N. T. Mathew

Manpower Planning in India

Introduction

MANPOWER *planning in India has* a history of two to three decades. During this period there have been abundant quantitative analyses by enthusiastic and able men in India and abroad, refinement of concepts and collection of data from censuses, sample surveys and administrative records. In spite of all this, nobody would deny that our present knowledge of the manpower problem remains incomplete and unsatisfactory, or that much of the planning in this field has been 'planning without all the facts'. This does not necessarily mean that the planning has been unfruitful, or that if we had more facts the planning would have been better. The quantity and quality of data required would depend on the permissible margin of error in the statistical conclusions-permissible in relation to programmes of action.

Manpower Policy

An organised and authoritative statement of the goals and methods of manpower planning and development in India is yet to be formulated. The Constitution recognizes the right to work, to an adequate means of livelihood, to education and to public assistance in cases of unemployment within the limits of the economic capacity of the State. The five-year plan documents have set forth aims like "utilisation of the manpower resources of the country to the fullest possible extent; greater equality of opportunity and reduction in disparities in income and wealth ; transformation of the labour force explosion from a serious threat to growth and stability into a powerful aid to progress; raising productivity of labour; relief of the poverty of the unemployable". There are policy indications in more specific terms ; such as "development plans have to be worked in such a way as to yield the maximum employment of which they are capable ; large-scale rural works programmes, village and small industries to absorb all those who are not provided employment in other projects ; develop industrial activity in the backward areas; expand self-employment; the growing labour force in agriculture has to be provided with fuller employment within agriculture ; draw the educated unemployed into productive activity; achieve a balance between development and

investment on the one hand and growth in employment on other". It is evident from all this that the state considers itself responsible for providing gainful work to all citizens willing and able to work and for ensuring equitable distribution of the gains from labour.

Unemployment in India

The basic fact about the manpower situation in India is general abundance, with pockets of scarcity in certain specialized categories like doctors, nurses and statisticians. In 1971, there were 548 million people in India of whom 285 million were in the working age group 15-59. Workers in this age group according to the definition adopted by the Census numbered 156 million in 1971. The total number recorded as unemployed was 2.7 million-a very low proportion of the labour force by any standard.

An intriguing feature of the Indian manpower problem has been that the Census, the National Sample Survey, and some other inquiries, have produced low figures of the unemployment rate, while the experts have a feeling that the percentage unemployed must be quite sizeable. The explanation often put forward is that the standard definition of unemployment which is based on a'Western' concept is unsuited to Indian conditions. Another reason mentioned is that in the rural areas the problem is one of underemployment which will not get reflected in the statistics of unemployment. According to the National Sample Survey of 1970-71, in which unemployed man-days (rather than unemployed men) were studied among the poorest 13 million households, 4-3% of all man-days could be classified as unemployed. In the remaining population which is not so poor, unemployment must be presumed to be less. Assuming that 4% of all man-days are unemployed, the total loss would amount, in terms of time, to about 10 million man-years, and in terms of money, some 5000 to 7000 millions of rupees, per year. Unemployment, though not negligible, does not appear to be of the magnitude that the experts imagine.

Educated Manpower

According to the 1961 census there were about 8 million educated (matriculates and above) in the age group 15-59. The figure for 1971 is not yet ready but a rough estimate would be 20 million. For these people, "Western" concepts should be applicable. From the employment exchange data the number of the educated unemployed is 2.3 million. The number of graduates in 1961 was 1.2 million and in 1971, 3.5 million. Among the graduates in 1971, registrants at the employment exchanges were 0.4 million.

Coming to specialized categories, the number of graduate engineers and technologists was estimated in 1971 to be 185,000 of whom 21,000 were unemployed; of graduate doctors, 98,000 of whom 5,000 were unemployed; and of science graduates, 560,000 of whom 75,000 were unemployed. Similar figures can be produced for special-

ists in agriculture, forestry and other fields and also for technical personnel who had not obtained degrees.

In relation to the specialized manpower, planning in India has been based on what is called the 'requirements approach'. This means that targets of development for the economy as a whole and its different sectors are translated into investment projects. Thereafter the number of different categories of men like engineers, managers, technicians etc., required for each project or each programme of investment or expenditure, are determined and added up for each year for which it is necessary to foresee into the future. A corresponding plan is then arrived at for creation or expansion of educational and training facilities so that the output of the educational system would match the requirements of the economic and social system. The success of the requirements approach depends on the ability of the planners to forecast or influence the size and direction of economic growth, and also to determine correctly the coefficients such as engineers per million tons of steel, or per 100 crores worth of construction. There have been in the past instances of miscalculation, leading to excess production of certain types of engineering manpower.

