

ANURUR



1988 - 89

DEPARTMENT OF ECONOMICS
STELLA MARIS COLLEGE

MADRAS - 600 086

For Private Circulation Only

CONTENTS

LIST OF ARTICLES

Editorial

2. The Unacknowledged Farmers — Asha. M. Alexander, II M.A. Economics 3
3. The Role of women in India — Meenakshi Charuseela II M.A. 6
4. Education In India — Shivani Joshi & Suma Joseph, I B. A 9
5. New Education Policy — B. P. Ramani, I M. A 11
6. Manpower Training and Development
— Patricia. v I B. A. 14
7. Electronics In India — Srividya. D & Supriya Rao, I B.A 17
8. Research & Development in our Civilisation
— Shoba Eapen I M. A. 21
- Jumbled words — Rohini Ramesh I B.A. 25
9. Chevalier Maurice : The 1988 Nobel Laureate
— Saioni Dayal II B.A. 26
10. Third Worldism — Aruna III B. A. 28
11. Input Output model — Nandini S. V. & Sripriya S. M. PHIL 31
12. A Class project — Jayanthi III B.A. 33
13. The Privatisation phenomenon Its Relevance to India.
— Shobha K.R. III B.A. 35
14. BOOK REVIEW — Susan Alexander II B A. 37
15. QUIZ — Thresia T Kuriakose I B A. 38
16. CROSS WORD and CARTOON — Rohini Ramesh I B.A. 40

EDITORIAL

The Editors have great pleasure in presenting to you, ANKUR, the Magazine of the DEPARTMENT OF ECONOMICS, Stella Maris College, Madras.

More and more countries of the world, developed, developing or under developed are becoming increasingly concerned about the development of human resources. In keeping with this growing emphasis on HRD, this year's Ankur has Human Resource Development as its central theme. We bring you thought provoking articles on various aspects and issues in HRD by students from various classes.

India's preoccupation with physical capital and the neglect of the human factors is one of the causes for the slow growth and stagnation of the economy. This issue features articles attempting to examine and analyse the state of India's economy.

Leading educationists recommend the Heuristic method of teaching or learning by doing. The project method has thus gained in popularity as a method of imparting education. We have included here, a brief report on a project carried out by III year Students and another report by two of our research students who were actively associated with the drawing up of an Input-Output table for Tamil Nadu.

In addition, there are cartoons, a word jumble, a quiz and a crossword puzzle.

We do hope you will enjoy perusing this magazine and continue to extend your support to Ankur.

EDITORS

Mrs. LAKSHMI

Miss. ASIA

THE UNACKNOWLEDGED FARMERS

(Women And Agriculture)

Who grows the world's food? A simple question such as this would probably bring forth a simple answer the farmers and the agriculturists. And an equally simple and natural reaction that would follow, would be to associate the term 'Farmer' with men or males. It would perhaps occur to only a few that a farmer could also be a woman or female. In every economy, whether developed or developing, women contribute significantly to agricultural production, and they play a role which simply cannot be ignored. In today's dynamic world, women have exerted almost every field and have made themselves a force to reckon with.

The women who live in the world's rural areas are farmers in everything but name. Their labour produces half the world's food. The women, of course, have always known who weeds the sorghum, transplants the rice seedlings, picks the beans and tends the chickens. But it has taken a long time for the rest of the world to discover these facts. In Africa, for example, three quarters of agricultural work is done by women. They are half of the agricultural labour force in Asia. And even in Latin America and the Middle East (where men tend to deny that their mothers, wives, daughters, do any work outside the house) detailed questioning reveals that women are doing a substantial amount of the farming there too,

However, there has always been a tendency to greatly under estimate women's

agricultural work. In Peru, for instance, the 1972 census indicated only 2.6% of women working in agriculture. A local survey in one area corrected that figure to 16%. In Egypt too, the 1970 census discovered only 3.6% of women doing agricultural work. But once again, local investigation revealed that in the South, half of the wives plough and level the land and between 35% and 40% are involved in planting, tilling and harvesting.

But, it is not only the fact that husbands are ashamed of their wives working, which means their farm-work is underestimated. As with their domestic work much of women's agricultural work tends to be overlooked because it is unpaid. In Malawi and Botswana, for example, over three-quarters of women work unpaid on the land. And there are far more women than men doing unpaid agricultural work in many countries. Even when unpaid work is taken into account, however, women's agricultural work-load still tends to be underestimated. This is largely because so much of it takes place away from the fields and the pastures. One study in Pakistan, for example, found that woman's invisible agricultural activity-like growing their vegetables beside the house, carrying lunch to the fields at mid-day, sorting through, cleaning and drying the crop, making bins to store it in, tending the livestock etc.,-took just as much as the 'Visible' ones, like weeding² and hoeing, usually counted as agricultural work.

It is not only in developing countries that women's farm-work is under estimated. The traditional European farmer's wife-who just bakes bread, churns butter, feeds a few hens, and clears up after her mud spattered men folk-may be just a benign myth. Surveys in Turkey and Spain found farmers, wives working up to seventy hours a week out on the farm itself.

It was not until the world Conference On Agrarian Reform and Rural Development in 1979, four years into the Decade For Women, that the international community began to realise the extent of women's contribution to agriculture. And this delay has been largely due to people gazing at the world's agriculture through the distorting prisms of men's and women's sex roles. Man, the breadwinner, is assumed, and expected, to be working in the fields. The woman, whose major roles are that of wife and mother, gets her agricultural work classed as domestic work. Even during the Decade For women agricultural training programmes for women had the tendency to help women farmers only with those skills that are associated with their domestic role. In Ghana, for example where women grow half the food, around a third of the cash crop like Cocoa, Sugar and Cotton and manage two-fifths of the coffee farms, over 70% of agricultural workers assigned to help women were only trained to teach about nutrition, and the preparation and storage of food. But at least these women were getting some preferential treatment. In Asia with the exception of China and Vietnam, a general pattern of development packages (including high-yielding varieties of rice and wheat, fertilisers, pesticides, irrigation and tractors) has been Super imposed on an existing picture of land scarcity and increasing landlessness. However,

these have not benefitted the small holdings which form the majority of the total holdings. The high-yielding seeds require more work (more weeding, more spraying, more planting and transplanting) and it is women who tend to be employed on the big farms to do these jobs. Though their average earnings are less than men's these increased job opportunities are some consolation. On the other hand, if the seeds are grown on her own family's land, the chances are that a woman will have to do all that extra work her-self-without pay.

Investing in women, has now been identified as an important feature of any nation or economy, because evidence points to the fact that, given the same kind of help encouragement and incentives as men, women are 'actually better farmers. On reflection, this should come as no surprise, they have the experience they work much closer to the soil than men, they see the crop through every stage of his development as opposed to just swooping in at ploughing and harvest time as men are prone to do, they see more directly-in the skin of their children in the grain in the cooking pot-the results of their labour on land. The key, says FAO (Food and Agricultural Organisation of the United Nations) is to ensure that women can acquire and hold on to independent access to land and loans. All women co-operative farms and rural credit schemes appear to the most promising way forward. And these have been tried with some success in countries such as Vietnam, Bangladesh and India. Yet when women are able to profit directly from their work in the fields they are not the only ones to benefit. Studies in Bangladesh, Nepal, the Phillipines and Swaziland have indicated that, when women do have time or money to spare, they use it to improve the health and well being of their children.

Briefly reviewing the Indian Scenario, we find that the total female population in the country is 321, 357 thousands of which 44,973 thousands from the female labour force. This means that only 13.99% of the total female population is recognised as participating in productive wage labour. However, the percentage of female to total labourers presents a higher figure of 20.21% Furthermore, about 78.4% of the total female working population is engaged in agriculture and allied activities. This is said to represent some 36 lakhs women. According to revised ILO estimates, some 47% of the total agricultural work-force in India is that of women-giving India the highest degree of female participation of agriculture in South Asia. More women in developing countries are slipping out of agricultural cultivation into agricultural labour. In India, for instance, while 55% of women agriculturists were cultivators in 1961, the figures had dropped to 33% in 1981.

An important characteristic of the female agricultural labour in India is that women get lower wages than men despite the Equal Remuneration Act, mainly because hired labour can be substituted by family labour. However prospects for Indian rural women do seem brighter because the government is implementing a number of development programmes specially for them, such as the Employment Guarantee Scheme (1981) National Rural Employment Programme (1979-80) and so on. Another area where current efforts will yield long term dividends for government is legislative reform. The strong need to enable women to independently hold land in their matrimonial rights is felt.

Women are equal partners with men in progress, and it is high time that the world, including women themselves, realized it.

Asha : M. Alexander
II M.A. Economics.

THE ROLE OF WOMEN IN INDIA

India, a nation of varied culture and tradition, a nation which worshipped and worships the woman as the Mother Goddess, has gone through a transformation. Culturally, women were given the first place and in our religious scriptures. i.e., the Vedas, mention have been made of vedic scholars who were women.

But over the centuries this viewing has changed and the most menacing threat facing women in India is that they would become practically second class citizens in every field.

