



**TAPMI LIBRARY**  
**MANIPAL.**  
Received on 29/1/96

**Thirteenth  
T.A. Pai  
Memorial  
Lecture**

---

**World Trading System:  
Challenges for Rural India**

---

**Dr. V. R. Panchamukhi**

*Director, Research & Information System for the  
Non-Aligned & other Developing Countries*

**January 17, 1996  
Manipal**

THIRTEENTH  
**T.A. PAI MEMORIAL LECTURE**  
By  
**Dr.V.R.PANCHAMUKHI**

17-1-1996



Smt. Vasanthi Pai, Wife of late Sri T. A. Pai presenting a memento to Dr. V. R. Panchamukhi during the Thirteenth T. A. Pai Memorial Lecture held in Manipal on January 17, 1996.

Received on 29/1/96

## **World Trading System: Challenges for Rural India**

I consider it a great privilege and honour that I have been invited to deliver the Thirteenth T.A. Pai Memorial Lecture. I am indeed grateful to T.A. Pai Commemoration Committee for giving me this opportunity of paying tributes to the memory of one of the great personalities of our times. It is no exaggeration if we say that Shri T.A. Pai - for that matter the Pai family - can be described as one of the architects of modern India. Banking, Industry, Agriculture, Food Security, Institution Building, Infrastructure, Education, - you name any sector of relevance to the challenging task of building a strong modern India - in all that, Shri T.A. Pai has left his indelible mark as a superb leader, a visionary and a man of action. His qualities of integrity, honesty and commitment have given to him a unique place of honour in the select galaxy of luminaries of post-independence India.

The personality of Shri T.A. Pai, as an independent thinker and as a fearless performer, becomes amply manifest in his article entitled "Are Autonomous Bodies really Autonomous?" which he wrote after he resigned as Chairman, Food Corporation of India in 1965 or so. The basic issues which he raised in that statement have been extremely crucial for achieving efficiency in the public sector undertakings. He was bold enough to point out as to what were the maladies of the Food Corporation of India, how government intervention scuttled its autonomy and sowed the seeds of making the FCI a big white-elephant as it is today. By hindsight one

---

*Text of the Thirteenth T.A. Pai Memorial Lecture delivered by Dr. V.R. Panchamukhi at Manipal on January 17, 1996.*

could easily proclaim that if Shri T.A. Pai had been given full freedom to function, he would have made the FCI, and by its example many other public sector undertakings, emerge as strong profit making bodies.

While speaking about autonomy of the autonomous bodies one is reminded of the famous correspondence between Pandit Jawaharlal Nehru and Dr. C.D. Deshmukh, when the latter was offered the post of Chairmanship of University Grants Commission (UGC). It is well known that Dr. Deshmukh wrote to Panditji enquiring as to whether he would have autonomy in his functions at the UGC. Panditji wrote back to him saying, "You assert your autonomy and I would respect it".

Perhaps such an assurance was also given to Shri T.A. Pai, when he took over as Chairman of the FCI in January 1965. However on finding that his assertion of autonomy was not being respected, Shri T.A. Pai did not hesitate to say good bye to his position of power in one of the pioneering national level public sector undertakings.

Some of the observations which he made in his article are worth recalling. I am just reproducing them here since I feel they are relevant for today.

"The Government had given us a capital of Rs. 5 crores with a great responsibility of handling the food grains in this country. When we pressed for the inadequacy of this capital, all the godowns of the government were transferred to us as their share of the capital! This would not help us as we could not be possibly expected to raise loans against them to carry out our operations".

"....little did I realise that food is politics in this country...."

"As a nation, we were not even thinking of self-sufficiency, leave alone surplus. The argument is we cannot produce more because we do not have storage and when we have surplus, we do not have storage. These shortsighted policies would certainly come in the operation of the Food Corporation".

"Ultimately the Food Corporation of India was reduced to a Transport and Godown Agency of the Government of India and the process was completed when 18,000 government servants of the Food Department were transferred to it. Such a large number of people with different culture and different practices, could not make the Food Corporation efficient. While the direct recruits in the Food Corporation of India could be dismissed for their inefficiency, others who came to the Food Corporation could not be dismissed by the President of India even, sometimes, after their death!"

I have just chosen to quote these observations from his very penetrating article to bring home the great depth of vision and the courage which made the personality of Shri T.A. Pai. The above information also brings out as to how the irrational and indiscriminate interventions of the government reduce the public sector undertakings to the status of being departments of the respective ministries and not as institutions entrusted with the responsibility of fostering the welfare of the common man.

The perceptions of Shri T.A. Pai have been eminently vindicated by the course of the Indian economic history since the sixties. Public sector undertakings with their mounting losses have become a burden on the public exchequer. Excessive government intervention has now been decried as an evil in the path of growth with efficiency. It appears that the perceptive wisdom of Shri T.A. Pai had laid the foundation

of economic reforms and liberalisation which have now been launched with great fervour.

For paying tribute to the memory of Shri T.A. Pai, I have chosen a topic of great contemporary relevance since Shri T.A. Pai was always a man of details for contemporary problems. The theme of my lecture is **World Trading System: Challenges for Rural India.**

One may wonder as to what is the relationship between World Trading System and the Rural Economy in India. I would endeavour to present to you at the outset my own rationale for choosing this topic and also for explaining the linkage between the World Trading System and the Rural Economy.

### **Importance of Rural Economy**

At the outset we should recognise that Indian rural economy needs to be considered distinctly from the rest of the economy. In our current debate on development paradigms and strategies - in particular globalisation, privatisation, marketisation etc. - we have been considering the Indian economy as one whole, as if it is a homothetic economic structure. There are many sub-economies within the national economy - each of which has its own macro and micro-economic framework. Disequilibria and distortions in these sub-economies could easily frustrate the pace and pattern of dynamism of the national economy. We have the sub-economy of the poor, sub-economy of the middle class, sub-economy of the rich, sub-economy of the informal sector, sub-economies of the different regions having diverse initial conditions and resource endowments. In the same vein, we have the distinct dichotomy of rural economy and urban economy, which needs to be explicitly recognised in the context of government's policy making and private sectors' actions.

Importance of the rural economy in the Indian economy needs no special emphasis. The special status of rural India on the national scene was eloquently recognised by Mahatma Gandhi, when he advocated the concept *Village Swaraj* as the ultimate goal of independent India. He wrote as follows:

"To serve our villages is to establish Swaraj. If the village perishes, India will perish too. It will be no more India. Her own mission in the world will get lost".

The fact that rural India maintains its crucial status even after fifty years of independence and that many of the cherished goals of development set for rural India have not yet been realised, deserves special attention.

