

Working Paper

27

The Theory of Economic Development

Yoginder K. Alagh
Professor Emeritus and Vice Chair

March 2022



**Sardar Patel Institute
of Economic &
Social Research**

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The Theory of Economic Development

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Introduction

A Theory of Economic Development can be developed with a theoretical perspective on economic development from an Indian and not an Anglo Saxon or European mind set. As Gunnar Myrdal said 'Values' are always there in social theory (G. Myrdal, 1954). The question is whether they are explicated or remain hidden. This Working Paper outlines such a theory with a developing country perspective on population and demography, real resources of land minerals and water, agriculture, manufacturing, infrastructure including, energy, transport, water as an input and for consumption and the infrastructure for product discovery and adaptation. Finally it examines the theory of development policy both in the traditional form and more recent institutional developments.

Population and Demography

The UN Population Division's structure of Population Projections builds on a framework developed on the structure of population by age, sex and rural/urban classifications

(UN, DIESA, 1981). These are similar to those used by the Registrar General of the Census of India, Government of India, and changes that have taken place since the Eighties of the last century. The similarities and differences of these with the analysis done and projections made by the Expert Committee of

Registrar General of the Indian Census are interesting in the sense that the latter are more detailed. These projections provide the base data set for of statistical modelling of population projections. Indian developmental thinking on this issue was indicated in the Five Year Plans which projected changes in output and employment structure and built these into the population projections (See Yoginder K. Alagh, 1980, UN, DIESA, 1981). There were similarities and differences with UN models influenced by the ILO based BACHUE models (Gerry Rodgers, ILO 1973).

In the Nineties of the last century the Theory of Demographic Dividend was developed and the approach that numbers were a burden gave way to the advantages of a younger, larger work force (Marie Bhatt, 2000, John Hallowell, CIGI/NBER, 2015). The sweetest Dividend is the fact that it cuts across Religion; caste and sex; The sweetest dividend is the fact that the girl child goes to college and they hold up half the sky; The work of the author himself, for CIGI in Canada Yoginder K. Alagh, 2018, and Marie Bhat (2000) who died young; Leela and Pravin Visaria; NSS and the Population Census developed; The Theory of the demographic dividend, (See Yoginder K. Alagh, 2018, op.cit., Ch.2, pp. 10-18) Rajiv Gandhi was politically committed to these objectives but recent vandalism on statistics has dealt a body blow to a larger perspective on population policies. (See official treatment of Sudipto Mundle, Technical Committee; 2016 Statistics Commission of India and compare with earlier official examinations of expert findings; Yoginder K. Alagh, 2013, Ch.2).

Resources

Land and Soil

Economic Development is based on real resource capabilities. Soil resources are best displayed in Geological Maps; desertification and forests and cutting trees can be shown by available Survey Data (see GOI, Survey of Forest Resources, Every 5 years); The World Bank pushed through its Forest Policy such surveys globally. But India already had them. Their comments on India were therefore non sequitur (World Bank, 2000 and Yoginder K. Alagh, 2013, pp. 207-212). Reclamation of land is possible from the sea; through silting; historical records in Vadodara; show such reclamation of land was there from the sea. Another example is the Indus Valley Civilization Remains at Lothal which show relocation of this port site across centuries as the Indus changed its course (Yoginder K. Alagh, 2002). In Eastern India, The Parganas Settlement of Revenue and now Bangla Desh data show the same phenomenon (J.M. Broadus 2001) as discussed in Yoginder K. Alagh, 2002).

A more systematic approach to this approach is in agro climatic regional planning. The origins, of the work went back to the work of Russian Geographers (Galina Sdasyuk & P. Sengupta 1968). It was then taken up by FAO/UNESCO in Committees and Studies in which the author was also involved (Yoginder K. Alagh, 2000, FAO/ UNESCO 2002). In India Rajiv Gandhi supported it, but the successor Janata Dal Government rubbished it, as everything inherited from Rajiv Gandhi. The Deve Gowda/ InderGujaral Governments supported it. Manmohan Singh was not in its favor, but Sonia Gandhi's Advisory Committee pushed it so he went along. The Planning Commission took it up. Now planning has been abolished but the idea surfaces in many policies and applications by the corporate sector. One such example is the Tata Shakti Pulses Project in

Puddocatai, pushed by the author as an Independent Director of Tata Chemicals and Rallis.

