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Knowledge as Tool For Economic Growth

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Professor A.C. Pigou, the Founder of Welfare School of Economics, opens his magnum opus **Economics of Welfare** with the following words :

> *When a man sets out upon any course of inquiry, the object of his search may be either light or fruit - either knowledge for its own sake or knowledge for the sake of good things to which it leads. In various fields of study these two ideals play parts of varying importance. In the appeal made to our interest by nearly all the great modern sciences some stress is laid both upon the light-bearing and upon the fruit-bearing quality, but the proportions of the blend are different in different sciences.*

The study of economic history shows that the second half of nineteenth century witnessed the most spectacular economic growth with two clearly noticeable features: one, growth was confined to only some parts of the world; and two, development and use of technical knowledge was its main causative factor. The lead in this respect was taken by those countries which adopted technical and vocational education as an integral part of their educational systems. The United States of America was far ahead in this respect, followed by the European countries, and Great Britain far behind. There were two main reasons for underdeveloped and developing countries for not following this course. One, the ruling powers were not interested in promoting economic development of their colonies; they wanted the colonies' education systems only to connect them to the local inhabitants. And two, since historically the education system everywhere was evolved to promote values and ethical concerns, the natives too did not have much enthusiasm for change. It is well known that in Great Britain and Europe

organized education was established by the Church to profess the gospel and promote Christian ethics. Those who were assigned this task came, therefore, to be known as *professors*.

Wassily Leontief, an early recipient of Nobel Prize in Economic Sciences, mentions three factors that dominated the overall development of the world economy: population trends, technological change, and the availability of natural resources2. W.W. Rostow's pioneering study The World Economy underlining the importance of population as the main driving force for development provides world estimates of population since mid-eighteenth century which are as follows :

Medium Estimates of the World Population since 1750 (in millions)

1750	1800	1850	1900	1950	2000
791	978	1262	1650	2515	6131

Rates for every 50-year Increase

1750-1800	23.64%
1800-1850	29.04%
1850-1900	30.75%
1900-1950	52.42%
1950-2000	143.74%

The secular trend in the growth of population is unmistakably visible both in the medium estimates and 50-year increase in the rate.

As population grew, education became increasingly concerned with technical and vocational aspect to find avenues for fruitful employment and gradually broke loose form its value moorings. The shift was not sudden but by now it is visible everywhere. Although the root cause of diversification of education was initially pressure of population, a closely related phenomenon was development of technology to exploit natural resources. Most of the developing and underdeveloped countries that have reoriented their education systems to incorporate technical education as a significant input for economic development were the erstwhile colonies which gained freedom after the Second World War (1939-46). Leaving aside China for which no authentic data are available from secondary sources, India may be described as the first newly freed major country to turn its gaze in this direction.

Transitions are always painful. Lest India and other similarly placed countries go astray, a well-intentioned advice came from Mrs. Margaret Thatcher, an ex-Prime Minister of Britain. In a lecture organized by the Citybank in 1994 at Bombay as part of its Asian Leadership series this is what she said :

> *While there are certain principles that are universal… each country has its own traditions and beliefs, its own history and characteristics, all of which have to be taken into account, especially when making systemic changes.*

Introducing technical (including vocational) education requires some safeguards such as manpower forecast which is not easy to construct as it needs statistics which are hardly available in any developing country. Soon after India introduced new education policy based on Kothari Commission Report (1986) Rajiv Gandhi, India's former Prime Minister, enlarging upon this requirement made it a part of his Convocation Address at Indira Gandhi National Open University (IGNOU). Here are his words :

> *We must first build a picture of what we want India to be, like 15 to 20 years from now. What will industry be like, what will agriculture be like, what will services be like, what will all other departments in the country be like? From that we must work back and build an education system which will serve those needs.*

Stress on manpower forecast as a prerequisite to introducing technical education in the system is also implied in an observation made earlier by the International Commission on the Development of Education set up by UNESCO in 1971. This observation is based on one of its three major findings and reads as follows :

> *... for the first time in history, education is now engaged in preparing men for a type of society which does not yet exist.*

The findings are preceded by a statement that in budgetary terms, education 'ranks a close second in world expenditure of public funds, coming just after military budgets.'

Next to manpower forecast is search for appropriate technology. Much of technology that developing countries use came from industrial economies which had enough capital but were short of manpower. Capital-intensive technology, rather than promoting employment, can further reduce absorption of labour. Besides, much of it being cost-intensive may not be within the easy reach

of developing countries given their resources.

Since no two countries are similarly placed in terms of their socio-economic characteristics, political systems and factor endowment, there cannot be identical policy prescriptions for their reform. To overcome this difficulty the policy makers often make use of case studies. India being the developing world's second largest economy after China provides some interesting lessons. The country became free from the colonial rule in 1947; it experimented with the mixed economy pattern until 1991; and finally began opening up its economy by slow degrees to be bogged down with insurmountable difficulties in less than twenty years. The main difficulty came from the country's failure to raise the level of employment. The rate of growth of employment in the country which was 2.7 per cent per annum during 1983-1994 dropped off to 1.07 per cent per annum during 1994-2000.