Rural population in India is as high as 74% of the Total. If we take the share of agricultural population in the total population it is also very high, being 62%. More than 32% of GDP in constant prices originates from agriculture and allied activities in 1993-94.

Rural economy also assumes a place of importance on the national scene, in view of the perpetuation of rural poverty in the context of overall poverty at the national level. It is documented that considering all the developing countries, the rural poor constitute 36% of the total rural population. Rural poor account for more than four-fifth of the total number of world's poor. In Asia, the most populous region of the world with 71% of the world population and 78% of the world's rural population, one-third of the rural population lives in poverty. It is estimated that two-third of the world's rural poor lives in Asia. Taking the approach of Head Count Ratio, one observes that in 1988 42% of the rural population in

India lived below the poverty line. This percentage was 46% for Sri Lanka, 86% for Bangladesh, 64% for Philippines, 51% for Mexico, 73% for Brazil. This profile of very high percentage of rural population being below the poverty line underscores the need for examining the different dimensions of the process of development in the rural economy.

Rural poverty is diverse in nature. The rural poor can be classified as small-holder farmers, the landless, the tribal and ethnic population, pastoralists, craftsmen, fishermen, displaced persons, poor rural women, etc. Out of these, small-holder farmers and landless population constitute more than 75% of the rural poor in Asia. Thus, land-man ratio holds key to the profile of rural poverty. Improvement in the productivity of land and efficient harnessing of the rural manpower provide the basic framework for dealing with the challenging issue of growing rural poverty. Both these dimensions influence and also are influenced by the different aspects of the world trading system. I would further elaborate on these points in the following pages.

### **Growing Interdependence**

The world is becoming increasingly interdependent. Economic events and policies of one country influence those in the others. Economic crisis in Mexico sent waves of ripples in many countries in the world. Stagflation in Europe and USA in the eighties forced many economies in east Asia and southeast Asia to experience very low or even negative growth rates. Billions of dollars move back and forth over the globe in the capital market transactions in the course of a day. Transnationalisation of production has now reached such a stage that the boundaries of nation states have tended to lose their meaning in so far as international production and

trade linkages are concerned. The share of the multinationals in the global output is very high and it is increasing. Intra-firm trade accounts for a significant percentage of total world trade. Increasing share of intra-industry trade-trade in intermediate goods and components belonging to the same sectoral category - has brought about vertical integration of an industrial activity across the cross-section of countries.

Interdependence among nation states for markets, resources, technology, services, etc. has been significantly intensified due to the revolutionary advances in communications and informatics. Of course, quite often, this interdependence tends to be highly asymmetrical leading to the syndrome of dependency and inequitous distribution of the benefits of economic linkages. This asymmetry in interdependence has the effect of perpetuating and sometimes widening the economic distances between nations and between groups of people within a nation. Economic power game among unequal economic entities implies exploitation of the weaker partners by the more powerful actors in the game.

Awareness about asymmetry in interdependence among nation states was first aroused in the sixties when Raul Prebisch, - the wellknown Argentinian economist, who became the first Secretary-General of UNCTAD in 1964, expounded the terms of trade deterioration thesis to bring out the point that primary producers are not getting their due share in the benefits of trading with the producers of manufactured goods since the prices of the primary goods showed secular decline in relation to those of the manufactured goods. This realisation led to the formulation of import-substitution oriented strategy for inducing a primary producing country to graduate into

the higher stages of development by partially or fully processing the primary products into manufactured products.

Perpetuation of asymmetry in interdependence has often generated reactionary or revolutionary responses. Sudden and sharp oil-price hikes in 1973 and in 1979 by the OPEC countries were based on the rationale that the oil producers had been denied their share in the high profits generated in the developed countries as a result of low energy prices. The initiative of Integrated Programme of Commodities and the Common Fund, launched by the UNCTAD in 1974, had the objective of correcting the imbalances between primary producers and manufactures/producers. The literature on the analysis of international economic relations, since the eighties has reflected upon the profile of increasing inter-dependence of the national economies and their sub-economies and has also come out with many suggestions on the policy initiatives required to introduce correctives for the asymmetry in the degree of interdependences and the consequent imbalances.

Rural economy and the rest of the world are entwined in a framework of inter-dependence - largely asymmetrical in nature. Interaction between the rural economy and the world economic system takes place in several ways. Firstly, rural economy participates in international trade by supplying exportable surplus or by importation of Agricultural goods, agro-based products and other non-farm products. Production, prices, consumption, savings, income generation, as also income distribution in the rural economy are all affected by the nature and magnitude of the export-import flows of goods and services pertaining to it. Secondly, in recent times, many foreign firms are investing in a big way on modern farming activity based on organic agricultural practices and also in

agro-based industries, - thanks to the policies of liberalisation and opening up. Large scale foreign investments are also taking place in the fields of aquaculture, horticulture with modern methods and technologies - some of which are eco-friendly while some are not. Inspired by the interest shown by the foreign investors, many large domestic private investors might also enter the field. All these new processes would generate many new systemic conflicts between traditional economic actors of the rural economy and these powerful large-sized new entrants in its economic space. Implications of these developments for socio-economic and cultural setting of the rural economy need to be carefully analysed and understood. Thirdly, the new rules and disciplines that are envisaged under the World Trade Organisation and in the various Agreements incorporated in it, have great relevance - both directly and indirectly - for the rural economy. The Agreements on agriculture, sanitary and phytosanitary measures, services, trade-related investment measures (TRIMs), trade-related intellectual property rights (TRIPs), when fully implemented, would bring about radical structural changes in the national economy and in this process, there is a real danger of the rural economy being marginalised. They imply both challenges and opportunities and as such the preparedness of the rural economy to respond to the emerging scenarios needs to be geared up by careful analysis.

There is yet another way in which Indian rural economy would interact with the rest of the world. Economic linkages between the rural sector and the urban sector at the national level have been intensified with the advancement in development. Structural changes in the urban sector, fast-changing lifestyles of the urban population and the growing disgust among the people about the urban economy due to

pollution, traffic congestion, problems of housing, water, sanitation etc. - all caused by the varieties of influences from the rest of the world- are likely to create great many pressures and distortions in the rural economy. It is also argued that rural to urban migration needs to be reversed and that there is an urgency for ruralisation - rather re-ruralisation of India. The moot question is whether the rural economy in India - given its fragility due to inadequacies in regard to educational, health and other infrastructures - would be able to withstand the pressures to be built upon it by the shocks originating in the rest of the world and operating on it through the Urban Sector.

