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Media and Broadcasting Industry in India

Government Communications Systems

Digital India

Information and Communication Technologies
for Development



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MEDIA &
BROADCASTING
INDUSTRY
IN
INDIA



AN ASSESSMENT OF CONTENT,
REGULATION, BUSSINESS AND POLICIES

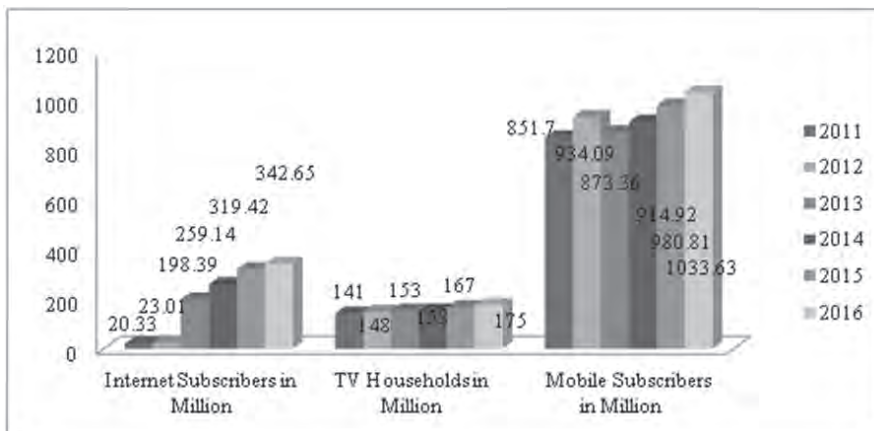


GITA BAMEZAI
WITH
KAMAKSHI KHAZANCHI
MANOJ YADAV &
MANUSHI

The convergence of telecommunications, media forms and digital technology has changed the communication spectrum globally. These changes have varying effects on the nature of the growth, content and experience of media consumption. This study explores the recent trends in the media and broadcasting industry in India by assessing reformulation of content, technology up-gradation and its impact on business and regulatory mechanisms. Based on a national survey the study examines the issues of regulation and the perspectives of different stakeholders and about the contending issues at present and how these would roll out in future. The study also provides some signposts for changing the track of media policy and tapping opportunities in alignment with the technological growth.

Ubiquitous presence of the media technology today has transformed the engagement experience of the media user to a hyper activity level which involves active selection, interaction and sharing. The burgeoning media landscape in India with about 869 TV channels, 243 private FM radio stations, 175 million TV households out of 277 million households¹, 331.66 million internet users and over 1,059.29 million mobile users today, has signaled an exponential growth in viewership and accelerated demand for content across all platforms (TRAI, 2014-15). According to the Planning Commission of India Report (2011), one of the sectors outperforming the national GDP growth, year after year, is the Media and Entertainment (M&E) and comprising of television with Compound Annual Growth Rate (CAGR) of 22%, radio at 28% and internet with the highest CAGR of 43% due to its smaller base. This projection matches with the M&E industry projection estimation of double-digit growth at 14.9% CAGR (FICCI-KPMG, 2012) during 2011-2016. Both reports point to the acceleration for the sector and as the broadcasting sector emerges as the fastest growing industry in the country, lot of hope and expectation revolves around the growth, investment and employment generation within the sector. In such a scenario repurposing the content by making it available through cataloging and categorisation is an imperative and a challenge.

Figure 1: Trends in Growth of Internet, Television and Mobile



Source: Overview Universe Update 2011,2012 , 2013, 2014, 2015, 2016 (<http://www.tamindia.com/tamindia>) and Performance Indicator Report 2011, 2012, 2013, 2014, 2015 & March 2016, TRAI (<http://www.trai.gov.in>)

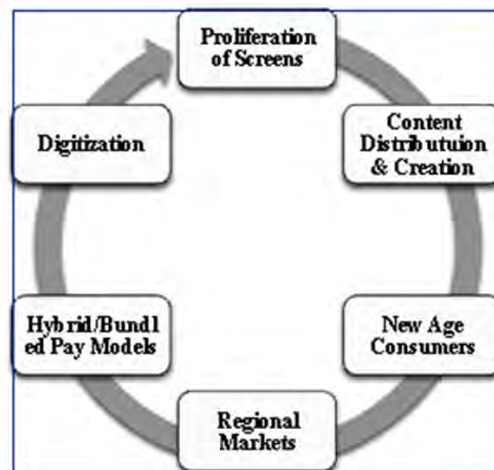
Media in India: Mirroring global trends

India continues to be the largest television market after USA and China with cable and satellite penetration at almost 80% of the total transmission

system. With a total number of TV channels touching 869 in 2016 (TRAI Indicator Report, 2012) and many more channels in the offing, the big picture is just unfolding. The extant growth of television today with almost 61% penetration in the country, has positioned India as one of the largest upcoming media markets in size and scale. Demand for satellite bandwidth, DTH expansion, HD channels, and many more options available, combined with ever-willing urban consumers to pay for the content are some of the trends becoming entrenched in the Indian media landscape. Together with these, other important factors expected to trigger changes in this burgeoning industry are: proliferation of screens, content creation and distribution, new age consumers, regional markets, hybrid/bundled pay models and the digitisation process.

In his book *Digital Destiny: New Media and Future of Democracy*, Jeff Chester (2007) echoes the pattern which is unfolding in India of monopolistic tendencies in ownership which would ultimately translate into business entities driving the expansion of convergent media platforms. The media ownership is going through a period of concentration and consolidation with increasingly fewer owners of the major outlets of newspapers, broadcast stations, and cable systems and their programming channels. The dangers are becoming apparent with media entities tying up with business groups in upgrading technologies while editorial freedom and decision-making would acquiesce to the market forces. A key reason for this consolidation, and disregard of what a robust and public-spirited press and electronic media should provide us, is the very corrupt nature of media politics.

Figure 2: Factors Capable of Triggering Changes in Media Industry



The media industry in this state of flux has been witnessing global trends of consolidation and convergence over the last ten years. Convergence is breaking traditional barriers of communication and consumers are increasingly less dependent on a single medium as source for the content since 'channels no longer matter but programmes do'. This pattern of growth experienced by the Indian broadcasting industry emulates the trajectory of growth witnessed in North America during 1998-2003, and subsequently in Korea (2003-2007), and Taiwan (2005-2010).

These trends (Figure 3) provide a comparative assessment of how the global media industry is undergoing transformation in the context of technology development and its ripple effect on aspects of business, revenue generation and access to content and services. The Indian broadcast industry is still evolving from a traditional media set-up to a new technological media regime by offering possibilities for creation, modification and sharing of content through the use of simple tools.

Figure 3: Global Trends vis-à-vis Trends in India

GLOBAL	INDIAN
• Multi platform content delivery	Rising DTH penetration (48.28million nationwide) .
• Tapeless workflows	Burgeoning Mobile industry
• Transition to HDTV operators	Growing Regional Markets
• IP networking and content	Multi platform content delivery
• Improvements in video compression efficiency	Greater Addressability
• Video on demand	Fluctuating business models
• Cloud based services	HD Quality/Tapeless Workflows
• Move to automated workflows	Targeted Advertising
• Targeted advertising	3 Cs: Content, Consumer & Corporatization
• 3D TV	Mushrooming media schools

Global trends will be mimicked in the Indian media industry but certain intrinsic trends peculiar to our situation - like the rural-urban divide, government regulation and policies, digitisation, mushrooming of private media education institutes, limitation of skilled manpower and growing class of techno savvy prosumers - would be the distinguishing factors as well.

8 Technology paving way for digital ascendancy

The Indian television industry has witnessed one of the most significant changes of this decade by the introduction of the Digital Addressable System (DAS) across the country in four phases. Digitisation of Cable TV Transmission leads to a greater understanding of the dynamics of the pay-TV market in India, because digitisation and addressability go hand-in-hand. Digitisation for the consumer means better viewing quality, access to multiple channels and multi-tiered services and pricing. The technological drive of the broadcast industry is moving at breakneck speed and leapfrogging into latest technological initiatives. Some of the technologies globally making an impact are: Pay TV, IPTV, broadband technology, new devices and associated interactive apps, HD quality, multi platforms, 3D TV, OTT (Over the Top), tapeless technology. The convergence and digitisation of TV and the internet is changing the entire media landscape and media experience of the average television viewer. From linear analogue broadcasting, viewers are not only exposed to HD quality content but experiencing seamless interactive services, like video on demand (VOD), pay per view (PPV) and content availability on multi screens (PC, tablets and smart phones). Digitisation may not translate into cheap subscription fees but the consumer has more options at hand when it comes to quality and variety.

Figure 4: Components of Broadcast Working Model

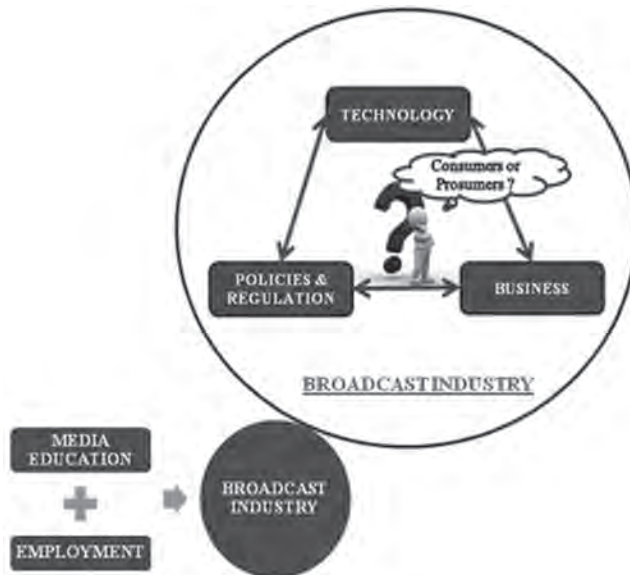
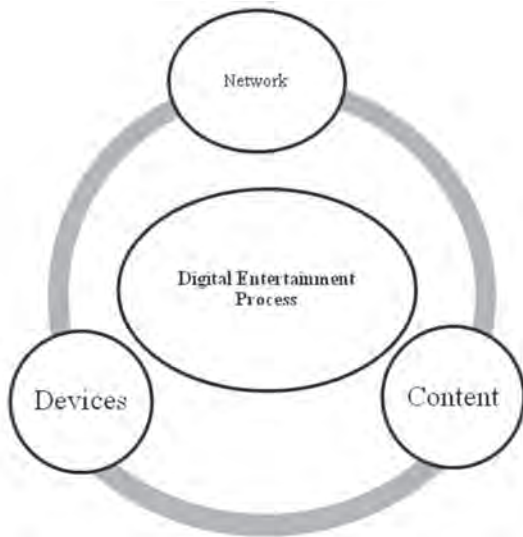


Figure 5: Digital entertainment process at core with Networks, Devices and Content driven by digital demands



With 1011 million cable television subscribers, 76.05 million registered DTH subscribers (including 41.152 million active subscribers) and around half a million IPTV subscribers form the pay TV universe, the span of television broadcasting has expanded significantly in the last five years (TRAI, 2014-15). According to market estimates, Direct-To-Home (DTH) market is expected to grow at a CAGR of 13.2 per cent to get 100 million subscriber mark by 2018. The Internet Protocol Television (IPTV) market in India is still in its early days and is expected to grow at a CAGR of 79.5 per cent to touch the 6 million subscriber mark by 2018 (Frost & Sullivan, 2012).