Women are being ruthlessly exploited. The dowry deaths in India stand a silent witness to this fact. Do women have to suffer in silence? Do they have any rights of their own at all? Are they really liable to become second class citizens in their own 'Mother Land'?

The Indian Constitution tries to give equal footing for men and women. It does consider the fact that women have been ill treated in some cases and has tried to remedy this and bring about real equality. For this, special provisions favouring women have been allowed by the constitution. The improvement of the weaker sections of the society in the state also includes women.

The constitution also expects the state to prevent exploitation of women. Equality and special provision for women come under fundamental rights. The rest two are directive principles of the state.

Article 14 of the constitution provides that the State will not deny any person

equality before law and equal protection of laws within India.

Article 15 (1) of the constitution provides that the state shall not discriminate against citizens on grounds of religion, race, caste, sex or place of birth.

Article 16 (1) and 16 (2) prohibit discrimination in general and also discrimination because of sex, in offices and those employed under the State.

Article 15 (3) of the constitution requires the state to make special provision benefitting women.

Thus various articles of the constitution prevent exploitation of women and try to place them on equal basis with the men. With permission from courts, the women's organisations can also appeal to the court against an unsatisfactory judgement. There have been cases where the judgements have been changed. The equality rule (Non discrimination between men and women) applies even in the public sector and any law passed by the parliament or government rule discriminating between men and women is not valid if it conflicts with the fundamental rights. The Equal Remuneration Act of 1976, Section 4, provides that the women and men would be on the same set of pay scales.

If a married woman due to some reason is forced to leave the residence of her husband, who is employed by the state she can claim protection, from the state and by Article 21 of the constitution which protects life and personal liberty. When a

Hindu married woman dies, her property inherited from her husband or father-in-law goes to her husband's heirs (where there are no children). Under Section 15 (2) of Hindu succession Act.

When it comes to dividing a legacy of a house, a discrimination does arise. When a Hindu male or female dies, leaving both male and female heirs specified in class I of the schedule to the Hindu Succession Act and his or her property includes a dwelling house occupied by the members of the family, the family heirs cannot claim partition, unless the males choose to divide the house (Section 23, Hindu Succession Act). However, female heirs are entitled to reside in the dwelling house (Daughters are so entitled only if they are unmarried or separated from their husband

or widows.) The problem is that one male heir can nullify the desire of the female heirs. The Bombay High Court has held that where there is only one male heir, he cannot refuse partition. But Calcutta and Madras High Courts take a different view. Women have been always given a second rate treatment before the government reforms started coming up. The Hindu Succession Act helps a woman to inherit property. i.e, any property possessed by a female Hindu is held by her as 'full' owner and not as "limited" owner. This provision applies to movable and immovable property. The provision also applies to all property whatever the manner of acquisition by a female. The provision does not apply to property acquired (by a Hindu woman) by way of gift or under a will or the other instrument or under a decree or order of a civil court or under an award, where the gift instrument or award prescribes a restricted estate in such property.

Property of Female Hindu inherited from her father or mother passes on to her

son and daughters; in their absence to the woman's father and similarly property from her husband or father-in-law, in the absence of children, would go to the heirs of the woman's husband.

Women are often neglected by their husband or sons. These women have a right for maintenance. Under the law, the code of criminal procedure 1973, deals with the order of a judicial magistrate for maintenance of wife, children and parents who are willfully neglected by the husband, father or son. Section 125 confers a statutory right of maintenance to wife, children and parents and imposes a legal obligation on husband, father or sons. These rights are uncontrolled by the personal law of the party. This law helps the women and children to obtain immediate maintenance. Even when divorce is granted the court can make appropriate orders regarding the maintenance to be paid by one spouse to the other. If the husband does not pay the maintenance amount that he has to, the present law does not help the women but recommendations have been placed by the Law Commission of India regarding this. The maintenance amount has to be paid even when the Court case is in proceeding.

But, the Constitutional safeguards and legal rights alone are not enough to protect women and enhance their status in society. What is required is social change—a change in the attitude towards women and increased assistance so that women gain their rightful place in society.

Women form a large part (nearly half) of the population of India. Women also constitute a significant part of the labour force. The female labour force potential is one of the largest in India. Women in India are employed in some kind of work or the other. In the rural sector, a large

part of the agricultural work force consists of women.

In Politics, Administration, Business, Industries, Education, Science and technology and even in agriculture women workers and entrepreneurs are forming a growing percentage. Active encouragement to these women is provided from every direction. The constitution itself provides for discrimination favouring women. In the Universities women candidates are given preference. Special training centers to cater specifically for women are being opened like the police training center for women cadets of I P S near Avadi. Women entrepreneurs are being encouraged to set up their own small scale industries. The banks offer loans upto certain limits for women without any security. Easy terms of repayment are given. Equipment for women entrepreneurs

are provided sometimes by the government itself.

More study cells on women are being set up to help in the social and economic upliftment of women.

Women are also offered pay scales on par with the men. Acts protecting women and their rights are being enacted by the Government of India to prevent exploitation of women.

Thus a major source of human power is generated by the Women, specially in India. In keeping with the times and requirements Laws are also being adjusted to help them in their contribution to the development of the country.

Meenakshi Charusheela

II M.A. (Eco.)

EDUCATION IN INDIA

(Role of Education in HRD, the present state and remedies)

Human Resource Development (HRD) has been defined broadly as, "The process of increasing the knowledge, skills, and the capacities of all people in the society". It has economic, political and sociocultural connotations - development of human capital, qualities of citizenship and ability to lead rich full and useful lives. Almost all societal processes - demographic, educational and occupational are subsumed by it. Therefore HRD has as its components population, planning and planning the quality of living of the people in respect of health, housing, employment, income and education. This HRD is initiated for two purposes - to increase labour productivity and to increase social welfare.

The Seventh Five Year Plan document of India mentioned that the bulk of human resources in the country remains under utilized, if not unutilized. Even after nearly forty years of planned economic development, this is the case. According to the planning Commission 37% of the total population i.e., 280 million in 1985 remained below the poverty line. The causes for this state of affairs identified are poverty, ill-health unemployment and illiteracy of vast sectors of the population.

The ministry of HRD and its predecessors published many articles, one of the important ones being "Challenge of education-policy perspective". (Challenge). The challenge gives a gruesome picture of the educational situation in the country. It states that in spite of a high rate of

growth of educational systems and institutions, teachers and expenditure, the progress achieved in education even in quantitative terms has been very low. Educational progress of women, backward communities, scheduled castes and schedule tribes has lagged behind. The statistical details supporting these facts present an appalling dismal picture.

1. No primary schools in one fifth of the country.
2. 40% of the habitations which have primary schools have no pucca buildings or blackboards.
3. 60% have no drinking water facilities.
4. 35% of schools have only one teacher to teach three or more classes.
5. There are also many without teachers.
6. In terms of enrolment :
 - a) 60 of every 100 children enrolled in class I drop out before they reach class V
 - b) 77% drop out before they reach class VIII

"THE CHALLENGE" also catalogues the shortcomings in the higher stages of education - about the bias observed in favour of the rich and the urban based population, about the poor quality of teaching, indifferent learning, outmoded examination

system, corruption and lack of any meaningful link between education and employment. The challenge also highlights the economic constraints which arise from rural-urban disparities and skewed distribution of income.

REMEDIES.

The challenge has put forth the goals that the nation should place before itself in the matter of educational development.

1. Generation of new knowledge, evolution of principles, methodology and guideness for the application of knowledge and provision of knowledge and skills for solving problems of development.

2. Ensuring socio-economic well being, competence and creativity of the individuals.

3. Imparting of knowledge about concepts and facts relating to different

skills and for developing of skills in the area of languages and communication as also an interest in hobbies, games and sports.

4. Equipping pupils with competence.

5. Integrating the individual into the social system.

Moreover the Government can universalize education, remove illiteracy, bring about a qualitative improvement of schools and higher and technical studies and establish institutions of excellence.

Thus good education can be the most effective means for equalising opportunities and reducing disparities between human beings and bringing about the development of the human resources of the country.

Shivani Joshi
Suma Josheph
Ist B.A.

NEW EDUCATION POLICY

"The Challenge of Education"— A Policy Perspective tabled by the Union Minister Sri. K. C. Pant, was released on 20th August, 1985 to fulfil the election manifesto of the Prime Minister Sri. Rajiv Gandhi, wherein he promised that education will receive top priority for action in his Government. In the foreword, Sri. K. C. Pant clearly states that "this document is not meant to be a final statement of Policy. It aims to provide the basis for a nation-wide debate which would facilitate the formulation of a New Education Policy. (NEP)

The 117-Pages document makes it difficult to detect signals. The document throws up many ideas and proposals and provides adequate material for nation-wide debate and discussion. The document recognises that education has also been made the scape-goat for all the ills, shortcomings, wrongs and problems which are plaguing this country. Hence, the document repeatedly stresses that it will speedily introduce measures to reform the existing education pattern in order to make education more meaningful, scientific and action oriented. Radical changes in the examination system, new approaches to teaching, development of new curricula, enforcement of discipline and decentralisation of authority as well as official admission of the failure of present education system are the highlights of the document.