### **Contours of the New Trading System**

Let me, at the outset, present to you a brief outline of the salient features of the emerging World Trading System. The conclusion of the Uruguay Round of Trade Negotiations and the consequent establishment of the World Trade Organisation (WTO) since January 1995, herald a new era in regard to the rules and disciplines of world trading system. The WTO would soon emerge as a powerful supra-national body empowered to monitor and enforce the implementation of the different clauses of the Agreements. Uruguay Round of Trade Negotiations - the VIIIth in the series of such trade negotiations since the inception of General Agreement of Trade and Tariff (GATT) in 1948 - is characterised by many firsts: It was for the first time that developing countries participated in the negotiations in an effective way. For the first time, a comprehensive view was taken of the tariff and non-tariff barriers to trade with a view to taking the world trade to a freer trading environment. It was for the first time that many new areas such as agriculture, textiles, services, trade related investment measures (TRIMS) and trade related intellectual

property rights (TRIPS) etc. were brought into the agenda of trade negotiations.

Some broad features of the emerging world trading system are worth noting: Firstly, on account of elimination of subsidies, as also due to reduction in tariff and non-tariff barriers to trade, the world market would be becoming freer and more competitive. However, emergence of many trading blocks and evolution of many sanitary and phytosanitary measures and harmonised standards could imply new impediments for the free play of market forces. In particular, these may act as bottlenecks in the expansion of comparative advantage by the developing countries.

Secondly, in the new system, knowledge and technology would be the prime movers of the nature of the dynamic comparative advantage. The role of the traditional factors such as labour wage rate, supply of raw materials, as determinants of comparative advantage is getting reduced. Access to knowledge and information and ability to generate new horizons of knowledge, would determine the dynamics of comparative advantage.

Thirdly, freer environment for capital mobility without commensurate freedom for labour mobility would bestow on the multinationals and the capital-rich countries greater scope in the world economic space than that available to the developing countries endowed with huge manpower resources. Further, the freedom and scope for developmental support and adoption of special measures based on balance of payments considerations by the developing countries have been considerably restricted and regulated.

It is worth noting that the coverage and depth of the various clauses that are incorporated in the Agreements are

so comprehensive that many aspects of the rural economy would be affected by them. For example, the Agreement on agriculture envisages reduction in agricultural subsidies, elimination of export subsidies, provision of minimum market access opportunities, revamping of the public distribution system, etc. The Agreement on sanitary and phyto-sanitary measures has envisaged harmonisation and strict enforcement of the international standards, in regard to the human, animal, or plant life and health. The Agreement on trade related intellectual property rights has envisaged protection of the patent rights for pharmaceuticals and agro-chemicals and also advocated setting up of special discipline for the protection of the plant varieties. This illustrative profile of the elements of the different Agreements under the WTO brings out the generic linkages that exist between the rural economy and the international trading system. Each of these elements implies new challenges and also opportunities for development in the rural economy.

#### **Four Types of Systemic Explosions**

The emergence of the new trading system has been preceded and also accompanied by many radical structural transformations. The geo-political map of the world have been almost re-drawn with the collapse of the former Soviet Union and the emergence of many new nations. This has had sudden adverse effect on the agricultural trade of India and other developing countries. End of the apartheid regime and the consequent integration of South Africa with the rest of the world, also signifies another element of this change. It is now argued that South Africa with its huge unexploited natural resources would be a strong partner in any grouping for economic cooperation. The emergence of many regional trading blocs - European Union (EU), North American Free Trade

Agreement (NAFTA), Asia Pacific Economic Co-operation (APEC), The Southern Cone Common Market (MERCOSUR), ASEAN, SAARC - has threatened to distort the global patterns of trade linkages and investment flows. Asia is emerging as a new growth centre in the background of the continued recessionary tendencies in the developed world.

Most countries in the world are now introducing economic reforms in the form of increasing liberalisation, globalisation, and privatisation. These diverse forces operating on the world economic system are bringing about many fundamental systemic changes. It may be visioned that the decade of the 90s would be characterised by four types of revolutions or explosions. These may be characterised as market explosion, information explosion, technology explosion and standards explosion. We would deal with each of these issues in the following pages.

### **Market explosion**

The essential feature of the process of economic reforms is to give to the market forces more effective role in the economic space. Competition has been the key word of the reforms process and it is believed that more the degree of competition, the better the scope for efficiency. The role of the State is conceived only as a facilitator for the free play of the market forces in a market friendly setting. The responsibility of the State to regulate and intervene in the market to promote the social aspects of development is not explicitly recognised in this approach of market determined growth process. High growth with its trickle down effects for the benefit of the poorer segments of the society is supposed to achieve the objective of growth with equity. Of course, there are some schools of thought which try to temper this extreme form of market fundamentalism by asserting that a

proper blend of the State and the market would provide a useful framework for growth with equity and social justice. Even the recent reviews of the experiences of growth miracle in East Asia and Southeast Asia are now reasserting the thesis that a strong State functioning in a market friendly manner has been responsible for the achievement of high growth in these economies.

Whatever be the analytical debate on the subject, the crux of the matter is that in the coming years, every economic agent will be exposed to very intense and sometimes beggar-thy-neighbour type of competitive forces. In this kind of cut-throat competitive environment, the economically powerful actors would obviously assert their way at the cost of the interests of the weaker partners in the game. The challenge before the rural economy is to face this intense competitive environment in the production and the service sectors. This challenge would manifest itself in various dimensions and the economic agents of the rural economy will have to evolve their responses to the challenges as they unfold themselves. In one of the following sections we would advocate two modalities of responding to these challenges posed by the process of market expansion. These approaches are categorised as the productivity route and the approach of sectoral clusters.

### **Information Explosion**

The second major feature of the emerging world economic system is concerned with the issue of information explosion. Knowledge and information prepare the basis for acquisition of economic power. The world is fraught with a paradigm characterised by the most inequitable distribution of knowledge and information. The new rules and the principles laid down

under the WTO and at the other international fora seem to have the inadvertent effect of perpetuating these inequities and distortions in the framework of access to knowledge and information. The pronouncement that intellectual property is a private property and that all services including the information services should function in a free market environment could obviously have the effect of bestowing on the leaders in the game unbridled advantages over the laggards. The asymmetry in regard to the assertions of the rights as against the obligations of the more advanced actors in the game has raised doubts as to whether dissemination and diffusion of technical knowledge and information from the leaders to the laggards would take place with ease or not. Further, the question of level playing field between the leaders and the laggards, has become an issue of crucial importance in the quest for technological self-reliance by the latter.

