National Council of Applied Economic Research

Studies in Macro Economic Monitoring and Forecasting

National Council of Applied Economic Research has been engaged at the Macroeconomic Assessment and Forecasting of the Indian Economy for over 20 years now. Major work of the division falls in the two broader categories - Macro Economic Modelling and Industry Package.

In macro modelling related work the focus has been primarily on WTO related issues, gender and informal sector in CGE model framework. The other aspect of modelling exercise is to focus on medium term forecast of the Indian economy with help of macro econometric model. Recently a new area of research has been started which focuses on modelling state economies.

The uniqueness of Industry package is that the effort tracks the development of the economy through two important quarterly documents, namely, Quarterly Review of the Economy and Quarterly Business Expectations Survey.

Quarterly Review of the economy is a comprehensive document which reviews the various aspects of Indian economy, namely, agriculture, industry, external trade, government finances, price movement, money and capital markets. It also contains a short term forecast about the Indian economy. Although the forecast is done at the beginning of every financial year, a periodic review of the same is made every quarter to incorporate the newer developments and accordingly the forecast is updated.

Quarterly Business Expectations Survey is a document that tracks the business confidence of the Indian Companies. On the basis of the responses received from over six hundred companies, a composite index that is called Business Confidence Index is calculated. The variation in the Confidence Index is also tracked on the basis of sector, size and region of the companies.
Appendix ‘B’

Studies in Consumer Behaviour

The National Council has been conducting surveys of household expenditure behaviour (called MISH) annually since 1985-86. It is the largest consumer survey in terms of its spread and theoretical rigor addressing the issue of household sector consumption of manufactured products (over 60 durables as well as expendables). Following a multi-stage sample design for sample selection separately for urban and rural areas, the study covers over 300,000 households. It is also noteworthy that the study from its inception has followed a consistent methodology; the sample design, estimation procedures, etc. being same for each round.

The availability of data from the MISH surveys has played a very significant role in understanding the complexities of India’s consumer markets. Based on these surveys, NCAER has regularly provided macro-scenario of the consumer markets in India. Besides individual product reports from each round of MISH, the larger picture is portrayed through our biannual “India Market Demographics Report” and the series of NCAER White Books (1998, 2001, 2002).

The latest publication, “India Market Demographics Report 2002”, uses a cumulative time-series data culled-out from various rounds of MISH survey to study the Indian consumer markets and the spread of consumers in the country. It provides information not merely on market sizes, but goes much further. Keeping in view recent developments and information demand, this edition addresses a wide range of issues such as changes in income demographics, professional demographics, income, factors affecting market growth both for durable as well as expendable products (FMCGs), consumer finance and the overall market structure based on household well-being.

MISH has revealed that the income distribution is continually getting transformed. It is observed that during the post-reform periods the rates of growth in the upper-income categories were much high compared to the corresponding decline in the size of the low-income class. The spurt in the growth of the top-most income class after 1995-96 has been of the order of about 19 per cent. A negative growth among the urban low-income class was observed to be significant in the South and West India, followed by the North India. A decline of over 15 percentage points in the share of low-income households is found to have taken place in the states of Karnataka, Punjab, Haryana, Kerala and Tamil Nadu.

For the first time, income estimated from MISH is presented in the report. Notwithstanding its limitations, it has its uses. It is found that while an urban household on an average earned Rs. 1,02,928, its counterpart in the rural areas had an average income of Rs. 56,630 in 1999-2000. The per capita income (PCI) in rural India (Rs. 9,481) was almost half that of urban (Rs. 19,467). The relative PCI of urban to rural reveals that the states/union territories of Delhi, Haryana, Chandigarh and Punjab had the lowest levels of rural-urban income disparity. On the other hand, the disparity was most prominent in the case of Orissa, West Bengal, Meghalaya and Madhya Pradesh.