The following issues have been dealt with in the Paper :

(i) Universalisation of elementary education and the production of efficient

man-power to deal creatively with new technologies and needs.

(ii) It clearly notes that "education with all its ramifications cannot be altered materially unless the over-all socio-political system requires such alterations for its survival".

(iii) The document seeks to use education as an "instrument of social change" and strives to reduce the disparity between sexes and among social groups thro' effective education.

Drawbacks and Failures :

The document is very candid in many respects. It presents a dismal picture of what has been achieved in terms of literacy quality of schooling, quality of college education, vocationalisation, educational expenditure and universality of primary education. The document points out that the goal of universality of primary education is still a distant dream and the standards in the case of university education have woefully deteriorated. It admits that the syllabi of the present text books is irrelevant and lacks social relevance, thus preventing the students from acquiring insight and skill relevant to employment opportunities. The document also points out that the NSS., NCC etc., which were thought of as socially productive failed to deliver the goods may be because of the examination oriented approach of the educational curriculum.

Some of the Statistical Data, quoted here (Source : Document) presents us a

dismal but true picture of what we have achieved in the field of education.

In absolute terms there were more illiterates in 1981 (437 Mills) than there were at the time of Independence (300 Mills). "If things continue as they are, in the year 2000 AD there would be 500 Mill illiterates in India", the document says.

Although the number of students passing through the higher secondary stage has risen from 3.37 lakhs in 1960-61 to 8.4 lakhs in 1981-82, a large number of them lack the capacity to understand their physical, cultural or socio-economic environment.

The failure to fulfil the goal of universality of primary education is basically due to the high drop-out rate. Between standards 1 and 8 the drop-out rate is 75% and is much higher among girls, scheduled castes and scheduled tribes.

The document also points out that 40% of the elementary schools have no buildings, while 35% of them have just one teacher. 60% of the schools have no drinking water facilities and a vast 90% have no blackboards.

A striking feature of the document which merits appreciation is the ruthless dissection of past failures to draw useful lessons. Taking the 1968 education policy, it points out that if the policy had been implemented, 50% of the students at the 10 plus level of secondary education would have developed employment-oriented skills. By 1982-83 student intake in vocational courses had reached a paltry 60,000 per annum. "This is largely because neither the physical facilities nor a detailed plan of action is available at present".

On college and university education, the document says that conditions existing

in these institutions are a matter of concern. "Many of them are known for rampant casteism, regionalism and inbreeding. Some of these are virtual battlefields in which political and other factions often fight pitched battles for power and supremacy."

The document, however, lists poverty as the biggest obstacle as poverty and illiteracy are intimately related as the poor are unable to contribute to the development of education through resources or encouragement. Second to poverty, the document lists Finance-inadequate budgetary provisions, the fact that education has in the past received only the budgetary 'left overs'. In 1980-81 the total expenditure on education was a mere 3%. The document makes a strong case for larger allocations in the budget through the imposition of levies on imports, mobilisation of private resources and by evolving a strategy to mobilise resources from the industrial sector through tax concessions.

IDEAS AND PROPOSALS :

(i) In the new design, the capacity to learn will be more important than what is learnt and continuing education will be emphasised.

(ii) Since there is a positive correlation between literacy and acceptance of family planning, both elementary education and adult education would be assigned high priority.

(iii) Introducing new curricula at school level to include acquisition of skills.

(iv) De-Politicalisation of the academic and non academic staff in the Universities.

(v) The introduction of scholastic aptitude tests for entry into colleges and universities and delinking of degrees and jobs.

(vi) Vocationalisation to be linked to not only the employment needs of the industry but also to that of agriculture and service sector.

But how far are the above proposals feasible? The NFP seeks to achieve national integration, help us overcome "material social and spiritual problems of living", as well as reduce caste and communal fragmentation through education. But, we see these problems surfacing in educated areas like Bombay and Bangalore. Disturbingly too, values, heritage, culture and integration are expected to be promoted through education in school and colleges. But, one must remember that heritage, culture and national integration are double-edged swords. They may antagonise the students further and may result in unrest and upheavals.

Blaming the education system and the teachers for not imparting 'values' is totally unjustified. What values can the teachers impart to a child, in a few hours, if the child's family indulges in all sorts of notorious activities. Naturally, the child is more influenced by its own family than what the teacher says.

The document devotes considerable space highlighting how paucity of resources has seriously handicapped the implementation of education policies. But growing population, poverty and financial constraints are mere excuses. Among 125 countries listed by the World Bank only 26 countries had worse literacy rates than India. The Government considers 3% of the GNP as adequate investment on education. A war-ravaged country like Vietnam has 87% adult literacy rate while in India it is just 36%. The document also favours informal education, the usage of fancy satellites, TV and computers. But informal education is a passive medium. While under formal education, the student tries to impress the teacher as well as computer for

a better position in the class-room. Hence, one feels that informal education is just an unnecessary wastage of resources.

Another important feature is vocationalisation of courses, starting from class-6. Of course this has its own advantages but as Gandhiji pointed out "Literary Education" is of no value if it is not able to build up a sound character and this, one fears will not be achieved through vocational system which is mainly job-oriented.

Besides, all these the paper has not suggested any time limit within which it seeks to achieve its objectives. This may give rise to the practice of the re-laying of foundation stones once more. Unfortunately, the paper has not brought out the divisive tendencies which have crept into our present educational system where the misguided "sons of the soil" policy is playing havoc. While the Government has a great responsibility to educate citizens it cannot claim monopoly in this field. In a democratic society this fact should be recognised and catered to. The present approach of providing reservations is cutting at the root of the quality of education and this should be rectified. We must avoid waste, inefficiency and incompetence.

Individuals who have merit, ability and capacity should be encouraged to reach the highest levels in the area of Research and development so that they can contribute meaningfully for the advancement of the nation as a whole the paper has abstained from commenting on the reservations in educational institutions as well as the capitation fee controversy in medicine, engineering and the like.

Despite the fact that there have been several short-comings in the framing as well as implementation of educational policies and programmes in the past we have significant achievements to our credit. India to-day enjoys the third largest pool of scientific talent in the world, next only to America, and Russia. This feat has been achieved despite the many drawbacks we have discussed so far. In our anxiety for reform we should not give up what has stood the test of time and contributed in a large measure to the rapid advancement of our country as an industrial power since Independence.

B. P. Ramani

I M.A. Economics

MANPOWER TRAINING AND DEVELOPMENT

Human capital formation refers to the process of acquiring and increasing the number of persons who have the skills and education which are critical for the economic and political development of any country. Thus, human resource development is associated with investment in men and his growth as a creative and productive resource. It is a process of increasing knowledge, skills and capacities of the people.

The secret behind the rapid industrialisation of the American economy has their relative increase in outlays on education and training. Therefore, under developed countries like India, should also train their abundant human resources in technology, engineering, medicine, management and a host of other fields.

It is very clear now that an economy to grow needs trained personnel. Training is not only provided for doing the present jobs but also for acquiring the desirable extra skills or knowledge for filling higher jobs. Training's main aim is to induce a suitable change in the individual concerned.

For devising adequate training programmes for individuals, whether beginners or experienced, it is necessary to conduct an accurate analysis of the individual's aptitude and performance level. This must be compared with the requirements of the job, he is required to perform. Thus, the objective of training is to bridge the gap between existing performance ability and desired performance. The success

of training depends on the accuracy with which the organisational need has been identified and the training objective specified.

Approach to training: The basic approach to training must be positively economic in nature. Training programmes should be well planned and completely executed almost like a technology operation. A modern training scheme's basic approach should comprise the following:

(a) *Profit objective as a take off point:* Specific objective should be there to improve skill and motivation of supervision talents and operational skills aimed primarily at cost reduction.

(b) *Reinforcement capability of human working capital:* Should aim at proper return from cost of training in the short run, for e.g., deliver training in continuous industries.

(c) *Training as Capital Budgeting :-* To prepare major personnel replacement programmes in keeping with the long-term modernisation and expansion schemes. It is an investment programme or capital investment in human capital.

(d) *Technologically updated information:* It should be ensured that the training content is relevant, the methods of knowledge transfer are effective, and the quality and quantity of training programmes and their timeliness are adequate and efficient.

Any approach to training must start with identification of the training needs.

Such objectives must be clarified, which need not necessarily include directly the profit objective which might in the longrun improve the good will and probably increase the future profits. The objective of training must necessarily include increasing efficiency and productivity.

INDUCTION AND TRAINING PRACTICES IN INDIA

Long back in the 1970's a survey was conducted by Prof. N A. Rudrabasavaraj on five public sector enterprises and thirteen private section undertakings and the following were his findings :

It was found out that many public sector undertakings did not have any formula or systematic induction programme for the new employee. As against this, in the private sector, most of the companies had an induction programme for new employees aimed at informing and educating them in connection with the company, its products, policies etc. These were generally conducted by the personnel department at times with the help of the Supervisory personnel.