With the advancement in the communication technology, the institutional mechanism for information flows across the globe has no doubt been revolutionalised. The scope and the range of information basket have also extensively widened covering not only the market information relevant for the traders and stock brokers but also the weather information so useful to the farmers and the fishermen. Competitive strength of the economic agents is largely determined by the speed with which the information is accessed, the competence with which the information is analysed and the wisdom with which responses to the analysed information are identified and acted upon. Given the fact that the economic agents in our rural economy are highly illiterate and also given the fact that the rural infrastructure in regard to communication and training is at least 20 years behind the world standards, the ability of rural economy to respond to the emerging challenges

in this area is highly limited. If these initial conditions of speedy access to information and building up of adequate infrastructure for analysing the same, including training and education are not built into our rural sector, the ability of the rural economy to integrate itself with the rest of the world and also to take advantage of the emerging opportunities would remain limited.

### **Technological Explosion**

Another major avalanche of powerful forces that have surfaced in the recent past, pertain to the emergence of new technologies and the profile of constant technological upgradation. These new technologies are essentially in four or five major areas, namely micro-electronics, information technology, bio-technology, photovoltaics and new materials. Each of these areas has been making rapid strides and has had significant impact on the patterns of comparative advantage across the globe. They have also significant impact on the structural characteristics of rural economy. In particular, it has now been well documented as to how biotechnological revolution has raised the new vista of challenges and opportunities for agriculture and also for agro-based and other rural activities.

A critical review of the experiences of green revolution is now bringing out that the struggle for improving productivity in Indian agriculture needs to be renewed with greater vigour and commitment by spreading the fruits of research to new regions and also to new crops, in particular, the millets and other dry crops. The fact that the efforts of productivity improvement have not been adequate, has been well documented in the recent literature on agriculture in India. The following observation in the study entitled: "The Second

India Revisited: Population, Poverty, and Environmental Stress over Two Decades" by Robert Repetto is worth noting:

"Despite the optimism generated in the 1960s by the success of high-yielding wheat and rice seed varieties, an extensive agricultural research effort in India has been unable to demonstrate continuing yield improvements over the 1970s and 1980s for major crops".

The speed and the range of the technological changes taking place in the rest of the world are such as to make the slow moving economies and sectors technologically obsolescent in no time. For example, the textile sector in the Indian economy, has not kept pace with the technological progress made in the other textile producing economies and as such has been fast losing its comparative advantage in the world market.

### **Standards Explosions**

Since the early part of the 1980's, the world community has become increasingly conscious of many global issues pertaining to the mankind as a whole. The growing concern for degradation of environment, the problem of pollution, global warming, sanitary and phyto sanitary features of the human and the animal living, have all added new dimensions to the debate on development and development paradigm. At the same time, consciousness of business and the consumer world for quality and standards has increased multifold. The concern for labour standards, child labour, human rights and social cause, and the drive for ISO 9000 etc. fall in this category of new awareness about the standards.

The Brundtland Commission Report on Sustainable Development (World Commission on Environment and Development 1987), Our Common Future (Oxford University,

Oxford), the United Nations Conference on Environment and Development (the Earth Summit, 1992, Rio de Janeiro, Brazil) etc. the ensuing intensive debate on Agenda 21 have all generated many new ideas and perceptions on this subject. The analysis of the nexus between international trade and environment has provided warning signals against the possible adverse effects of trade and investment flows on the environmental situation of a country. The relocation of pollutive industries from the more pollution-conscious developed countries to the less pollution-conscious developing countries that is now taking place under the garb of capital and technology transfer, is accentuating the problems in the latter economies by not only increasing pollution in them but also by adding to the capital costs of development and pollution management.

Studies have also shown that there is some sort of paradoxical relationship between poverty and pollution. It is argued that poverty is both the cause and the effect of environmental degradation and abetment of pollution. Deforestation and the indiscriminate exploitation of the common property resources by the poor has, it is argued, aggravated the contradictions inherent in the search for sustainable development with growth and equity. A recent study on the issues of shrinking common property resources makes the following interesting observation.

"For such reasons, common property resources that had once been managed more or less sustainably through local traditions and community authorities increasingly became open to unregulated exploitation by all. Inevitably, "open access" to these resources tended toward a situation akin to Garrett Hardins' famous "tragedy of commons", wherein no individual had reason to restrain his own use, knowing that

others were free to exploit the common resources without limit (Agarwal, B(1993). "Gender, Poverty, and Environmental Change in Rural India". Institute of Economic Growth, Delhi, Background Paper, Second India Reassessment Study).

How should the Indian rural economy respond to these emerging new challenges? In what follows, I would deal with only some select issues. Of course, I am aware, that these issues are not exhaustive in scope and content. But my purpose is only to highlight some issues which, I feel, deserve priority attention.

### **The Challenge of Productivity**

With the emerging scenario of open competition, the scope for special price support and subsidies for the inputs and the outputs of agricultural sector would be considerably reduced in the future. In this background, the role of productivity in influencing competitive strength of agriculture becomes very crucial and significant. Agriculture will have to gear itself to this new challenge by adopting the integrated approach to the task of productivity expansion. Available information of productivity comparison between India and other countries reveals very puzzling results. Even in regard to the green revolution crops of wheat and rice, productivity per hectare India is much lower than that in other countries. India produces 2420 KG per hectare of wheat whereas China produces 3318 KG per hectare. India's productivity in rice is 2817 KG/HA, which China produce 5869 Kg/HA, Indonesia - 4344 KG/HA. In regard to cereals total, India produces 2107 KG/HA while Indonesia produces 3863 KG/HA and China 4500 KG/HA. In pulses, soyabean and maize also, India's productivity of half or even less than half of the highest productivity in the world. The moot question therefore is: Can

rural India stand competition from the more productive producers in the world when the new trading regime comes into full operation?

With the full implementation of the Agreement on agriculture, it is expected that agricultural subsidies in Europe and USA would be reduced, and consequently international prices of agriculture would increase. It is expected that the efficient producers from the developing world would have many new opportunities of market access in the developed countries' markets. These opportunities, of course, imply intensive challenges. Essentially there are two types of challenges. One is concerned with productivity and the other concerned with scale of production. On both these counts, Indian agricultural sector is not yet fully geared. There is also a new dimension of the challenge caused by the concerns of environment and chemical residuals of the agricultural produce. The demand for organic agriculture has been increasing in a revolutionary manner. Thus, increase in productivity and size of production will have to be achieved in an environment-friendly organic framework.