Many intrinsic aspects of the consumer markets in India have been addressed in detail in this edition. There are areas related to the services sector, especially the consumer finance that hold significance for the future market growth. NCAER promises to address such topics in the coming years.
Work Plan for Human Development Programme Area

The Human Development Programme Area has a comprehensive research programme in the area of human development. Research studies of the Area broadly link human development with issues of social and economic development. The programme area has core expertise to undertake research in areas such as evaluation of poverty and employment, sectoral studies in population and demographic transition, morbidity and health economics, economics of education, nutrition and child welfare, gender studies and conducting nationally representative sample surveys to aid our research. The programme area undertook Human Development Analysis as a part of Human Development indicator study, which was vast and comprehensive.

The aim of the programme area is to generate and sustain a process of domestic capacity building in human development, through a well-conceived study programme which will enable undertaking policy-driven research. The area plans to conduct a second round of the Human Development survey of 50,000 households in rural as well as urban areas. Three special modules will be prepared for the survey. First, to assess the impact of economic reforms on livelihoods. Second, assessing public subsidy transfers on households and third, household resource allocation for education and health with a focus on gender issues. The Human Development Programme is scheduled to begin in mid 2003 for a period of four years, which includes both collection of data and a new programme of studies in human development.

In the field of health, the programme area has recently completed a study, which looked at various aspects of infrastructure and workforce in the health sector across India. The study undertook a content analysis of policy documents, assessment of mismatch between demand and supply of health personnel, infrastructure and manpower etc. It also looked at the feasibility of public-private partnership in the health sector at various levels. We are also launching an all India socio-economic study of HIV/AIDS impact and a study of assessing the impact of indoor air pollution and water quality among women in rural areas.
Appendix ‘D’

Rural Household Panel Surveys

The last three decades have witnessed significant shocks that have affected the structure of the Indian economy. These include the Green revolution of the late 1960’s, the oil shock of the 1970’s, and liberalisation in the early 1990’s. Each has had an impact on both the rural and urban landscapes. N.C.A.E.R, in collaboration with the Harvard and Brown universities, instituted a process wherein; the welfare of a representative sample of households can be assessed. The project funded by the National Institute of Health uses a sample of 7000 households to model the impact of the various shocks on the Indian economy and trace the development process. The earliest round of surveys was conducted in 1968-69 under the auspices of ARIS (Additional Rural Income Survey) project. The later rounds were in 1981-82, and, 1999-2000. The last two rounds have been conducted for the REDS (Rural Economic and Demography Survey) project. Specifically, the project addresses a) technology adoption and its impact in the rural areas, b) impact of land reforms, c) the structure of poverty, d) demographic transition in the rural areas, and, e) the impact of generic economy wide macro economic reforms on the rural sector. The collaborators for this report will be Prof. Mark Rosenzweig and Prof. Andrew Foster.
Appendix ‘E’

MIMAP-INDIA
(Micro Impact of Macro and adjustment Policies in India)

1. The MIMAP-India project was first initiated in 1994 to study the impact of the ongoing economic reforms on household groups in India. The project is co-ordinated by National Council of Applied Economic Research (NCAER) in New Delhi, India.

2. In its first phase, the MIMAP-India project conducted a unique sample survey to examine the well-being of Indian households in the context of assessing the effects of economic change on vulnerable groups. It also started the process of modelling micro-macro linkages, and produced several papers as well as a report on the survey. A linear model and a macroeconometric model for Indian economy was built. The survey collected detailed information on income, expenditure and other social indicators from the same household, along with investment and employment data. It detailed a wealth of information that can provide a comprehensive base line from which future surveys may be launched to create a panel to measure the actual impact on households due to economic reforms.

3. The MIMAP-India team played an instrumental role in expanding the MIMAP programme to other South Asian countries, notably Pakistan, Nepal and Sri Lanka. This offers a good example of dissemination and promotion of the MIMAP initiative.

4. The project seeks to formalize the analysis of macro-micro linkages through a set of modelling exercises and to further validate and analyse the MIMAP data set in a series of focus studies. In the 2nd phase of MIMAP-India, a Social Accounting Matrix (SAM) for 1997-98 was constructed for the Indian economy. The SAM constituted 60 production sectors, two factors of production (Labour and capital), and six categories of occupational household groups, separately for rural and urban areas. Apart from this some focus studies were carried out on ‘Savings and Investment Behaviour’ and on Effectiveness of Employment’ using the MIMAP-Survey data. Besides, a manuscript on the Macro-econometric model with its linkage to Poverty was completed.

