

Cable broadband is where the future is

A reliable wired broadband infrastructure is critical for creating more jobs and economic growth

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India's manufacturing and agriculture are stymied by regulation and farmer market structure.

The boom in IT services is under threat of technology-led disruption. Seven-hundred million Indians are under-30 with half under the age of 15, many more than in China. How will they rise?

In India, freedom to choose is hindered by regulatory and tax complexity. The only way forward for India in this digital world is facilitating broadband over the already ubiquitous cable television wires.

But isn't broadband everywhere in India now? No, it isn't.

According to TRAI, there is a little over one broadband line for every 100 people in India. There are 10 lines in Brazil, 20 in Russia and China, 30 in the US and 40 in South Korea.

The World Bank reports that each new 10 wired broadband lines per 100 people improves per-capita GDP by ₹800,000. In China, it resulted in GDP growth of 2.14 per cent. Each broadband job creates 2.5 to 4.0 other jobs in a multiplier effect. While mobile broadband is a substitute for wired broadband and can

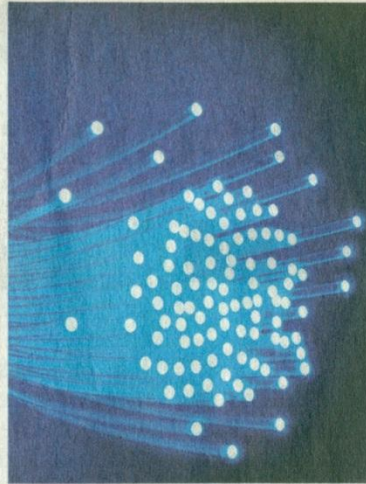
enhance growth in low-income countries, each new 10 mobile broadband subscriptions per 100 people reduces GDP per household by 0.52 per cent.

Reliance-Jio gave the common man an addictive taste for affordable mobile broadband but it is also experimenting with wired broadband.

Sam Pitroda worries that the unprecedented amount of knowledge available freely on the Internet may be locked up before Indians take advantage of it. Whether it is health assurance to 500 million low-income Indians or improving farmer incomes, a ubiquitous, reliable wired broadband infrastructure is critical.

Cable broadband is the elephant in the room. Consider this: The existing cable into each home has a capacity of 856MHz. In comparison, Reliance-Jio's capacity at each cell tower of 20MHz is shared by the entire local population and, like all wireless, suffers loss of signal or speed inside Indian brick and mortar dwellings.

In 240 million Indian homes, half have cable access but only 10 per cent have a telephone. Cable subscription is linked to literate homes with electricity; with the penetration of both at 75-80 per cent,



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cabled homes will increase.

Cable broadband is based on the mature DOCSIS standard. That means equipment is readily available, interchangeable between different vendors, affordable, and easy to install, replace, and repair locally with limited training. Wireless, telephone-DSL and fibre technologies are more complex, proprietary or expensive. A local cable network can be upgraded to broadband in 8-12 weeks with existing labour. Even the ₹10,000-crore rural WiFi project will be easier to implement over Cable broadband.

Cable broadband delivers 1.5Gbps speed to each home in many countries along with HDTV channels. The standard can deliver 10.0Gbps downlink and uplink speeds. There is nothing else on the Indian horizon with this potential.

So, where is the catch? The government scrapped plans to regulate the industry in the mid-1990s. This lack of regulation may have helped the country in getting 'quickly cabled' but it also led to non-transparent financing with network assets deployed freely without rights on government property. The result is a fragmented local cable industry with 50,000 operators who assert property rights through might-is-right and influential local news channels in a heady mix of media, politics and non-transparent cashflows. But most countries had a version of this colourful scene before institutionalisation.

An opaque industry

A non-transparent industry whose assets are on the streets without verifiable title has no property rights and cannot attract institutional capital. But local cable assets are on government property and carry critical news, sports and entertainment. The government's na-

tional security responsibility calls for digitally documenting these assets.

Capital expenditure to upgrade from one-way cable TV to two-way broadband is required only on the local cable network. The government can facilitate the upgrade by authorising rights-of-way for cable and providing access to capital to operators, subject to two conditions: (i) operators organise as co-operatives or mergers in minimum blocks of 100,000 cabled homes in compact, geographically contiguous areas; and (ii) complete the upgrade within six months under a national cyber-security framework. The government can auction networks that don't upgrade.

Anti-competitive practices in the broadcast television industry hinder Cable Broadband. Local cable operators own and maintain most of the fixed assets in the business, directly serve customers and bill and collect subscriptions. Broadcasters and their collection agents or "MSOs" bundle content and use proprietary set top boxes to limit local operators' business flexibility and subscriber choice. The boxes and conditional access systems should be standardised.

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