Response to this challenge has not been taking place in a concerted manner. We should hasten to add that the approach of integrated intensive farming system (IIFS) launched and popularised by the eminent agricultural scientist Dr. M. S. Swaminathan through his institute - M. S. Swaminathan Research Foundation is a commendable initiative in this regard. IIFS eminently combines the new imperatives of efficient organic farming, environment friendliness, social justice and long term sustainability in one framework. The country needs such initiatives on a massive scale in different parts and in different agronomic conditions.

## **Sectoral Cluster**

Another approach for dealing with the challenge of competition is to evolve a framework of sectoral clusters in which competition and cooperation are effectively blended for optimum benefit. A sectoral cluster is a framework in which firms specialised in different stages of a production activity evolve both horizontal linkages and also vertical integration wherever feasible. Horizontal linkages imply sharing of the same activity for collective efficiency. Collective efficiency at each stage of production activity is expected to result in collective efficiency at the level of the totality of the activity. In a sectoral cluster, firms evolve a mechanism for obtaining easy access to knowledge and information which could improve their capability for design innovations and experimentation.

The concept of sectoral cluster differs from that of cooperatives in the sense that the latter pertains to the level of a product whereas the former encompasses different stages of the production activity and implies high sectoral and geographical concentration. There are many industrial clusters in both the developed and the developing economies. Foot-wear districts in Italy and Mexico and Cotton-knitwear industry cluster in Tirupur in Tamilnadu stand out as examples of successful sectoral clusters. It has been observed that these clusters consist of small and medium sized enterprises and they have the suitable mechanism for taking full advantage of the forward and the backward linkage effects within the cluster. The economic agents operating in them have often a common cultural and social background and have therefore the advantages of complementing each other in the framework of non-competitive relationships. There is always a network of public and private local institutions supporting these economic agents in their endeavour for achieving optimum

growth. The economic effects of the clusters include generation of external economies in a static and dynamic perspective. Proximity economies by reducing transaction costs thereby generating speedy information exchanges. Local innovative capabilities are also expanded through quick imitation processes and sharing of infrastructure and common service facilities. There is a special relationship in the labour market in terms of consistency and commitment of a competent labour force.

In short, the organisation of a sectoral cluster is a mix of cooperation and competition in which prices and quantities are defined and exchanged as well as information, codes, strategies, ideas and knowledge. The environment is one of non-competitive relationships among the big and the small firms with extensive use of the methods of out-contracting and in-contracting for optimum aggregative results. The authorities on the concept of sectoral clusters have advocated that this approach is the most appropriate one for developing countries. Pyke and Sengen Berger (Pyke, Frank and Werner Sengenberger (eds) *Industrial Districts and Local Economic Regeneration* (Geneva:ILO, International Institute for Labour Studies, 1992) term this approach as a "low road" to industrial expansion in which productivity increases overwhelmingly from pressure on labour rather than from labour-displacing technological advances.

This detailed account of the approach of sectoral cluster, with illustrations from the experiences of the cotton knitwear clusters of Tirupur is aimed at bringing home the point that in the midst of euphoria for competitive market and efficiency through competition, it is useful to remind ourselves that there are also some alternative approaches rather more relevant ones to the task of realising high growth and rapid

structural transformation. In fact, for the Indian rural economy, which is still not poised to face the cut throat competition from the superior economic agents from the rest of the world, it might be a useful proposition to consider the approach of industrial clusters as a modality for growth and structural changes with efficiency and social justice. In this task, once again, the State, both at the central and the state level, as also the academic and the business community will have to play a significant leadership role.

### **Seeds Controversy**

Seeds are obviously crucial inputs in the agricultural sector. From time immemorial, farmers have been handling the production and distribution of the seeds in their own traditional custom-bound framework. However, commercialisation of seeds since the emergence of hybrid varieties of seeds under the green revolution process and also as a result of extensive research in biotechnology have raised many critical issues in the field of seeds management. The recent rules of the world trading system under the Agreement on TRIPs, have further brought the seeds issue to the center stage of the debate on management of the agricultural sector. Green revolution and the recent spates of biotechnological research and have created a new class of entrepreneurs - even multinationals - in the form of plant breeders and seeds companies. The new rules of trade provide for "protection of plant varieties either by patents or by an effective *sui generis* system or any combination thereof". These provisions have been essentially aimed at protecting the interests of the plant breeders and the seed companies on the rationale that they would have spent huge resources on Research and Development. The *sui generis* System referred to under these rules, is supposed to be governed by the conventions and

the principles established under an international agreement on this subject, called UPOV. So far UPOV-78 has been in practice and the more recent UPOV-92 which is more rigid and restrictive on the issue of transfer of seeds among the farmers, is yet to be universally put into practice.

There are four important questions on the seeds issue. First is the question of standardisation of the seeds and the consequent near-extinction of many of the hardy drought-resistant varieties. Second is the question of transferability of seeds among the farmers as per the conventions and traditions practised since the beginning of agriculture. Thirdly, there is a growing concern that the cost of agriculture may increase significantly if the plant breeders and the seed companies create a monopoly or oligopolistic market for seeds. Finally, the recent upsurge of interest in reverting to the traditional practice of using organic seeds and adopting organic farming methods has raised a big question mark about the future of hybrid varieties, pesticides and chemical fertilisers.

Should plant varieties be patented? In my view, they should not be patented. Even if they are patented, the period of patent rights should be kept the shortest. Any innovation on seeds should be treated as a public good and like essential public utilities, research in this area should be subsidised and extensively supported both by the public sector and private sector. Fortunately, the Agreement on Agriculture under the WTO has exempted subsidy on Agricultural R&D from the purview of reduction commitments. This provision should be made full use of. Further, the current upsurge for standardisation of seeds should be systematically thwarted and the approach of Gene Banks and extensive research on drought prone hardy seed varieties should be encouraged to

retain and expand the bio-diversity base of the seeds market. Whatever be the form of the patent regime, the oligopolistic nature of the seeds market is bound to stay with us. The best way to safeguard the interests of the rural economy in this background, is to encourage establishment of more and more seeds cooperatives and local seeds companies so that the overbearing hold of the foreign multinationals on this crucial element of the agricultural sector is kept to the minimum.

Next is the question of organic farming. Our indigenous capability to revert to organic farming and use of bio-mass based fertilisers is unlimited. It would be in our national interest if a grand scheme is worked out to have a golden hand-shake with all chemical fertilisers and chemical pesticides companies. A high powered techno-economic body may be appointed to work out the modalities of bringing about this revolution in a peaceful manner by keeping the adverse effects of the transition process to the minimum.

### **Food Security and Public Distribution System**

I would just like to flag a few points in regard to the implications of the Agreement on Agriculture of the WTO on the National Food Security System in India. As part of the Food Security System, the Food Corporation of India has been engaged in the task of procuring food grains from different parts of the country, storing them in public sector store houses and distributing them through the network of the outlets of the well-knit public distribution system.