5. The MIMAP-CGE models are being used to analyze policy impacts on the welfare and poverty of households in two versions, one the Trade-CGE model and the other Human capital CGE model. Various simulations pertaining to both domestic and import tax policies have been carried out to study their effects on households groups.

6. Nationally, the MIMAP-India research has been disseminated through various workshops, articles, journals and discussion papers as an instrument to impact the public policy debates. It is noteworthy to mention that some MIMAP-India findings have been featured in leading newspapers such as The Financial Express, The Business Standard and The Times of India. In addition, the ongoing quarterly MIMAP-India Newsletter has become very popular among researchers, policy makers and advocacy groups. In addition, the team has been successful in routinely involving policy-makers and academic leaders at MIMAP’s workshops and advisory committee meetings. The dissemination of the MIMAP India research work is now made available to a wider audience through the MIMAP network website (www.mimap.org). The MIMAP-India
team recently started to upload materials in the Website.

7. In the 3rd phase of MIMAP one Report and two books are getting published to make the MIMAP research and data available to wider audience. These are

   a) A study of Well-being of Indian Households. This Report based on the MIMAP-Survey. This is getting published by Tata-Mc Graw Hill, New Delhi.
   b) Household Savings and Investment Behaviour in India. This is being published by EPW Research Foundation, Bombay.
   c) Social Accounting Matrices for India. The Manuscript is complete.

8. Results of the project have also been published/being published in various journals like Economic and Political Weekly, Applied Economics, Journal of Development Economics etc.

9. Now we have various models and unique data set from the 1st Survey. To measure the real change on the ground, we are planning to go for the 2nd Survey of the same households. We are in look out for resources to conduct this extremely valuable survey. Secondly, we will use the existing models to run simulations to get policy relevant conclusions. Simultaneously, we will keep on updating and revising the models.
Appendix ‘F’

Work Programme on the Informal Economy

Over the last six years, NCAER has developed a programme of work on the informal economy, motivated by a concern that the role of this dominant part of the Indian economy needed closer attention by economists and statisticians.

A large part of this research programme has been conducted as a collaboration with the Self Employed Women’s Association, Ahmedabad (a trade union of poor and self employed women workers). The Gujarat Institute of Development Research, Ahmedabad has also been a partner in some of the research.

A set of seven studies co-ordinated by NCAER and conducted by NCAER, SEWA, GIDR and other partners over the period 1997-2000 looked at the question of the contribution of the informal sector to the economy from different perspectives. The areas in which research was undertaken included:

GIDR:
- Informal sector in national economy and Gujarat state: an analysis of its growth dynamics and contribution to national income
- Urban Informal Sector in Gujarat: Ceramics
- Urban Informal Sector in Gujarat: size and income generation processes: a mixed enterprise-household survey

ISST (Institute of Social Studies Trust)
- Herbal Medicinal Plants (HMPs): An analysis

NCAER
- Macroeconomic analysis of the Indian informal sector within a social accounting matrix framework
- Informal sector in India: a study of household savings behaviour
- Health Insurance for Informal Sector Workers

These studies are under publication by Sage, New Delhi and will be available as an edited volume later this year.

These studies helped to establish the large size and importance of the informal economy, its contribution to income, employment and savings. Around 93% of total employment in India is informal, the contribution of the informal sector to the GDP is around 60%, and almost 60% of total household savings originate from informal households.

Subsequent work in the area at NCAER has examined the nature and characteristics of women’s work in the informal economy through sectoral studies, notably a study of women’s role in dairying in rural Punjab. A study has also been undertaken examining the extent to which sub-contracted home based work was expanding in an era of globalisation, and the associated impact on child labour. These studies have been based on micro data and field work, unlike the earlier NCAER studies that used a macro perspective.
On-going research is examining the likely and expected impact of trade liberalisation on the informal economy, using different methodologies. One prong of the research is an extension of the earlier modeling study based on a SAM structure. The other is based on case studies of the rice milling and garments sectors, in selected parts of the country. (This study is being done in partnership with Queen Elizabeth House, Oxford).