Radio Revival

With almost 90% mobile users exercising radio accessibility, this trend is compelling radio companies and mobile service operators to innovate and explore possibilities of convergence.

Radio had been the main medium of entertainment, information and education even before the television grabbed eyeballs. The All India Radio (AIR), the public broadcaster, has a network comprising of 414 stations and 596 transmitters -145 MW, 48 SW and 403 FM, which provide radio coverage to 99.20 per cent of the population and reach 99.20 per cent area of the

country (TRAI, 2014-15). The opening of FM radio for private participation in late 90s provided an impetus for the revival of the radio industry. Buoyant by the success of FM service, the government has announced the expansion of FM Radio broadcasting by extending radio's reach to 294 towns and 839 stations as part of the Phase III expansion. With opportunities and investments looking up for the industry, even demand for Community Radio Stations (CRS) is becoming more. The growing number of CRS from 20 stations to 121 in 5 years and 191 (TRAI Performance Indicators, 2016) presently has pushed the concept of community-led local radio stations as credible source of information in the local settings.

Digital Transformation of Media Market and Business

The media industry in India is rapidly changing as new technologies are being deployed which span from capturing information to storage and management of media, including broadcasting global content to the Indian audience (Technology, Media & Telecommunications India Predictions, 2016). With a spurt in digitisation drive in the metros and other cities, India would be the 5th largest digital market in the world in terms of revenue (www.digitaltvresearch.com). However, technological changes would experience hurdles if high cost of network upgrades like Set Top Boxes (STBs) is not readily made available at subsidised rates. For the government, greater transparency would yield more revenue and simultaneously pursuit of the National Broadband goals would boost economic growth. Without retracting its pace during global economic recession and financial crisis, technological innovations have enabled choice and consumption of content across multiple platforms. Almost 35 hours of content gets uploaded every minute on You Tube and Facebook is used by 1 out of 13 people on earth (Accenture, 2011).

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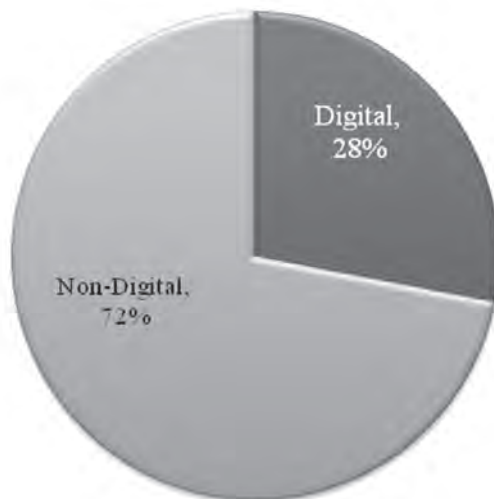
Content players today can move directly to consumers and distribution service providers may not be able to follow the policy of 'go it alone', while device manufacturers have an opportunity to become 'access-gateways'. Social networks and cloud-based services can be intercepted to provide insights into the needs and behaviour of new online consumers to capture greater market share.

Key Drivers of Growth in Media Industry

Convergent technologies have transformed the media distribution network system in an unprecedented manner ushering in a growth regime where the media industry at 17 billion dollars annually is poised to reach the

100 billion mark (CII-PwC, 2012). Advertising will see a competitive digital growth and non-digital resilience at the same time. Global digital advertising revenue will rise at a 12.2% CAGR as against just 1.2% for non-digital advertising. However, non-digital will still contribute over 60% of global ad spend in 2019 (PwC Global Entertainment and Media Outlook, 2015-2019) since the expansion of the media sector in the rural areas in India will keep the demand for the traditional and digital media in constant flux. India has responded to the digital age a little late compared to other global digital markets. Presently the industry is beset with limited digital infrastructure while the economy is turning to the technological upgradation.

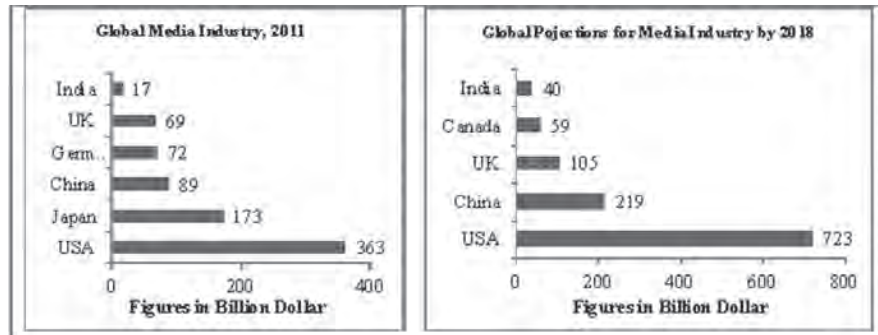
Figure 6: Global Digital Ad Spending, 2011



Source: PwC Global Media Outlook Report, 2012

There is an upsurge worldwide for phasing out analogue and adapting to the digital regime evident in the 12.1% increase in the global digital funding compared to previous year (PwC Global Report, 2011). Imperatives of reforms like digitisation are crucial but have not allayed fears that the industry has reached a level of stagnation since the scepter of economic slow-down can still cast its shadow. This is a pessimistic assessment compared to reports of double digit growth of 12% to 13% and projections at 16% by 2016-18 for the media industry. For enlarging the debate about the viability of unbridled growth, a fundamental shift is required in the industry. The need to evolve a consumer driven business to consumer model will propel digital transformation.

Figure 7: Global Media Industry Business



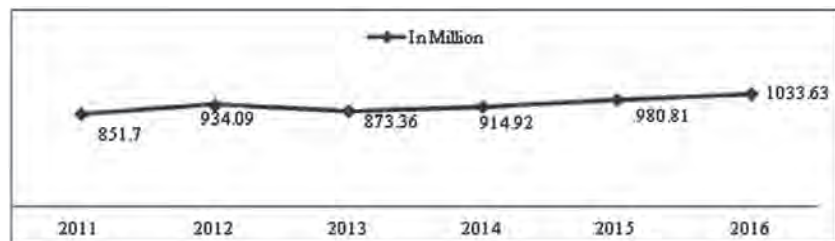
Source: PwC Global Report, 2011

http://trade.gov/topmarkets/pdf/Media_and_Entertainment_Top_Markets_Report.pdf

Silent Revolution Made Possible by Mobile

A silent revolution in the form of mobiles has inundated the media market. Today TV is also being challenged by smart devices like the smart phones, tablets which allow accessibility on the move, especially catering to the next generation. Market for this technology can be tapped as well but with some trepidation since “one size fits all strategy does not work for long”. A comparative study of the US market *vis-a-vis* Indian Market for the year 2010 shows there were 292.8 million mobile subscribers in US while 771.2 million in India achieved in a shortest period. At present mobile revolution is surging in the Indian market with total wireless subscriber base at 1058.09 million in 2016 (TRAI, 2016) whereas wire line base has dropped by 2.31%. Mobile penetration would lead to regionalisation of content and provide access to various services. Mobile is no longer treated as a device for telecommunication but a gadget to access diverse modes of content and information.

Figure 8: Mobile Subscribers in India

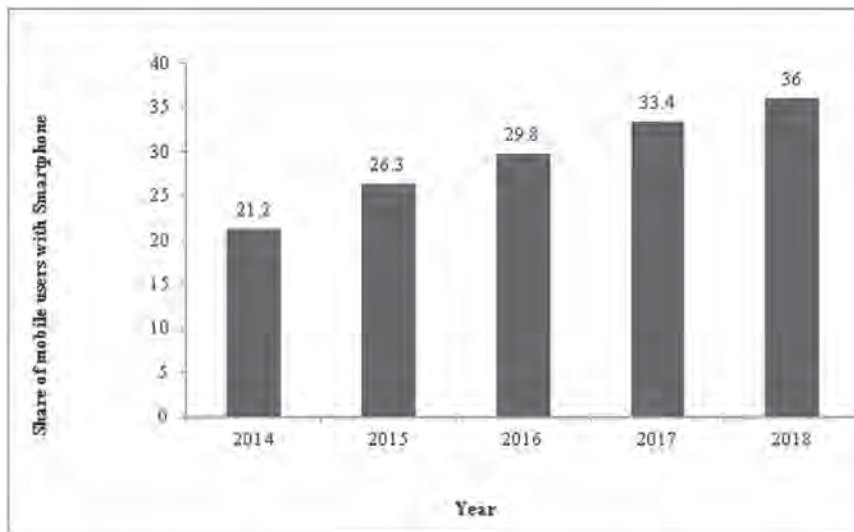


Source: Performance Indicator Report 2011, 2012, 2013, 2014, 2015 & March 2016, TRAI (<http://www.trai.gov.in>)

There is a visible demand for smart phones which has been growing steadily. India is expected to soon overtake the US as the second-largest smart phone market. The country's smart phone market will grow at a CAGR of 23% through 2018 and would account for 30% of the global growth during the period (Morgan Stanley Report, 2016).

Unlike in the mature markets where internet has reached a saturation level, there is still hope in India for more expansion.

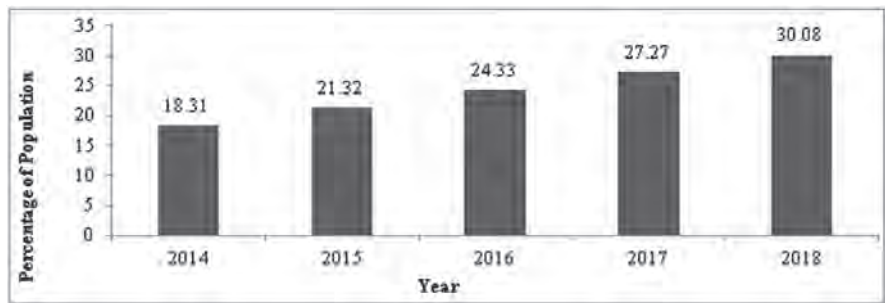
Figure 9: Share of Smart phone Mobile phone users in India



According to Economic Times (2012) report, Singapore, Hong Kong and Australia as well as Urban China have higher smart phone user rate than the United States. In Japan, a person has an average of 45 applications on his/her mobile phone while United States has a low of 23. Relocation to Asian and other developing countries by search giants like Google, which hired 600 people in the region and invested \$700 million to establish new data centres in 2012, indicates substantial shift in market priorities and direction of further expansion. India tops the position of countries with mobile internet subscriber growth (50.8%), followed by Mexico (42.2%), Pakistan (42.2%), and Chile (40.1%). The demand for smart phones sales has shown a 3 digit growth rate, but compared to other South East Asian neighbours, the smart phone penetration in Indian market is only 10%, whereas in Singapore (72%), Korea (67%), Hong Kong (58%), and China (42%) smart phones have replaced conventional mobiles.

However, wired internet access market is expected to show only a modest growth at present because of encumbrance of pricing and infrastructure. As the mobile industry grows by leaps and bound, mobile internet access is expected to grow rapidly which would spur the demand for smart phones. The new media technologies bring convergence of technology and content with internet, emerging at the core of these convergence services. Compared to other Asia-Pacific countries, though India stands quite low in overall internet penetration at 26% (www.statista.com), it is still riding high on wireless broadband by contributing almost 81% of the total internet penetration. To boost its penetration widespread broadband roll out will enable consumption of content anywhere and on any device.

