximising growth rates of national income and giving liberal incentives to investors. Such a philosophy may shed crocodile tears at poverty and inequality, but assumes that giving priority to growth would enhance the size of the national cake and facilitate the removal of poverty. It is not realised that economism rides on the back of the poor and the weak at their expense, and of course, at the expense of environment. The damage done to environment by reckless economic growth may often be irreversible. Many of these costs are hidden and do not enter national income accounting, but it does not mean that such costs are not felt by the people. The failure to include such costs in national income accounting is a conspicuous limitation of economics and is the direct result of basing economics on the philosophy of economism (see Nadkarni 2011: 85–87).

Gaspar (2004: 80–81) lists a few features of economism which are pertinent at the collective level:

- Primacy to the economic sphere;
- Separation of the economy and economic consideration from other spheres and other considerations (to ensure primacy to the former);
- Primacy to the value of economic efficiency ignoring other values like social justice, human rights and environmental sustainability;
- Most or even all of life is understood, valued and managed in terms of economic calculation;
- GNP or modification of it is accepted as the primary, if not the only, indicator of the achievement and progress of the country;
- The expectation that the ‘economy should be managed according to its own supposed inherent technical requirements and without political influence’.

Why did economism dominate economics and economic behaviour so much? This was mainly because a narrow brand of utilitarianism guided economic philosophy for long. Utilitarianism as a philosophy was first developed by Jeremy Bentham (1748–1832) and then by John Stuart Mill (1806–73). Both took the stand that the only ultimate, intrinsic good is pleasure, which is also the doctrine of ethical hedonism. Mill, however, gave a more refined version. His famous work ‘Utilitarianism’ published in 1863 is the basic scripture of neoclassical economics. The term utility is not used by Mill with its usual meaning of usefulness. “Utility of an action or a good is its tendency to produce pleasure or happiness” (Benn 2000: 61). At the individual level, the good is to maximise one’s utility out of say, a consumption activity, or an economic activity in general. At the collective level, since many persons are involved, the principle is to promote the ‘greater happiness of the greatest number’. Utilitarianism does not mean that we do not need truthfulness or honesty, but they are needed only because, and to the extent, they enable promoting the ‘greater happiness of the greatest number’ (ibid: 62) Utilitarianism can thus be said to be economists’ own version of consequentialism—a school of ethics which believes that what is good is that which does good or has good effects.

There are, however, several serious problems with economists’ utilitarianism to serve as a basis for economists or economic policy (see Nadkarni 2011: 87–88). First, the approach does not provide any guidance regarding conflicts between different kinds of happiness and choosing between them. The *Kathopanishad*, for example, distinguishes between two types of happiness—*Preyas* which is a short-term or momentary pleasure, and *Shreyas* which is a lasting or long-term happiness. A person is advised by the Upanishad not to seek *Preyas* at the cost of *Shreyas*. There is no such distinction in utilitarianism, and usually the *Preyas* type of happiness takes precedence over the *Shreyas* type. Utilitarianism has nothing to say to a man who spoils his health by smoking or drug addiction.

Secondly, there is the problem of *separateness of persons*. Can utilities of different persons be aggregated, simply by adding their pleasure and deducting displeasures across people? Can utility to one person (or group) be set off against disutility to another person (or group)? This is not just an abstract philosophical problem, but very much a problem of practical economic policy. Take for example, a development project—say, an irrigation-cum-hydroelectric project. Let us say, it

is expected to benefit 1000 persons raising their incomes by a total of a crore (100 lakh) of rupees, but also to displace 500 persons whose income declines by a total of 50 lakh rupees. It means that the project raises the national income by 50 lakh rupees and satisfies the criterion of 'the greatest happiness of the greatest number', taking income as indicating happiness. Aggregate happiness rises, more persons benefiting from it than those who lose. Can we therefore go ahead with the project with a clean conscience? No, because it amounts sacrificing 500 people income for the sake of 1000 persons, and each person's right to livelihood counts. The economic viability of the project has to be tested on the criterion of whether the losing persons can *in fact* be fully compensated and rehabilitated from the surplus income generated by the project, with not a single person getting worse off than before the project. If a social cost-benefit analysis of the project is done, the cost should include such compensation and rehabilitation costs and also other external diseconomies particularly environmental costs like submergence of forests and loss of biodiversity.