The application of agro climatic regionalization needed a proper evaluation of resources, at a fairly local level. Space telemetry at which India had capabilities gave online estimates as it were of such resources; but there were controversies between ISRO and the Land Revenue settlement estimates on land use and cropping patterns. Committees were set up to solve the differences and one under Y.K. Alagh and A. Vaidyanathan, reconciled them (Y.K. Alagh and A. Vaidyanathan 1990, as discussed in Yoginder K. Alagh, 2013, pp. 183-186).

Clean energy is a resource, but hydel invariably involved conflict with forests, nuclear energy is an option but fuel sources and disposal of waste is a problem, India is short of uranium and Thevalhalla of India's energy solution is the fast breeder reactor based on thorium (Yoginder K. Alagh, 1996, 2013, Ch. 5, pp.81-82 and A. Sharma, 2007).

Growth Rates

The analysis of growth processes can be both at the aggregate level or at the sectoral level. Apart from descriptions, the analyst is interested in the turning points. These can lead to controversies on base years and terminal years. In democracies this also gets involved in politics and 'rubbishing high growth periods in opponent regimes. The eighties of the last century in India is an example, which has been described in IMF studies as the decade of highest growth but was rubbished by the experts of the successor V.P. Singh, Government of India (see Y.K. Alagh, 2018 Ch.1 and Sec. 4.2 of Ch.4).

In a historical perspective; the discovery of fire is one break; then the steam engine and the industrial revolution. Across countries imperialism and colonialism led to turning

points. Pandemics had their toll on aggregate and per capita growth. For example, per capita consumption of grain went down in every quinquennium in the last century in India, but the twenties of the last century, on account of the influenza pandemic then.(Y.K.Alagh, 2013, Ch.2). This may take place in the COVID episode also.

Structural change may take place in the growth process. Classic studies by S.Kuznets and Colin Clarke, showed that growth cannot be forced. The Soviet example, when corrected for differences between material product and national income accounts, showed this. Recent examples of false prophets, include amongst others, BRICS, Goldman Sachs. Their pronouncements read funny in the covid years, but are telling. It is being understood that the pandemic was on account of overuse of resources. As the American economist of Romanian origin, N.Georgescu Rogen argued excessive use of a finite resource can lead to the working of the entropy law and the challenge is to avoid that(N. GeorgescuRoegen, 1971). The pessimists & messiahs are there in every age.

The falling rate of profit has been a bogey in economic thought and keeps on recurring; for a recent example, latest Alvin Hansen's essay on the eighties of the last century was greeted with a spurt of economic growth in the eighties(Alvin Hansen, 1981). The enduring lesson is that of steady growth with fluctuations; this can be modelled with Roy Harrod and the Razors Edge or by Robert Solow and steady growth. Both need to be understood or there is a Roshomon like situation.

Structure and Development of Agriculture

Studies from the time of the Indus Valley Civilisation at Lothal, three to five millennia ago show that urbanization starts when yields go above one tonne per hectare and surpluses are available for the cities. Urbanization followed the river bank. If the river

shifted so did the settlements. Was yield stagnant? Ashok Desai argues so comparing in the Mughal period (Todarmall's revenue settlement and now?, Ashok Desai, Penguin, 1971).

Studies on consumption of grain in the twentieth century confirm this; per capita grain consumption in the twentieth century was constant in many countries. FAO studies show this for North Africa. The Arab Republic of Egypt was an outlier, because its revolutionary leader Abdul Gammel Nasser introduced a universal policy of free bread. Grain studies have to deal with markets. Income distribution, is also important the Author did these studies in his work for Agriculture towards 2000(FAO, AT 2000; now revised at FAO, AT 2030) by his younger colleagues then).

These trends can be examined by studies of the peasant through the ages (India, China, Egypt, the dead sea papers as available in the magnificent Biblioteca Alexandrina in Alexandria in Egypt, built for dialogues of civilization and with an inaugural speech by this author. The counterfactual is countries with abundant resources like Indonesia).

This is then the modern context in which resources are not a constraint as earlier. Again the context is no longer just grains, but animal husbandry, fish and forestry. The structural question can then be examined from the angle of demand. Demand can be at the household level or at the sectoral and economy level. This then gets into questions of rural-urban continuums; markets and agro processing and industry and transport infrastructure. Historically local markets were in perishables. Global trade was in spices, intoxicants, opium, wine, tea, coffee and tobacco. But preservation technologies led to fillip to trade and specialization. This then got into the world of storage and prices. Futures markets came into place. If markets were thin, the role of the state, became obvious and policies for reform, were demanded. At the global level there were

negotiation bottlenecks and food security and "way of life" considerations became the subject matter.