Figure 10: Mobile phone Internet user Penetration in India



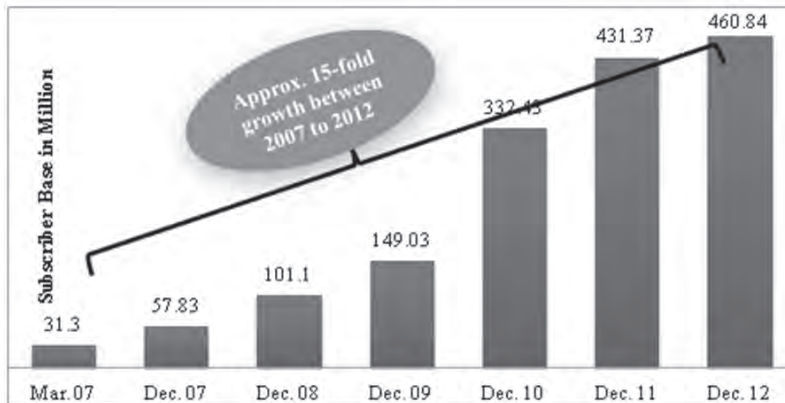
Source: <https://www.statista.com/statistics/309019/india-mobile-phone-internet-user-penetration/>

With dispersion and availability of the New Media, technology is blurring the lines between telecommunication and broadcasting. The new age devices flooding the Indian market, so as the new generation demands for such devices. Almost 550 million or about 42% of the total population constitutes the youth in country so the demand for content anywhere anytime is bound to increase. Interactivity holds the key in this scenario with smart phones, tablets, wireless broadband becoming more affordable. The television content on the mobile is an example of convergence not only at the level of handset device but also at the level of networks which provide this service. Two forces are currently driving mobile television development and its commercialisation: network providers/mobile television service providers see it as additional possible revenue over and above voice income flow; and cell phone manufacturers see an opportunity to sell new, more expensive television-capable handsets. Other options available to the customers, like gaming, surfing, listening to music or FM, video downloading has detracted attention from mobile television. With diverse options available, customers are likely to be more circumspect and selective in years to come.

With dispersion and availability of the New Media, technology is blurring the lines between telecommunication and broadcasting.

There is a steady growth in subscription base of wireless data services [approximately 15 fold (14.72%) growth in seven years] which only confirms the growing potential of mobile television market with as many as 460.84 million subscribers (2012) capable of accessing wireless data services as against 31.3 million in March 2007 (Figure 11). The internet penetration presently may look low with only 26%, but with impetus to government regulation leading to sunset of analogue transmission, digital cable growth is bound to leapfrog.

Figure 11: Subscriber Base and Access to Wireless Data Services



Source: TRAI Indicator Report -March 2007, December 2007, 2008, 2009, 2010, 2011 and June 2012, TRAI (<http://www.trai.gov.in>).

Social Media, Animation and Gaming

India is ranked as the seventh market world-wide in social networking. Social media in India is growing exponentially, especially among the younger generation. With so much to offer Social Media has become a force to reckon with as it is recognised as a unique component of the consumer decision journey. As compared to users' position in the traditional media like print, television, radio, the amount of content generated today by the online users far exceeds the content developed by the daily newspapers. The agility of social media as a format can be used by several governments to engage with various stakeholders, seeking inputs into policy making, recruitment, and providing access to services. The complete changeover from classic media to broadband media will take time to materialise and until then both will coexist.

The growing number of channels in kids' genre offers an abounding potential for animation and character licensing in India. Indian gaming consumer and services market had 35 million consumers in 2005 which has

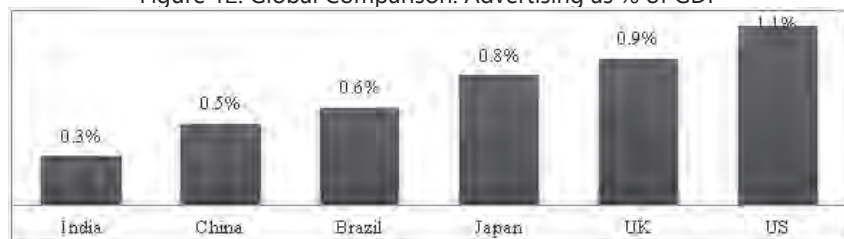
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grown to 343 million in 2010. On-line gaming is fast making inroads along with increased broadband penetration to expand its demographic base and stimulate spending. Indian animation industry was estimated at 28 billion INR in 2011 and is expected to grow at CAGR of 18% to reach 66 billion by 2016 (PwC report, 2011). Declining trend in Advertisement Revenue per User (ARPU) is compelling the market players to switch to alternate revenue sources. Animation continues to offer newer avenues in the form of e-learning, through mobile games, advertising and character licensing. There is an expected growth in global animation and gaming market from \$122.20 billion in 2010 to \$242.93 billion by 2016 with the compound annual growth rate of 12.94% from 2011 to 2016. In the global scenario North America forms the largest segment with about 42% of the overall share but Asia-Pacific and Japan in particular is the fastest growing region with an expected CAGR of 19.08% from 2011 to 2016 (marketsandmarkets.com).

Emerging Business Model

As technological advances increasingly get shaped and directed by requisite policy changes, the business is expected to go through a metamorphosis as well. The broadcasting business model is witnessing unprecedented changes marked by emergence of new markets, discerning consumers and their predilection, but a higher market share and revenue targets for broadcasters as well. At present, advertising revenue, which constitutes a major chunk of 35% (PwC Report, 2012) and is crucial for survival of the broadcasting industry, is now showing a disconcerting shift. Advertisers are now moving in bulk to other more lucrative platforms for their products. As channels are struggling to break even, industry experts propound primary reasons for decline in quality content due to the failure of the traditional business model heavily dependent on advertising revenue. For the broadcasters it is a Catch 22 situation since ‘good content comes at a price, bad content fetches no price’. The industry is experiencing diversification both horizontal and a vertical expansion with the purpose of remaining afloat and optimising profits through innovative market strategies.

Figure 12: Global Comparison: Advertising as % of GDP



Source: India Entertainment and Media Outlook 2012 – A Price water House Cooper Report

As compared to the Global spend, India has a good share of the advertising at 0.3% of GDP and this amounts to 33% of revenue generated through advertisement in M&E industry. This is indicative of the vast potential yet to be tapped which can provide some succor to the industry looking for a way out of the tight financial situation. India as a country presents a diverse and differentiated picture with regard to how each region spends on the broadcasting time.

In the new environment, business and market are proving as catalytic agents for greater vibrancy and consolidation. Business models are undergoing unprecedented changes in the new digital paradigm; fragmentation is what businesses will have to contend with. Paradoxically, industry is in a conundrum at this stage with limited resources, infrastructure, time, money, bandwidth and talent. Although advertising driven linear television remains central, its fundamental economics are structurally challenged today with rise in digital advertising. Indian M&E industry shows continuous growth in terms of revenue as it has generated 1,120 billion INR in revenue in 2013, an increase of 19% over the previous year. India's television industry form the largest segment of the Indian M&E industry which shows the growth of 366 billion INR in 2012 (Revenue from subscription in 2010 has been revised due to changes in the number of DTH subscribers, as per TRAI) to 420 billion in 2013, representing year on year growth of 15% (PwC Report, 2014).

Meeting New Challenges: Content, Quality and Control

As digitisation and convergence process gets embedded, simultaneously the industry will witness consolidation of business for the prized share of the advertising revenue. Potentially a mixed model based on advertising and subscription is an alternative to experiment with. Unlike the mobile industry which has successfully monetised its business model, the broadcast industry with over dependence on advertising revenue is unable to regulate and put a cost to content access. The 24-hour news has 'unleashed a beast' thereby creating more pressure on broadcasters to deliver content in quick succession and time. The 'public information space', in context of the term used by BBC journalist Nick Gunning, has become fast, brutal, irreversible, fragile and is forcing a level of accountability for those in power.

Technology ripple effect is creating both challenges as well as opportunities for the industry. Production of fresh content is expensive and in turn can affect the quality of programming through cost-cutting measures. Television broadcasters face prospects of competition from new devices while new class of consumers portends to cut into their advertising revenue

by migrating to new platforms. Convergence of technologies, especially between the telecom and broadcasting sectors, will play a key role in democratising access by making inroads in rural areas. Wireless connections in rural areas have outnumbered the demand for wired lines. Telecom Private Subscribers are tapping these markets as rural tele-density low at 40.66 per cent in 2012 has risen to 51.37 per cent in 2016. Demand for mobile market is picking up as well as DTH service providers are more visible in rural areas. Tier 2 and Tier 3 cities are becoming attractive as potential markets for private service providers. This is pushing the broadcasters to develop more regional content to attract new viewers.

Evidence of an increasing trend in channels entering regional markets by spreading their network across the country is all too obvious in number of regional language-based programming. With the industry in a state of flux, the demographics of viewership are seeing a shift from metros to smaller towns. This shift in consumer base would translate into creating and fashioning content and format which aligns with the needs of the vast majority in the hinterland. In such a scenario, repurposing the content to ensure availability through cataloging and categorisation in a way it reaches right audience at right time and through the choice of medium, is the challenge faced by investors. Enhancement of content management becomes a pre-requisite for customising content to various demographic viewer categories to ensure an increase in the net volume and loyalty of viewership.

The broadcast industry is also losing talent to digital industry and this could very well be attributed to convergence of technologies. Today YouTube is a television channel in itself which globally commissions people to produce original content with the same set of production houses and creative talent. Broadcasters are of the view that content monetisation may become a major revenue model in next five years. While this model of revenue generation will grow via internet or mobile TV, niche channels or the special interest segment, will provide more scope to the broadcasters for content monetisation. With the growth in subscription and content monetisation, dependence on advertisement will eventually decrease. The private broadcasting sector which was initially loosely organised is undergoing consolidation with large corporate groups showing interest in buying stakes in media companies. New players are seen entering the fray, while some old guards are falling prey to the market forces.

Working Through Regulation and Freedom

As content and technologies converge new uncertainties come to the fore

With the industry in a state of flux, the demographics of viewership are seeing a shift from metros to smaller towns.

like content regulation, level of control that government and other agencies (Press Council of India/Broadcasters Association) ought to exert, whether telecommunication and media laws should be applied to the internet. A major challenge faced by the content developers relates to protection and regulation of the content. Economic compulsions and competitive market trends are compelling media houses, struggling to survive, to compromise the quality and relevance of the content. The element of social responsibility, though important, has receded in the background in the face of stiff economic compulsions of staying afloat. The content vs. carriage question occupies a major part of a broadcaster's dilemma. While most broadcasters feel that consumer must pay more for the content which will indirectly boost the sector, the consumer's point of view is posited on paying for quality content. If some felt strongly about market forces driving the content, others euphemistically declared that, if 'content is the king, screen is the queen'. In this changing environment the news media's proclivity to engage and in providing arena for the slinging match has added more substance to the controversial debate of regulation. The government in its twelfth five year plan on broadcasting, has praised the development around self regulation, but has maintained the existing regulatory function of the government, arising out of the extant statute, namely, Cable Television Networks (Regulation) Act, 1995 will remain intact. Thus, if independent regulatory model is not a choice, self regulation is constrained by a mix of political influence and corporate indifference. This leads to a conclusion that a broadcasting regulatory framework needs to integrate public and private commercial broadcasting principles and policies and social role of media.