The problem gets more complicated if the 'greatest number' and 'greatest happiness' do not tally, but are divergent. Taking a development project again, 500 persons are expected to get a rise in their incomes by a total of crore of rupees, while 1000 persons are expected to face a loss of income totalling 50 lakh rupees. There is of course a net gain from the project to the tune of 50 lakh rupees, but more people lose than gain. 'Greatest happiness' is expected but not for the 'greatest number'. Can we go ahead with the project? The project should not get a green signal, unless the projects' surplus is expected to be large enough to compensate all the losing persons and rehabilitate them, and to take adequate corrective steps addressed to external diseconomies. If the cost of compensation has to be met by the beneficiaries of the project, it may be more difficult in the second project than in the first, because less number of people have to compensate a large number in the latter. If a project cannot so compensate and rehabilitate displaced or losing people either in terms of economic viability or in terms of political feasibility, then it has to be simply given up. This is a solution suggested by New Welfare Economics or modern welfare economics itself, which has tried to overcome the difficulty posed by 'separateness of persons' inherent in traditional utilitarianism.

It is not as if economics just cannot incorporate human rights or other ethical issues; it can, but it needs first to be conscious of these ethical issues and integrate them into economic analysis and policy. Economism can be tamed and moderated by conscious human will, as taught by world's religions. In practice, however, economism dominates project selections with technocrats and development enthusiasts underestimating displacement and environmental costs and exaggerating project benefits. Adding to these woes, implementation of even accepted and agreed rehabilitation programmes is usually and painfully tardy, inefficient and inadequate. That is how new development projects often encounter bitter resistance from local people.

There is also a widely prevalent attitudinal problem behind unethical economic behaviour both at the individual and enterprise level. Take the case of fake milk and milk products manufactured from urea. Apart from callous indifference to health

costs imposed on the unwary consumers, the producers and distributors of these fake products believe that in a market largely of genuine milk and milk products, the fake product would not be noticed. In other words, they 'free ride'. Free riding is well illustrated from a legend of Akbar and Birbal. Akbar once expressed before Birbal that his subjects were all honest and loved him a lot. Birbal said, 'let us test it'. Accordingly it was announced that to conduct a ritual for the welfare of all including the Emperor, all people living in the capital were to pour a pot of milk into a pond near the palace at midnight in the dark. Next morning when Akbar and Birbal went there, they saw only water and no milk. Birbal explained that people simply believed that everyone else would pour milk, and pouring water by one individual would not matter. Such an attitude of free riding lies at the basis of many problems, obstructing a proper functioning of the system as a whole. Unfortunately, free riding is done not only by individual economic agents but also by enterprises, and even media—the watchdog on the moral behaviour of others. The example of 'paid news' shows how the media camouflages them amidst genuine news, and 'sells' celebrities for extra money. They free ride on the faith of their readers. The problem is, in a society of lawbreakers, we cannot expect much of law and order! It may not enthrall the so-called practical people to be ethical, because it involves personal sacrifice. For example, it is tempting and personally profitable for the powerful to take bribes. They can easily cover their tracks leaving no evidence. Then what can make a person remain ethical and be incorruptible? Are there ethical philosophies which can inspire and guide integrating our conduct with ethical values, and integrating economics itself with ethics? This leads us to the next section.

3 Philosophical Basis for Integrating Ethics into Economics

The philosophical basis for guiding our conduct including particularly economic behaviour on ethical lines and the one for guiding economics as a discipline to integrate itself with ethics, need not stand apart from each other. The bases for both are interrelated, and can even be considered as common. A dichotomy between the two philosophies can create a dichotomy between economic behaviour on the one hand, and its analysis and the theorisation on the other, as happened with neo-classical economics as pointed out earlier. In other words, economics cannot but take into account ethical values that should guide conduct and policy.

A related issue is where we should begin in integrating ethics into economics. As the individual is at the basis of the society, economy and the polity, should it be first left to the individual's own initiative in morally reforming oneself? Or, should the state take the initiative in morally ordering the conduct of all individuals. Or, should the economist first integrate economic theory and analysis with ethics? After so many millennia of the evolution of the human society, economy and polity, we

cannot afford to wait now for the individual to reform first before taking up the task of integrating ethics into economics at the other two levels of state policy and shaping the discipline of economics. The process of integration has to begin at all the three levels simultaneously, so that the integration at one level complements the same at the other two levels. It is the responsibility of all—the individual, the state and the economist—to work together simultaneously in this direction.