The prices question became important in this context and was not that just of absolute prices but relative prices and the terms of trade became an issue of both understanding and policy. Through time growth was seen as shift away from both output and employment in agriculture in Maurice Dobb and Amartya Sen kinds of models, following the work of W.Arthur Lewis. Is balanced growth a possibility? This became a controversial issue with the examination of wage rates and surpluses, pushing static, comparative static and dynamic outcomes.

Technology, became another driver. In a sources of growth exercise with non-renewable resource constraints this author showed that 15% of growth would be sourced from technology(Yoginder.K.Alagh, 2013 and 2018).The potential of Biotechnology and the market control issues, its possible discovery raised both ethical and policy issues, in the well-known Monsanto case. In this kind of problem involving decision making under uncertainty, the methods of bargaining and public policy control problems arose. Does game theory help when you know some phenomenon is there but not precisely measurable; this to an economist becomes an issue of Ricardian rents and regulation. The author has argued elsewhere that LRMC principles'and game theory as a measure of generating information, may be a possible way out in biotechnology -maize in an Indian example (adivasi tribal farmers growing maize as staple, but with biotech seeds it also develops industrial potential).

Agriculture has never been just a technical issue and institutions and their structures have always been important. Historically in the colonial period, plantations were the red flag

to theories of exploitation in and of agriculture. Subsequently more benign models of linkages developed. Initially they were of the statist kind, but later cooperative models were developed. Also, theories of public and private of different kinds came up (Cooperation: The New Institutional Economics since Olivia Nordberg Nobels).

Cooperation for limited purposes with models of the AMUL variety led to farmer managed companies, which mandated audited accounts and annual elections, married to the cooperative model. The Companies Bill (Second Amendment, 2002) emerged from a committee the present author chaired. It is still in its infancy, although there are interesting cases like the later cases of the Sahyadri Farmers Company and Shakti Pulses of Rallis. These in fact are examples of recent trends in institutional economics.

Manufacturing and Industry

There is first the question of definitions. Units can be large or small. They can be in the household sector or corporate sector. They can be large enterprises in factories or small units. In industrial statistics enumeration, they can be in what is called the Census Sector in India or the Non Census sample sector. Global agencies like the IMF have their own classifications, particularly for global income comparisons across countries. Again at the global level, FAO and UNESCO have their own definitions. In India the Labor Bureau has its definitions for statistics of employment and these are coordinated for national Income purposes by the CSO.

Functionally industrial units have been classified as agro based, skill based; resource based in India, the new knowledge Frontiers and the digital age got emphasis with the policies of the late Rajiv Gandhi. These are making these definitions somewhat fuzzy. Are Definitional questions therefore now a question of the past, as an individual fishes

easily for h(er)is needs seamlessly in a world of cloud computing and an information universe. Around three decades ago at MIT, Enrico Brusco propagated The Brusco/Sabel Hypothesis. This announced the end of scale. The example was of the fashion industry in Italy's EmiliaRomana and soon others were discovered in France, Japan and Korea. Originating in the ILO, this research caught up in the EU, and later in South Korea at KIET and in Japan. In India the present author got work done under his supervision and by himself in the Surat Gems and Jewelry sector and traced the organizational systems from household enterprise to global chains. Enterprises went from the cottage to global chains. The Dutch industry could not compete with these enterprises which were, based on historically developed skills, again based on caste and community linkages.

The structure of some industry now entered globalization through firms which were specializing in components and other units collected them and made the finished goods. This was 'The Rurban World' of supply chain management. We began seeing the Janus face of the digital world and decentralization. Some felt that dominance was now a part of history. This was not true. The power lay with the person who designed the system. The others were as in the past only a cog in the machine, with illusions of importance. The power of the new innovator lay in returns to knowledge. Schumpeter was still relevant and not a part of history. The system designer was the egocentric Schumpeterian entrepreneur. India which had been constantly chastised at investment in research and not in primary education, was justified in saying that in large countries both are important and choices have to be made with other nonessentials. The old monopolies and monopsony models of control resurfaced in the new world. It was no longer a world of marginal vs. average pricing. There were benign or exploitative systems of functioning. Cooperatives gave way to Producer Companies. In India these were designed by a

committee the present author chaired. The new behavioral economics, however saw decentralized institutions and designed them for linking with markets and creating wealth by massaging the rough edges. This is the world of the Nobel Prize winners of the last seven years or so (beginning with Olivia Nordberg White and more recently Acemogulu) and in India, the work of younger economists like Munish Alagh and his discovery of Hearty Mart and its new characteristics and limitations unless it links up with larger horizons of wealth creation.