Conclusion

Convergence between entertainment, information and telecommunications are impacting the overall media industry. Leading the drive for convergence is demand for access to content, easy availability and portability. At present the industry is flooded with enhanced, relevant and curated content available on varied devices, platforms, and across segments. This would throw up possibilities of intense competition resulting in enhanced consumer spend on information and entertainment. Hence, the scenario poses significant challenge for the industry to signify economic value associated with numbers, such as consumer spends. Ultimately, innovation will be the key issue driven by technology, digitisation, convergence and content.

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GOVERNMENT COMMUNICATIONS SYSTEMS



A COMPARATIVE ANALYSIS



B. NARAYANAN

The governance structure of a country is developed and formulated over time, guided by certain factors based on its political ideology and economic status. Scholars have now come to accept that the theories of media systems need to look beyond politico-economic factors and include social ones such as a country's cultural milieu too. This study makes a comparative analysis to see how the media systems of five countries are structured, which in turn determine the kind of freedom enjoyed by their press. A free press leads to greater exposure of corrupt practices and the structures of the media systems thus determine how free from corruption these countries are. India's position on both parameters is analysed in comparison with China, the United States, the United Kingdom and Canada.

The state as an instrument of political will, has been a repository of economic and civic functions. The state's ideology shapes its approach to the duties entrusted to it. A direct correlation exists between a state's ideology and the kind of executive organisations it creates. The institution of media systems for the propagation of its values also flows from the same ideology. However, the institutions governed by the market are not immune to the State's approach and reflect the influence of the state. Thus, even in a state professing to have a free press, the structure of the state may prevent it from exploring its boundaries.

Ahrend (2002) in his study on *Press Freedom, Human Capital and Corruption*, finds strong empirical evidence that a lack of press freedom leads to higher levels of corruption. Another study by Brunetti and Weder (2003) came to a similar conclusion opining that a free press is bad news for corruption. Chowdhury's (2004) empirical study on the impact of democracy and press freedom on corruption strongly correlated the two.

Freille, Haque and Kneller (2007) tested the relationship between aggregate press freedom and corruption. Their results supported the theoretical view that restrictions to press freedom leads to higher corruption. Their study also obtained strong correlation between political and economic influences on the media and corruption.

A comparative analysis is important as it helps to sensitise us to variation and similarity and is thus invaluable for conceptual clarification and theory development (Hallin & Mancini, 2004, p. 2, p.5).

This study aims to situate India in the spectrum of countries having freedom of the press, through a study of their communication systems. The countries being studied include China, the United States, the United Kingdom and Canada, along with India.

Theories of the State and its communication apparatus

Criticised as being too simplistic, the *Four Theories of the Press* (Siebert, Peterson & Schramm, 1956) nevertheless was instrumental in shaping the approach to the relationship between the state and its media for decades. The authoritarian theory referred to the original prototype which was most pervasive of all the dimensions. This implied that the state has a fundamental interest in maintenance and stability in the power structure in its favour. The libertarian theory involving an innate distrust of the role of the government and state and having the prime function of advancing the interests of its individual members was held to be ideal while the Soviet Communist model

is seen as an extreme application of authoritarian ideas. The last model of social responsibility placed the onus on the state to provide adequate information for citizens to make informed decisions (Ostini & Fung, 2002).

The *Four Theories* were supplanted by the *Five Theories* of Merrill and Lowenstein (1971/1979) merging the social responsibility with the libertarian theory to rename it the social libertarian theory, removing the communist label to rename the communist theory as social-authoritarian and a fifth category of social-centrist based on ownership of press sources by the government. In the 1980s, Hachten (1981) attempted to re-categorise the theories into authoritarian, western, communist, revolutionary, and development or third world. Picard (1985) included a new category of the democratic socialist theory of the press, which ascribed the role of promoting media plurality to the state. Later, Akhavan-Majid and Wolf (1991) added the element of ownership and the corporate search for synergy and profits, followed by Altschull (1995) who tried to move beyond the *Four Theories* to give three categories - market, communitarian and advancing types of media.

In 2004, Hallin and Mancini came up with the *Three Models of Media and Politics* that included the Liberal Model, the Democratic Corporatist Model and the Polarised Pluralist Model, prevalent in the United Kingdom, Ireland and North America; northern continental Europe and southern Europe respectively. The Liberal Model was characterised by the relative dominance of the market, the Democratic Corporatist model by the historical coexistence of commercial media and other media tied to social and political organisations as well as by a relatively active but legally limited role of the State. The last model, named the Polarised Pluralist model was characterised by integration of the media into party politics, weaker historical development of commercial media and a strong role of the State (pp.10-11).

However, as Ostini and Fung (2002) point out, the fundamental problem with the media models has been that they are prescriptive, rather than descriptive of social phenomena and assume an evolutionary mode of development from say communist to authoritarian to liberalism and social responsibility, which has been proved to be false. Hence, it is necessary to factor in other elements such as structures and institutions, economic perspectives, individual journalistic autonomy and the structures of state policy. Blum (2005) brought a little more complexity into the analyses thus far which factored only political and economic aspects and attempted to introduce the factor of cultural backgrounds into the comparative analysis of media systems across the world. He went on to describe six kinds of media systems based on his analysis – the Atlantic – Pacific “liberal model”, the

Southern European “clientelism model”, the Northern European “public service model”, the Eastern European “shock model”, the Arab-Asian “patriot model” and the Asian- Caribbean “command model” (pp. 5-6).

Scholars such as Yin (2008) also believe a De-Westernised approach to research paradigms in the new global context is necessary. Expressing similar concerns about the *Four Theories* model not really fitting in for Asian countries, she has proposed a two-dimensional model with freedom and responsibility as coordinates, responsibility being a key Asian cultural emphasis. The scholar holds that instead of using the West’s single dimensional models that emphasise freedom, the Asian value of responsibility, which stems from its Confucian tradition and its socio-economic realities, needs to be factored in.

However, despite its limitations, the *Four Theories* continue to be relevant, with suitable modifications such as to separate the levels of philosophical approaches, political systems and press systems (Christians et al, 2009).

Methodology

This paper studies each country in the way it has organised its communications system, using a case study approach. A comparative analysis method is used to see whether a country makes a distinction between public service and political communication. This would bring to the fore the country’s attitude to governance too. The Code of Ethics for Government Communicators is another parameter by which the countries are compared to see where India as a country stands with respect to freedom of the press, as also how each country is ranked in the Corruption Perceptions Index (CPI), the Freedom Index being inversely proportional to the CPI.

China: Hegemony and Control

Government communication in China flows from the legacy of its communist philosophy days which has elements of coercion and comprehensive state control over the flow of information. Ostini and Fung (2002) classify China as Soviet Communist (as per the *Four Theories*), Government, Social-Authoritarian (as per Lowenstein), Communist according to Hachten as well as Picard and Communitarian as per classification designed by Altschull (1995).

A key study on the Chinese system by Anne-Marie Brady (2006) gives the outline of their information and communication apparatus. The Central

Propaganda Department (CPD) is roughly the counterpart of the Information and Broadcasting Ministry in India, except that it has total control, and monitors and instructs all newspapers, television, radio, internet, publishing industry, indeed all elements of cultural and information production in China, through the Education and Propaganda System, which it oversees.

Figure 1: Organogram of Chinese Government Communication System



(Source: Author)

While the Central Propaganda Department controls internal propaganda, the Office of Foreign Propaganda looks after external propaganda. The CPD is headed by the Propaganda Leading Small Group, which consists of senior Communist party officials. The structure of control by the CPD is as given below; the body itself is highly secret, and its addresses/telephone numbers itself are classified. The staff of the CPD is generally educated at least upto Master's degree level, in subjects like mass communication, history, political science to name a few, and are the members of the Communist party. Retired party members who held positions in media, culture, and publishing are also co-opted into "news reviewer groups" who advise the party on which news item deserves a brickbat or a bouquet. Each cadre is assigned a particular television station or a newspaper, and they submit regular reports.

On paper, the CPD is supposed to have only the power to guide, and actual implementation is undertaken by State-run divisions, such as the Ministry of Culture, television stations, Public Security Bureau etc. Its guidance is supposed to be expressed in the form of written or oral instructions.

The CPD and its regional branches exercise their power to "guide" the media by having powers to hire and fire senior media managers in

media and related sectors; by “encouraging” these seniors to become party members, thereby subjecting them to party discipline; by dominating all the professional bodies/associations, such as the Journalists’ Association, all of which have at-least a 50% quota for CPD and its staff; by holding so-called “update” meetings with the media, in which they are told what is allowed, and what is not allowed to be aired/printed/broadcast; by publishing and circulating of an internal journal, which explains the politically correct way of analysing sensitive topics, and the current words to be used.

The most important way in which the Central Propaganda Department influences the media is to reward the most obedient and docile sections of the media with commercially lucrative monopoly contracts. Licenses are given to only those who will keep within the confines of the guidelines spelt out by the Department, and will be taken away from those found to be deviating from the line laid by it.

Under the supervision of the CPD, Xinhua is the top official news agency in China. According to Sanders, Crespo and Holtz-Bacha (2011), no other media organisation is given better access to the decision-making circles than Xinhua, whose official coverage other media organisations routinely wait for to report important events. China’s communication bodies, such as the State Administration of Radio, Film and Television, act as Departments under the supervision of the CPD.

After the 2008 Olympics in Beijing, China appointed a spokesperson for each Department, to act as the voice of the government. The vice-minister of each Ministry has the role of chief communication officer or main spokesperson on special occasions. Day-to-day contact for the media is the chief of the communication department of the ministry, who is also the routine spokesperson. These spokespersons are not centrally appointed, unlike, say, the Indian Information Service in India: they are recruited through individual ministries and departments.

Most spokespersons are from journalistic or communications background. Key communicators at the national level, however, are highly ranked party officials.

The World Press Freedom Index of the Reporters without borders¹ (2014) places China at 175th while the Freedom House Report for 2014 puts it in the category of *Not Free*, which is marginally better than *Worst of the Worst*. Transparency International Corruptions Perceptions Index ranks China 100 out of 175 countries, with an overall score of 36 in 2014.

Indian polity has puzzled scholars with authors such as Rudolph and Rudolph (1987) calling it a political and economic paradox: a rich-poor nation with a weak-strong state. Among its strengths are counted its centrist pattern of partisan politics with secularism, socialism, democracy, a mixed economy and a non-aligned foreign policy forming its pillars.

In India, the Information and Broadcasting Ministry is a player, regulator, and also performs the role of being a communicator of government policies and programmes. The Ministry controls two key organised Cadres of permanent Government officials – the Indian Information Service (IIS) and the Indian Broadcast Programme Service (IBPS) – which staffs key posts in the Government’s media organisations, and the largely State-funded broadcasting corporation respectively. While the Press Information Bureau (PIB) serves as nodal agency for earned publicity through press conferences and press releases, the Directorate of Advertising and Visual Publicity (DAVP) is the main agency for paid publicity, putting out advertising in newspapers, television, radio, websites and outdoor hoardings.

As in the United Kingdom, so in India: the IIS and IBPS are supposed to be neutral and apolitical civil servants, as enshrined in the Civil Service Code of Conduct. Consequently, PIB’s press conferences and press releases do not blatantly praise political parties by name or side with one political party against the other. PIB issues Press Releases and organises Press Conferences publicising the “achievements” of the Government, without naming any political party – something which would not possible and is expressly forbidden under the Canadian Government’s Communication Policy, or the United Kingdom’s Government’s Code of Propriety, or the Hatch Act² in the United States of America.