Regarding the question, posed earlier, about what can make a person or even an organisation or enterprise ethical, in spite of temptations, Aristotle's answer is virtue ethics. He is credited to have developed 'virtue ethics' in answer to the question of 'why be ethical?'. In fact, virtue ethics characterises all religions including Indian religions preceding Aristotle. Religions have taught us virtues of honesty, truthfulness, integrity, compassion, non-violence and so on. But even then why be virtuous? Aristotle's answer, briefly stated, is as follows: In considering why I should be ethical, I should take a long-term view of myself, of what I should be, and how I should be known as, and seek an answer to the question what I should do in that light and how I should behave (see Scruton 1995: 293). Developing a habit of taking bribes, for example, will corrupt not only my character but my very being, and rob me of mental peace and composure. A morally confident man is much more relaxed and at peace with himself than a corrupt person who tends to be always tense. Scruton says that every rational being has a reason to cultivate virtues, regardless of personal pecuniary duties (ibid: 295). After all nearly everyone cares for one's image, which has much to do with moral reputation as with material success. What is left of a person, when his or her character is destroyed? This applies equally to enterprises and institutions. Aristotle urged people to be good citizen too, be actively participating in public affairs, watching the conduct of representatives or officers in charge of governance or civic affairs. Aristotle felt that by being a good citizen, a person can reach one's full moral potential, and not by being content with being virtuous at a personal or private level alone.

A reputation for being virtuous on the part of most of the citizens is good not only for the individuals concerned but also for the whole economy, polity and society, i.e., for the country as a whole. It is not good infrastructure alone which can attract foreign or even domestic investment, but also the moral reputation of people concerned. How can we hope to have good export markets, if the quality of goods exported is unreliable, or their production is notoriously based on slave labour or child labour or reckless cost to the environment? Let us remember that several advanced countries have trade laws that prohibit such imports. How can we attract tourists, if we cannot keep our roads and other public places clean and tidy, if we do not even greet customers with a hearty smile, and if women tourists are at the constant risk of being robbed, molested or even raped? It seems to me that we as a country, need moral development much more urgently than economic growth! It does not mean that we need to be virtuous only because of such benefits from being virtuous. Our motivation can be higher, that is aiming at being virtuous for its own sake. This is because a calculated move to be virtuous leads only to *acting* and not to genuine and heartfelt virtuosity. Our motivation should basically be to become a

country of clean, considerate, honest, friendly, caring and compassionate people as an end in itself. Beneficial consequences will follow on their own.

I should recall in this context Gandhiji's advice to business enterprises, which contains a whole philosophy of how to treat customers. I quote:

A customer is the most important visitor on our premises.
He is not dependent on us. We are dependent on him.
He is not an interruption in our work – he is the purpose of it.
We are not doing a favour by serving him.
He is doing us a favour by giving us the opportunity to serve him.

(As quoted in Kulkarni 2012: 489)

Before we go further into some schools of western philosophy which are relevant in the task of integrating ethics into economics, let us at least briefly make a note of how Indian tradition and religions viewed this issue. Amartya Sen makes a rather casual observation that the author of *Arthashastra*, Kautilya, who was a contemporary of Aristotle, adopted an amoral, logistic approach to economics, unlike Aristotle, but like modern economics (Sen 1987: 5). But in his Introduction to *Kautilya: The Arthashastra*, Rangarajan (1992: 36) observes "... the condemnation of Kautilya as an unethical teacher is based on ignorance of his work. His is always a sane moderate and balanced view. He placed great emphasis on the welfare of the people. His political advice is rooted in *Dharma*". Regarding where Kautilya's sympathies lay, the following quotation from Rangarajan's translation of the *Arthashastra* is revealing: "Unprotected, the small fish will be swallowed by the big fish. In the presence of a king maintaining just law, the weak can resist the powerful" (ibid: 108). It is true that in certain matters of practical statecraft, especially in foreign policy. Kautilya's attitude could be stated to be amoral, but even here, he kept the national interest or welfare uppermost in his mind.

