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<th>Information highways: paths to prosperity or poverty</th>
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Cyberspace is the new global commons, the new living space in which the global city grows and thrives.

Cyberspace is like the planet's surface, unevenly spread and developed: rich and abundant for some, void and remote for many.

This new area requires the formation and observance of a shared framework of values and ethics so that:
(a) the benefits for those most in need are optimized
(b) the use of Cyberspace is sustainable, renewable and catalytic for further progress.

Crime, violence, perversion and terror hover on information highways as they do on motor highways. Pornography, specially child pornography, hate groups, easy availability of potentially dangerous data (e.g. on bomb-making) hackers, viruses, et al represent the dangers lurking in Cyberspace.

Like the universe, cyberspace is forever expanding because: as media make the world smaller, information makes the world larger.

Information is the only commodity that grows exponentially: i.e. by accelerated multiplication.

Information is like an all-season, year-round crop that is perennially harvested every second, every minute, every hour.

The expansion of information is completely dis-proportionate to the expansion of other services and sectors of society.

Information highways are unique networks because they are always
Each user of the information highways can change them and add to their value.

Thus, information highways become a relentless, awesome force for change.

Information highways are the new routes to wealth constructed in Cyberspace. They generate both ‘infowealth’ and ‘moneywealth’.

The benefits of ‘infowealth’ are virtually all-encompassing. From better health care to education to knowledge to transportation to production to industry to agriculture to the financial sector to services to art and creativity.

‘Moneywealth’ from information highways is not necessarily spread as widely. Its benefits are more narrowly concentrated in fewer hands.

Is ‘information wealth’ or ‘infowealth’ truly tangible - or ephemeral?

The specific contribution of information highways to the creation of prosperity cannot be isolated (from other contributory factors) and evaluated over a sufficient period of time and in different conditions.

In sectors such as software development and computer hardware the contribution of the new sector of information technology is well measured.

But in total, composite terms, is there conclusive evidence that in developing countries information highways always bring prosperity?

Yes: e.g. Bangalore, India, and other similar places.

The abiding dominance of government-controlled corporations in aspects of information highways is a factor that prevents the full mobilization of the people’s energy and initiatives in using information highways in a dynamic manner.

Such government dominance of the information highways in South Asia applies to sectors such as telecommunications, electricity and energy, education and development policy.

The cost of entering and using the highways is still relatively high, and for those in poverty without a phone or a computer information highways remain beyond their reach.

But there are notable new initiatives to substantially reduce costs. For example: the Hamdard University of Karachi, Pakistan proposes to shortly introduce a student user service for the Internet at only Rs.4 per hour as compared to the average present commercial user charge of about Rs.35 per hour.

Another initiative is right here in Chennai in India.

Dishnet Ltd., Tamil Nadu, India. May, 1999.
User charge: Rs.1 per hour!
Rs.3500 (US$ 80) for 5 years of browsing.
- Rs.10 (US$ 0.30) for each extra hour.
- Connections to all cities in the state.
- First 14 Mbps international gateway in India.
- Local language content. Website updated every hour.
- Free Tamil e-mail facility.
- Servers at each gateway to serve 250,000 members.
- 1200 leased lines to start with.
- 200 ISDN actts in 12 months.
- Projected revenue:
  - Rs. 25 crore in 1st year
  - Rs. 800 crore in 5th year.
The building blocks of the information highway are already in place, in small or in large measure, in different countries:
- Computers and networks.
- Software
- Telecommunication
- Electricity and energy
- Multi-sectoral applications

The users of the information highway are pioneers who are building exciting new pathways to the future.

A critical mass of people is required before information highways can play a determinant and decisive role in stimulating prosperity in a country.

The travellers on information highways particularly in South Asia are still a very small minority. For example, there are about 100,000 users of the Internet in Pakistan in 1999 out of a total population of 135 million and out of about 25 million households. That works out to a percentage of 0.74% of the population and 0.4% of all households.

In recent times, in civil society, in the private sector and in the government, there is a new, heightened commitment to increase the use of information highways in Pakistan. There is scope for significant growth in every sector.

The social dimension of the users of information highway is that they become deeply involved in the use of computers and information highways and yet at the same time become disengaged and distant from the heat and dust of their own physical environment.

Cyberspace enslaves even as it liberates!

Information highways do not directly reach the poor.

Nor can the poor get off their dirt roads and begin to themselves use the ‘paved, metalled’ information highways.

The caretakers of those trapped in poverty, i.e. the social sector of the government, the private sector, NGOs, civil society organizations, overseas donors and multi-lateral bodies can use information highways to reduce poverty and promote prosperity.

But does this inter-locutory, intervening role, hasten or delay the transition from poverty to prosperity?

The nature of poverty is multi-dimensional.

Monetary poverty is only one type of poverty.

The poverty of opportunity and of equity is the most debilitating.

A recent study in Pakistan refers to the: “the return of poverty”.

The disparity and inequity in income between the richest and poorest across the planet and particularly in Asia and South Asia have substantially increased, not decreased, despite the gains made in the general standard of living in the past 50 years.

Poverty exists fairly widely in countries with highly advanced information highways e.g. today about 30 million people are estimated to live in poverty in the USA.

South Asia has the largest concentration of people living in poverty anywhere in the world: about 400 million people.

Another 200 million are just barely above the poverty line in a condition of: ‘quasi-poverty’.

There certainly have been significant improvements in the quality of
life and in the standard of living in South Asia during the 20th century, particularly in the second half of the 20th century.

Yet rapid growth in population, urbanization and social conflicts have neutralized or defused some aspects of the gains.

For different sectors of society, prosperity is shaped by a range of different factors. In varying degrees, information highways can play a determinant role.

Prosperity for the farmer is determined by access to:
- water
- seed
- fertilizer
- pesticides
- credit
- technology
- markets

The factor of weather is a great imponderable for the farmer.

If electricity/energy is available, then the information highway becomes a relevant input for some of the essential elements of prosperity for the farmer.

Prosperity for the small scale manufacturer is determined by:
- raw material
- credit
- energy/electricity
- technology
- skilled labour
- markets

Prosperity for the services sector is determined by:
- skills
- technology (telecommunication, information highway, etc.)

Prosperity for the employed worker is determined by:
- wages
- training
- up-gratation of skills

Can information highways be streaks of light in realms of darkness?

Can information highways create oases of prosperity in deserts of poverty?

Can information highways be short-cuts to prosperity?

One interesting example of an attempt to create information highways at an exceptionally accelerated speed is the ‘Venus project’ being developed by Microsoft in China for launch in end 1999.

China has over 1.2 billion people.
320 million TV sets.
Only 2.1 million Internet users.
(Since 1995, over 10 million computers were sold in China).

The Venus project is “... a combination of software and hardware that lets VCDs and other similar devices display Chinese language Internet content on an ordinary TV set.” (Time magazine, 19 April 1999).

Venus set-top boxes (using Windows CE) will enable over 320 million Chinese TV households to ‘leap-frog’ almost ‘overnight’ on to information highways to gain access to entertainment, education and communication technology.

Despite information being the most valuable commodity, it can only generate prosperity when it is used in conjunction with at least one other high-value sector or commodity, not on its own.

To be effective as catalysts for prosperity, information highways have to be part of, if not preceded by, a whole set of basic infrastructural
elements.

Physical, social, political, economic infrastructure are pre-requisites, or at least need to be simultaneously present, before information highways can help produce prosperity.

As part of an egalitarian political vision for change supported by a well-designed strategy, information highways offer the most promising opportunity to us for transformation and emancipation of the human condition.

Let's get going!