A variant of the requirements approach which some theoreticians advocate, though this does not seem to have been tested in practice anywhere, is the 'rate of return approach'. In this, the development targets are not selected in advance. A number of alternative feasible patterns of production as well as manpower development are considered in relation to costs and benefits and the pattern which appears to yield the maximum rate of return on invested capital is selected.

A third approach which was put forward in the 'Robbins Report' in 1963 is based on'social demand'. Strictly, this is not a method of manpower planning but of forecasting the demand for places in educational institutions. When tried out in U.K. in the sixties, this method is said to have resulted in an underestimation of demand for admissions. Social demand seems to bs the force behind development of educational facilities in India in the field of arts, science, commerce etc. However, the official view of educationists and planners is that education at higher levels should be 'job-oriented', i.e. only as many graduates should be produced in different fields of study as could be provided with jobs in which their special knowledge would be useful. Development of human beings has not been accepted as an end in itself but only as a means to economic development, even though the term 'human resources development' is becoming popular with manpower planners. The time seems to be far off when, in India, we can have as a practical goal the provision of education upto the highest level each one is capable of, instead of beginning with a set of jobs which are considered necessary and then arranging for the growth of human beings even if partially stunted so as to fit in every body smoothly.

Control of Population Growth

The problem is to minimize the gap between what is desired and what is achievable

from available resources. Manpower planners usually look upon their task as one of balancing supply and demand for different kinds of trained professionals. This is no doubt one of the important things to do in medium range planning for five or ten years. From a longer view of twenty or thirty years measures to control the growth of population become quite relevant. In India, Rs. 750 million or 0.2 per cent of the national income was spent on family planning during the year 1972-73 and it is estimated that about 3-0 million births were prevented. The unprevented births still numbered 20 million and the net addition to the population 12 million. The birth rate has declined by 10 per cent from 41.7 per thousand in 1961 to 36.5 in 1972. The death rate has fallen from 22.8 to 15.0 during the same period. Thus the decrease in births has not even compensated for the reduction in deaths. It will be another two or three decades before birth control begins to make an impact on population size and a further two decades before it affects the labour force.

Creation of Jobs

The immediate problem is that of a large number of men and women, who during most or all of the days that they are available for work have no income and no opportunity for contributing anything to the national product. As we have seen the National Sample Survey results show that some 10 million man years must be going unutilized in the rural areas. To this must be added perhaps a million or two of the educated unemployed. The economic loss that this entails is only a part of the problem. The social and personal consequences of idleness are difficult to quantify but are perhaps even more important. There is no quick remedy for this problem which is steadily growing in magnitude.

In theory it should be possible to put all the idle hands to work. It is evident that society as a whole is providing food and shelter for all these men and women to survive. If the falling death rate is any indication, even the poor cannot be deteriorating in health. However, to convert all idle man years into productive work a degree of compulsion, not consistent with the present political system in India, may be required.

Dandekar (1970) after a careful analysis of available facts suggested a massive programme of rural works. "The only feasible, and immediately available, solution appears to be to offer and assure employment to all those who are willing to work on a minimum wage on works which can be immediately undertaken, namely projects of land development, irrigation, afforestation, road construction, etc. This can immediately place in the hands of the poor incomes which may give them the desirable minimum living and in the process create community assets in improved land and water resources and needed infrastructure which in due course will improve the productivity in the economy and accelerate the process of economic development." This is in accordance with the new thinking that general economic development will not by itself remove unemployment and that in specific areas special labour-intensive programmes should be provided.

A large enough increase in rural employment will also relieve urban unemployment,, as a large proportion of the unemployed in the towns are migrants from the villages in search of work. Some schemes specially designed to provide work in rural programmes in the districts in all parts of the country are being put into operation every year. For those who do not get absorbed in these schemes, the traditional social and family structure in India continues to provide sustenance. For the educated unemployed who do not find places in the development programmes assistance is given to start their own small enterprises.