The DAVP has been issuing advertisements publicising the achievements of the government for many decades. These have carried the names of both government ministers and even party leaders. Photographs of these leaders have also been carried in these advertisements. However, India’s highest court, the Supreme Court in 2015 in a landmark judgement held that advertisement paid for by the exchequer would not carry the photos of any Minister or Chief Ministers of provinces, and only the President and the Prime Minister’s photos could be carried. In partial modification of this order in March, 2016, the Supreme Court of India permitted use of photos of Chief Ministers, Governors and Ministers in government advertisements (The Hindu, 2016). However, it did not go

In India, the Information and Broadcasting Ministry is a player, regulator, and also performs the role of being a communicator of government policies and programmes.

into the question of content, and, consequently, the achievements of the government continue to be publicised in paid advertisement, both at the central and the regional levels.

Television and radio, funded largely by the State, were nominally made an autonomous corporation called Prasar Bharati in 1997. However, both the IIS, which runs its News Department, and the IBPS, which airs the other programmes, are under the administrative control of the I&B Ministry. Here, a mixture of political and government public-service communication takes place.

In the last few years, the Indian press (including new media) has shown its strength with the exposure of big-ticket scams such as “2-G Spectrum Scam” (India Today, 2012) and many others which were said to have caused a loss of over lakhs of crores to the public exchequer. The intensity with which the press went after big names, including the Prime Minister, is a testament to the freedom that the Indian press enjoys, framed by the media system devised by the government itself. The 2011 anti-corruption movement started by Anna Hazare also saw support from the press in India (Rajagopal, 2011) in a massive way, thumbing their collective nose at the establishment, again illustrates the freedom enjoyed by the media in the country.

At 140th rank as per the World Press Freedom Index, 2014 and 39th as per the Press Freedom Index 2014 of Freedom House, India finds itself judged much higher than China with respect to allowing freedom of the press. Transparency International ranks India at 84 with regard to the Corruption Perceptions Index of 2014.

The United States: Is the Press truly free?

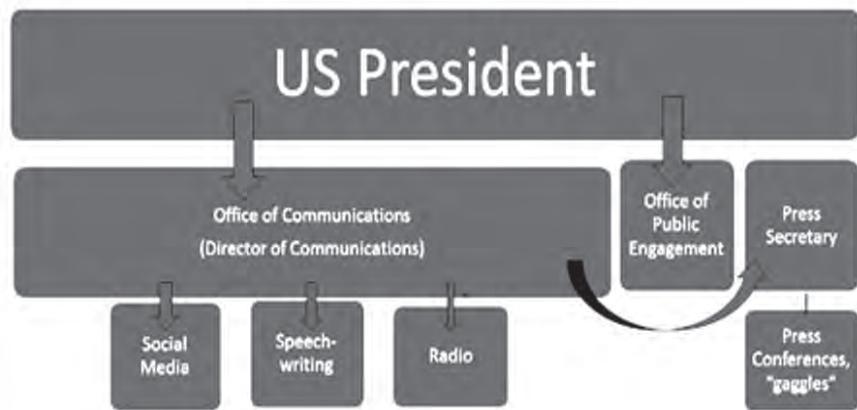
By contrast, the United States is at 46th in the World Press Freedom Index and a *Free Country* in the Freedom House Report of 2014. The USA presents a very complex scenario, when it comes to government communication, with federal, state, county jurisdictions, and a separation of executive power amongst the President, the Senate, House of Representatives, and various specialist agencies tasked with various missions.

Government communication in the United States of America is known in a variety of ways: public affairs, public information, public agency communication and public sector communication. Government communicators in the USA are employees or professional consultants at various levels, who communicate internally or externally government policies, decisions and guide government communication strategy.

The United States Office of Personnel Management has described responsibilities of federal public information officer as advising agency management on policy management and the potential public reaction to proposed policy, and identifies and carries out the public communication requirements inherent in disseminating policy decisions (Liu & Levenshus, 2014, p.61).

The White House has three primary offices which carry out the President's government communications; the Office of Communications (OOC), the Press Office and Office of Public Engagement (OPE). While the OPE is basically a mechanism for outreach through meetings with public-interest groups, the OOC and the Press Office have some similarities with Press Information Bureau in India.

Figure 2: Organogram of US White House Communication System



(Source: Author)

The OOC not only provides reporters with information, but also carries out advocacy for the president. It contains staff who craft the President's messages, speeches etc. The OOC includes the office of the Press Secretary, in addition to media affairs and research. The OOC is headed by the White House Communications Director, who is given an office in the West Wing of the White House. His role is to develop a coherent communications strategy, so that the President's agenda is communicated through all media outlets. This would be the State-of-the-Union-Address, radio, television and most importantly social media.

The office of the Press Secretary is the President's spokesperson, and conveys the President's agenda to the media.

Daily press briefings, “gaggles” (informal background briefing which are not televised) are all ways to do this. Even though the OOC, OPE and the Press Secretary are institutionalised structures, they are influenced deeply by the President’s approach.

Since executive power at the Federal level in the United States of America is shared with the Congress, the congressional press secretaries or communication directors also play a role in government communications. However, government communications have been traditionally viewed with suspicion and distrust by the Congress (Levenshus, 2010). Consequently, government communicators are subject to a restrictive framework. The Hatch Act bars federal communicators from partisan or campaign-related activity during business hours, or using a government vehicle for political activities. Other laws bar use of government funds to lobby Congress, state or local legislatures on pending legislation, including publicity campaigns directed at them.

Liu and Levenshus (2014) in their analysis have pointed out that many challenges government leaders and their communicators face, who seek to employ digital or social media communication to reach key publics (in the US). These challenges include legal and regulatory restrictions, rigid organisational structures, limited budgets, group conflict hierarchical organisational cultures and employee beliefs and behaviours.

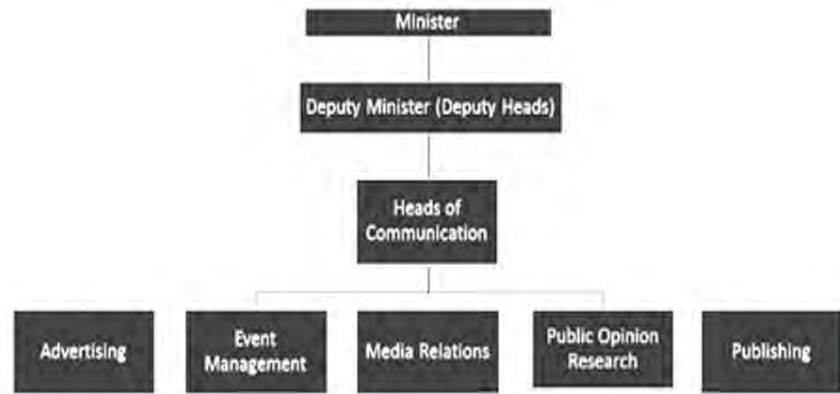
With a score of 74, the United States ranks 17 among 175 countries in Transparency Internationals Corruptions Perceptions Index 2014.

Canada: A free country for the press

Canada figuring at 18th in the 2014 *World Press Freedom Index* and in the *Free Country* category in the Freedom House Report (2014) has a clearly enunciated Communications Policy, which categorically states, “Communications are central to the work and management of the Government of Canada. As a function of good management, open and proactive communication ensures that the public receives government information, and that the views and concerns of the public are taken into account in the planning, management and evaluation of policies, programs, services and initiatives” (Communications Policy, 2012).

Canada, a constitutional monarchy with an elected government is one of the free-est countries in terms of press freedom in the world.

Figure 3: Organogram of Canadian Communication Structure



(Source: Author)

As can be seen, while Ministers ceremonially head the system, the Deputy Ministers (called “Deputy Heads”) are accountable for meeting the government’s communication priorities. The policy is clear that political publicity is to be left to politicians i.e. the ministers and their offices: Ministers present and explain government policies, priorities and decisions to the public. Institutions, leaving political matters to the exclusive domain of ministers and their offices, focus their communication activities on issues and matters pertaining to the policies, programs, services and initiatives they administer (Communications Policy, 2012, Para 20).

The actual cutting-edge level is the “Heads of Communication”, who serve under the Deputy Heads, who are tasked with managing corporate identity, advertising, publishing, marketing, environment analysis, public opinion research, media relations, event participation, and other communication activities” (Communications Policy, 2012, Para 6). The policy is also very clear that the Heads of Communication are to be kept in the picture and consulted at all stages; the communications function is a shared responsibility that requires the support, co-operation and interaction of various personnel throughout an institution. Policy advisers, program managers and other functional specialists, analysts, researchers, human resource officers, access to information and privacy coordinators, marketing specialists, information technologists, web masters, graphic artists, librarians, receptionists and call-centre staff must carry out the requirements of this policy in all aspects of their work. Their supervisors must ensure that the head of communications or his or her designate is consulted on all activities and initiatives involving communication with the public or which have implications for an institution’s internal communications (Communications Policy, 2012, Para 7).

The policy is very clear on media relations that institutions must operate and respond effectively in a 24-hour media environment. They must be able on short notice to reach and inform the media on issues of importance to decision-makers and the public. Institutions engage the media using a variety of communication tools, including news conferences, background or technical briefings, news releases and audio-video presentations (Communications Policy, 2012).

Transparency International gives Canada a score of 81 and ranks it 10th out of 175 countries in its 2014 Corruptions Perceptions Index.

The United Kingdom: Getting there

At 33rd in the world ranking by Reporters without Borders in its 2014 World Press Freedom Index and classified as a *Free Country* by the Freedom House ranking, the United Kingdom ranks above the United States and below Canada in media freedom.

After shutting down its Information and Broadcasting Ministry just after World War II, the United Kingdom set up a Central Office of Information (COI) which would be roughly equivalent to three media units of the Government of India - the Press Information Bureau, the Directorate of Advertising and Visual Publicity and the Directorate of Field Publicity put together. The COI was disbanded in 2011 and departments were allowed to carry out their own publicity, in what was termed a Government Communication Network. However, in January 2014 a General Communications Service (GCS) was set up, equivalent in role and function to the Indian Information Service, which would be a “professional body for colleagues working in communication roles across government” (Government Communication Service, 2014). It may be noted here that the GCS is not an employing organisation. Government departments, executive agencies and a wide range of other organisations employ government communicators directly.

Figure 4: Organogram of UK Government Communication



(Source: Author)

At 33rd in the world ranking by Reporters without Borders in its 2014 World Press Freedom Index and classified as a *Free Country* by the Freedom House ranking, the United Kingdom ranks above the United States and below Canada in media freedom.

The main reason the GCS was set up is because a series of communication capability reviews in 2013 and 2014 concluded that government communication was tactically weak but strategically strong, with poor links between policy and communication. These highlighted the need for:

- Government communicators to be highly skilled across a range of communication disciplines, including internal communications, digital, marketing and press and media handling,
- Greater efficiency, value for money and strengthened central co-ordination,
- A smaller service, which is less hierarchical and more innovative (Government Communication Service, 2014).

The GCS is the equivalent of PIB in United Kingdom in role and function with the officers equivalent in capabilities to the Indian Information Service. The responsibilities of the GCS include:

- Informing people about specific legal or statutory requirements, such as submitting annual tax returns,
- Helping the public understand the government's priorities, such as changes to the benefits system and welfare reforms,
- Encouraging people to behave in a healthier way, such as by discouraging drink driving and encouraging healthy eating,
- Letting people know about the public services, such as the reforms of electoral registration,
- Informing the public in times of crisis, including pandemics or widespread flooding,
- Enhancing the reputation of the country by promoting the UK to people overseas to help boost investment from tourists and businesses.