In case of training programmes in the public sector, according to this Survey, all the five public sector undertakings had training managers and instructors. Their main job was to design and conduct training programmes as required for the employees. A variety of programmes were conducted in terms of specific organisational needs and the peculiarities of the industry concerned. The public sector enterprises generally used their internal training facilities for training their non-supervisory staff. In case of steel employees and airlines undertaking, the survey disclosed that the employees were also encouraged to avail of external training facilities.

According to the same survey, most of the private sector enterprises "set great store and value on the training programmes" for systematically developing their employees' skills, attitudes, and knowledge. In these programmes, the personnel administrators and training specialists played an important role. In this survey, all the thirteen companies which conducted in-company programmes stressed that their training was based on their employees' needs which were determined through :

- 1) Supervisory recommendations;
- 2) analysis of job performance;
- 3) analysis of job requirements; and
- 4) employee suggestions.

The training and development practices of a few leading companies in India has been illustrated in brief :

1. *Training and development at Larsen and Toubro* : At L&T, a lot of emphasis is placed on the training and development of its personnel. It uses both in company as well as outside training programmes. For example, every first Monday of the month, there is an induction programme. It's objective is to familiarise the new employees with the organisation; provide information of the company's organisational structure; products manufactured etc.

In addition the company also has schemes under which trainees are recruited to fill the technical manpower needs at different levels. For them, training includes theoretical instruction on the job training, assignments and so on, for different periods.

Programmes are arranged for all the levels of personnel, being developed on the basis of identified training needs. Employees are invited to attend the in-company programmes or are deputed to

external programmes on the basis of their developmental needs identified from appraisal forms and through consultation with their superiors. Thus, training is an integral part of the management development efforts.

2. *Management development of Tata Iron and Steel Co. Ltd :-* At TISCO, integrated management programmes are organised based on the training needs and the facilities available at the Staff Training institute, Jamshedpur. The courses include :

- (a) A 4-tier management development courses;
- (b) functional and cross-functional courses;
- (c) orientation courses;
- (d) need-based seminars;
- (e) lectures meetings; and
- (f) evening programmes.

These are for the junior-level management. For senior-levels, programmes are conducted by professional bodies like HM, Calcutta; and the Institute of Personnel Management.

3. *Training Schemes at State Trading Corporation :* At STC, there is a two year management course for young recruits from universities at a high level of academic and general excellence. Also it

organised in-company programmes to update the STC's managers with latest techniques in functional and general management. For e.g. in last two years 2,000 managers have been put through in-company courses, 200 through outside courses, while 16 were sent abroad. In addition 20 persons were sponsored for studying a foreign language.

4. *Training Activities in TELCO:* In 1948, itself TELCO instituted training schemes for graduates, diploma holders and others both in theory and shop-floor. Again TELCO set up a training division copying the Apprentice School at the plant of Messers. Daimler-Benz, West-Germany. Here separate shops are set up which are equipped with expensive modern machine tool including sophisticated jig and borers to provide both practical and theoretical training.

The above examples makes it clear that Training is being accepted as one of the essentials for any economy to grow and develop. Training alone can increase human capital formation. But human resource development requires a long period of time as skill formation is a time consuming process.

Patricia V
I Year Economics

ELECTRONICS IN INDIA

Over the ages man has always had revolutionary ideas but it is only in recent times that he has been able to give shape to his dreams and make them a reality. From then on, it has been a continuous series of changes, processes and effort in search of the highest and loftiest, the product of supremacy and superiority. This gave rise to a diverse, new field—"ELECTRONICS", a field of vast and unlimited opportunities. It is the unmistakable indication of the birth of a new age—"THE ELECTRONIC AGE."

Development of Electronics in the World Today

Today, talk of the 21st century is incomplete without a reference to computers and robotics. Computers are now the busiest workers in any field—'It is not surprising to see a computer processing students'—university marks or even playing the star role in a science-fiction film. India herself, although a developing country has had her fair share of computers—be it computerising Railway Reservation system, spreading the Television, Radio and Telecommunication network to the remotest villages in India, encouraging the setting up of computerised bank, cash counter sale teller, even to the extent of obtaining super computers to determine the behaviour of monsoons.

Being a much exploited colony of Britain till the former half of the 20th

century, India did not have a chance to enjoy the benefit of an electronic Revolution while elsewhere in the world, country were rapidly developing, keeping the importance of the electronic sector well in view. Even after independence, none of the planners for planned development in India considered electronics, important enough to form an objective of any plan. So growth in India as regards electronic sector, keeping the other factors influencing development in mind, has even been negligible at times. It was only when the new government came into power in November 1984 under the prime ministership of Rajiv Gandhi that the idea of "21st century and Electronic age" came to be rooted. Suddenly electronics was the need of the hour. Electronics sector in India received a big boost with the policy of Rajiv Gandhi with his technical advisor Sam Pitroda (his project for Human Resource Development-Telecommunication).

Progress over the years

The progress of the various categories of the electronics sector in India has been amazing considering the various hindrances to its growth such as high rate of inflation, unemployment etc. The following table will substantiate and prove the considerable degree of growth in electronics.

I ANNUAL COMPOUNDED GROWTH RATE OF ELECTRONIC INDUSTRY—I

Period	Consumer Electronics	Professional Electronics	Electronic Components	Overall Output
1971—1976	22.87	22.78	14.78	18.84
1976—1981	19.49	12.73	16.68	15.86
1981—1983	15.22	32.73	15.30	26.05
1983—1986	56.92	28.30	30.40	36.51

II YEAR TO YEAR SECTORAL GROWTH IN THE ELECTRONIC INDUSTRY

Sectors	1984/83	1985/84	1986/85	1987/86
Consumer Electronics	77.9	75.5	23.9	42.7
Instrumentation and Industrial Electronics	33.4	20.6	30.0	30.5
Computers	17.9	68.5	80.6	33.9
Communication & Broadcasting	18.7	18.6	32.6	40.9
Aero Space & Defence	18.3	31.5	13.3	35.1
Electronic Components	31.7	35.3	24.4	37.3
Export Processing Zones (EPZ'S)	38.0	-17.9	69.4	-9.7
Total	38.9	40.7	30.1	36.4

SOURCE - DEPARTMENT OF ELECTRONICS - ANNUAL REPORT

From Table I it can be seen that in nearly all the sectors, there has been doubling of growth except in the professional sector due to importance given at present to the unemployment problem. This growth rate have been very encouraging to the electronic sector which in itself promote employment to millions.

From table II it can be seen that considering all sections, some have developed,

especially the computer and communication and broadcasting. The overall growth for the period of four years has been made considerably stable and efforts are being made to increase the growth rate higher level.

In 1971, Department of Electronics (DOE) started functioning and as a prelude to 1975-1980, plan certain significant conclusion had been reached. The DOE

Policy were as follows to increase the growth of this sector.

(a) Research and Development supplemented intensively in selected area.

(b) Mechanisms to be worked out for diverting some imports to Rupee payment Countries.

(c) Large part of investment and production indicated was to be in the public sector.

Since then significant production has been made in areas of consumer electronics, mass-communication, Tele-communication, Radar and Defence system etc.

This objective have begun to take concrete shape only now due to the great importance given to this sector by the present government (ever since 80's)

Effect on Human Resource Development

Electronics have revolutionised the mode of production, exchange and distribution—no doubt there is displacement of labour but in the long run, the displaced labour could be retrained to manage the growing electronic sector which could do, with brain power. Besides growth of national income is accelerated through export of the electronic ware and also reduction of cost in production through electronics.

Electronics helps in motivating (mobilising) Human Resource Development in another important way ie by educating the people and providing basic literacy level for the huge illiterate masses of a developing country like India. The uses to which computers are put to are astonishing especially in Navodaya schools all over the country where both visual, audio-visual aids are used in education techniques. The media now are used even for the benefit of election campaigners.

The peoples knowledge and standard of living can be increased through the communication field. This electronic sector also provides employment to millions in India.

Sam pitroda, the technical advisor of the prime minister of India has stressed that Human Resource Development could be brought about through the various fields of oilseeds etc and most importantly by telecommunication.

Electronics in the Future: Prospect for India

Earlier no doubt, too much of control and regulation, attempts at centralised purchase of technology, excessive protection to the public sector etc have all resulted in a serious set back to self reliance and building up of a vibrant enterprise.

The promotional role of the State Public sector has been singularly helpful in consultancy, product development etc, which should continue.

Research and Development support from DOE to industries should be specific and well identified into projects with gestation period of 1 to 3 years to reduce costs and develop soft ware.

The workshops should be established in remote and underdeveloped areas to increase the number of new small entrepreneurs. These should be encouraged by DOE and other educational and training institutions.

In order to boost the interests of the public in future in electronic market a viable and workable decentralised system should be evolved for the purpose of efficient installation, commissioning maintenance repair and utilisation. This will prevent National waste of capital in educational institutions, hospitals, R & D

laboratories where 1000's of millions of Rupees worth of electronic equipment is being invested every year, both indigenous and imported.

Vocational education and training must be clearly linked to the needs of the electronic industry and consumers. Mutual sponsoring of projects between industry, R & D establishments and educational institutions should be encouraged.

