Technology and Global Order

The term globalization refers to the integration of economies of the world through uninhibited trade and financial flows, as also through mutual exchange of technology and knowledge. Ideally, it also contains free inter-country movement of labour. Technology played an important role in global order.

Impact of technology on the developing countries

Major measures initiated as a part of the liberalization and globalization strategy in the early nineties included the following:

- Devaluation of currency
- Disinvestment - Under the privatization scheme, most of the public sector undertakings have been/ are being sold to private sector
- Dismantling of The Industrial Licensing Regime
- Allowing Foreign Direct Investment
- Throwing Open Industries Reserved For The Public Sector to Private Participation
- The removal of quantitative restrictions on imports
- The reduction of the peak customs tariff
- Wide-ranging financial sector reforms

The implications of globalization for a national economy are many. Globalization has intensified interdependence and competition between economies in the world market. These economic reforms have yielded the following significant benefits:

- Globalization in developing countries had a favorable impact on the overall growth rate of the economy. Gross Domestic Product (GDP) growth accelerated due to globalization.
- Due to globalization not only the GDP has increased but also the direction of growth in the sectors has also been changed. There is change in the structure of economy. Earlier the maximum part of the GDP in the economy was generated from the primary sector but now the service industry is devoting the maximum part of the GDP. The services sector is expected to benefit from the ongoing liberalization of the foreign investment regime into the sector. Software and the ITES-BPO sectors have recorded an exponential growth in recent years.
- Foreign Direct investment (FDI) inflows into the developing country.
- Foreign Trade (Export- Import)
- Globalization has an impact on employment of the developing countries. In a developing country, the final employment impact of increasing trade depends on the interaction between productivity growth and output growth both in traded goods sectors and in non-traded sectors. when a developing country opens its borders to foreign capital, FDIs generate positive employment impacts both directly and indirectly through job creation within suppliers and retailers and also a tertiary

employment effect through generating additional incomes and so increasing aggregate demand.

- Globalization has the effect of income inequality. Both trade and FDI should take advantage of the abundance of low-skilled labour in developing countries and so imply an increasing demand for domestic low skilled labour and hence decreasing within-country wage dispersion

and income inequality.

- Globalization has played an important role in poverty alleviation. As far as poverty reduction is concerned, trade and FDI are supposed to be beneficial to a developing country's economic growth and so - given the expected overall neutrality in terms of their impact on income distribution, globalization should be a way to achieve poverty reduction.

Impact of globalization on Agriculture, Medicine and IT

Agriculture

Globalization and internationalization are not new to agriculture - since the 1970s farmers' incomes have been heavily dependent on their success in selling products in international markets. More recently the development of agreements such as GATT and NAFTA have been the focal point of much of the globalization discussion, with the emphasis on broader access to world markets, expanding exports of agricultural commodities, and, particularly, further processed agricultural and food products.

The processes of globalisation and trade liberalization present both opportunities and challenges in the agricultural sector. Some of the positive impacts on agriculture are:

- **Expansion of Industrialized Agriculture** : Industrialization of production means the movement to large-scale production units that use standardized technology and management and are linked to the processor by either formal or informal arrangements. Size and standardization are important characteristics in lowering production costs and in producing more uniform crop products and animals that fit processor specifications and meet consumers' needs for specific product attributes, and their food safety concerns. Technological advances combined with continued pressures to control costs and improve quality are expected to provide incentives for further industrialization of agriculture.

- **Production of Differentiated Products** : The transformation of crop and livestock production from commodity to differentiated product industries will be driven by consumers= desire for highly differentiated food products; their demands for food safety and trace-back ability; continued advances in technology; and the need to minimize total costs of production, processing, and distribution. Food systems will attempt to differentiate themselves and their products by science and/or through marketing.

- **Precision (Information Intensive) Production** : Increased use of monitoring technology will greatly expand the amount of information available regarding what affects plant and animal growth and well-being. Precision farming in crop production includes the use of global positioning systems (GPS), yield monitors, and variable rate application technology to more precisely apply crop inputs to enhance growth, lower cost, and reduce environmental degradation.

- **Emergence of Ecological Agriculture** : In recent decades there has been an increased awareness of the importance of the perspective and practice of ecological agriculture.