In any case, we cannot go only by the *Arthashastra* in understanding the ancient Indian attitude to economics vis-à-vis ethics. In Indian religions, self-interest was certainly acknowledged as a motivating force in human behaviour, and the pursuit of *artha* (wealth and power) was recognised as one of the *purusharthas* or human goals. But the pursuits of *artha* as well as *kaama* need to be in the overall framework of *dharma* or ethics or moral duty. Pursuit of *dharma* meant recognition of other values too, like altruism, honesty, truthfulness and compassion. A human being in Indian religions is not just a utility maximiser, but an integrated being in whom diverse goals and values have to be reconciled, guiding human action.

Nearly four thousand years ago the Rigveda (10.31.2) gave a golden rule to guide how *artha* had to be pursued.

Parichin marto dravinam mamanyaad
Ritasya patha namasaa vivaaset |
Uta svena kratunaa samvadeta
Shreyaamsam daksham manasaa jagrabhyaat ||

It means: Let a man (or women) ponder well on wealth and earn it through the path of moral law or truth, and with humility let him (or her) take counsel with his (or her) own conscience and heartily gain justifiable prosperity.

The verse makes it clear that earning wealth is certainly allowed but one has to ponder well (*parichin*) over how it has to be earned through the path of moral law or truthfulness (*ritasya pathaa*), and not by dishonest means. It has to be earned with humility (*namasaa*) and not arrogance, since success depends on the grace of God and one owes it also to be the society of which one is a member, making it possible. Consulting one's own conscience (*kratu*) also is important in deciding the way in which it is earned. Once these conditions are kept in mind, one can earn wealth heartily (*manasa*) and gain justifiable or upright (*daksham*) prosperity (*shreyaamsam*).

This is not all. The *Rigveda* goes further and advises how the wealth or one's earnings have to be used. It insists on sharing one's earnings and wealth with others. In the same *Mandala* (the Tenth) as the above verse, we have the following (the *Rigveda* 10.117.6):

*Mogham annam vindati aprachetaah
Satyam braveemi vadha itsa tasya |
Naaryamaanam pushyati no sakhaayam
Kevalaagho bhavati kevalaadi ||*

It means: The one who is not conscientious earns food in vain. I tell you the truth, it is like (morally) killing oneself. The one who supports neither the learned and the good nor a friend and consumes all by himself, earns only sin.

While commenting on Buddhist attitudes to economic activities, Ajit Dasgupta observes: "A recurrent theme in Buddhist texts is that the worldly and spiritual spheres of activity are not different *in kind* and that the same qualities required for success in them have a large overlap" (Dasgupta 1993: 4). It means that the requirements of right thought and right conduct apply equally both to the spiritual and worldly pursuits. The need to temper the pursuit of self-interest through an attitude of compassion, goodwill and sincerity characterised both the Vedic thought and the Buddhist and Jain teachings. This value system in the Indian tradition (including the Gandhian) of integrating ethics into economics, may not have been theoretically as sophisticated as the modern Western economics, but it is certainly more relevant and meaningful for designing and operating both personal and collective economics and socio-economic policies.

Let us now briefly look into some of the approaches to ethics developed in the West and see how they resonate with the Indian approaches, in so far as they are relevant for integrating into economics. We have already discussed virtue ethics developed by Aristotle and found how we find it in the Indian tradition and religions too.

One of the most popular and ancient theories of ethics is what is called as 'consequentialism'. It amounts to the welfare approach in Western economics, a strand of which developed into 'utilitarianism' discussed earlier. The traditional consequentialist approach consists in explaining or justifying why we should be

ethical on the basis of beneficial consequences on the individual and particularly on the society. This is hardly new to Indian religions. Right from ancient days, consequentialism has been a leading theory of ethics in India. For example, the Mahabharata says:

Yad bhootahitam atyantam etat satyam matam mama (Shantiparva 329.13).

It means, what leads to the welfare of all beings is *satyam* (truth). *Satyam* is seen here in ethical terms of what is good and right. In *Karna Parva (69.51)* again, the epic says that Dharma is what sustains people and the society (*Dharmo dharayate prajaah*). In traditional Indian texts, the word Dharma is not used in the sense of religion in the western parlance, but in the sense of moral duty or code of conduct or ethics. It is insightfully observed in the texts that when *dharmā* is protected, *dharmā* in turn protects us (*Dharmo rakshati rakshitah*). It is when we respect ethics and put it into practice that it takes care of us in significant ways and promotes our welfare and progress.