Further work, expected to start later this year, is in the area of social protection for informal workers.

This research programme on the informal economy has been supported by the Ford Foundation, New Delhi, the UNICEF Innocenti Research Centre and UNICEF Delhi, and by DFID, UK.

NCAER has participated in and contributed to the discussions of two international networks, the Delhi Group, an Expert Group on Informal Sector Statistics, and WIEGO (Women in Informal Employment Globalising and Organising) as a result of this programme of work, and has also actively contributed to policy discussions, notable those around the issue of social protection to home based workers.
Appendix ‘G’

Gender Research

Research on cutting-edge themes in development from a gender perspective is an important area of NCAER work. Through various gender-focussed projects, NCAER positions itself well in current gender and development knowledge generation, debates and policy making.

From the post-UN Decade for Women, policy makers in India started paying a more serious attention to the goal of women’s economic empowerment. This goal also revealed gaps in gender-based knowledge including sex-segregated statistics on human development indices. The Council’s work responded to this need and projects in Human Development programme area have not only been generating sex-segregated data in large-scale survey but there has also been an attempt to interpret secondary data to bring out gender differentiated impact of development policies and processes.

There also exists at the Council a good internal capacity to work on cutting-edge gender-focussed research on economic issues. This research is largely an outcrop of the second generation exploration on gender. These explorations go beyond collection of sex-segregated data. This work builds upon the work of feminist economics standpoint which is premised on the view that central assumptions made in mainstream economics are often biased, not merely against women, but against efforts to broaden economists’ ability to interpret economic reality meaningfully. This research, especially projects on sectoral impact of globalisation allows NCAER to engage critically and meaningfully in gender and development problems, issues and debates while allowing at the same time conceptual space to link the micro-context to the macro-context.

Research focus

Thematic areas in which gender issues have been explored at NCAER include education, health, demography, work participation, informal sector, and macroeconomic modeling.

Recently concluded/Ongoing Research Projects with special focus on gender

1. Informal sector studies (including consolidation of research programme on ‘Contribution of the Informal Sector to the Economy’)
2. Gender and social analysis of dairy sector in Punjab
3. Gendered labour process and garment industry in the times of restructuring
4. Women and children in home based work in selected sectors
5. Gender Differentiated Impact of Free Trade

Gender Links

NCAER researchers have forged meaningful links with other national and international gender and development organisations and networks, including Women in Informal Employment Globalising and Organising (WIEGO), Self Employed Women’s Association (SEWA), Gender and Trade Network (GTN), International Centre for Research on Women (ICRW), International Association For Feminist Economics (IAFFE) and McGill Centre for Research and Training on Women (MCRTW).
Infrastructure Sectors

NCAER activities relating to Infrastructure sectors are handled in the Centre for Infrastructure and Regulation. They can be grouped into three categories.

On-going Activities

The current on-going activities of the Centre are:
- The Infrastructure Database (for intended use in in-house research and for use of networking organisations)
- System Infrastructure Study (focussing on linkages between stock of infrastructure and economic growth – a case study of Chhattisgarh state)
- Sector Report on Power (Compilation of papers on the theme of a competitive market structure in India’s reformed power sector), and
- Rural Infrastructure Report (compilation of data on rural infrastructure and policy recommendations – report to be finalised and disseminated through seminars/ conferences).

We expect to put the database on the NCAER web-site by June ’03. Other activities are scheduled for completion by end of the year.

Planned new work for year 2003

This includes two important conferences focusing on policy and implementation:
- International Round Table on Telecom sector structure and competition, planned for end August,
- Conference /Seminar on evaluating State level reforms in power sector in the enabling context of new Central electricity legislation (date to be decided)

A National Consultant has been engaged to research and write a comprehensive review report on India’s telecom sector that will also look at technology and convergence-related issues.

We also plan to access international expertise to undertake ‘benchmarking’ of performance standards in key infrastructure sectors. This will be backed by a selective programme of field studies, principally in the electricity, telecommunication and road transport sectors.