I have already narrated at the beginning of my address that Shri T.A. Pai was the first Chairman of the Food Corporation of India and he resigned from his position when he found that the system was not geared to function efficiently. His views seem to be fully vindicated now.

It is interesting to note that the Agreement on Agriculture stipulates that countries commit themselves to the gradual phasing out of the Aggregate Measure of Support (AMS) given to agriculture through their subsidies and price support policies. Export subsidies are totally prohibited. There are however some exemptions to the reduction commitment, - the criteria for which are very strictly laid down. The government service programmes such as "those which provide services or benefits to agriculture or the rural community" including support for research, pest and disease control, extension and advisory services, marketing and information services, infrastructural services, are exempted from reduction commitment provided they do not imply distortions in trade and production. However, it is stipulated that public stock holding for food security purposes should be made through purchases at current market prices and also that distribution should be made at the current domestic market prices. The volume and accumulation of such stocks are required to correspond to "pre-determined targets related solely to food security".

The above stipulation for food security almost strikes off the very basis of the public distribution system in India as it exists today. However, there is a brief foot-note to this clause which states that "the provision of food stuff at subsidised prices with the objective of meeting food requirements of urban and rural poor in developing countries on regular basis at reasonable prices shall be considered to be in conformity with the provisions.

My purpose in giving this detailed account of this part of the Agreement on agriculture is to bring home the point that the public distribution system in India and the functioning of the Food Corporation of India need to be radically

restructured to meet the requirements of the WTO Agreement. There is no evidence, as of now, as to whether the Governments at the Central and at the State level are seized of this problem in right earnestness. Conforming to these commitments raises many practical and analytical issues. How does one define the rural and the urban poor? Would the world body impose any international standards on the concept and measurement of poverty? Who would decide the volume and accumulation of food stocks which are just enough solely for food security?

How to evolve new modalities of distribution outlets to ensure that only the urban and the rural poor benefit from the system? What should be done to the surplus manpower engaged in the FCI and its Public Distribution System if the new mechanism requires lesser manpower? Would the redeployment of labour be possible without creating social tensions?

These and many other issues pose very serious challenges particularly because, as Shri T.A. Pai had pronounced way back in 1965, that "Food is Politics in India".

### **Ethos of Development**

I would now like to raise a fundamental issue underlying the different challenges of development faced by the rural India or for that matter by the Indian economy and all other developing economies. This is regarding the Cultural basis of Development which permeates that basic thinking on the contours of development and developmental strategies. This is often referred to, as Ethos of development. I am tempted to raise this point particularly because I am speaking at this tradition-bound Cultural Centre viz. Udupi, whose commanding God - Lord Krishna has given to the world, fundamentals of ethos for human welfare.

The ability of any economic society to face the challenges of development is determined by the ethos of development to which it is committed. The recent literature on the success stories of the East Asian Miracle has brought out that one of the basic factors for the achievement of high growth on a sustained manner is the cultural basis of the people of the economy. It is argued that Japanese Economic Ethos was influenced by Zen Buddhism and Confucianistic doctrines. Kim and Lunde reflecting on this subject observe that "rationalism and pragmatism are the sources of Confucianism which helped to establish the basic structure of political, social, and economic condition in Japan's (1981) (Kim, K.I. and H.I. Lunde (1982), *Quality Circles: Why they Work in Japan and How we can Make them Work in the United States*, in Lee, S.M. and G. Schwendiman (Eds.) *Management by Japanese Systems*, Praeger Publishers, pp. 460-477.

Confucianism is also credited with the ethos of orderliness under which respect for the elders and the seniors in any profession defines the basis of social behaviour. This ethos has enabled the Japanese economy to evolve a purposeful industrial culture characterised by the qualities of three C's: Commitment, Consistency, and Competence. Every individual, whatever be his field of functioning, is expected to be consistently competent and committed to his functions. This ethos built over a long period of time since the Meiji Era has given to Japan a very powerful human resource base.

We, in the contemporary Indian scene, seem to have added one more C to this list of C's viz Corruption, thereby practising consistency and competence in and commitment to corruption! The end-product of all this is bound to be two more C's viz confusion and collapse!

The great ability of the Japanese society to synthesize modernity and tradition, has been admired by many scholars on the subject. The report of a High Powered Expert Group set up by the then Japanese Prime Minister (late) Masayoshi Ohira in 1979 on the theme of Economic Reforms in the Cultural Age, has underscored the imperatives of retaining and strengthening the five basic principles of economic management in the age of cultural priorities. These five principles are: Respect of Humanity, Respect for Independence, Respect for Creativity, Respect for Regionality, and Respect of Internationality. The Japanese Economic Society has been moulded on these five cultural principles and adherence to them is believed to be the basic requirement for sustaining their economic dynamism.

Every country, for that matter every society, has its own ethos for development. In a recent study on Sustainable Development in Africa, the World Bank has argued that nations like trees grow from their roots. The super-structure of development has to be built on the roots to which the human society of that nation is linked. In other words, the contours of the different aspects of structural transformation will have to be defined and designed in such a way as to be consistent with the socio-cultural ethos of the people of a given economy. It is interesting to note that many concerns of the modern development process are very well dealt with if the processes are left to the practices and the modalities determined by traditions and faiths. Even though such an observation may appear to be paradoxical and inconsistent with the conception of modernisation, it is often true. In an interesting study by the World Resource Institute on "The Second India Revisited: Population, Poverty, and Environmental Stress over Two Decades" by Robert Repetto,

it is observed that "Common property resources that had once been managed more or less sustainably through local traditions and community authorities increasingly became open to unregulated exploitation by all" when commercialisation was introduced in an indiscriminate manner.

The classical Indian ethos considers all the basic ingredients of environment in the framework of divinity. The Mother Earth, the Water, the Fire, the Wind, and the Ether are all regarded as divine and no man has a right to pollute them and create disharmony among them by his thoughts and deeds. Environmental management had been accepted as one of the basic premises of human behaviour. There are many prescriptions in our classical literature which prohibit cutting trees, without at the same time planting atleast two trees for each tree that is cut. They also prohibit mankind from polluting the river waters and the river beds. Cooperation and concern for social welfare and the happiness for all, collective self reliance in regard to the sharing of thoughts, knowledge, and information are all eminently spelt out in our classical literature.