Almost parallel to consequentialism, another approach to ethics developed—the duty-centred ethics, called also as deontological ethics. Actually there is no conflict between the two approaches. It is the expected consequences of action on the society as a whole, which lead to the formulation of duties. The virtuous person is and *has to be* considerate to others, and mindful of consequences of what one does to others. This develops a sense of duty regarding what should be done and what should be avoided.

An ancient guideline in this respect is that if I do not like a certain thing happening to me, I should see that it does not happen to others (*aatmanah prati-koolani pareshaam na samaacharet*). Since I do not like people telling lies to me and cheat me, I should not do so to other too. Otherwise the world cannot function. Let alone the economy, but even the society and polity would not survive if we are not considerate to others and do not do our respective duties. It is because most of us observe this basic ethics that the society and the economy survives, but their stability is at constant threat from free riders. There is a ‘golden rule’ to which all religions and civilisations have subscribed. The *Bhagavadgita* (Gita for short) says in Chapter 6 (Verse 32):

*Atmoupamyena sarvatra samam pashyati yo Arjuna |
Sukham vaa yadi vaa dukkham sa yogi paramo matah ||*

It means that one who judges others’ pleasures and pains by the same standard which he applies to himself, such yogi is the highest. The *Kural*, an ancient Tamil classic on ethics by Tiruvalluvar, also says: “Do not do to others what you know has hurt yourself” (Aphorism 316, Tr. Sundaram 1990: 50). The Bible advises similarly: ‘Do unto others as you would have them to do unto you’. It is this mutuality that makes it possible for a society or economy to function.

The Golden rule was made more sophisticated and refined by Immanuel Kant (1724–1804), the eighteenth century enlightenment philosopher. Morality of action, according to him, is not based on its consequences but on the *motive*—the motive of

doing one's duty of doing what is right and for the right reason. Consequences only follow an action, so what guides action is duty. Though duty may be initially derived from *expected* consequences, they are not germane to Kant's approach. To illustrate Kant's point of view, carrying out one's business honestly is certainly praiseworthy, but what makes it *intrinsically moral* (rather than instrumentally moral) is if the motive in doing so is for the sake of honesty as an end in itself, as an intrinsic virtue, rather than merely because it is the best strategy to stay and prosper in business in the long run. A moral action is based on one's sense of duty of doing what is right, for its own sake, and not out of any selfish motive.

Kant developed a principle, which he called as 'Categorical Imperative', which may be said to be a refined version of golden rule. He called it *Categorical*, to distinguish it from a hypothetical or relative or conditional, *Imperative*. The Categorical Imperative is absolute. It says: "Act only on that maxim whereby thou canst at the same time will that it should become a universal law" (Wood ed. 2001: 178). In other words, we should act always in such a way that the principle that we are acting upon can be *willed* by us to become a universal law. Making use of an example given by Kant himself, can I take a loan giving a false promise, and yet wish it to become a universal law? Today I may benefit at somebody's expense, but apart from the fact that I may not get any loan in future, someone can act similarly at my expense. The universal laws or principles with which all rational people can agree, form the basis of functioning of civilised societies and their economies.

Kant derived an important principle from this categorical imperative. It is that we should treat other *persons as ends* in themselves rather than use them merely as means for our purpose. All human beings have an intrinsic dignity which has to be respected, just as I want my dignity to be respected by others. Any cheating in business transactions violates the principle of treating persons with dignity, apart from violating virtue ethics. Deceptive advertisements in business provide a case of such cheating, involving manipulation of potential customers. However, businessmen legally and legitimately employ persons in business to make profits for themselves. Does it mean that they use employees as means? Is it unethical? Not, if the employees are voluntarily in service and agree to terms out of their own free will, without compulsion. Once this condition is met, it amounts to a free contract and is not in itself unethical, unless there is cheating and undue exploitation. In practice, a situation may not be as simple. Let alone slave labour or similar conditions of forced labour, which undoubtedly and openly violate human dignity, what if the concerned workers have no choice and the alternative to accepting employment would be facing starvation? Under such conditions, employment at less than what may be considered as a fair wage, amounts to exploitation and would be clearly unethical. This is because here the workers are *used as mere means*, without treating them with due dignity. The state has to, in such circumstances, act in ways to increase workers' bargaining power or effectively implement fair wages through employment guarantee programme offering minimum guaranteed fair wages. We can clearly see here how ethics can lead us to practical economic policy.