Everything is new; but everything is the same. We saw again corruption, including the digital crime syndicate and the new robber barons. In India we saw the gem trader criminal Mody and the Kingfisher manipulator. The central bankers, Y.V. Reddy and Rakesh Mohan chaired global groups trying to tackle the situation of cross border digital crimes not easily managed by country level agencies.

Economic Infrastructure

Energy

The origin of fire was a major advance in human civilization. For many centuries this was the only source of energy. The next major advance was the discovery of the steam engine by James Watt, electricity was always there, perhaps even in ancient times, but is attributed to Benjamin Franklin, the English scientists, William Gilbert and Sir Thomas Browne.

Electricity is now generated by coal, hydel flows and nuclear power systems. Coal in India is concentrated in some areas and its demands are spread all over the country. This led to super thermal power stations and the National Power Grid. The Parastatal power grid became the largest transmitter of power in the World when the present author was

Energy Minister of India. India has abundant resources of power grade coal, but they are concentrated largely in Eastern India.

It is obvious that the power sector needed long term planning .The present author argued that pricing should not be cost plus but cover costs at the margin, so the economic framework was suitable for the country's insatiable needs. He suggested that this could be done in the framework of long term marginal cost pricing, which was integrated into The Electricity Act.

Electricity can be distributed across national borders. In fact coal in the European Union countries and EURATOM were the forerunners of the European Union. India and Pakistan as also Nepal can trade huge amounts of power; with seasonal needs determining the direction of flows. This also needs seasonal surpluses and deficits. So when Pakistan's Finance Ministry expressed interest in the World Bank's proposal for power sharing arrangements like the Indus Waters Treaty, the present author as Power Minister deputed the CMD of powergrid as India's nominee much to the chagrin of the Foreign Ministry. In fact the Pakistani Power Minister publicly contradicted a news report on trade and said they were against the Indian proposal. We kept quiet and India developed a framework of power sharing and we constructed the last mile transmission systems, across the border.

Some Sustainability Problems

In the Super Thermal Power Plants(STPPs), there was the problem of sequestering the carbon emissions. The engineer Appa Rao, in Andhra had produced a technology for sequestering carbon in chimneys and using it as a byproduct. As a Minister in charge I announced a policy of special incentives, taking on the initial costs of installing this

technology. This required delicate negotiations with global lenders as a 'subsidy' but we were successful.

Most of our hydel reserves were in forests and forests have traditionally been the land of tribals (the Adivasi as s(h)e is called in India; the man there before) and the adivasi had rights of the forest people. I was invited to Canada for a goodwill visit and the High Commissioner came to discuss details with me. Apart from my engagements in the eastern seaboard provinces, he asked me for special visits to Canada's beauty spots. He was taken aback when I said I wanted to go to James Bay in the almost uninhabited Canadian ice locked tundra. A lot of the energygrid which fed the eastern seaboard of Canada and the USA originated from James Bay and the Canadian lawyer who was helping Medha Patkar, who was leading the agitation against the Sardar Sarovar Narmada Project, had originally cut his teeth in James Bay. I wanted to see for myself how the eskimo had been rehabilitated. We ultimately designed a rehabilitation project which stood the test of time. Medha Patkar delayed it by a decade, but she couldn't stop it, in spite of a global campaign which we opposed using Gandhian persuasive techniques, rather than force.

This experience helped India to take on the NGO Global Alliance against Sardar Sarovar at Rio. The NGOs very were militant on SSP but were defenseless when we brought up their dams. At Rio when Japan's dams were brought up the JapaneseNGO's, weakened the alliance by saying that they will not discuss Japan's dams. India's work was also noted by the Mekong River Valley Commission. The dams in the Mekong had been designed by an Indian engineer. But it was discovered that at the delta of the Mekong was the lake Tonle Sap and there had to be enough water in the dry season for the more than half a

million people dependent on the Mekong flows in the Tonle Sap. SSP rehabilitation was studied as a model.