Utilization of Scarce Manpower

As noted earlier, the general manpower problem in India is one of abundance but in the midst of this plenty there are some fields with scarcity of personnel. One way **of** meeting this situation would be to train up more people for employment in these fields. This may take 5 to 10 years, especially if the training facilities themselves have to be expanded. An alternative way of bringing immediate improvement is to examine whether the jobs really require of the skill and education that is being sought. This is applicable to medical work, where a 'licentiate' doctor, who can be trained in 3 years, instead of the usual 5 years or more for a graduate doctor, can perform sufficiently well The cost of training a graduate doctor may be Rs. 1,20,000, whereas for the licentiate it may be only Rs. 40,000 or less. By analysing the number of patients according to the level of knowledge and experience required for treatment, it will indeed be found that a large majority of cases can be effectively dealt with by licentiates, leaving only the more serious cases to the better qualified doctors and specialists. Similar considerations would apply to engineers, and other professional workers.

Another approach to the same problem can be illustrated for the work of nurses. There is a great scarcity of trained nurses in India and many are lured away by high remuneration in some affluent countries. However, we are not making the best possible use of even the available nurses. A recent study (Thomas 1972) of a general hospital in Delhi showed that of the total working time of trained nurses only 28.0 per cent was spent in patient care. The rest of the time was accounted for by such things as education and administration-5.3 per cent, clerical work-6.8 per cent, house keeping-15.0 per cent, maintenance of supplies and equipment-3.2 per cent, others-41.5 percent. It should be possible to at least double the utilization of trained nurses by relieving them of the types of work which can be given to less skilled and less scarce personnel.

Equipment Utilization and Increase in Employment

The problem of ensuring more intensive utilization of manpower exists only in certain limited, though important, areas. In other areas, ic is just the reverse. Scarcity is of equipment and not of manpower. Productivity of equipment becomes more important than that of labour. It is well known that equipment utilization is very low in most places in India. A machine shop with 40 per cent utilization of equipment would be among the comparatively more efficient units, while even in plants with equipment

worth several billions of rupees, utilization may be as low as 30 per cent in some places. When cost of equipment (expressed in monthly rental value) is many times the wages of operator, situations commonly occur where a doubling of labour employed will entail only a small percentage increase in the total cost, but will enable the recovery of a large percentage of the unutilized time of equipment. A programme of 'over-staffing' will then not only increase employment but will result in a substantial increase in industrial output. One application of this principle is the recent decision taken jointly by the management and labour in some textile mills in Bombay to rotate the weekly holiday over the seven days of the week and thereby increase both production and employment by one seventh of what was before.

Something like this 'over-staffing' must be happening on agricultural land also. Otherwise it would be impossible to account for the low figures of unemployment that even recent surveys have produced in spite of the fact that some 50 or 60 million people were added to the labour force during the last twenty five years.

Productivity

It must be noted that, even when over-staffing reduces locally the productivity of labour in order to bring about a more than compensating intensity of equipment utilization, the overall result for the country as a whole will be an increased average productivity per head. This will be the case so long as over-staffing does not divert labour from other more productive work but only absorbs people who would otherwise have been idle. The crux of the manpower problem in India is not wholly, or even mainly, one of unemployment or underemployment but it is the low productivity of the employed. This is quite obvious in the organised sectors which now employ some 20 million people in government, manufacturing, and other activities. Deficiencies exist in organisation and environment, in training and, above all, in motivation. In the unorganised sector, including agriculture, the lack of equipment and of other resources is an added reason. However, we have not yet exploited available methods that could ensure the maximum productivity possible with available resources.

Conclusion

The manpower problem in India is of a magnitude that makes it difficult to realize the goal of securing to every man the right to work in the near future with available resources. Control of population can have an effect only after two or three decades. At the same time it appears that the extent of unemployment may not be as much as the experts feel. A large part of the 50 or 60 million persons added to the labour force during the past 25 years seems to have been absorbed in more or less productive work. The most important programme that manpower planners have indicated is that of a massive rural construction work.

The idea of 'job-oriented' education is popular though questionable from certain angles. In any case this has not been operating in relation to the majority of educational

output in India. Utilization of scarce categories of manpower requires special attention using operational research methods. The question of increasing employment by more intensive utilization of equipment and other scarce resources has to be fully explored.

Tables 1 to 5 give some background data connected with manpower in India.