Amartya Sen has expressed reservations about duty-centred approach to ethics. He is opposed to obeying the call of duty disregarding consequences of so doing. He cites the Gita as an instance of duty-centred approach, and observes that Arjuna was right in opposing the war against his relatives and friends for whom he had love and reverence. Since I have responded to this elsewhere (Nadkarni 2011: 136–9), I am not going into details here again. I only observe here that even duties are designed normally by taking into account their expected consequences on the society in general, though not personal consequences in each particular instance. Not obeying the call of duty can have unexpected and even unpleasant consequences. Not doing ones duties fearing personal or short-term consequences can lead to lawlessness and chaos. It is by ignoring our respective duties in India that we have driven our country to the bottom level of human and moral development.

There is a set of theories of ethics under the name of contractualism or contract theories, which have been used to answer the questions of what is just or how we can derive principles of justice. Ideas of justice lie at the basis of all civilised societies, particularly of their economies and politics. Kant's theory is also considered as contractualist because, according to him, moral principles must be the ones to which all rational beings could agree. Kant's contractualism finds a full expression in John Rawls much celebrated work—*A Theory of Justice* (1972, revised 2001). Rawls wants to derive principles of justice, which are equitable and fair to all. To do this, he sets up an imaginary scenario called the 'original position' in which rational agents participate under a 'veil of ignorance'. These participants do *not* know what they will be—whether rich or poor, strong or weak, employers or employees, intellectuals or unskilled manual workers. They do not know what qualities or skills they have, advantages or disadvantages they would face, and even their gender. Under this situation, what kind of a society will they opt for? What principles would they choose to govern their society? It is this 'veil of ignorance' that will help them to derive and agree to principles of justice equitable to all. It is not necessary for Rawls to assume that these participants would eschew self-interest and act altruistically. All decide according to self-interest, but under the 'veil of ignorance' in the 'original position'. If I were to know I would become rich, I would opt for principles or a system that would favour the rich. But I do not know it, and I might as well be poor too! The question is what a self-interested man would then consider a just system. "A self-interested choice in the original position may be very different from a self-interested choice when my circumstances and qualities are known" (Benn 2000: 21–22). The 'original position' under a 'veil of ignorance' may look artificial and unreal, but it is nevertheless a brilliantly helpful way to eliminate prejudices and derive principles of justice impartially.

Rawls derives two principles of justice (2001 edn):

- (a) 'Each person has the same infeasible claim to a fully adequate scheme of equal basic liberties, which scheme is compatible with the same scheme of liberties for all; and
- (b) Social and economic inequalities are to satisfy two conditions:

First, they are attached to offices and positions open to all, under conditions of fair equality of opportunity; and second, they are to the greatest benefit of the least advantaged members of the society.

The second principle (b) is known as the Difference Principle.

Rawls's principles of justice do not insist on rigid equality. They allow inequality, but only if it is functional and subject to equal opportunity for all. Even if inequality with final outcome cannot be avoided, the starting points for everyone should be equitable as in a race. But even inequality in the outcome is permitted only if it can work for the benefit of least well-off and enables the society to eradicate hunger, illiteracy, ill health and other such deprivations. This might look paradoxical. But the point behind Rawls's stand can be appreciated only if we recognise that no society can progress if individual initiative and motivation for excellence are curbed. But with Rawls's principles, even the functional inequality resulting from this has to be minimised by using the growth in income for the advantage of the poor. None should be excluded from the gains from development or economic growth in any way.

Amartya Sen in his book *The Idea of Justice* (2009) argues that the contract theories, including the theory of Rawls, have a great shortcoming in that they cannot take note of the interest of non-participants in the contract. Rawls assumes rational human agents participating in the contract as having self-interest in mind. What then about the interests of children, the mentally retarded, animals and plants, and nature in general, who are not participating? Sen, therefore approves instead the approach of Adam Smith, who speaks of an 'Impartial Spectator' who can take into account the interests of all, including the interests of those who could not have participated in the contract.

Sen's criticism, however, is purely technical. Rawls's 'original position', in which the contract takes place between rational agents under a 'veil of ignorance', is only a device to logically derive what is just and fair. It need not prevent deriving principles of justice which are fair to all including non-participants in the imaginary contract. So interpreted, the difference between the 'original position' of Rawls and the 'Impartial Spectator' of Adam Smith would vanish. Rawls's assumption of participants in the contract deciding in self-interest will have to be modified into enlightened self-interest, where the concept of the self has to be much broader.