Solving Conflicts

Prime Minister Narasimha Rao commissioned a 3 member team led by me to adjudicate a conflict on the Cauvery River to allow a minimum amount of water to flow into Tamil Nadu. I travelled across the River meeting groups of people all along. The Kannada Prabha carried a picture of a young man telling me in the north that they will separate and my putting my hand on his shoulder and telling him that they cannot because I will not separate from him. My report had an impact in border disputes in Mexico and US. The Mekong Commission as stated above used our conflict resolution strategies in the Tonle Sap case. The Durbin Protocol had listed India and Pakistan solving disputes on the rivers of the Punjab.

It is now being stated that transmission and distribution grids are new policies being implemented and new legislation is on the anvil. But there was in the last century a transmission and distribution grid with the Mangalore STP by British Gas. Old memories are forgotten and the problematique is taken up afresh. This delays progress because familiar ground has to be covered again; the same is true on the Brahmaputra hydel project and China's investments upstream in Tibet on the river. It was stated that it is a run of the mill water project which will not affect downstream flows in Arunachal when the river flows into India and has a large part of the balance hydel power potential of India. Now it turns out this is not true and the flows are affected.

Swiss models of energy projected India's energy scenarios by Pitcher and Yang and Pierre Audinet did the same in consultation with the author. They are all very depressing

and do not meet India's energy requirements for a young and expanding work force. They all bring out the importance of nuclear power. This said the problem is that of feedstock for nuclear power plants. India has very limited reserves of uranium. But fast breeder reactors can also be fuelled through thorium and India has vast reserves of thorium. It also has some technological capability in thorium based reactors. An experimental thorium based reactor, Kamini, is functioning in the Bhabha Atomic Research Centre of uranium to fire thorium based nuclear reactors. A fairly large stock of uranium will be needed to fire the first super size nuclear reactors based on thorium and the present generation VVER reactors, based on uranium are producing the nuclear waste, which reprocessed will produce the stock of uranium. This is then the Valhalla of India's energy problem. Of course the real solution is solar energy, because India is the land of the sun. (My favorite song is Harry Belafonte's Oh my island in the sun; willed to me by my Father's hand. I will spend all my days singing your praise; of your forest land and the sea and sand.) But solar power needs not only the sun, but also a lot of land for its panels and India is a land scarce economy. Further research is a priority here.

There is now the additional issue of climate change. Climate change negotiations are an interesting phenomenon. We know it's there and it is affecting our lives, but the exact facts are controversial. How can negotiations take place when the facts are not exactly known? One possibility is to introduce games as a negotiating strategy. Each negotiator can take a position for initial stances and then bargain. Soon the area of differences will narrow down. There is then the theory of reducing uncertainty when the facts are not known, but the phenomenon exists and it's an economists area of specialization.

Transport

Transport is an important factor in economic development, as it is the mirror image of trade. For the market of fresh agricultural or animal husbandry produce, farmers or their agents in trade can and do walk to the market. Village markets are common and in many big metropolis, like New York, Paris and Rome, farmers markets are common on selected days in a week. In India apart from daily markets for produce, there are periodic haats, bazaars and so on in different parts of the country having different names. In some in tribal areas, trade is still on the basis of barter. This author's favorite example in a fortnightly haat in Eastern Gujarat is that an Adivasi is given chicks and brings them back after some time and gets a part as his return. This can be called a chicken rate of interest. At the next higher level, farmers transport fresh perishable produce in carts, small vehicles and so on. They carry their own display furnishings, normally detachable and sometimes also sell cooked produce for sale for immediate consumption. But perishable produce sold in what Marshall called short run market pricing is applicable only to a small part of the market. In any case perishables can now also be stored. Transport makes supply more elastic in different markets and transport costs become a part of the economic system. These can be costs pertaining to unimodal or multimodal transport systems. These can be unidirectional or what are called hub and spoke systems, depending on market characteristics on the spatial demand aspects. There are therefore intricate connections between location, physical terrain, energy costs and transport. In addition to the physical transport possibilities, corporate pricing strategies like equalizing prices across spatial markets and government policies like freight equalization can play an important role in determining outcomes.

The geographical distribution of energy resources like fossil fuels and waterways play an important role in transport infrastructure and economic systems.