Outside Consulting

We are currently carrying out paid consulting work in three areas, two of them interfacing infrastructure policy and implementation:
- Rural telephony (Universal Service Obligations)
- Urban mass transport (fare structure for the proposed Bangalore Metro) and
- Highway tolling concessions (for the National Highway Authority of India)

The Centre has the capacity to take up similar work in other infrastructure areas as well.
Agricultural and Rural Development Programme Area
Key Developments and Vision for the Future

After the onset of economic reforms, studies related to reforms and trade liberalisation in the agricultural sector both domestic as well as international, have driven the research work and activities of the programme area. Studies related to export competitiveness of agricultural commodities, changes in cropping patterns and resource use efficiency and more recently WTO Agreement on Agriculture, market intervention operations and price stabilisation mechanisms have tried to address quite a few issues related to these aspects. Changes in agricultural policies after the reforms have already initiated several measures to deal with the concerns raised in these studies. However, more progress is needed particularly in areas related to pricing of inputs as well as output, marketing, distribution, processing, rural infrastructure, credit, investments and social protection to deal with the process of globalisation.

Future policy agenda in Indian agriculture will have to address these issues in a more holistic manner to increase the rate of growth of the agricultural sector. A significant and sustained improvement in the rate of growth in this sector can only eradicate poverty and put the economy on a higher growth path. In a country, where about 72 per cent of the population lives in rural areas (2001 census), the importance of rural incomes and rural demand in influencing the growth of industrial goods and services hardly needs any emphasis. This is more so in a situation in which majority of the producers of goods and services depend heavily on domestic demand.

As further liberalisation occurs, there would be re-allocation of resources, which will have significant implications for the producers as well as consumers. The potential benefits to India from these developments could be large, provided required investments (both public as well as private) are forthcoming and pro active steps are taken to protect groups that will be adversely affected in the short run by the resource allocation to follow.

Some of these issues are being addressed in the current studies that the programme area has undertaken but a lot more remains to be done. Keeping the above in view, it is clear that to form a comprehensive reform programme encompassing pricing of inputs and outputs, marketing, distribution, processing, rural infrastructure, credit, investments and mechanism to deal with the process of globalisation, serious research efforts are needed. Wider dissemination of these ideas generated through research is equally important to formulate public opinion and bring about required changes in policies. Therefore, our programme area plans to focus on these issues in which we have developed expertise over the years. Obviously it is not possible to nurture this expertise and achieve this entirely through the sponsored research, which has its own limitations. Hence, earnest efforts should be made to get either endowment grants or fairly long-term committed research grants to be truly independent and carry out independent research.
Appendix ‘J’

Trade Related Work Programme

1. Title: Canada-India Trade and Competitiveness Analysis

Objectives: The project aimed at a better understanding of Canada’s merchandise trade pattern with India with the following three specific objectives. First, to provide an in-depth and long-term analysis of trends in Canada-India merchandise trade. Second, to provide analysis of various factors (e.g. transhipment, mis-invoicing) that could lead to a continuous mis-representation of the size and nature of the Canada-India merchandise trading relationship. Finally, to provide an analysis of Canadian "revealed comparative advantages" in the Indian tradable goods market. The study is a joint study between the NCAER and the APFC. NCAER's contribution to the project is focussed on the second part of the project while the APFC concentrated on the first and second sections.

2. Title: Model Based Studies of Agriculture and Textiles

Objectives: The studies aim at providing an in-depth analysis of the automobile, agriculture and textiles sectors with a view to providing advice on improving the performance and increasing the competitiveness of the sectors. The project objective are: first, to provide an analysis of the trends in production, consumption, exports, investments and employment in the sectors along with projections of demand and supply. Second, to provide an analysis of the level and impact of regulatory factors especially since the onset of the economic reform programme of 1991.

3. Title: Sector Study on Automobiles

Objectives: The studies aim at providing an in-depth analysis of the automobile, agriculture and textiles sectors with a view to providing advice on improving the performance and increasing the competitiveness of the sectors. The project objective are: first, to provide an analysis of the trends in production, consumption, exports, investments and employment in the sectors along with projections of demand and supply. Second, to provide an analysis of the level and impact of regulatory factors especially since the onset of the economic reform programme of 1991.