As the membership body for government communications professionals, the GCS plays an important role in developing a capable, unified profession. It aims to bring all communications up to the standard of the best (Government Communication Service 2014).

When the GCS was set up, all government communicators were declared to be absorbed into the GCS.

The vision statement of the GCS says:

Members of the Government Communication Service represent a communications community that help central government achieve its policy objectives through effective and efficient communication by pioneering and sharing best practice;

increasing collaboration and co-ordination; and eradicating inefficient and unnecessary spend. GCS members will deliver, across departmental boundaries, effective communication in the most transparent, accountable and responsible way (Government Communication Service, 2014).

The GCS sets out a detailed communication plan every year. For instance, the Plan for 2015-16 was a 52-page document, which has four core themes: helping working people, spreading hope and opportunity, bringing the country together and securing Britain's place in the world. The document details around 80 communication campaigns built around these themes, for a cost of 283 million pounds. It consciously identifies six core audiences for campaigns across Government: families, young people, working age people, older people, businesses and international audiences.

With an overall score of 78, the United Kingdom is ranked 14 out of 175 countries in 2014 by Transparency International.

Analysis and Discussion

In China, the distinction between public service and political communication is totally lost. By contrast, in countries such as Canada (18th), the United Kingdom (33rd) and the United States (46th), which are ranked considerably high in the Press Freedom Index, the distinction is clearly defined. India (140th), has a partial distinction between public and political communication, and falls below the three top-ranked countries—Canada, the United Kingdom and the United States but above China (175th). The communication systems in the countries poorly ranked in the Press Freedom Index are also more centrally organised, as compared to countries like Canada and the United States; the United Kingdom's centralised organisation Central Office of Information has been disbanded recently. A robust code of ethics for government communicators is another distinguishing hallmark of free countries. Again, in China's case, the question of such a code does not arise.

Country	Organisation	Distinction between Public-service Vs Political Communication	Code of Ethics for Government Communicators
India	Information and Broadcasting Ministry	Partial distinction	Civil Service Code of Conduct and Supreme Court Judgement on Advertisements from taxpayer's money

Canada	Heads of Communication of Each Ministry	Yes, clearly defined	Communications Policy of the Government of Canada
USA	Federal Communicators	Yes, partisan communication is barred during office hours or use of federal funds to lobby members of Congress/Senate	Hatch Act
UK	General Communications Service (under Cabinet Office)	Yes – bars party political work	Framework of Propriety and Code of Conduct
China	Central Propaganda Department	No such distinction exists	Does not arise

Conclusion

The organisation of the communication systems of Canada, the United States, the United Kingdom and China, along with India, shows the strong emphasis on ethical codes and non-partisan government communication for countries ranked high in the Press Freedom Index. Both the indices, the Press Freedom and the Corruption Perceptions for 2014 place the countries studied above in the same ranking order- Canada, the United Kingdom, the United States, and India, followed by China at the bottom of the pile. In the spectrum of countries from the most free to the least free country in respect of freedom of the press, India does much better than China, though it has a long way to go to be ranked among the most free. Similarly, the Corruption Perceptions Index gives a score of 81 to Canada, 78 to the UK, 74 to the US, 38 to India and 36 to China for 2014. India, thus, is positioned in the lower half of the comparative scale measuring these countries in terms of press freedom and corruption perceptions. The theoretical models support the contention that the index of press freedom in a country and the corruption perceptions index are directly proportional to each other. Further empirical studies may be needed to see where India is headed as far as its communications policy is concerned.

Author

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Notes

1 *Reporters without Borders*, is a non-profit organisation that promotes and defends freedom of information and freedom of the press.

2 *The Hatch Act of 1939* is a piece of United States federal legislation which prohibits federal employees, employees of the District of Columbia and certain employees of state and local governments from engaging in partisan political activity. The Act was named after Senator Carl Hatch of New Mexico who protested the political involvement of federal employees in primaries and general elections and sponsored the bill that became the Hatch Act. In 1993, the Act was substantially amended. The 1993 amendments, 5 U.S.C.S. §§ 7321-7326, clarified the rights of federal employees to a great extent. The Act bars only the misuse of official authority or influence, and misuse of work place and official duties. The Hatch Act Reform Amendments of 1993 permit most federal employees to take an active part in partisan political management and partisan political campaigns. While federal employees are still prohibited from seeking public office in partisan elections, most employees are free to work, while off duty, on the partisan campaigns of the candidates of their choice. However, a small group of federal employees are subject to greater restrictions and continue to be prohibited from engaging in partisan political management and partisan political campaigns. The Hatch Act, 5 U.S.C.S. §§ 7321-7326, forbids employees of the United States and its agencies, generally, from politicising the work place. It assures that federal employees are appointed and promoted according to merit, and that they serve the public equally, regardless of political affiliation.

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DIGITAL INDIA



AN IMPERATIVE FOR
PARTICIPATORY GOVERNANCE AND
SUSTAINABLE DEVELOPMENT



ARCHNA KATOCH

Digital innovation, deep research and appropriate technological progression can revolutionise India into an enormously powerful nation by connecting, involving, and empowering all citizens which contributes towards equity, efficiency, transparency, inclusive growth and sustainable development. This study reveals that 'Digital India Programme' is a path breaking initiative of the government to convert India into a knowledge economy and digitally empowered democratic participatory society with indigenous manufacturing and product development capabilities. Establishment of digital infrastructure, delivery of governance and various services on demand, and digital empowerment of all citizens are the three main components of the Digital India initiative. Its nine pillars acknowledged as growth areas may take India to the next level in terms of governance, sustainable development and overall social change. This project is worth exploring but faces diverse challenges which require profound introspect and proactive action on the part of the government.

In this era of digitalisation, India must venture to fulfil the expectations of its citizens where government with all its services disembark at the thresholds of the citizens and bring about inclusive growth and sustainable development. We live in a world where those who cannot change with times are left behind in the race. The brave new cyber world has already revolutionised communication, relationships, business, knowledge, news - the whole gamut of human life (Purie, 2013). Marshall McLuhan coined the remarkably prophetic phrase 'The Global Village' in order to describe the power of digital technology to revolutionise communication. Internet has altered the approach of information dissemination worldwide across all platforms and in the current atmosphere there is a huge opportunity for government to disseminate significant and easily accessible information and services.

Information and communication technologies (ICTs) create and disseminate knowledge and also enhance the transparency, efficiency, and speed in delivery of services; both these characteristics must be used for the advantage of the poor (Bhatnagar, 2014). Moreover, Narendra Modi, Prime Minister of India portrayed technology as a way to discover, learn, evolve, execute, empowers the less privileged and believed that technology amalgamates 3Ss - speed, simplicity and service (ANI, 2015). ICTs, which are egalitarian and inclusive in nature, have the potential to help the underprivileged, and are being increasingly used in everyday lives whether inside the homes, in educational institutes, on the road, in the retail stores, or at the government offices.

Like steam power and electricity, ICTs are the potent media for sustainable development and global change. Digital technologies which embrace cloud computing and mobile applications are being used as catalysts to speed up the economic growth along with citizen empowerment globally. "As technology influences change in the communication landscape, the future belonged to digital media due to its reach, scale, variety and accessibility" (Jaitley, 2015).

ICTs have been acknowledged as a catalytic intervention in respect of transforming the lives in rural India, to break the vicious circle of rural poverty, to bridge the digital divide, and to empower the rural communities (Hazra, 2012). In fact, ICTs are efficient means to expedite knowledge diffusion, capacity-building, skills development and impartation of inventive e-government solutions for sustainable development. At the United Nations Conference on Sustainable Development held in Rio de Janeiro in June 2012, a global accord was made to attain the sustainable development goals by having institutions at all the stages that are effective, liable, translucent

and egalitarian.

India still breathes in villages as around 70 per cent of its population lives in rural areas. Internet, which is barely two decades old in India, has turned out to be synonymous with the Smartphone today. Escalating utilisation of Smartphone and mobility of people force the provision of anytime, everywhere access to government services and resources (Alrazooqi & Silva, 2010). “M-governance is an empowered governance. It has the potential to make development a truly inclusive and comprehensive mass movement. It puts governance into everyone’s reach. It puts governance in your hands 24/7” (Modi, 2015).

India is world’s leading wireless market at present in terms of number of users. By the end of 2016, there will be one billion mobile phone subscribers and internet connectivity will be 500 million in two years. At present, India, with a population of 1250 million, has 980 million mobile phone subscribers and 300 million internet connections (Prasad, 2015). Back in 2008, the share of internet traffic through mobile phones was zero but today it stands at a staggering 70 per cent (Purie, 2014).

According to the Internet and Mobile Association of India and IMRB International, India’s internet user base grew over 17 per cent in the first six months of the year 2015 to 354 million. It reached to 402 million by December 2015. It adds that the country had 306 million mobile internet users in December 2015, of which 219 million were from urban India and registered a 71 per cent growth year over year and 87 million (28 per cent) were from rural India, up by 93 per cent year over year, primarily due to content in local language (Alawadhi, 2015). Further, social media users in the country reached 143 million by April 2015 with rapid uptake seen in rural India where user base grew by 100 per cent in last one year to 25 million (PTI, 2015).

According to United Nations e-Government Survey (2014), in spite of global drift to enlarged ICT connectivity and the mounting focus on setting up e-services for national development reasons, there is present uneven distribution of e-government development amid the 193 member states. The Republic of Korea is yet again at the top position with its regular focus on e-government innovation. Australia is on the second and Singapore is at the third position, followed by France, Netherland, Japan, United States of America, United Kingdom, New Zealand and Finland etc. This survey depicts that Europe led by France, Netherlands, United Kingdom persists to show highest regional E-Government Development Index (EGDI)

followed by the America led by the United States of America; Asia led by the Republic of Korea; Oceania led by Australia; and Africa led by Tunisia (ranked 75th globally). India's position was at 118 with middle E-Government Development Index. This survey also exposes high inner diversity within each geographical region.

Digital India: The way forward

The world's largest democracy is well on its way to becoming the world's most powerful economy (Kant, 2015). Digital India scheme is a path breaking venture of the Government of India to revamp India into a knowledge economy and digitally empowered democratic participatory society by exploiting information technology as a growth engine of modern India. It is an umbrella project of Indian Government to amalgamate the government departments with citizens. The Cabinet has approved and unveiled a far-reaching, visionary blueprint of the ambitious 'Digital India Programme' on August 20, 2014 worth Rs 1130 billion, which seeks to link all Gram Panchayats by broadband Internet, convert India into a digitally linked knowledge economy, and encourage e-governance. It will provide immense authority to the people by linking all the citizens to the entire world. Digital India is designed to empower Indians with the power of technology and the citizens will have the power to make choices, to save time, lower their costs, add convenience to their days and recover their health (PIB, 2014; Prasad, 2015).