It is hoped that the enthusiasm generated for electronics all round would marshal the captains in the government, industry, R & D institutions and the educational and training establishments towards directions pointed out above. This way the target of Rs. 100,000 million per annum projected for 1990 and growth thereafter can be achieved with a sound technological and entrepreneurial base.

Components of Electronics

There is no area which has not been touched by electronics in India. The Components for development of electronic sector today are characterised by :

i) High degree of sophisticated technology

- ii) Capacity for surplus generation
- iii) Encouraging large scale production and
- iv) Benefits of economies of scale.

India has a vast potential for entering into the international market for export of telecommunication system and services, especially in the field of computers, communication including office automation. In addition there are related activities such as Human Research Development, operation and maintenance of the networks, management services (Commercial, financial, telecom accounting etc) applicable to telecom services, research and development and training for which experts are required by many administrators.

To exploit the full potential of exports in telecommunications it is essential that India adopts a co-ordinated approach through various specialities by identifying a modal agency for export in electronics and telecommunications.

Srividya. B
Supriya Roa
I BA. Economics

RESEARCH AND DEVELOPMENT IN OUR CIVILISATION

Life is permeated, saturated and may be even surfeited with research. Historically research in our civilisation has been profoundly influenced by the early discoveries of fire, the wheel, compass, numbers and alphabets, paper and the printing process, development of metals, agriculture, the use of steam, electricity, atomic power and the penetration of outer space. Wars especially world wars affected research and development in our civilisation. Gunpowder, aircraft, radar, atomic energy and medicine developed over the years to marvels of intricate and effective mechanisms.

Research aims at using existing knowledge for solving problems and can be defined as a systematic and objective investigation of a subject or problem in order to discover relevant information on principles. It may be primarily fundamental or primarily applied. The information that is required for research is usually got from secondary information, respondents, natural experiments, controlled experiments and simulation. The research design specifies the methods and procedures for acquiring information needed to structure or solve problems. The scope of R & D is conditioned by the definition of R & D effort and the availability of data.

R & D can be measured directly in terms of the firm's objective. The general rule should be to match the precision of the project's objective to the size and potential importance of the project.

R & D may be either defensive, offensive, long term, short term or intermediate R & D. These objective may be attained by adopting an appropriate strategy, the various available strategies being a concentrated vs. diversified policy, technical vs. market oriented policy, defensive vs. offensive policy, external or internal oriented policy, a policy regarding the use of technology, fixed vs. responsive organisational policy and the open and closed policy.

R & D plays a crucial role in the modern economic growth experience of contemporary developed countries. Their high growth rates have been sustained by the interplay between mass applications of many new technology innovations based on rapid advancement in the stock of scientific knowledge. It can be regarded as an input in the aggregate national production function and calls for increasing govt. intervention and a centralised allocation of resources, including the provision of research grants to research and industrial institutions. Successful performance of R & D implies technology change, increased national growth, profits, productivity, maintenance of one's competitive position, long run survival, decreased costs of production, import substitution, export and thereby foreign exchange expansion.

Impact of R & D Industry

The department of industries place contracts for research which they consider

relevant to their objectives so as to make research industry-oriented rather than merely adopting foreign technology. Some of the modern and emergent technologies are electronics, computers, robotics, informatics, biotechnology and space-technology.

Bio-technology has significantly revolutionised many areas related to the chemicals, drugs, pesticides and fertiliser industry. It has also increased agricultural productivity, by developing better hybrid high yielding and pest-resistant seeds, higher yield of oilseeds and natural rubber thereby enabling the country to save large foreign exchange spent for their import. Appropriate biotechnology enables researchers to manipulate the genetic material of plants, microbes and animals, eg. Creation of vaccines, antibiotics etc but has not yet been widely applied to cultivated.

Space technology is a highly interdisciplinary field and involves quality and reliability as the determining factors besides sophisticated management capabilities. Space applications cover various fields such as communication, information, meteorology, navigation and remote sensing. With technological progress there are satellites that provide data including pictures for the weather forecasts, those that relay data collected by remote earth stations, weather balloons etc. Now there are even giant telescopes helping humans to look 14 billion years into the past to record the birth and death of stars. India launched into orbit her 1st remote sensing satellite this year becoming the 5th nation to do so and is the 2nd after U.S. to transmit standard time through the satellite there by improving efficiency in navigation, telecommunication, defence, earthquake warning systems, radio and television broadcasting.

In the textile industry, priority was given to cotton clothing which was identified to be best suited to serve man's needs. The new textile policy formulated after conducting wide research gives equal footing to the handloom and large scale textiles sector and fuller flexibility between use of cotton and man-made fibres.

Agriculture

As agriculture provides raw materials to most of the leading industries, research in this field is equally important. After 20 years the Green Revolution stands as a touchstone in international agricultural development. At a time when famine seemed imminent, new varieties of wheat and rice introduced to Asia and Latin America, along with fertilisers, pesticides and mechanised farm equipment that dramatically increased harvests. The agricultural strategy helped in transforming countries like India and Indonesia whose food prospects formerly seemed black, today hold grain reserves that provide insurance against famine and for exports.

Recently harvests have outpaced population growth not only since more land has been cultivated but also since researchers and extension agents encouraged cultivators to use more fertilisers, pesticides, irrigation, hybrid plant varieties and improved tools and equipment. Agricultural research that emphasises biological approaches to raising productivity can help poor farmers cope better with the risks imposed by erratic rainfall and less fertile soils. Conventional agricultural modernisation based on fossil fuels has recently gained considerable significance, although it may remain beyond the means of many Third World Countries.

Agricultural research been needlessly hindered for two decades by pejorative attitudes towards traditional farming. Recently due recognition has been given to the ecological and astronomical strengths of traditional practices that had helped farmers to maintain the lands fertility for centuries.

R & D and medicines

Govts. throughout the world have adopted the goal 'Health for all by the year 2000' and considerable progress has been made to achieve it. Financing even basic health services remains challenge in countries facing severe resource constraint. Private expenditure on curative health care in poorer countries indicate the willingness to pay for services, if investment promises results.

Medical research was conducted regarding production of drugs, industrial and occupational health, nutrition and drinking water. R & D is especially required in the fields of epidemiology of tropical and communicable diseases, development of new drugs, clinical trials and designing of suitable health care delivery systems. Of the total outlay on health, nutrition related R & D accounts only for 10% industry and occupational health for 14%, research on reproduction, drugs and devices or population control forms 6% of the total R & D outlay on health.

R & D on Housing & Employment :

R & D aims at meeting the basic need of shelter by way of low cost housing, though in reality not much importance was given to such research.

R & D on employment aims at not only creating jobs, but also to augment one's income, increase level of output, satisfy the demand for goods and services and curb inflationary pressures.

Marketing Research :

This is conducted by careful planning on a broad array of topics by a variety of types and sizes of organisations, such as companies, firms, govt. and non-profit institutions. Researching market potential before taking up projects is recently being given the importance it deserves.

R & D and self-reliance :

Self-reliance has been given high priority by R & D programmes. A number of technologies developed with self-reliance as an objective remain unutilised by the industry, probably due to the entrepreneur's reluctance to risk his capital in technology that has not proved to be successful. Some of the sectors on which R & D efforts for self-reliance are significant are electronics, instrumentation, fuel and power, chemical industries, mining and aeronautics.

Technological self-reliance requires selective import of foreign technology and its subsequent absorption, adoption & upgradation to suit domestic resources and conditions. Currently India's self-reliance in technology import is indicated by about 526 foreign collaborations approvals. The major initiatives to accelerate the pace of local generation of technology were (a) development of scientific and technology infrastructure. Several institutions training scientific and technology personnel were set up, which now produce about 1, 60,000 scientists and technologists per year. The various research councils were ICMR, ICAR, Council of scientific and industrial research, departments of atomic energy, space, electronics, science and technology, science and industrial research, environment, defence research and development organisation.

(b) Beginning with a modest Rs. 20 crores expenditure in the 1st 5 year plan

it has increased to an estimated Rs. 14, 278 million. (c) Incentives have been provided to In-House R & D units now about 924 in number and for utilisation of indigenous R & D.

Educational Research :

It can be classified as laboratory or field, curriculum, psychometric or sociometric research. Early educational progress was hampered mainly due to lack of statistical techniques and testing instruments and by the highly decentralised nature of the educational system and by the complexity of human nature. Most of the research conducted in education is faulty since studies in education contain flaws that automatically make them null and void from the standpoint of scientific truth and application. The U.G.C. and Bar Council of India are some of the organisations that determine standards of higher education.

The world's technological power has no doubt been very beneficial for the development of poor countries, though this development, may not be real, if population increases more rapidly than GNP growth. The brain drain is the most visible effect that vast concentration of science and technology in rich countries has on the poor countries, with scientists and technologists migrating to the richer countries due to higher remuneration benefits derived due to contact

with a wider community and ample infra-structural facilities etc. Thereby developing countries lose not only their scarce intellectual elite but also the costs of training and education incurred on them. Moreover considerable scientific and technological effort is devoted to the development of synthetic substitutes replacing natural materials on which developed countries depend for their export proceeds and also since scientific institutions have been given very low priority in poor developing countries and access to world science and technology is hampered severely.