Examples: ईशावास्यमिदं सर्वं यत्किंच जगत्यां जगत् ।

तेन त्यक्तेन भुञ्जीथाः मा गृधः कस्यस्विद् धनम् ॥ (Isa)

सं जानामहै मनसा संचिकित्वा मा युष्महि ॥ (Atharva)

It is pertinent to note that the Indian classics recognised the importance of efficiency, social justice and high growth in a most fundamental framework. The classical ethos pronounced that efficiency of labour cannot be achieved merely by providing formal training but by inducting the right kind of motivation and work culture in the labour. It is only in the Indian classical literature that a distinction is made between rights and duties and a place of pre-eminence to the concept of duties by pronouncing an axiomatic thesis

that rights automatically follow the duties and not vice-versa. The modern struggle in search of efficiency has wrongly reversed the linkage between rights and duties and has placed the question of rights in the forefront and thereby totally marginalised the issue of duties in the whole debate. All around the world, we have many Human Rights Commissions for preserving and protecting the human rights, while we do have not even a single forum for asserting the crucial role of the duties. It is therefore high time that we explicitly incorporate the crucial status of duties from the premises of our classical ethos into the modern models and mechanisms aimed at improving efficiency. By the same token, the emphasis given on motivation in the classical Indian ethos deserves to be fully incorporated in the models of development.

Indian rural economy is characterised by its own ethos for development. Men, Women and Children are all engaged in economic activities without distinction of age and gender. Their life style is simple and it does not imply excessive exploitation of the common resources of the mankind. The approach of recycling of resources is evident in many of the activities of the rural people. The value system of the human resources is of high order. It is useful to encourage these characteristics of rural people and build upon them to provide to the people a modern outlook even in the traditional framework. For this purpose expansion of educational and health facilities deserves a priority attention.

Way back in the Seventh Century, Kautilya had underscored the importance of the Indian ethos in the context of management of the political economy of the nation-state. He provided a beautiful well integrated framework for achieving optimum welfare of the mankind as a whole. I am tempted

to quote Kautilya Artha Suthras which spell out his integrated framework in a precise manner:

सुखस्य मूलं धर्मः । धर्मस्य मूलं अर्थः । अर्थस्य मूलं राज्यम् । राज्यस्य मूलं  
इन्द्रियजयः । इन्द्रियजयस्य मूलं विनयः । विनयस्य मूलं वृद्धोपसेवा ।  
वृद्धोपसेवाया मूलं विज्ञानम् । विज्ञानेन आत्मानं विन्देत् ॥

The meaning of these Suthras runs as follows: Value system and value based human resources are essential inputs for realisation of maximum welfare. The right kind of value system should be inducted in the society through the process of capital formation and growth. Realisation of this kind of capital formation is possible only when there is a stable political system in which the leaders and the people at large are endowed with the qualities of self-restraint, modesty, respect for the superiors and a good sense of reasoning.

This kind of integrated framework of social welfare is indeed highly relevant for the present situation wherein many conflicting and powerful sources are trying to influence human behaviour. Rural economy in India which has still retained many of the traits of the classical wisdom in the individual and group behaviour of its people provides the best suited ground for launching a new paradigm of development which is firmly embedded in the roots of its people.

I strongly believe that any discussion on Indian ethos of development should not be wished away as something irrelevant to the discussion on the current issues of development and development paradigm or the challenges posed by the world trading system to the rural economy. Personally, I feel convinced that we have to analyse the problem of the challenges and the options open to the people for facing them in a framework which takes note of not only

the economic setting, but also the social and the cultural setting of the people. I am aware that much more work needs to be done to convert the various elements of the classical wisdom into practical guidelines relevant for our current complex economic life. But this is a task deserving priority attention and it is only through a proper blend of traditional and the modern that we can build a strong India embellished by maximum national pride.

### **Responses to Challenges: Summing Up**

In the previous paragraphs, I have tried to flag a few areas of challenge which emanate from the new world trading system. To sum-up, these are related to the challenge of competition, the challenge of information, the challenge of technology, and the challenge of standards. The institutional revamping that would be necessitated by the need for conforming to the requirements of WTO including the changes in the national law and the implementation machinery also constitutes yet another area of challenge. How should the rural economy prepare itself to meet these challenge?

In the previous pages I have dealt with only a select few approaches which I feel require priority attention. I feel that the challenge of market needs to be tackled by adopting productivity route and the approach of sectoral clusters in which competition and cooperation could co-exist. For improvement of overall efficiency of resources used in the rural economy, immediate steps need to be taken to provide education, to improve health facilities, to implement land reforms, in letter and spirit and also to initiate innovative social security schemes. These steps, as Amartya Sen and Jean Dre'ze (India: Economic Development and Social Opportunity, Oxford University Press, 1995) have argued,

would enable the rural population to improve their 'development capability' and take full advantage of the new social opportunities created by them.

In regard to the challenge of information, it is necessary to strengthen the infrastructure of access to information and also to improve capability of the rural economic agents to process the information and draw suitable inferences from it.

Regarding the challenges of technology, environment, and standards, the approach of Integrated Intensive Farming System should be launched on a comprehensive basis throughout the country. Research and development in biotechnology and in those areas of agriculture, which are still suffering from low productivity need to be encouraged. For responding to the challenge of patents and the seeds issue, indigenous seeds cooperatives should be established and steps should be taken to retain bio-diversity basis of the seeds economy. There is an urgent need for revamping the public distribution system to make it relevant only for the rural and the urban poor as prescribed in the Agreement on agriculture. This would necessitate radical restructuring of the Food Corporation of India by reducing its size and its national network of functional departments. I have also used this opportunity to raise a fundamental issue about ethos of development, since the Indian rural economy is endowed with a unique economic ethos and also since closer linkage of the rural economy with the rest of the world may imply some danger signals to the sustenance of this indigenous rural ethos. I have strongly advocated that efforts should be made to build the development paradigm and development strategies in close consonance with the value system and ethos which is cherished by the rural population as part of the philosophy of their life.

I am aware that I have traversed through quite diverse fields in the subject of my address. I am aware I have not touched many other crucial issues such as rural credit, role of banking and non-banking financial institutions, rural infrastructure which would also change their nature and form under the new economic order. Since the field is very vast, I had to be selective. I do hope that the issues and the questions which I have tried to flag would be considered as interesting and useful by the intellectuals and the policy makers.

Once again I would like to convey my gratitude to T.A. Pai Management Institute, in particular to Professor D. Nagabrahmam, Director of the Institute and to the members of the Governing Body of the Institute and also to my good friend and professional colleague, Dr. N.K. Thingalaya, Chairman and Managing Director of Syndicate Bank for giving me the opportunity of addressing this august audience. I am also grateful to all of you present here for giving me a patient hearing. I appeal to you to adopt Hamsa Ksheera Nyaya to sift milk and discard the water.