TABLE 1
GROWTH OF POPULATION IN INDIA

Year	Population in million			Percentage urban	Percentage growth during the decade	
	male	female	person		Total	urban
1921	128	123	251	11.2	—	—
1931	143	136	279	12.0	11.0	19.1
1941	164	155	319	13.8	14.2	32.0
1951	185	176	361	17.3	13.3	41.4
1961	226	213	439	18.0	21.6	26.4
1971	284	264	548	20.0	24.8	38.2

TABLE 2
POPULATION AND NUMBER OF WORKERS IN THE AGE GROUP 15-59 FROM THE CENSUS OF INDIA IN 1961 AND 1971

	(In million) 1961	1971
Total Population		
male	122	148
female	113	137
person	235	285
Number of Workers*		
male	111	129
female	51	27
person	162	156
Workers in Rural Area		
male	90	102
female	47	24
person	137	126
Workers in Urban Area		
male	21	27
female	4	3
person	25	30
Agricultural Workers		
male	71	75
female	41	21
person	112	106
Non-Agricultural Workers		
male	40	44
female	10	6
person	50	50

*The definition of worker in the 1971 Census concluded certain categories like housewives who occassionally entered labour force.

TABLE 3
NATIONAL SAMPLE SURVEY RESULTS SHOWING PERCENTAGE UNEMPLOYED IN INDIA

Yetr	*Number of households in sample*	*Sex*	*Percentage*		
			not in labour force	*employed*	*unemployed*
		rural			
1960-61	23,200	male	44.3	54.2	1.5
		female	72.3	25.9	1.8
		person	58.1	40.3	1.6
1961-62	55,000	male	47.8	50.3	1.9
		female	77.8	20.3	1.9
		person	62.5	35.6	1.9
		urban			
1960-61	15,000	male	47.7	51.0	1.3
		female	86.5	13.2	0.3
		person	66.0	33.2	0.8
1961-62	36,000	male	49.0	49.4	1.6
		female	89.1	10.5	0.4
		person	67.9	31.2	0.9
1963-64	27,000	male	49.7	49.3	1.0
		female	89.5	10.2	0.3
		person	68.3	31.1	0.6
1964-65	32,000	male	49.8	49.2	1.0
		female	89.7	10.1	0.3
		person	68.4	31.0	0.6
1965-66	32,000	male	51.0	48.1	0.9
		female	89.6	10.1	0.3
		person	69.0	30.4	0.6
1966-67	29,000	male	49.4	49.8	0.8
		female	89.1	10.7	0.2
		person	68.1	31.4	0.5

TABLE 4
PERCENTAGE OF UNEMPLOYED MANDAYS FROM THE 25TH ROUND OF THE NATIONAL SAMPLE SURVEY (JULY 1970 TO JUNE 1971)

Age group	*Percentage of unemployed mandays to labour force mandays*		
	male	*female*	*person*
	17,500 small cultivator households		
15-44	3.9	4.2	3.9
45-59	3.4	3.0	3.3
15-59	3.8	4.0	3.8
all ages	3.8	3.9	3.8
	17,500 non-cultivating wage-earner households		
15-44	7.3	5.6	6.7
45-59	64	8.0	6.9
15-59	7.1	6.0	6.7
all ages	7.3	5.8	6.7

References

1. HMSO, *Higher Education,* Report of the Committee under the Chairmanship of Lord Robins 1961-63. London, 1963.
2. Thomas, Achamma, *A Study of Activities of all Categories of Nursing and Ancillary Personnel Engaged in Patient Care in an Inpatient Unit of a General Hospital in Delhi,* National Institute of Health Administration and Education, New Delhi, 1972.
3. Dandekar, V. M. and Rath, Nilakantha, *Poverty in India,* The Ford Foundation, New Delhi, 1970.
4. Burgess, Tyrrell, Layrad, Richard and Pant, Pitarnber, *Manpower and Educational Development in India 1961-1986,* Oliver and Boyd, London, 1968.
5. Tobias, George with Queener, Robert S., *India's Manpower Strategy Revisited, 1947-1967,* N. M. Tripathi Private Ltd., Bombay, 1968.
6. *Forecasting Manpower Demand and Supply-A Review of Methodology,* Institute of Applied Manpower Research, New Delhi, 1972.
7. Agarwal, S.P., *Manpower Supply,* Meenakshi Prakashan, Meerut, 1969.
8. Agarwal, S, P., *Manpower Demand,* Meenakshi Prakashan Meerut, 1970.