The scope of technology transfer depends not only on the gap between the techniques existing in the country and also abroad but also on the ease with which economic forces can be re-directed and social attitudes changed. The experience of Japan shows how technology adoption can help in increasing the growth. Japan initially imitated Western technology, but later adopted a technology appropriate to its own economy. Others like Schumacher stressed the need for intermediate technology lying somewhere between the traditional and modern technology, since modern technology may not solve the problems of developing countries.

Shoba Eapen

1st Year M. A. Eco.

JUMBLE WORDS

1. UTPIN FFCOTINECTE
2. YEAHK TIAIOSUNT
3. LFAUNNOCIT ECNANIF
4. NOISCIDE LEDOM
5. GPA RYEDANLFOITA
6. SREAB NDA SLLUB
7. DGLO SDANADRT
8. YBRUDTEGA RUMBILEQIII
9. NIDATAULEVED
10. DINKEK

ANSWERS

1. INPUT COEFFICIENT
2. HAYEK SITUATION
3. FUNCTIONAL FINANCE
4. DECISION MODEL
5. DEFLATIONARY GAP
6. BEARS AND BULLS
7. GOLD STANDARD
8. BUDGETRY EQUILIBRIUM
9. DEVALUTION
10. KINKED

CHEVALIER MAURICE: The 1988 Noble Laureate

The winner of the 1988 Nobel Prize for Economic Science is a 'Chevalier' of the order del 'Economic Nationale and an 'Officer' of the Ligiond' Honour, Professor Maurice Allais. The Royal Swedish Academy of sciences awarded the 1988 Alfred Nobel Memorial Prize in economic science to Professor Allais of France for his pioneering contributions to the theory of markets and efficient utilisation of resources. He is the first French Economist to win the coveted award since it was established in 1968 by the Bank of Sweden.

He was educated at the Ecole Polytechnique of Paris and later moved to the Ecole Nationale des Mines at Paris. He obtained his doctorate in Engineering from the University of Paris in 1949. Since 1944 he has been Professor of Economic Analysis at the Ecole Nationale Supérieure des Mines to Paris and is also currently the director of research at the Center Nationale de la Recherche Scientific.

Professor Allais most important works were published in 1943 as 'Traite' decconomic Pure and in 1947 as 'Economic at interest. In these, he provided mathematical proofs that in an abstract model of a market in which goods are traded between households and firms, equilibrium prices are efficient that is, nobody can become better off without making somebody else worse off. He has also written on how to run public monopolies more efficiently and has figured prominently in debates on planning in France Since 1945.

In the tradition of Walras, Fisher and Pareto, Professor Allais theoretical contri-

butions are basic in four important areas of economics general equilibrium and optimum allocation of resources, capital and growth, money and business cycles, and risk choices. But, Allais, views on the relevance of the Walrasian general equilibrium model has changed in a marked fashion in recent years. Allais would now define a state of general equilibrium as a position in which no distributable surplus can be obtained and describes the whole motion of the system as governed by the search for such surpluses,

Professor Allais main contribution to the capital and growth theory are found in his 'Economic at Interest' of 1947. He was the discoverer of a 'golden rule' of economic growth that is, to get the right amount of investment to maximise consumption perhead, the rate of interest needs to equal the rate of population growth, (a rule normally credited to the 1987 Nobel Prize winner, Robert Solow). He also proved that in a stationary state, a zero rate of interest maximises real income. According to Allais, we cannot expect from an indefinite increase of available real capital an indefinite increase of real national income consumed per capita. And, also that there is an optimum amount of capital for which real income per capita is a maximum.

The contribution of Allais to the resatement of the quantity theory of Money is significant. Upto 1950, there was no serious attempt to derive a formulation of the demand for money which is operative. A new logistic formulation of the demand for money was developed in his paper,

'A Restatement of the quantity theory of money' published in 1966. His model had different foundations because it is supported by an alleged psychological law of the perception of time. The solutions of the integro differential equations describing the evolution of income are shown to have three different unit cycles depending upon initial conditions. It is then possible to explain logical stability of equilibrium, business cycles and hyper inflation states in the same model. He brought out the basic difference between psychological time and chronological time. The work is important not only for its treatment of the demand for money but also for its considerations of the problems in the formation of expectations.

Prof. Allais research concerns itself with the choice under risk and his approach is both theoretical and empirical. His argument is that in a surrounding of certainty a rational agent will prefer absolute safety. The result of his thinking was

the formulation of 'Allais Paradox' in 1952. Allais applied his theory of behaviour under uncertainty to a general equilibrium model. The Allais paradox concerns itself with theory of individual choice in the face of uncertainty. He has demonstrated this through an example where a competitive allocation of risks leads to an optimal allocation of resources and where such an allocation can be obtained as a competitive equilibrium with an appropriate redistribution of initial endowments.

The contributions of Allais to economics are not only original but also thought provoking with an insight into public decisions. Prof. Allais accurately predicted last years stock market crash. The Royal Swedish Academy of Sciences could not have found a better economist for the prestigious award than the frenchman Maurice Allais.

Saloni Dayal

II B.A.

THIRD WORLDISM

The free world needs slaves, blared the big black head line. Underneath, the blurb spelt out the theme: "the world in which we live is a huge extermination camp. 40,000 human beings die of hunger everyday. Millions of others live through an endless martyrdom. The well-being, wealth, and democracy of the rich peoples of the northern hemisphere are paid for by the exploitation, pillage and poverty of the proletarian peoples of the south."

Those headlines typify the arguments advanced by self-styled defenders of what is called the Third-world. This expression was coined in the 1950's to designate nations belonging to either the communist block or to the mainly democratic group of industrialised countries. The term also implied that these nations were the world's poorest and that development was their biggest problem.

"Third-worldism emerged in the 1960's as an ideology claiming to reveal the true causes of world poverty and to provide cures for it. During the past 20 years it has become the official doctrine of numerous international organisations, churches, much of the press and many political leaders. In the third world itself it is the basis of nearly all standard rhetoric.

According to the thesis of Third-worldism, some nations took off economically at the end of the 18th century not because of their own merits, but because they exploited the rest of the world's wealth, and labour. Exploitation first took the form of conquest and colonial

occupation. Then, even after the colonies gained independence, they remained under the rich nations economic and political thumb. The industrialised countries forced the less developed ones to gear their economies to the interests of the developed world, thus perpetuating their own underdevelopment. For example, claims this doctrine, a system of "unequal exchange" ensures that trade between rich and the poor countries always works to the detriment of the poor. The industrialised countries and particularly their multinational companies, manipulate the prices of raw materials, the third world's chief resources, to drive them down artificially. This results in virtual "pillage of the third world's natural resources" (a favourite catch phrase). In order to buy needed manufactured goods while prices of their exports are falling, the developing nations are forced into debt. Desperate to raise cash they produce ever more raw materials, flooding the markets and further lowering the prices. So the cycle continues. the richer countries growing richer and poorer ones poorer. According to third worldists, this cycle could be broken by throwing out the multinationals, abolishing capitalism and installing some form of socialism.

As an argument this seems logical and coherent. Better still, it's easy to turn into propaganda. Like all ideologies it lumps different problems together and explains everything in a way that eliminates any mental effort. Above all, Third worldism shrugs off the question of third government's own responsibility: a nothing

that goes wrong in their countries is blamed on the industrialised nations, no wonder many of these governments are ardent supporters of this theory. And naturally the communist countries do anything to promote this trial by-ideology in which the guilty parties invariably turn out to be capitalism and industrialism/imperialism.

Lets take these arguments one by one and see what they are worth. Was the development of today's rich countries first triggered by exploitation of their colonies? Although Britain's industrialised expansion paralleled the creation of its colonial empire, all other examples show that this was probably a coincidence. The two European countries beside Britain that had the largest and longest-lived colonial empires were Spain and Portugal. Yet both missed out on their industrial revolutions and are still less developed than the rest of the continent. France's colonial empire reached its peak around the end of the 19th century and went through a remarkable consolidation between the two wars. But throughout this period, French industry lagged seriously behind that of Germany, whose colonial empire was insignificant before 1914 and non-existent after 1918. Latin America shook off its colonial yoke only a few years after the United States, and its economic difficulties can hardly be attributed to a colonization that ended over 150 years ago. In short there is no way to establish a direct cause and effect link between colonial exploitation and present day lack of development.

"Pillage of third world's natural resources"—economic domination through the manipulation of material prices to create an "inequal exchange"—doesn't stand up to an examination of the facts any better than the colonization argument does. These questions are examined by United

Nations secretariat. Its report on the prices of raw materials relative to those of manufactured imports concluded that despite third world claims, there had been no long term "deterioration of the terms of trade for developing countries". From 1950 to the fourth quarter of 1973, average raw materials prices increased as much as the prices of manufactured good imported by the Third world. Two years later, Paul Samuelson, a nobel prize winning economist likewise refuted this agreement in an essay elegantly titled ; Illogic of the Neo-Marxian theory of Unequal exchange. Yet so persuasive is propaganda that the notions " Pillaging the third worlds natural resources," and "deterioration in the terms of trade" still prevails.

