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Broadband: A Key Strategy For Development

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The technological innovation and commercial development of telecommunications have gone hand in hand—particularly during recent decades—and the combined influence of economic, communications and technological developments are fast leading towards what is now known as the "information society". Broadband telecommunications are beginning to feature highly among these technologies, and their growing prevalence is testifying to their future potential for users, businesses and governments alike.

Broadband, which has been referred to as the infrastructure of the knowledge economy, is seen by Middle Eastern countries as crucial infrastructure for achieving their economic and social goals. High hopes have been placed for the revitalization of demand for the products and services of telecommunication sector through broadband, and many describe it as a panacea for a range of social and economic woes. Despite this, the take-up of broadband in the Middle East has been below expectations mainly due to its high cost and lack of appropriate policy aimed at promoting broadband.

Broadband refers to a range of enabling technologies that offer high-speed always-on connectivity, and allow users, be they individuals, businesses or organisations to do the things that matter to them more conveniently, more entertainingly and more effectively.

Performances in the Middle East (2004):

	Internet Users (per 1,000 people)	Broadband Subscribers (per 1,000 people)	International Internet Bandwidth (bits per person)	Price Basket for Internet (USD per month)
Iran	65	0.2	15	5.9
Israel	397	135.3	471	29.8
Jordan	86	0.9	29	26.3
Kuwait	237	5.4	120	24.7
Lebanon	122	7.9	14	36.9
Oman	37	0	15	23.6
Saudi Arabia	95	0.4	56	34.7
Syria	45	0	1	55.2
United Arab Emirates	397	13.1	543	13.1
West Bank and Gaza	43	0	12	25.4
Yemen	5	0	-	30.8

Source: World Bank, ITU.

Benefits to Users

As the Internet matures and moves from being largely a luxury towards being a basic necessity, faster access to richer information becomes more important to users. Broadband allows more information to pass to the user's computer in less time than with slower connections. This increased speed can offer significant time savings and can significantly reduce frustration levels for users. This is especially true for those who download large amounts of information from the Web.

Broadband enables users to access and exchange high-quality graphics and other bandwidth-intensive content, such as 3D imagery in video games that would be either impossible or difficult to use over slower connections. There are many content-rich applications that have been identified as potential drivers of broadband take-up. This ever-growing list, for which many benefits have been cited, includes applications in voice, audio, video, e-commerce, e-education, e-health, government services, online gaming, and file sharing.

Communication applications such as e-mail and instant messaging have been major drivers of Internet usage. A key attribute of broadband in enhancing the effectiveness of these communication applications is that it can be offered as an always-on connection, usually priced at a rate that is independent of the time spent connected. In addition, broadband does not tie up a telephone line as a typical dial-up connection does. Thus, broadband facilitates communication through increased availability.

Furthermore, the increased bandwidth offered by broadband enables the use of other communication applications, such as video-e-mails, file and photo sharing, and videoconferencing. Moreover, broadband enables higher levels of interactivity than other communication channels, thereby providing a better user experience.

Benefits to the economy

For many Middle Eastern countries, broadband forms part of the goal of establishing an information society. The idea is that people's lives will improve as they have access to better information and applications concerned with health, education, finance, and a range of other topics. For these economies, the promotion of broadband forms part of an overall plan to realise the benefits of access to information in digital form. Specifically, three types of benefits arise:

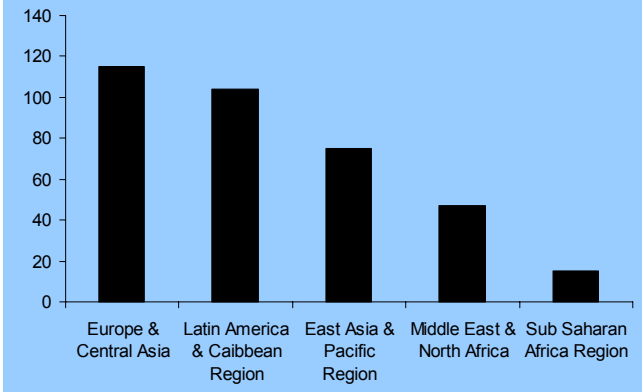
How to Promote Broadband Demand:

Over and above differences in culture, landscape, and technological development, economies that have been successful in promoting broadband have several key factors in common. A successful broadband economy is characterized by:

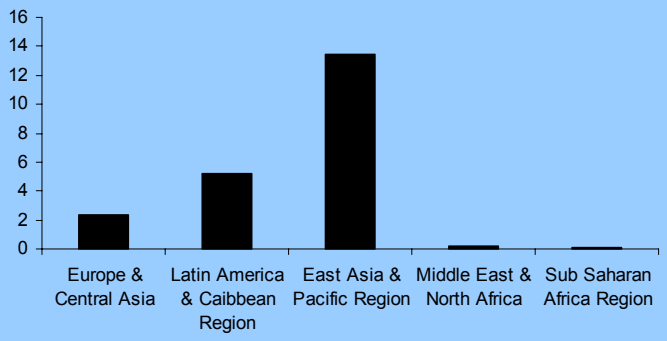
- **Informing the public about broadband.** Efforts to promote demand for broadband depend largely on the target market being aware of the products available, and aware of what benefits broadband can provide them. Increased exposure to broadband should boost take-up rates. Growth should be rapid once penetration reaches a certain critical mass.
- **Making effective use of broadband through applications and content.** Broadband adoption is much higher in countries where users make full use of current broadband applications. This may include high usage of IP telephony, video/audio via broadband, online gaming, and telecommuting. Content in local languages also plays a key role. Policies that encourage these uses should boost penetration rates.
- **An environment that fosters broadband innovation.** Economies must have policies and incentives in place that create a fertile environment for broadband content and application development. This includes important issues such as thoughtful intellectual property protection, adequate funding for Internet research, and consumers ready to participate in developing new, high-bandwidth applications.
- **A competitive market structure that keeps prices low.** There is no substitute for true market competition in broadband to reduce prices. Subsidies, grants, regulatory obligations and other financial support are only temporary fixes and cannot replace a well-functioning market. Efforts to ensure the market runs efficiently will have the greatest effect on prices, and in turn on broadband adoption.

- **Creates New Market Opportunities.** The networked economy increases convenience and choices for consumers by fostering closer connections with companies and more knowledge about choices. For businesses, it creates the opportunity to sell their goods and services in larger markets, potentially even global markets. By creating new types of interaction between producers and consumers it creates new business models and new businesses. Broadband networks can also help to attract foreign direct investment. This brings new money into the economy and serves as a conduit for transferring technological know-how.
- **Overcomes Barriers.** The ubiquity of information in the networked economy creates much greater access for everyone. Business people can more easily keep abreast of what competitors are doing and key industry trends. Because the networked economy is global in scope, the effects of physical isolation are reduced. Firms and individuals can more easily become informed about public processes and policies and organize to participate in their development.
- **Promotes Efficiency and Reduces Costs.** Firms can more easily shop for lower cost or higher quality suppliers. Production, inventory, and delivery can be streamlined and made more transparent to both workers within firms and between customers and firms. Transaction costs, including marketing, ordering, and fulfillment can be reduced. Additionally, many countries recognise that promoting broadband adoption encourages innovation, thereby stimulating growth within the economy. As a new technology, there is significant scope for innovation surrounding broadband as people interact with it and new applications are developed that take advantage of its characteristics.

A Long Way to Go:



Internet Users per 1,000 people



Broadband Subscribers per 1,000 people

Source: World Bank (2004 figures)

Conclusion

A vibrant private sector—one where firms invest, create jobs, and increase their competitiveness — promotes growth and expands opportunities for poor people in developing countries. Broadband is an essential part of national infrastructure and private sector potential. It can create business opportunities, especially for companies located far from urban centers, and improve links among firms, suppliers, and clients. When used well, Broadband can also make management and operations more efficient.

This new technology can be especially valuable for firms in developing countries because it provides opportunities to connect to markets and participate in trade, domestic and foreign. As with other factors of production, such as capital and labor, Broadband use differs based on businesses' size, ownership, and export orientation.

Broadband penetration is a crucial factor which is increasingly becoming the benchmark used to ascertain the health of a nation's economy.

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