ABSTRACT

I. Education and Development: Historical Evidence

Numerous empirical studies, spanning over post-war decades, boldly point out that (i) a high and positive correlation exists between education and growth of an economy; (ii) a significantly negative correlation exists between education and level of income inequalities, and that lesser inequalities do, in turn, promote economic growth; and (iii) per worker productivity is invariably higher, in all economic activities, among the educated group of workers than among the illiterates or lowly-educated ones.

II. Education and Development: Emerging Challenges

Thanks to the increasing spate of globalization, in recent years, international competitions are becoming fiercer by the day. So are linkages in production technologies, investment and finance, labour market, etc., across countries, and regions. Undoubtedly, the future growth in the developing world would be increasingly propelled by education-, knowledge- and skill-driven production and marketing processes. Under the emerging technology-institutional-human interfaces, in the developing world, a typical worker of tomorrow has to be markedly different from his predecessor of yesterday just as tomorrow’s production and marketing would demand a vastly different strategic vision and commercial alertness. His choices would be plentiful but the scope for erring would be no less plenteous. Tomorrow’s worker will have to be much more than himself. Growth without education would be a costly delusion.

That, in the coming years, education, knowledge and skill would be inescapable pre-requisites for all sectors/activities needs no special emphasis. For example, diversification in favour of newer crops, floriculture, horticulture, livestock, dairying and poultry, the rising bio-tech and genetic complexities of farm production, the shift to non-conventional renewable source of energy, agriculture as industry, etc., are the emerging education-based challenges of new agriculture. Similarly, scientific precision, mathematical accuracy, high-level product standardization consistent with changing quality-consciousness and tastes of consumers, at home and abroad, are a must for sustaining industrial demand and growth. Finally, the changing consumer tastes and demand sophistications, insistence on timely deliveries and competitive choices, already occurring in trade/hotel and restaurant, transport-storage-communications, banking transactions, sanitary/community/recreational/cultural/personal services, will put great premium on workers’ education, knowledge and skills, in each variety of services, most ostensibly those linked with the external transactions. Many of the developing economies, characterized by wireless mobility, seamless connectivity and ubiquitous access to distributed and shared computing resources, are close to becoming knowledge societies. Others have to follow suit. Educational policies have to re-orient themselves.

III. Newer Educational Policies/Orientations

It is time, the developing economies quickly realize that (i) their future economic regimes would be hugely technology-driven and knowledge-based entities, the ICT being the most obvious, and fasting expanding incarnation; “there is no doubt that future economies will live and die by the decisions that today’s communities make with regard to broadband and information communication technologies, (ii) the pace and pattern of future growth would be inescapably linked with workers’ education, knowledge
and skills, (iii) taking a hard look at, and re-orient their on-going educational policies, are indispensable pre-requisites for achieving, first, labour productivity increases, especially in employment-intensive sectors, second, for ensuring cost-competitiveness of their production and marketing outfits, and third, for pushing up their growth trajectory, on a sustained basis. Inasmuch as the technology frontiers would continuously move upwards, most ostensibly, under pressure of competition from within and without, workers’ education, knowledge and skills would have to be constantly upgraded. As a corollary, life-long learning, training and re-training would have to become a core element of the educational matrix, and job flexibilities and switchovers more regular features of labour market.

The following are the broad, and illustrative, education policy reforms that need to be effected, in varying form and combination, in the developing world, to ensure that future economic growth picks up well, and that, the distributional effects of growth yield sustained, and more remunerative employment and poverty reduction:

1) **Quantitative Expansion**: Layers of education; primary, secondary to higher education; *higher education is the Achilles’ Heel*: huge supply gaps still exist; very low gross enrollment ratios in the developing world; more institutions, and greater emphasis on science and technology, needed.

2) **Equity and Inclusion**: uneven access to higher education; rural-urban, male-female, inter-community, and inter-regional gaps: *India’s 11th Plan achievements and 12th Plan vision*.

3) **Quality and Excellence**: from memorization-oriented to electronic-governed learning; wireless classrooms and multi-media learning tools; hierarchy of universities and research institutions; special support for *institutions of excellence*; emphasis on quality research.

4) **Relevance and Value**: Continuous updating of syllabi; ICT all along; e-governance, e-commerce, e-business, e-learning, m-learning, etc., should build a close rapport between an academic institution and industry, economy and society; emphasis on inter-disciplinary courses; *global perspectives and educational networking; flagship courses/programmes*; regional educational hubs and collaborations.

5) **Education for Left-overs/laggards**: on-the-job training and retraining; distance education and virtual class-rooms; mid-career job flexibilities and switch-overs; *concept of life-long learning*; incentives/public support to institutions and learners; role of the civil society.

6) **Technology Vision and Hierarchies**: Visualized growth patterns and technology needs; medium and long-term R&D strategies; *developing world’s R&D investment is too little, too late*: fear of technological orphanage; global collaborations and technology exchanges/transfers; developing world’s public versus developed world’s private R&D investment; ‘healthy’ public-private partnerships still to evolve in the developing world.

7) **Federal Governance Structure and Policy-making**: Line of demarcation between central and state governments; India’s case; central government surging ahead in a big way.

8) **Inclusive Education Policies**: education is investment in human capital; paramount role of government; increasing privatization is exclusionary; workforce gets deeply segmented; *composition effects overtake compression effects*; growth potential remains under-utilized; India’s case of un- or under-realized demographic dividend.