Contract theories lead naturally to 'rights approach' to justice, as 'contracts' are meaningless without rights and corresponding duties. Various rights together ensure liberty such as the right to life, right to freedom of expression, right to property, right to equal treatment and so on. Rights which were not recognised earlier are now recognised, such as, the right to food, to housing, to employment and to a minimum of education, which enable a human being to live a life of dignity. Rights invariably correspond to duties. A child's right to have love and care implies also the duty of parents to provide it; and if parents are no more, the child does not lose its right, and it becomes someone's duty, or the State's duty to provide it. Gandhiji preferred to stress the duty aspect more than the right side of the coin. It is easier to

enforce duties than rights. Or, we can say, rights are ensured only through duties. In any case, recognition of both rights and duties forms an important content of justice.

Justice contains freedom too, which Sen (2009) has emphasised. While there can be no absolute freedom, freedom can be restricted only by a due process of law and the law should satisfy ethical requirements of guaranteeing human dignity. Restriction on individual freedom should be to only guarantee equal liberty for all. The argument that economic development of developing countries can be ensured only through authoritarian regime and suppression of freedom, ignores the very purpose of development. It would not be counted as development at all, and at best only an economic growth. Economic growth through suppression of freedom is hollow and meaningless, and will have a built-in explosive potential, which can be suppressed only by further suppression of rights. It would be a vicious circle.

The essence of freedom is freedom of choice, but it is not confined to providing for consumer sovereignty or freedom to choose between different goods and services. It is capability which enables choice. In Sen's approach to justice, an individual's advantage is judged by 'a person's capability to do things he or she has reason to value' (Sen 2009: 231). When we enhance capabilities, we enhance freedom too. It is the essence of economic development to expand such capabilities *of all*, and to ensure that such advantages are enjoyed without discrimination equally by all, instead of being confined to a few elite.

There may be no disagreement with a general statement that all should be treated equally. But equally in what? What is it that we want to equalise—income, wealth, consumption, utilities or welfare? Or, instead of getting bogged down to problems of measurement with respect to each of these alternatives, should we focus only on equalising opportunities? Amartya Sen advocates equalisation in terms of capabilities, which in turn means freedom to do things that an individual values. It does not mean that Sen demands that everyone be made as capable as Albert Einstein. But his approach proposes a 'serious departure from concentrating on the *means* of living to the actual opportunities of living' (ibid: 233). A great merit in thinking of equalising capabilities is that the approach goes beyond providing formal equalities of opportunity, but proposes to compensate persons for disabilities or disadvantages imposed on them by differences in birth, handicaps, and lack of access to education and health. The approach aims at enabling them to overcome these disabilities and come even.

The implication of all these approaches to ethics for economic theorising about consumer and producer behaviour, and economic policy may now be summarised. An important implication is that the assumption of the current economic theory that welfare is maximised at the consumer level by maximising utilities from personal consumption, and at the producer level by maximising short run profits, needs to be modified. How?

In the first place, a moral valuation of utilities, similar to what is indicated by the *Kathopanishad* in terms of *Shreyas* and *Preyas* would be necessary before they are sought to be maximised. Secondly, we have to allow for the fact that rationality and wisdom would require taking into account ethical values like being considerate, fair and even compassionate to others. It would also require that environmental costs of

one's consumption and production are taken into account along with considerations like utility maximisation and profit maximisation. In business, it means particularly that the interests of all stakeholders are safeguarded, and not of the shareholders alone.

Thirdly, we should also allow for the fact total welfare of the community is not a simple summation of utilities or profits of all individuals (as consumers or producers) considered as separate from each other, and that such a summation does not represent the community's optimum welfare. Such an optimum is attained when individuals act in a way that enhances the welfare of others too, may be along with their own, in a co-operative attitude rather than in an adversely competitive attitude. There could certainly be competition, but it should be healthy and humane, and should not give scope for unscrupulous activities like cheating, deceptive advertisement and unfair or hostile expropriations and takeovers. What should dominate economic activity to attain an optimum is co-operation and synergy, and nothing should be done in competition that destroys the undercurrent of co-operation and synergy.