The Third worldist arguments are designed to spread the idea that capitalism is constantly and inevitably impoverishing the Third world, But the notion that the poor nations are all steadily growing poorer is manifestly untrue. In fact the term "Third world" itself is misleading, for it implies a uniform entity, whereas the ranking of its countries are constantly shifting. In 1969 a report by the Pearson Commission, an independent world bank sponsored study group, noted that for nearly a decade South Korea seemed doomed to permanent dependence on foreign aid with no possibility of achieving a high growth rate from its own resources, Indeed, not South Korea but all of Asia then seemed mired in the penury described by Swedish economist Gunnar Myrdal in his famous study. 'Asian drama' an inquiry into the poverty of nations'. Yet in september 1982, the financial journal of Euromony rated South Korea 4th out of the 85 countries examined in economic performance over the previous year. Nine developing countries in the Pacific zone and South east Asia figured among the top 20, but none of the industrial powers in the organisation for economic cooperation

and development except Japan rated 10th and Austria 19th. In Latin America too, the economic ranking has changed amazingly.

What causes these shifts? We cannot begin to understand the problems of the Third world unless we consider political factors. Third worldist ideologists would rather we didn't talk about how the developing nations are governed because the fact is that the countries in deepest trouble are those that have communist or socialist governments and from which multinationals have been barred for the past 10 or 20 years. Ethiopia, Angola, Mosambique and Madagascar all fell into this category and all are in catastrophic economic shape.

What Third worldism is saying is, essentially that the world problems could

be solved if capitalism were eliminated. But, as we have seen, all the under developed countries where state monopolies are dominant are more under developed now than they were before. Today's industrialised nations reached that state only by virtue of democracy, free enterprise and freedom of scientific research, with the technological progress it makes possible. Unless all these three factors are combined, no lasting economic take off is possible. The real solution to the problem of poverty in this world is not to blame or vilify the successful societies, but for the champions of third worldism to create the economic, political and cultural conditions for the success of those nations that have not yet joined them.

D. S. Aruna

III B. A. Economics.

INPUT OUTPUT MODEL

Input-output analysis is a technique which was invented by Prof. Wassily W Leontief in the year 1951. This technique deals with the type of problems one of which may be described in the following words :

“What should be the level of output of each industry with the existing technology so that the total output goal for consumer & industrial use of the product gets fully satisfied, or alternatively what level of output of each producing sector in an economy can bring about equilibrium for its product in the economy as a whole”.

Input output model provides a framework of inter-industry interdependence on the basis of which production decisions are taken. As the Government of Tamil Nadu did not possess one such model to serve as basis for its plans the Department of Economics University of Madras was entrusted with the task of preparing a model for the State.

Initially the table was constructed only for the organised and unorganised manufacturing sector. The source of data for the organised manufacturing sector were the census and non-census schedules of the ASI. Registered establishment having 50 or more workers with power & 100 or more workers without power & 20 or more workers without power come under non-census. The data source for the unorganised manufacturing sector were the CSO and the data available with the Department of Statistics, Tamil Nadu.

The input output cell was given access to ASI, census (1981-82) and non census

(1981-81 and 1982-82) schedules by the Department of statistics, Tamilnadu. All factories covered under ASI were considered into 25 groups and each group was given a 2 digit industry code which was further sub-classified and was given 3 digit industry codes.

All 3 digit industries were ranked in terms of their relative share in total output. Those industries which accounted for 1% or more of the total output were treated as sectors while the rest were considered keeping in view homogeneity of output. This procedure resulted in the classification of the manufacturing sector into 40 sectors.

For construction of commodity X industry input flows and commodity X industry output flows details relating to materials concerned and products and by-products were required. These were available in the ASI schedules in a disaggregated form. Each of the inputs used in an industry should be an output of some other industry. The industry from which each input is obtained has to be first identified. In other words, each input has to be mapped into a 3 digit industry code of which it is an output. Similarly products and by-products also had to be mapped because not all products will be output of the same industry. Common product nomenclature (CNP) to Agriculture, Mining and Manufacturing Sectors published by CSO Government of India, was referred to in assigning mapping codes. For ambiguous items technical experts were consulted and where necessary deviations were made from codes given in CNP.

Both under inputs and under products and by-products there were certain miscellaneous items such as other basic materials, other chemicals, other packaging materials and other outputs for which no mapping codes were available. Hence a new set of mapping codes were generated for them. Assigning mapping codes is not an exercise which can be done with total accuracy. However better results have been achieved within the available limited possibilities.

Input-Output transactions (commodity and industry) tables at purchasers prices for Census (1981-1982) and non-census (1981-1982) and 1982-83 sectors were constructed. Each column in the table gives the intermediate inputs consumed in a particular sector. These inputs for which new codes were assigned were placed below the transactions.

Since a sectorisation scheme for the service sector was not evolved those items were listed below the transactions table. Apart from being an accounting table the commodity X industry transactions matrices throw light on the structure of the industrial economy. The rows corresponding to fuel and chemicals were mostly filed up

indicating that both are Universal intermediary goods.

Commodity X industry output flows or the 'Make Matrix' was constructed, which provides row-wise information about the supply of each commodity group in terms of the industry of origin. The extent of diversification of each sector can be gleaned from the columns. By construction, diagonal entries give the value of principal products i.e. products of the same sector, while off-diagonal elements represent either by products or other products.

Further areas where possibilities for potential research work exists are building of an input-output model in the same format for the agriculture, mining and services sector, construction of a commodity X Commodity matrix, industry X industry matrix. These areas could be exploited by research scholars in the future years to come.

S. V. NANDINI
S. SRIPRIYA
M. Phil.

A CLASS PROJECT

A project regarding women's status was organised by the Economics Department the month of October 1988. The third year students participated in it. A questionnaire was prepared and a personal interview was conducted by 21 of our students with the women workers of TTK pharmaceutical. Their factory is located in Pallavaram. There are 90 women workers in the company TTK pharma is one of the leading pharmaceuticals companies and some of its important products are "Gripe Water" and "Tefroll" and "Ossopan".

We were to interview woman working in the table section, packing department and Gripe water section. Most of the women are involved in packing. We expected to meet an entirely different group of people and expected to have difficulties in communicating with them. But this was not the case. We found a group of enthusiastic women working there. Though they were all hesitating to come out of their shells in the beginning, they later understood the purpose of our visit and responded well. As this work does not require any special qualification employment is through recommendation only.

The surroundings were quite pleasant. We saw Adam Smith's theory of 'Division of labour' in practice. Each labourer was involved in only one activity. For example, one person has to make the box for the bottle, another would paste the label on the bottle, another would fill the bottle and another person seals the bottle while another packs it the final person packs all

the bottles in a carton. If we take up the process of sticking the label, the workers do the same thing the whole day. Due to specialisation they are able to stick labels on 1000's of bottles a day. As the job is very monotonous they talk about all matters as they work. This way they find the work easier and less monotonous. Their work load is quite high, still they do it efficiently.

As for the employers, they pay the workers quite well. A cup of coffee is given everyday. The company also gives soaps, towels, a pair of sandals etc. to the workers. The employees seem to very happy with the management. Thus they have a good relationship between the employers and the employer. Most of them are not aware of the factory act. They have full confidence in the trade union. The union works very effectively. When they are let down they fight for their rights boldly.

Many of the women working there have a very pathetic background Most of them could not study further as they had to work at an early age and support the family. They feel sorry that they could not study and so hope to educate their children very well. These women have to leave their houses at 7 a.m to reach the factory in time. Their work commences at 8 a.m. Most of them cook and do all the other house work and then leave for work. Most of them have an elderly person in the house to take care of their children. All the women feel that men should help the working women in their house work. They draw an income ranging from

Rs. 1500 - Rs. 2000. A major portion of their income goes towards the house maintenance. Very little or nothing is spent on entertainment. They do spend on clothes. They spend a lot to keep their children happy. When asked if they would quit their job if their husbands earned more they gave a negative answer. They strongly feel that women should not depend on others. They feel that all women should study well and earn. They are quite enterprising. After their retirement they have their own plans for business. Some of the women prefer to have their own business instead of working under someone else. Regarding wealth, they strongly believe in possessing a house. They also collect gold jewelry as assets. They feel this investment is wise because the value of gold is raising and when they need money they can pledge their jewels

and get money. They also save through chits. Some women themselves conduct these chits. They get good bonus and they use this bonus in a useful manner.

To conclude, we found the workers very active and hard working. We learnt a lot about the labour community, their problems and expectations. The women like being financially independent. The woman are treated quite well here. From this set up we could see that a good relationship between the management and staff is essential and it helps the firm to grow. We could also see that when women are left on their own, without any pressure or control, they do a marvellous job.