4. Title: India –Singapore Free Trade Agreement

Objectives: It is only recently that India and Singapore have been thinking about having some type of economic co-operation agreement. The lacklustre Singapore’s overall exports performance to India compared with India’s illustrious export performance to Singapore is eminently clear during the period 1999-2002. The bilateral trade statistics between India and Singapore clearly indicate an urgent need by Singapore for India to reduce its import tariffs. This more so since India’s tariff barriers are still quite high compared to Singapore’s barriers, which are close to zero. Obvious question then is whether India should go ahead with the formation of FTA with Singapore. We make a modest attempt to answer this question in this paper. We use CGE modelling technique to evaluate the impact of India entering into a free trade agreement for trade in goods with Singapore.
5. Title: Movement of Natural Persons in Health Services

Objectives: Mobility of labour under the General Agreement on Trade in Services (GATS) is a complex and not yet completely clarified issue. The study first examines whether the GATS framework can accommodate health services and in particular the temporary movement of health workers. It concludes that although GATS could play an important role in further liberalising trade in health services and facilitate the temporary movement of health personnel, the existing framework is hardly used. Our analysis of possible reasons shows that the lack of flexible solutions under GATS together with the MFN requirement seems to be a major element. Evidence suggests that Member countries tend to show regional preferences for specific services. This tendency is further strengthened by fears that labour mobility under GATS could serve as a tool to establish permanent residence and thus conflict with existing immigration policies. From this point of view, existing immigration rules allow for more flexibility by granting ample room for discretion. This flexibility contrasts with the need for transparency and predictability, which is required by GATS. We suggest that the introduction of a GATS visa should be further examined in this context.

6. Title: Andhra Pradesh Export Study

Objectives: The study has the following four objectives:

- To estimate the size of AP’s inter state commerce. Identify few select commodities (goods and services) that are exported to other states in India, their magnitudes, sources, destinations and future growth prospects.
- Estimate the size of AP’s international trade. Identify few select export commodities (goods and services), their magnitudes, sources, destinations and future growth prospects.
- Identify factors (e.g. infrastructural, regulatory, cost and availability of credit / finance, labour laws, taxes, bribe and harassment, insurance, access to relevant information to name few) that are constraining AP’s trade with rest of India and rest of the world.
- Recommend specific and implementable policy actions that the government of AP can undertake to leverage more trade with other Indian States and the rest of the world to achieve its vision 2020 growth targets.

7. Title: Trade in Health Services

Objectives: The proposed project will assess the benefits and costs of trade in health services. A central objective is to examine how the gains from trade can be realised without undermining the pursuit of objectives such as equitable access. For an expansion in trade to be possible, two conditions need to be fulfilled: an elimination of barriers in foreign markets and the development of capacity within developing countries to provide services of an acceptable quality, possibly through greater foreign investment. Secondly, measures need to be taken to ensure that increased opportunities to trade do not have a negative distributional impact.
Trade in Agriculture

Among other developments, one of the important changes that will have a considerable impact on the agricultural sector in the developing countries is the WTO Agreement on Agriculture (AOA). There has been very little change due to the AOA so far in many countries of the world because there was little required of them in terms domestic support and export subsidies. Further, imports of agricultural commodities continue to attract high import duties. The situation is, however, likely to undergo a significant change in the future as barriers to imports come down. These changes will have important implications for Indian economy given the large size of agricultural sector in the country in terms of output as well as employment. In particular, these changes will expose the resource poor farmers, agricultural labourers, and other excluded sections of the rural areas, to various kinds of risks that are associated with globalisation. It is important, therefore, to understand the implications of trade liberalisation and put in place mechanisms to minimise the short-run adverse effects. This is important both for the successful realisation of the benefits of liberalisation as well as minimise the adverse effects on vulnerable sections of the society. Some of these issues related to the AOA are being dealt with in the current studies that that the programme area has undertaken, mainly sponsored by the ministry of commerce but a lot of work remains to be done.