Vision of 'Digital India' took a step forward when Prime Minister Narendra Modi launched the 'Digital India Week' on July 1, 2015 and revealed that he always dreams of a digital India where speedy digital highways stick together 1.2 billion Indians to make innovation. Modi, who foresees an impending 'bloodless' cyber war as a global risk, enthused the Indian IT community to become global leader in providing trustworthy cyber-security systems to the entire world. Further, as a part of another initiative 'Make in India', he encouraged the leaders in IT manufacturing to increase production of goods and electronic services. He also announced a slew of digital programmes - digital lockers to store documents, e-Sign using Aadhaar, e-Hospital systems, National Scholarship Portal, Centre of Excellence on Internet on Things (IoT) and a high-speed digital highway - that aims to make government services more efficient, easily accessible and hassle-free (Hindustan Times, 2015; Indian Television, 2015). Indian major industrial houses have approved to spend over Rs 4.5 trillion on Digital India project that can potentially raise 1.8 million jobs. In a significant initiative aimed at bridging the technology gender divide, Tata Trusts has also launched

a net plan ‘Internet Saathi’ for women in partnership with Google and Intel on July 3, 2015. This plan is committed to cover 4,500 villages, commencing from Gujarat, Madhya Pradesh, Rajasthan and Jharkhand and will benefit about 500,000 women in rural communities.. While 50 per cent women in urban India use the internet, this number is very low for rural women despite the fact that in India six to seven million users are being added each month (Ambre, 2015; PTI, 2015).

Actually, it combines various ideas and thoughts into a single absolute vision and every component of this vision is seen as a constituent of a big comprehensive goal which makes the mission entirely transformative in nature. The initiative also includes establishment of ICT infrastructure at Gram Panchayat level which will facilitate high speed internet connectivity to the villagers to enable them to get easy access to the various government services like health, banking, education etc. Digital India has the competence to revolutionise the current public service delivery system, boost production, remove unemployment and encourage economic growth in areas which were not digitally linked. In fact, it is an agenda to prepare India for a knowledge future and its key spotlight is on making technology essential to facilitate growth. In this approach, things will become easier by creating two-way platform for both those imparting services and the consumers (PIB, 2014). In fact, e-Governance encourages corruption free, receptive, participatory, and all-encompassing democracy to augment sustainable grassroots progress, and ensures effective and efficient service delivery (OJO, 2014).

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Under this Digital India initiative, all ministries and departments shall provide their services to the citizens in the areas of education, health, economic, judicial field etc. By adopting public-private-partnership model, Digital India Programme is also aimed at digitising land records, birth and death certificates, mark sheets and other such utilities. Apart from being cost-effective and error-free, the programme would also provide employment, transfer of money in the bank account directly, which would be linked with the Aadhaar account. This project actually guarantees the accessibility of these services to citizens electronically by reducing the lengthy and time consuming paperwork. This programme also includes many existing schemes which will be improved, updated, re-adjusted, and executed in a harmonised manner. It is employed by the entire government, coordinated by Department of Electronics and Information Technology (DEITY), controlled by the Digital India Advisory Group, and chaired by the Ministry of Communications and IT (DI Presentation, 2014).

The vision and pillars of Digital India Programme

The vision of the Digital India Programme is based on three main key areas: digital infrastructure as a utility to every national, governance and services on demand, and digital empowerment of the people. First area of this vision requires huge speed internet as a main utility, cradle to grave digital identity - distinctive, ultimate, online, authenticable, mobile phone and bank account enabling participation in digital and financial space, easy access to a common service centre, shareable private space on a public cloud, and protected and safe cyber-space. Digital infrastructure will emphasise on supplying high speed, safe and sound internet (DI Presentation, 2014; Dwivedi et al., 2015; PIB, 2014).

The second key area of 'governance and services on demand' stresses that there should be a seamlessly integration across all departments for providing an uncomplicated, simple and single window access of various services to diverse stakeholders obtainable in real time from internet and mobile platforms. In order to ensure easy access of information, all entitlements of each citizen should be available on the cloud. Ease of doing business should be ensured and facilitated by creating digitally transformed government services, which should enable and facilitate electronic and cashless financial transactions. Finally, there should be utilisation of integrated electronic government systems for decision support and development. The third vision of the programme supports the empowerment of all individuals digitally and this digital literacy entails universally accessible digital resources, all certificates/documents to be obtainable on cloud, accessibility of digital resources/services in vernacular languages, combined digital platforms for participative governance and portability of all allotments through cloud (DI Presentation, 2014; Dwivedi et al., 2015; PIB, 2014).

There are nine pillars of Digital India Project recognised as growth areas such as, (i) Broadband Highways; (ii) Mobile Connectivity Ubiquitously; (iii) Public Internet Access Programme; (iv) e-Governance; (v) e-Kranti (delivery of services electronically); (vi) Information for All; (vii) Electronics Manufacturing; (viii) IT for Jobs; and (ix) Early Harvest Programmes . In this scheme, all central government ministries and departments will emerge with their individual projects that can be transmitted to community using ICT (DI Presentation, 2014; Dwivedi et al., 2015; PIB, 2014).

The website of Digital India Programme (n.d.) explained that states would be given agility in this project to make out insertion of extra state-specific projects which are pertinent for their socio-economic requirements.

Public private partnerships would be preferred wherever feasible to implement e-Governance projects with adequate management and strategic control. Implementation of Unique ID would be endorsed to make easy recognition, confirmation and deliverance of benefits. National Informatics Centre (NIC) would be reorganised to reinforce the IT support to every government department at the centre and state levels. For designing, developing and executing faster various e-Governance projects, the positions of the Chief Information Officers would be generated in at least 10 key Ministries (PIB, 2014).

Broadband Highways as a first pillar will cover three sub components, namely broadband for all rural, broadband for all urban and national information infrastructures. The Bharat Broadband Network Limited, a Government of India entity that implements the National Optical Fibre Network (NOFN) project of 750,000 Kms has planned to connect 250,000 villages in the country through optical fibre by 2017 which will surely provide the first basic setup to achieve the Digital India project. Government User Network (GUN) overlay over NOFN for delivery of e-Governance services to Panchayats will ensure broadband for all. This project will be an IT layer atop the telecom layer from district HQ to all Gram Panchayats (DI Presentation, 2014; PIB, 2014).

The second pillar is focused on creating infrastructure for the *Ubiquitous Mobile Connectivity*. Government is taking all steps to ensure mobile access in around 44,000 uncovered villages in the country by 2018. *Public Internet Access Programme* is the third pillar of this initiative which is also called as National Rural Internet and Technology Mission. Hence, this government has taken the initiative to expand the coverage of Common Services Centres (CSCs) for a total of 250,000 villages and 150,000 post offices to become multi-service centres, and as well as to give a push to connect the unconnected villages of North Eastern Region in the mobile communication network (Dwivedi et al., 2015; PIB, 2014).

As a fourth pillar, government has planned to reform through technology that is *e-Governance* coupled with Business Process Re-engineering (BPR), which includes form simplification, online application and tracking, use of online repositories, integration of services and platforms, automation of workflow, and use of an automated public grievance redressal system for resolving citizens' issues (Dwivedi et al., 2015).

The fifth pillar concerns with *e-Kranti* which focuses on electronic delivery of services such as e-Education, e-Health, technology for farmers

using online ordering of inputs, technology for planning through GIS-based decision making, mobile banking and micro ATM program for financial-inclusion, e-Court, e-Police, e-Jails and e-Prosecution to provide the justice, and e-Security like National Cyber Security Co-ordination Centre (DI Presentation, 2014; Dwivedi et al., 2015). To advance the primary healthcare network and basic education standards, use of telemedicine, e-Education, virtual classrooms, and Massive Open Online Courses can be the kick-starter (Gupta, 2015). The National Mission on Education through ICT website explains that under NME-ICT financed by the Ministry of Human Resource Development, a proper equilibrium between content creation, research in different crucial areas for imparting quality education and connectivity to amalgamate knowledge with the latest technological expansion is being attempted (n.d.).

The sixth pillar is the *Information for All*, where government pledges to provide data online, use of web based technologies and democratic social media to inform people, and messages to general public online on special events or festivals (DI Presentation, 2014; PIB, 2014). An innovative portal MyGov, launched for this purpose on July 26, 2014, is yet another path breaking initiative both in terms of scale and content which presents for citizen engagement in all aspects of governance, involving citizens in policy and execution through a 'discuss, do and disseminate' strategy i.e. two-way participatory communication between the citizens and government.

Seventh pillar covers *Electronics Manufacturing* where the government's target is to manufacture all electronic items in the country in order to accomplish a net zero import target by 2020. A special initiative of Indian Government called 'Make in India' was launched on September 25, 2014 to support companies to manufacture their goods within the country. The foremost aim behind this 'Make in India' scheme is to take into account 25 sectors of the economy for job creation and skill development thus generating 17 million direct and 85 million indirect jobs. The scheme will amplify the growth of GDP, tax revenue, and to attract capital and technological investment in India (Choudhury, 2014; Business Standard, 2014).

The eighth and one of the most vital pillars is to generate *ICT-based Jobs*. To realise this objective, the government has intended to train the people of small cities and villages for jobs in IT sector and setting up IT enabled services in the north-eastern states. Finally, the ninth pillar, the *Early Harvest Programmes*, aims to have an IT platform for messages, government greetings being available through e-Greetings and provision for biometric

attendance system in government offices (DI Presentation, 2014).

IT platform for messages (Sampark) is a programme in which the contact details of a large number of elected representatives and government employees have been compiled in the Sampark database. Also e-Greetings platform was launched on August 14, 2014, as part of the Government's initiative to develop and deploy eco-friendly methods of sending greetings in the country. The portal has a collection of designs made by the citizens of the country through crowd sourcing. The first greeting was sent by PM on August 15, to over 3.2 million users in English and the local languages. Another programmes constitute standardise Government e-mail design and the National Portal for Missing Children. The existing Portal is being upgraded to include mobile application to report and search a lost child, and registration of different non-government organisations and volunteers for assisting the authorities in tracking the lost children. Further, Wi-Fi in all universities under *Early Harvest Programme*, Public Wi-Fi hotspots, school e-Books, and SMS based weather and disaster information are being implemented by the other central ministries concerned. In addition to the above, the department is contemplating to significantly upscale the use of GIS in the decision making process with the cooperation of the state governments (DI Presentation, 2014; Dwivedi et al., 2015).

Interestingly, a lot of private companies, especially MNCs are joining hands with the government to take this initiative forward. Intel has pledged its support to empower five million people towards the success of Digital India program (IANS, 2014). Facebook CEO, Mark Zuckerberg also praised Prime Minister's vision of boosting digital infrastructure, bringing internet access to all citizens and providing online government services. Microsoft Chief Executive Satya Nadella, who made his trip to India in October, 2014, likewise underscored the role of Microsoft and technology in spurring growth. He showed his keen interests to partner with government of India and industry at large to help make this vision a reality. Google has also announced to help the government to accelerate its Digital India agenda by helping millions of women get online, creating more online Indian languages content, and facilitating about 20 million medium and small enterprises to have their online presence by 2017 (PTI, 2015; Srivas, 2014).

Official website of Digital India is an excellent platform of crowd sourcing and to empower the citizen of India by making them digital volunteers in government projects in which paper documents are transformed into digital documents. Furthermore, Indian Rail Budget has proposed to provide Wi-Fi on railway stations, premium trains and 'Office on Wheels'. Government

is promoting the Digital India scheme in alliance with the social media platform, called Twitter, and launched Samvad on March 24, 2015. This new service aims to allow people to receive tweets as SMSs from government offices, including the Prime Minister's office (Zee Media Bureau, 2015).