Thanking you all once again.

## References

- Bhalla, G.S. (Ed.), Economic Liberalization and Indian Agriculture. Institute for Studies in Industrial Development, 1994.
- Cawthorne, P.M., Of Networks and Markets: The Rise and Rise of South Indian Town, the Example of Tiruppur's Cotton Knitwear Industry. World Development, Vol. 23 No. 1, January 1995.
- Dre'ze, Jean, and Sen, Amartya, India Economic Development and Social Opportunity, Oxford University Press, 1995.
- Dubey, Muchkund, An Unequal Treaty- World Trading Order After GATT, New Age International Ltd. Publishers, 1996.
- Dunning, John H. and Mikotousui (Ed.), Structural Change, Economic Interdependence and World Development, Macmillan Press, 1987.
- Gandhi, M.K., Village Swaraj, Navajiva Publishing House, Ahmedabad, 1962.
- Grootaert, Christiaan and Kanbur, Ravi, Child Labour: An economic Perspective, International Labour Review, Vol. 134, No. 2 1995.
- Human Development Report 1995, UNDP, Oxford University Press, 1995.
- Islam, Rizwanul (Ed.), Strategies for Alleviating Poverty in Rural Asia, International Labour Organisation, 1985.
- Kamat, M.V., The Innovative Banker- T.A. Pai: His Life and Times T.A. Pai Memorial Committee, Manipal, 1983.
- Khan, Azizur Rahman and Lee, Eddy (ed), Poverty in Rural Asia, International Labour Organisation, Asian Employment Programme (ARTEP), Bangkok, (1983).
- Koshal, Manjulika and Koshal, Rajindar K., Gandhian and Japanese Labour Relations - Surprisingly Similar. The Indian Journal of Labour Economics, Vol. 36, No. 4, October-December 1993.
- Nagatomi, Yuichiro (Ed.) Masayoshi Ohira's Proposal - To Evolve the Global Society, Foundation for Advanced Information and Research, Japan, 1988.
- Our Global Neighbourhood, The Report of The Commission on Global Governance, Oxford University Press, 1995.
- Panchamukhi, V.R., Recent Developments in Trade Theory and Practice, Presidential Address delivered at the Platinum Jubilee Conference of the Indian Economic Association, 1994 -RIS Occasional Paper No. 44, 1994.

Repetto, Robert, The "Second India" Revisited: Population, Poverty, and Environmental Stress Over Two Decades. World Resources Institute, 1994.

Singh, Ajit, How East Asia Grew so Fast? Slow Progress Towards an Analytical Consensus, RIS Occasional Papers No. 46, 1995.

The Dynamics of Rural Poverty, Food and Agriculture Organisation of the United Nations, 1986.

UNCTAD Commodity Year Book, 1994, United Nations, Geneva.

UN World Summit for Social Development - Declaration and Programme of Action, 1995

**Career Profile**  
**and**  
**Some Select Achievements**  
**of**  
**Dr. V. R. PANCHAMUKI**

**Education:**

- Upto B.A. at Dharwad in Karnataka, 1956. Stood first class first in the University with record marks.
- M.A. in statistics from Bombay University, 1958. Stood first class first in the University and won Chancellor's gold medal.
- Ph.D. from Delhi School of Economics. Thesis was highly praised by reputed scholars.

**Employment/Assignment:**

- 1961-75 served on the faculty of the Post-Graduate Department of Economics and also that of Statistics, Bombay University - Teaching of development economics, trade, planning, and econometrics.
- 1968-69 served as Economic Affairs Officer at the United Nations Economic Commission for Asia and the Pacific, Bangkok.
- 1975-79 served Trade Development Authority as Chief of its Research Division and also as its Executive Director.
- 1977-78 was Member Secretary of the famous Alexander Committee on Import-Export Policies and Procedures (with Dr. P.C. Alexander, the present Governor of Maharashtra, the then Commerce Secretary as the Chairman. The recommendations of this Committee provided the basis for liberalisation and rationalisation of the import export policies).
- 1978 served as Economic Adviser in the Ministry of Finance. Attached to Dagli Committee on Controls and Subsidies.

- 1979-82 Professor of Economics at the Institute of Economic Growth, New Delhi. In-charge of the Indian Economic Service Training Programme.
- 1982 served as Industrial Development Officer in the United Nations Industrial Development Organisation, Vienna.
- 1982-84 Research Professor at the Centre for Policy Research, New Delhi.
- 1984-till date, - Director of the rank of secretary to the Government of India) Research and Information System for the Non-Aligned and Other Developing Countries, New Delhi.

**Other Major Distinctions:**

- 1986 Convenor of the World Economic Congress which was organised jointly by the International Economic Association and the Indian Economic Association. Edited one of the volumes of the Conference proceedings, jointly with Professor Jeffrey Williamson of M.I.T. (USA)
- Since 1988 Managing Trustee of the Indian Economic Association Trust for Research and Development with its Board of Trustees headed by Dr. Manmohan Singh, Hon'ble Finance Minister.
- 1988-89 Leader of the Indian Delegation to SAARC countries for working out studies on cooperation in Trade, Manufactures and Services.
- 1991 Chairman, SAARC Group of Coordinators of the Regional Study on Trade, Manufacture and Services.
- 1992 Visited China as a Member of the delegation for an intellectual dialogue with experts and policy-makers in China.
- 1992 Visited Chitose, Japan for delivering a Special Address at the Seminar on South-South Cooperation, organised by the UNCTAD.

- 1992 Visited Jakarta, Indonesia on the invitation of Government of Indonesia. Was a member of Working Group for the preparation of the background documents and the declaration of the Non-Aligned Summit.
- 1985-93 - Member of the Board of Directors of the Industrial Finance Corporation of India as a nominee of IDBI.
- 1993-94 - President of the Indian Economic Association.
- Was Member, Board of Directors, Risk Capital and Technology Finance Corporation Ltd. and also Indian Overseas Bank (Nominee of the Government of India).
- President SAARC Economic Association.
- Was a Member of the Governing Bodies of a number of important Institutes of Research, Foreign Trade and Labour Development.
- Has been Consultant to many inter-governmental bodies and United Nations Organisations, such as ESCAP, UNIDO, UNCTAD, APDC, ADB, etc. for specific research projects.
- Author of more than 10 books and more than 70 research articles in different Journals.
- Has been President of Cultural Organisations in Delhi.
- Was honoured by the Delhi Kannadigas as the *Shreshtha Dehali Kannadiga*, in 1990.