Water

Water as a resource has been discussed earlier. The availability of water as a resource does not mean that it will be available for human consumption. Many metropolitan water conveyance systems were built in the days when conveyance pipes were of asbestos and/or iron and not of the PVC variety. They would rust and create impurities in the water so that it did not meet drinking water standards. Meeting that need, even with modern material requires storage, purification and conveyance systems which are both efficient and hygienic. Interestingly this problem has existed for millennia. In the days of ancient Rome, slave rebellions were around the availability of fresh water from hill springs, not only for patricians, but for slaves. The city of Rome even today has taps from which an ordinary citizen can drink pure cold spring water conveyed through aqueducts, from hill springs.

Creating adequate and hygienic drinking life saving water facilities requires systemic planning which needs operations research, engineering and financing and pricing techniques. Dual pricing has been advocated where a certain amount of water is free and the balance is priced. But water literally leaks from the free supply to the priced market. Various models have been advocated for solving this problem including involving community leadership and cooperation models, of the limited objective variety.

Infrastructure for Product Adaptation and Adoption

This is the age of fast product adoption and change. As the Thirteen Directorate of the European Union: The FAST(Forecasting and Assessment of Science & Technology)

Directorate stated; product cycles are short. Each generation of products builds on the corpses of earlier products. In addition most products are derived from inter disciplinary technologies; consisting of computerization, new materials, biotechnology and so on. This then needs a scientific infrastructure to help the growth process. The fact that India for example, very early in the Nehru period, set up a council of Scientific and Industrial Research, an Indian Council of Agricultural Research, Indian Council of Medical Research and so on, meant that it was ready for the fast product adoption, adaption and change age.

The Theory of Economic Development Policy

The Conventional Approach

The Theory of Economic Policy was initially enunciated in the early sixties of the last century by the first Nobel Prize in Economics winner, the Dutch economist Jan Tinbergen. His was a mathematical structural approach to economic policy. Given an empirically estimated structure of an economy; targets could be stated by the political or socio-political process in democratic societies; the professional economist could test the seriousness of the objectives stated by politicians by examining if enough instruments were available. This was a feasibility test and could be used by counting the rank of the targets and instrument vectors. If sufficient instruments were available, the political process was serious. In addition though there could be alternative methods of achieving the objectives, all of which were feasible. Then choice was available and a linear programming approach could be used to optimize the best way of achieving the objectives. The econometrician here was some kind of a super examiner of the politician. In fact soon it was realized that he was also a kind of supervisor and naturally the

political process was not willing to give him that role. In fact as stated earlier, Tinbergen himself was of the opinion towards the end that the treatment of social factors like employment and income distribution was inadequate in the formal work and thus his invitation to practitioners to work on the 'solution' to such (See the authors paper in the volume edited by Thorbecke and Cohen, referred to earlier). But once you gave way new approaches which don't rely on your method of reasoning emerge and that is the way of progress.

The real issue is that what we thought of as 'problems', like adequacy of instruments, etc. became in a sense a non problem. Monopolies and duopolies became vehicles of progress and not policy issues of public control. The duopolists collaborate to create larger newer opportunities for progress and newer ways of development in sectors like agriculture or participation in supply chains. They learn to collaborate and compete. This was the method the behavioral economists were suggesting rather than the control mind of conventional economics.

Households have surpluses and use them to collaborate and expand in a dynamic process, rather than only large firms, subtracting costs from revenue as in the conventional economics. The process becomes that of widespread growth with multiple households acting as widespread agencies at the foundation rather than just a few firms. They make mistakes learn and the system grows.

There are however problems in this paradigm of solving problems step by step in spiraling growth. Different periods have problems of their own. Not all problems have the same solution. Also there is the problem of meeting societal needs. Does the market really coordinate in problems like health and education? Taxes and subsidies may not be

enough to meet such needs. Individual actions of an 'optimal' kind can ignore real natural resource constraints, like land, water, minerals or air. This is what the American economist of Romanian origin Nicolas Georgescu- Roegen called The Law of Entropy. How can we avoid what the Ancient Hindus called 'Pralaya'?

It is wise to consider that simple explanations like 'the falling rate of profit' (Alwin Hansen, 1984), or 'the stages of growth', as a 'final 'counter to the classical economists, like Ricardo, Marx as also Keynes are by now forgotten. It is best to end with the modest thought that each age has its own problems to solve.

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