At the macro-level economic policy of the state, the aim would not be one of maximising growth rates of GNP, but should essentially be one of achieving high levels of human and moral development, enhancing capacities and opportunities. At the same time, opportunities should also be made equally accessible by making the starting point for all equitable. Needless to mention that eradication (not simply alleviation) of poverty, hunger, ignorance, destitution and homelessness ought to receive highest priority. To do this, equal access to education and health is also necessary. Economic growth has to be justified only in terms of these goals. Implementation of such goals would require a much better control and monitoring of governance by the civil society. This cannot come without greater participation by citizens in the affairs of the economy and policy, as advocated by Aristotle long ago. We may have to more effectively demand barring criminals from contesting election at any level, and seek ways of the civil society partnership in the screening of candidates in election.

All this may sound as suggesting an agenda of replacing the existing pecuniary amoral economics by a moral economics. It may not be analytically rigorous, but would certainly be wiser and more relevant. Is it only a dream or is there something to build upon to derive a moral economics? I think that the Gandhian economic thought has the potential to build such an economics. This leads to me to the fourth and final section of my lecture.

4 The Gandhian Way to Economics

Truth and non-violence are the two key principles which Gandhi used for his economics. The Gandhian way to economics is so revolutionary that it may appear that it would require turning down conventional Western economics on its head. *First*, The goal of Gandhian approach is human and moral development, not utility

or profit maximisation and not economic growth as an end in itself. *Secondly*, the Gandhian approach deplores endless multiplication of wants, subject of course to the fulfilment of basic human needs and needs to keep human life in some degree of comfort that would ensure human dignity and efficiency; it calls for conscious moderation of wants. *Thirdly*, the human being is seen not as a predator, who has the right to exploit nature as he wants, but as a protector who has the moral responsibility to ensure sustainable development. *Fourthly*, while the motivation to accumulate wealth is recognised as legitimate, such wealth in excess of the need to maintain oneself and one's family with dignity and minimum comfort, should be seen or treated as a trust, to be used for the benefit of the community or needy people, so that even if income cannot be equalised, inequity in consumption level is minimised. If such a trusteeship spirit is not voluntarily forthcoming from one's wealth, the state would be free to tax excess wealth and transfer it for the purpose of meeting the needs of the poor and the deprived. *Fifthly*, production activities should be so organised as to give first preference to satisfy local needs and to sell in the local markets. There is no ban on exploring the excess over what is required for local needs, nor any ban on imports—subject to the condition that the consumer gives first preference to local products. This means that the scale of production is small, and energy spent on unnecessary movement of goods is saved.

In his book, '*Small is Beautiful*', Schumacher makes fun of how, as he observed, a lorry load of biscuits left London for Manchester minutes after another lorry load of biscuits arrived at London from Manchester. Schumacher asks if this to-and-fro movement of the same commodity between the same places added anything to the nutritional quality of biscuits. It involved only extra energy costs and an increase in the price of biscuits to the consumer.

By insisting on small-scale production and decentralisation of economic activity including production, Gandhiji sought to prevent accentuation of inequality, so that we do not have to depend on the altruism of the rich. It is wrong to characterise the Gandhian approach as relying on the altruism of the rich. The trusteeship principle comes only where some centralisation and large-scale production are inevitable. It was the uncontrolled tendency to increase the scale of productivity and to centralise production which created most of the evils of competition, according to Gandhiji.

This leads us to the *sixth* element in the Gandhian approach to economics integrated with ethics—the centrality of the human factor. He was not opposed to mechanisation or large-scale production if it was not at the cost of reducing jobs or employment. The key to understanding Gandhian economics and approach to development lies in not treating labour as the scarce resource for economisation, but in treating natural resources as scarce. Gandhiji would allow machinery or modern technology, where such technologies reduced drudgery and increased productivity without much reducing employment. He preferred small-scale production and decentralisation only because such an approach maximised employment. But he did not mean to go back to ancient or old technologies. Kulkarni (2012) thinks that the Internet Revolution is Gandhian in spirit and philosophy. However, Gandhi

believed that we have to ourselves innovate new technologies suited to our conditions. He used to feel that we needed Swaraj in respect of technological development too.

The Gandhian economist, J. C. Kumarappa (1892–1960) (1945, 1951), felt that for sheer survival of the humanity with dignity, Gandhi's ideas on economics would be invariably needed, and he predicted that using these ideas, the central tendency of development would be towards less and less violence, and more and more non-violence. Ultimately, the basic Gandhian values of truth and non-violence should guide both theorisation and policy formulation in economics.

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