Some of the adverse effects on argriculture sector are:

- The opportunities stem from the fact that reduced barriers to trade and larger markets - on a global scale – across national frontiers, would allow a division of labour and specialization in

production based on comparative advantage which would assure that the aggregate benefit for the world economy would be maximized.

- The challenges are related to the fact that not all countries, particularly those with undeveloped and non-modernized agricultural systems, would be able to compete in such a competitive environment and sustain viable agricultural productions at the national level. Many of such vulnerable countries are developing countries, especially the poorest amongst them, for whom agriculture is still the backbone of their economies.
- There is now growing recognition that the process needs to be better managed from a perspective of global governance

The agricultural trade balance shows a widening deficit, which reflects a growing food import dependence. Moreover, there is a deterioration in the ratio of total food imports to total agricultural export, i.e. food imports are rising faster that agricultural exports, by three percent for LDCs and by five percent for other developing countries. In most of these countries, export earnings have stagnated over the last two decades, mainly because of the fall in commodity prices. The foreign debt burden has also limited the ability of many LDCs to import.

After six years of implementation, the experience with the WTO Agriculture on Agreement has been mixed: The Agreement has contributed to the re-instrumentation of trade and agriculture policies, however, actual changes in the levels protection have not had a tangible impact on global trade and incomes. In most countries, agricultural import barriers are still much higher than in the industrial sector.

Export subsidies continue to depress world agricultural markets. Agricultural tariffs remain high, especially for horticultural products, sugar, cereals, dairy products and meat, and tariff escalation continues to give particular protection to processed foods, notably the value-added forms of coffee, cocoa and oilseeds in importing countries.

Problems faced by the developing countries: - Limited flexibility to introduce policy support as needed - Limited or no access to special safeguard measures in periods of import surges.

Obviously, being economies with little other resources than agriculture, these countries need to concentrate on making their agriculture more competitive, and this in two directions: - domestic food production to compete with imports, and - agriculture for export

The underlying facors include whether or not countries have effective infrastructure and technologies, market-friendly legislation etc.These then work through the following mechanisms: - market access - this is crucial for developing countries - competition -for the losers, greater competition can lead to rural unemployment, dispossesed farmers etc. - food import surges - these can have negative impacts on local production and lead to volatility in pricing. - reduction of export subsidies - positive effects for exportes, but negative short term effects for fod importing countries. - domestic support - remains high in developed countries. For some developing countries it could be helpful, but is not allowed to be built up - Compensation and SDT - hasn’t been fully, lacking operational mechanisms.

edicine

- Bio-technology
- Personalized medicine

Information Technology

Technology and globalization go hand-in-hand. Globalization unleashes technology, which in turn drives firms to plan production and sales on a global basis. Technology changes the work we do and in nearly all cases, the jobs created by it demand more education and training. It also changes the way business operates by transforming relationships between suppliers, producers, retailers and customers.

Ever since the beginning of the first industrial revolution in the 18th century, the introduction of new technologies has meant both the transfer of jobs from one sector to another (from agricultural labour to the production of farming equipment, for example) and the ultimate creation of more jobs throughout society.

On a selective basis, globalization indeed brings in new technology and opposition to globalization is not tantamount to becoming technologically isolated from the rest of the world. But today, almost no advocate of globalization is calling for selectivity.

The more intense the use of technology, the greater the job creation over time. And while many of the jobs created by new technology are frequently not accessible to the people who have been displaced, it is important to remember that job creation by companies that make greater use of technology is not limited to just scientific or technical jobs:

- The service sector is the largest generator of jobs and many of the jobs created in this sector do not demand high-level technical skills.
- Growing manufacturing companies in high-tech sectors also need workers in clerical, finance, shipping/warehousing, sales and marketing fields.

A shift is occurring in the sociotechnological paradigm that underlies our current sophisticated industrial structure. This old paradigm consists of the mass production of essentially standardized goods in ever-larger units; an emphasis on quantitative goals for production, requiring ever higher inputs of capital, energy, and raw materials to produce more and more; and little attention to environmental impact, resource use, and conservation issues. In contrast, the new paradigm taking shape is identified with an emphasis on quality and diversification of products and processes, diffusion of small but highly productive units that rely on new technologies and are linked to a process of decentralization of production, adoption of process and product choices requiring far less energy and materials input per unit of output, and a greater awareness of the need to preserve the quality of local and global environments. The process of technological change spurs structural changes in the economy and society.