Jayanthi

III B.A. Economics

SOLUTION TO CROSSWORD

DOWN

1. Cycle
2. Octroi
3. Ilo
4. Collusive
5. Multiplier
6. Keynes
7. Nordhaus
8. Calculus
9. Labour
10. Dumping
11. Simon
12. Smith
13. Hicks
14. Debt
15. E. T

ACROSS

1. Economic
2. Loan
3. U.N.
4. Control
5. Oil
6. T. R.
7. B. O. P
8. Scale
9. Lira
10. Util
11. Labourer
12. H. R. D
13. Budu
14. R. B. I
15. Due
16. Net
17. Sting

THE PRIVATISATION PHENOMENON-RELEVANCE TO INDIA

The global wave of privatisation has been so overwhelming a process that it can be considered as another socio-economic revolution in the making. The concept of privatisation is being implemented in many industrially advanced countries and developing ones. Even the communist bloc countries are in the midst of different stages of opening up experiments based on the basic tenets of market economy. The scope for privatisation in India would include divestiture, denationalisation, any relaxation with respect to Industry Policy Resolution (IPR), closure or liquidation of State Owned Enterprise (SOE). Leasing an SOE to a private party of the transfer of management to the same, abandoning or postponing proposals to start new SOE's or to expand the existing ones and farming out to private contractors the function of supplying various goods needed by SOE, instead of these being produced departmentally.

In developing countries like India, privatisation programme is being pursued in order to achieve rapid economic growth. Certain loosening up of controls in the area of industrial licensing, liberalisation decisions relating to industries have been taken since Mr. Gandhi became the Prime Minister in 1985.

The most important reason for considering privatisation lies in unsatisfactory performance of SOE'S- The overall profitability of Indian SOE has increased in recent years as measured by net profit as

a percentage of capital employed 1984-84 .8%, 1985-86 2.7%, 1986-87 3.4%. But this is too small return on huge investment of Rs. 51,931 crores as an enh of March 1987 for 214 central public enterprises. Net profit after tax increased from 1983-84 240 cr. (201 SOE'S). But if the profit of 12 public sector petroleum companies are taken out, the rest non-oil SOE'S have recorded net loss of Rs. 208 cr, (195 SOE'S) in 1984-85, 1986-87 373 cr. (202 SOE'S). The losses of various other central and state undertakings should also be added.

As against this the private sector companies have been earning attractive profits. According to a survey of 541 large companies (paid up capital of Rs. 1 cr. each) conducted by RBI (1985-86) gross profits showed higher growth rate of 20.6% in 1985-86 when compared to 20.3% in 1984-85, whereas profits after tax and retained profits showed lower growth rate of 27.3% and 35.3% in 1985-86 compared to 30.4% and 41.3% in 1984-85. If Indian non-oil SOE'S would have earned half as much profit as those of non-government companies the pressure on the budget could have been much less.

The SOE'S of developing countries have been a big drawer of Government resources. According to Clausen former President of World Bank: "Governments in many developing countries over taxed themselves, especially when they get involved in direct management of industry . . . the consequent burden on budget and demand for credit

have been important causes of economic difficulties. With domestic and external resources currently as constrained, the pursuit of efficiency and domestic resource mobilisation is more critical than ever. And that is why there is such an urgent need to expand and release the energies to the private sector"- One can also argue that the shortage of resources will not be the major problem for profit making Indian SOE'S like petroleum and telecommuni-

cation industries, if they are to be privatised.

The case of privatisation needs to be supported by the new dynamic ethos and rationale. Introduction of privatisation can also be based on economic pragmatism. Privatisation need not necessarily be correlated with ideological fundamentalism of the laissez faire theory.

Shobha. K.R.

III B.A.

BOOK REVIEW

Rural Women And Development (Mithal Publications 1987)

By V. Shoba. Pages : 372. Price : Rs. 195.

Development of the rural woman is becoming an increasingly important necessity in today's society since women constitute a major part of the weaker sections of society. This book is concerned with women in the rural areas of Telengana (Andhra Pradesh) as it was originally submitted as a doctoral dissertation. In this context, a vast spectrum of topics right from women in the agrarian context to their development through various agencies, has been considered.

Chapter one is merely an introduction to the female agriculturist and the importance, objectives and limitations of the study are mentioned here. The following chapters deal with the main matter of the book trends in female agricultural labour and the work climate and cultural climate they work in. Chapter III is full of empirical results and evidences relating to income pattern, occupation, expenditure, etc., supplemented by tables. The later chapters are more socialistic, relating to domestic situations of the average female labourer. The conclusion provides an accurate and realistic picture of the woman labourers in agriculture.

The book's main strength lies in the fact that it is very clear and comprehensive. It has a systematic layout where one aspect is dealt with logically and in detail before progress to the next aspect. Above all it is a book that is easy to follow — i.e. book for the laymen to increase his fund of knowledge by providing an exposure to a typical rural area. At the same time, it also possesses depth that the experienced

economist can explore, and benefit greatly by. The summing up is an excellent feature of this book. For those who do not have the time to go through the book page by page, the summaries are an excellent, time saving device for grasping the salient points of each chapter.

Character sketches and the backgrounds of a few female labourers have been set aside as a separate chapter. This is a good idea but the chapter is littered with faulty English that spoils the entire presentation of the chapters. In certain parts of the chapter, there are unnecessary details and repetitions of certain phrases. The overall effect is very stilted. This is a pity because in spite of it, the chapter is riveting simply because of the descriptions of the impossible conditions in which the female labourer has to keep her family going and survive too. For example, the average female labourer manages on a significantly low income ranging between Rs. 1000 to Rs. 4200 per annum. Quite often, it is hardly enough to meet the basic requirements of life.

It is a realistic scenario but a very depressing one. Mention of their utter poverty and bleak horizons makes one realise just how privileged we are. There are hopeful touches here and there; the strength of the Indian woman and her inner core of resilience come out clearly, though there is no direct mention of it. It is a little expensive at Rs. 195 for adding to one's personal collection of books, but is definitely worth a perusal.

Susan Alexander
II Year B.A.

QUIZ

1. The Nobel prize for Economics was given for the first time in 1969. Name the economists who won it that year ?
2. Name the famous Swedish economist who won the nobel prize in 1974 & died in May 1987 ?
3. What is commodity money ?
4. Where is the Head-quarters of the World Bank situated & when was it established ?
5. Name the state which has the maximum number of people living below the poverty line ?
6. What is gold standard ?
7. What are Eurodollars ?
8. When did the UN adopt the charter of economic rights & how many articles does it contain ?
9. Name the largest debts country in the world ?
10. Which is the poorest country in the world & what is its per capita GNP ?
11. What is Zero growth rate ?
12. As per the census of 1981 what percentage of our population are literates ?
13. When was the Human Resources Development ministry formed ?
14. Who is India's HRD minister ?
15. Name the only Indian bank which finds a place in the list of 100 largest banks in the world ?

ANSWERS

1. Ragnar Frisch (NORWAY) & Jan Tinbergen (HOLLAND)
2. Gunnar Myrdal
3. Gold or silver coins whose intrinsic value corresponds to their face value
4. Washington D.C. at the Bretton Woods conference in 1944.
5. Uttar Pradesh ; 53.06 million
6. A system in which gold of a certain weight & fineness represents a country's monetary unit.
7. The deposits of US dollars in foreign banks or in Overseas branches of US banks. Since European banks make the most active use of such dollars, the name "Eurodollar" originated.
8. Dec. 1974 34 articles.
9. Mexico, owing foreign creditors \$, 108 billion.
10. Ethiopia \$, 110 per annum.
11. Zero growth rate means that the population will keep steady through generations. In other words births will be just enough to compensate deaths never more.
12. Overall/ 36.2%
Males 46.9%
Females 36.2%
13. Sept 1985
14. Mr P. Shiv Shanker
15. State bank of India. It ranks 91st in the list of 100 largest banks.

THRESIA T. KURIAKOS

1st B. A.

CLUES ACROSS

1. Pertaining to dismal science
2. You can get it from the IBRD
3. Mediator for world peace (abb)
4. The iron fist of Economics.
5. Sheikh's Speciality
6. = — TC (abb)
7. NX-M Favourable of unfavourable? (abb)
8. Economics measured in inches and in centimetres
9. Caesar's money
10. Marshall measured the abstract cardinally
11. The stock exchange francaise
12. What 'Ankur' 1988—89 is all about
13. Bush's economic model has dukais in mind
14. Guardian Angel of Indian banking
15. Give him what he desires; be the devil...
16. Thrifty fishes, beware !
17. 'Pinching dough' in comman jargon is...

CLUES DOWN

1. Pedalling in trade
2. The eighth tax.
3. Workers of the world unite (abb)
4. Price rigging—the clandestine pack?
5. Mathematical effect on national income
6. 'Demand creates his own supply' to quote him
7. Samuelsons working partner
8. To differentiate and to integrate.
9. Indispensable productive input
10. Unloading dirty line in Alien territory,
11. Proud pioneer from U.S., goes to stock holm-1948
12. Our 'Classical' parent
13. This economist was not indifferent to curves
14. Giver's asset-taker's liability
15. Pondering 'dally' over dismal science? (abb)