Technical education is a mixed blessing for developing countries. Whereas it promotes gainful employment, its overall impact on the level of employment in the economy as a whole may be positive or negative. For the period 1997-2002, the Planning Commission, Government of India, indicates significant pick-up in the rate of growth of employment - to 2.44 per cent per annum. Although the emphasis in the country's education system is no more on the non-technical aspect, the system has neither a manpower forecast nor the occupational data from which it can be constructed. When the All India Council for Technical Education was set up in 1987, making 'forecast of the needed growth and development in technical education' was made one of its primary functions. The Council's many other responsibilities included preventing 'commercialization of technical education'. Sadly, both these functions have been neglected making the entire system move rudderless. A typical instance of ignorance about some aspects of education even among those who have a sensitive awareness of its overall position is the recognition accorded to Kerala as a model State in the field of education not knowing that Kerala is among the three States of the Indian Union - the other two being Punjab and Bihar - which carry the largest imbalance between growth of labour force and that of employment. This will be clear from the following statistics taken out of a more comprehensive table included in the country's Ninth Five Year Plan [1997-2002] giving contrasting data about growth of employment and that of labour force in respect of 15 major States of the country.

Growth of Employment and Labour Force

Per cent per annum			
Estimated			
State	**Growth of Employment 1997-2002**	**Growth of Labour Force**	
		1997-2002	**2002-2007**
All India	2.44	2.51	2.47
Andhra Pradesh	3.11	2.39	2.34
Assam	3.73	2.73	2.79
Bihar	1.29	2.58	2.85
Gujarat	2.53	2.37	2.18
Haryana	3.49	2.99	2.84
Karnataka	2.81	2.47	2.26
Kerala	1.26	2.30	1.90
Madhya Pradesh	2.61	2.39	2.48
Maharashtra	2.54	2.26	2.20
Orissa	2.35	2.10	2.13
Punjab	0.73	2.27	2.08
Rajasthan	2.71	2.84	2.91
Tamil Nadu	2.00	1.98	1.70
Uttar Pradesh	2.07	2.57	2.68
West Bengal	2.75	2.52	2.45

Estimates are on usual status basis

The imbalance between growth of labour force and employment implies not only the cost in terms of human factor - the number of persons unemployed - but also the cost of resources utilized in creating the infrastructure and other facilities to train these persons. The country's Tenth Five Year Plan (2002-2007) does not carry any specific assessment of the impact of technical education on development, particularly on the level of employment, but describe the functioning of its education system as the most disappointing aspect of its development strategy. The waste in the country's unplanned technical education can be imagined by the fact that while in industrial countries, on an average, only 1.4 technicians are employed for 1 engineer, in India this ratio goes up to anywhere from 1 engineer to 3-6 technicians.

Education, along with resources which include a country's size and composition of population, has come to be universally regarded as the main determinant of economic growth. India's initial indifference to evolve a suitable population policy as its government decided to adopt planning as the main method of development was due, according to Gunnar Myrdal, another early recipient of Nobel Prize, to the inhibiting influence of the "father of the nation", Mahatma Gandhi, who ruled out all methods of birth control other than continence (brahamascharya).

Although, historically, technical knowledge has emergd as a major input for development, non-technical education is of no less importance for overall progress of mankind. There is an old proverb, 'Man does not live by bread alone'. At a time when developing societies are being increasingly overwhelmed by materialism and individualism, there is an urgent need to 're-conceive the process of education, not merely as an instrumentality of providing proficiency for a job, but as an activity that nurtures a continuous growth of the mind and the spirit, and respects the ethics and morals necessary for ordering and illumination of life.'

References

A. C. Pigou (1920), The Economics of Welfare , Macmillan & Co. Ltd. , London, fourth edition, 1952, p.3.

Wassily Leontief (1978), Observations on Some Worldwide Economic Issues of the Coming Years, Challenge, March/April.

W. W. Rostow (1916), The World Economy, University of Texas Press, Austin, 1980 print, pp. 4-5.

Margaret Thatcher (1994), Keynote Address at the Citybank, Asian Leadership lecture series, Bombay, September 19.

Rajiv Gandhi (1989), IGNOU's First Convocation Address, February 21.

UNESCO, Learning to be, The World of Education today and tomorrow, Paris, 1972. First Indian edition by Sterling Publishers (P) Ltd., New Delhi, 1973, p.13.

Ibid., p.12.

Government of India (1997-2002), Ninth Five Year Plan, Vol. I., p. 200.

Gunnar, Myrdal (1968), Asian Drama, Vol. II., PANTHEON, New York, p. 510.

H. K. Manmohan Singh (2008), Maulana Abul Kalam Azad Memorial Lecture, Punjabi University, Patiala, Nov. 11.