The new electronic ag

Information Science

Shahwar Junaid

The information age has arrived for only a small percentage of the world's population. One out every two persons interviewed by Brussels based European Union opinion pollsters said they do not know anything about the "information superhighway", "information society" or other developments in the terminology of information technology which includes computers, telephones, televisions and related facilities, linking consumers with services and other consumers across the globe. On the other hand, shipments of multimedia personal computers more than quadrupled in 1994 to 10.3 million units. From less than one per cent of the total number of PCs shipped out in 1992 nearly 22 per cent of those shipped in 1994 were multimedia PCs. Multimedia personal computers include more prosaic business functions with those of automating offices and homes while including the functions of modern entertainment units. Obviously a section of the public is purchasing this upmarket information technology and there is no doubt that its capacity for the two way exchange of information, opinions technology and information can impact individual lives and organised society, profoundly.

According to private sector estimates the US has 35 per cent of the world information market, the EU 27 per cent and Japan 16 per cent. The small percentage of the world population that is tuned into the world information network is becoming more empowered as technology is refined. This empowerment, as it is fashionably known, is a double-edged sword: while those with access to technology are in contact with others wired in like themselves, their contact with their surroundings, ordinary people, the majority of whom do not have access to technology becomes increasingly limited. This alienation can be particularly disruptive in developing countries where such groups identify not with their immediate surroundings but with their cybernet contacts, These groups of people, connected across international boundaries, are likely to acquire influence in their various spheres of expertise at an accelerated rate.

A G-7 conference on the information society held in February 1985 in Brussels was elitist if nothing else. The changes that the information society is expected to generate were discussed. There was no discussion of the primary factor limiting access to information tools: poverty. Those most concerned, the managers and owners of computer and telecommunications companies as well as governments, their main consumers, were well represented. Objectives of the conference included the removal of obstacles for marketing goods and informing the public about changes that will take place as a result of the introduction of modern information paraphernalia. Another objective was stated to be assurance of open access to markets in order to stimulate innovation and investment necessary to make the technology economically viable and accessible to larger numbers of people. The need to address the social and cultural implications of these new developments in conventional information media was, however, not discussed.

There is movement towards the dismantling of state telephone monopolies. The European Union has agreed this should happen by 1998 but whether this deadline is reasonable remains questionable. The United States has pledged that it will introduce legislation to remove restrictions on foreign investment in American telecommunications for those countries that also have open markets. Limits of 25 per cent foreign ownership of telecommunications companies could go up to 100 per cent. It would be useful for countries like Pakistan, that hope to enter world markets, to note that in key areas that impinge on security, the governments of the most developed market economics of the West feel the need for regulation and control.

France and other European countries are concerned that the telecommunications revolution could pose a threat to their culture and language. Now the major players in the field have planned pilot projects covering everything from the setting up of experimental libraries to healthcare networks to show consumers how they can benefit from the new information superhighway even though potential consumers are only a fraction of the entire population.

The incontrovertible fact is that the development of new information technology is creating new social, cultural and technological divisions not just between nations but within nations. The level of access is severely limited by income. According to a 1993 US Census report 68 per cent children in families enjoying an income of US$75,000 or more had access to computers at school. In this income group 68 per cent had access to computers at school. Only 53 per cent of the children in families with an income of US$20,000 or less had access to computers at school and 15 per cent of them had access to computers at home. A significant difference in home access to computers indicates how income influences possibilities for individualised, discretionary use of technology which may limit creativity. This is the view of those who feel these information tools are crucial for future success. Private enterprise says it can bring down costs if open access to markets worldwide is ensured. However, the issue of dumping of first generation technology, that has become obsolete in the West, in Third World countries needs to be addressed. There is also the question of embargoes on the export of even the most primitive technologies to countries like Pakistan where consumers have to pay through their nose for it.

It is reported that American companies have spent nearly US$01 trillion on fancy computer systems over the last decade without showing any significant increase in productivity

It is reported that American companies have spent nearly US$01 trillion on fancy computer systems over the last decade without showing any significant increase in productivity. The Government of Pakistan, the biggest purchaser of computer notebooks in the country, needs to keep this in mind before investing further in information technology: it is not unusual to see employees and dependents of organisations with sophisticated info systems playing computer games or watching porno sequences. Optimum produc-

ge The Nation 3-8-98

tive use is seen only in sweatshop type private computer training centres in countries like Pakistan, where each unit is used by students putting in shifts during 18 hour work days.

As information systems become interlinked security of information that is created, stored and transmitted is becoming a major problem. For instance one cyber pirate in the United States remained untraced for over 03 years. Nevertheless, big companies have been doing business electronically for some time now. In 1997, a survey revealed that three in four of the 60 million people wired to the Web used Internet for shopping during the previous month. Several software firms have been trying to develop digital currencies but the experiment has not been successful so far. However, people are getting used to the encryption of credit card numbers and as fears about security are dealt with, the number of credit card transactions over the Internet, which is quite economical, is increasing. This will pave the way for electronic money.

The idea of electronic moneys may become a reality when the stored value card, similar to a credit card in appearance and recently tested, becomes generally used. These cards are called electronic purses. These cards store digital tokens that can be exchanged for goods, like tangible cash. Banks issuing the cards would make a small profit on every electronic cash card transaction while the cost of handling physical currency would be eliminated. Banks hope they will eventually be used for small repeat transactions and the frequency of use, such as the purchase of newspapers, will bring in regular fees.

All these developments are for the convenience of the public alongwith reduction in the cost of financial services and increase in the use to maintain and even increase profits accruing to those who provide services. It is expected that the number of electronic money providers will increase in the industrialised countries and competition will be on the lines of that between credit card consortia.

Central banks will need to review their role in the control of money supply while regulating the activities of issuers of electronic money. The impact on money supply of the common use of electronic money by the general public, in preference to the physical handling of currency issued by the state, will have to be evaluated. If costs are kept competitive it is likely that this particular development will not increase the gulf between the lifestyle of those with access to technology and those without access.