Government's new policy also permits the utilisation of Open Source Software (OSS) for e-Governance services which will support the Digital India plan, and India will join several other developed and developing countries. Besides this, it will employ the local workforce, save foreign exchange, enhance innovation, better safety, inexpensiveness, vigour, and conformity to open standards and liberal licensing (Ramani, 2015). Recently launched 'e-Tourist Visa' and 'Jeevan Pramanam' schemes are remarkable services and finest creation of ICTs. The southern Indian state Kerala is all set to become the first digital state in the country (PTI, 2015).

Mobile Seva is an innovative initiative aimed at mainstreaming mobile governance in the country. A Mobile Applications Store (m-AppStore) has been created to provide mobile applications for delivery of public services which will surely speed up the development process.

Karnataka state mobile-governance platform, which is India's foremost and the world's biggest multi-mode mobile governance platform, integrates 4,187 mobile services, both government and private, into one app. Mobile-One, is an excellent example of unifying the delivery of services through mobile phones. In view of this exemplary success and to push the concept of Digital India ahead, the Government of India is trying to scale it up nationally and replicate it in other states also. With the intent of giving integrated services to the public at their fingertips, the Mobile-One app has generated business to the tune of Rs 50 million that is growing at a rate of 10 per cent every month, and the app has had 12.5 million hits and 150,000 downloads, so far (Aji, 2015).

Government has also planned to invest over Rs. 70.6 billion to build 100 smart cities (with private and international collaboration) as satellite towns of big cities and by revamping current middle-sized cities, tourist destinations, state capitals and heritage cities. These cities will have highly advanced urban infrastructure and a variety of easily accessible online services to the people. "A smart city involves the blending of technology and big data to improve civic decisions" (Gopalakrishnan, 2014, p. 25).

Government of India is determined to generate protected cyber space all-around and has intended to build a 'botnet' cleaning and malware analysis centre which will identify malicious programs and botnets, and facilitate

device owners to eradicate destructive software for free. Actually, botnet is a complex net of malevolent software, which can control other devices, rob their information and execute cyber-attacks remotely like Distributed Denial-of-Service (DDoS) that thwart websites access. This centre will be constructed with an expenditure of one billion under the supervision of Indian Computer Emergency Response Team (CERT), a national cyber security watchdog (Sharma, 2015).

Therefore, Government of India is strong-minded to make every household and every individual digitally empowered, to make every household digitally literate with an objective to make India the global knowledge hub. For this, focus should be on all essential and inter-connected aspects, namely infrastructure development, integrated and streamlined e-services coupled with governance and digital literacy of citizens.. If this ‘Digital India Programme’ will be successfully implemented as conceived, the impact of internet connectivity (via mobile, broadband and public internet access points) will be significant in terms of bridging the digital divide, and creating an inclusive, equitable information society, and knowledge economy.

Robustly focusing on e-Governance through ICTs, this project is a great enabler for empowerment, equity, efficiency and overall enhancing participative governance. Digital India is designed to eliminate the difference among the digital haves and digital have-nots, between the poor and affluent, between the men and women, between the rural and urban, literate and illiterate, employed and unemployed, and between the empowered and the disempowered (Prasad, 2015). However, Digital India is not just about delivering basic services instead, it is part of an integrated roadmap to transform India into a knowledge driven economic superpower with indigenous manufacturing and product development capabilities, and a research and innovation hub creating world-beating products (Gupta, 2014).

Government of India is strong-minded to make every household and every individual digitally empowered, to make every household digitally literate with an objective to make India the global knowledge hub.

Implications and challenges of Digital India Programme

Research, technology and digital advancement can revolutionise India into a potent nation by involving, empowering, and binding all stakeholders as one in a single direction. Fifteen years into the new millennium, India is swiftly digitising. Mansell and When (1998) opined that these technologies do not create the transformations in society by themselves; they are designed and implemented by people in their social, economic, and technological contexts” (p. 12). However, communicating with the citizens has always been a big challenge for Indian government because of country’s huge population, widespread geography, and enormous linguistic and cultural

diversity. Indian government has launched many e-governance programmes in the past; yet, the majority of e-governance plans in India remained invisible due to poor implementation and absence of proper laws and legal structure. Lack of connectivity and apposite infrastructure, inadequate power supply, peculiar problems of rural India, unawareness, poverty, corruption, and low literacy are some of the major problems which require profound introspect and proactive action on the part of the government. Hence there is need to decide the appropriate direction and make the suitable strategies to tackle the challenges before the implementation of the programme. Some of the challenges that Digital India initiative may face are:

1. Digital India project is worth exploring and each pillar of this programme has its own challenges. We should neither undervalue these challenges nor should we get beleaguered by them but we must be laser-focused on our goal. Exhorting people to keep innovating, PM Modi encouraged the start-ups in a big way. “Start-ups are the engines of exponential growth, manifesting the power of innovation. Several big companies today are start-ups of yesterday” (The Indian Express, 2015).

2. Lack of sufficient trained technical manpower is one of the very critical issues for the Digital India Project. For delivering e-Governance and e-Service, under this project 17 million citizens are to be trained for IT, telecom and electronic jobs which will simultaneously remove the problem of unemployment (DI Presentation, 2014). “If China is like a ‘manufacturing factory’ of the world, India should become the ‘human resource capital’ of the world”, Prime Minister Modi said while referring to 65 per cent of India’s population which is below the age of 35 years, on July 15, 2015 while launching the ambitious ‘Skill India Mission’ which aimed at promoting entrepreneurship and equipping 400 million Indians with skills by 2022. The initiatives include National Skill Development Mission, National Policy for Skill Development and Entrepreneurship 2015, Pradhan Mantri Kaushal Vikas Yojana (PMKVY) scheme and the Skill Loan scheme (Baruah, 2015; Business Standard, 2015).

3. Lack of financial resources to implement a gigantic project is a major problem to be faced in this project despite a huge budget permitted. The source of funding for most of the e-Governance projects is through budgetary provisions of respective ministries/departments in the central or state governments. Apart from the huge investment committed by industry towards Digital India Programme, everybody (centre, state governments, organisations, corporates, people) should come together to finance for this project.

4. Complete coordination of various services under a single platform is required for the success of Digital India. India is a country with 22 official languages and states having different parties in power than at the centre which will create several language and political issues. So coordination and interaction issues are to be managed for its proper execution.

5. Even though awareness and literacy rate have grown, still the urban-rural divide in India is quite gigantic in terms of technical capabilities and accessibility. Full internet access is not that readily available in villages and small towns and will take time for this connectivity. India has more internet users than English language speakers; as a result regional language keyboards are vital for deeper internet penetration. At the same time, content in local language should be digitised as early as possible.

6. Nonexistence of privacy laws in India, lack of parliamentary oversight for e-surveillance in India, data protection laws, lack of intelligence related reforms, and civil liberties abuse possibilities, are going to produce a big trouble in near future for the successful execution of this project. There is a need to create frameworks so that internet surveillance practices motivated by security concerns are conducted within a truly translucent and responsible framework.

7. In order to diminish the hazardous impact on environment and health due to the polluting technologies used in the unorganised sector for recycling e-waste, there is a need to start persistent mechanism to generate awareness. Department of Electronics & Information Technology (DeitY), Government of India, has launched 'Awareness Programme on Environmental Hazards of Electronic Waste' under Digital India Initiative. The scheme under this programme aims to provide financial support to DeitY's societies, academic institutions, industry associations and professional organisations for organising workshops/seminars for schools/colleges/Resident Welfare Associations (RWAs)/bulk consumers/regulatory bodies, media engagement etc. and making campaign material for wide circulation on ill-effects associated with e-waste. Besides awareness, the programme would also undertake inventory study for estimation of the quantum of e-waste in few selected cities (DeitY, n.d.).

8. In a large part of India, villages do not have electricity supply and power cuts are common problem, thus paralysing internet connection and e-Services entirely. In order to overcome this problem, CSCs and public internet access points should be powered by a supply of electricity that has been generated by alternative means, such as solar or wind power. Therefore,

each CSC should be accompanied with the installation of solar panels of adequate capacity, which will not only provide sustainability and continuity to this initiative but will also create awareness and a positive public attitude towards using alternative power sources those are renewable, inexhaustible, pollution free and economical.

Conclusion

Digital India is a very ambitious programme with enormous potential that will indeed take India to the next level in terms of governance, sustainable development and overall social change. Before the successful implementation of Digital India project in India, crucial challenges and obstacles are required to be tackled. Moreover, the involvement of the relevant stakeholders is imperative for the Digital India project to succeed. In a nutshell, this initiative is to make technology as a key enabler to deliver good governance and development for all, and thus improve the lives of millions of Indians by providing digital empowerment and participative governance. At present, India's credibility is very high than ever before due to visible optimism, high energy and momentum of enthusiasm all-around. Along with supportive industry and proactive government whole nation has also come together to convert the dream of wholly digital India into a fact.

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INFORMATION &
COMMUNICATION
TECHNOLOGIES
FOR
DEVELOPMENT



AN OVERVIEW OF
DEVELOPMENT
THEORIES



JOYA CHAKRABORTY

Communication is intrinsic and embedded in the concept of Information and Communication Technology (ICT). It is the networking function facilitated by ICT overcoming the restriction of space and time that has opened avenues for its applicability in participatory development practices. Thus it becomes imperative to look at ICT within the broad context of development theories and ideologies; and the role envisaged for communication within such processes. This study provides an overview of development theories that have evolved over time and have also redefined the deployment of various communication media in meeting the set priorities. The discussion that follows, introduces the current philosophies in the international development discourse and participatory theories that call for judicious and timely use of new age communication technologies as agents of social change.

The importance of communications for society and social change was envisaged by modernisation theories of development where communications was considered to be a key part of development. Development was defined as economic growth, but required a move to modernity, a transformation that involved changes in individuals' traditional attitudes and social institutions (Servaes, 1995). To enter the modern world, underdeveloped societies had to overcome traditional norms and structures opening the way for social, economic and political transformations. For some scholars modernisation was a derivative of greater differentiation of societal functions, institutions and roles along with development of new sources of integration. For others, modernisation was based more on the actual transformation of individuals through their assimilation of modern values (Valenzuela, 1979). There was seen to be a link between modern culture and economic and political development, following which it was proposed that changes in ideas would result in transformations in behaviour. As the problem of underdeveloped regions was believed to be an information problem, communication was presented as the instrument that would solve it (Waisbord, 2001).

The concept of development communication both as theory and practice was thus closely linked with the growth of the 'development industry' and went through a continuous process of defining and redefining based on an evolutionary understanding of the interconnections between communication and society. Thus 'development support communication', 'communication for development' and 'development communication' are a few of the various concepts that came to represent the strategic use of communication to persuade people to change and enhance the development processes (Servaes, 1996).

The role of communication in development is rooted in the dominant paradigm of development approach of the 1950s and celebrated by scholars like Wilbur Schramm, Daniel Lerner, Everett Rogers and others. According to them communication basically meant the transmission of information, and exposure to mass media was one of the factors among others (e.g. urbanisation, literacy) that could bring about modern attitudes. Communications infrastructures and developmental education were assumed to provide the means for the diffusion of progressive scientific, technical and organisational innovations. Mass media messages were said to lead to innovations in values, attitudes and technology i.e. behaviour leading to development (Marceau, 1972). It was also assumed that expansive mass communication and campaigns directed at specific groups would allow parochial and traditional groups to be exposed to cosmopolitan and

modernising influences. Development communication was thus equated with the introduction of media technologies to promote modernisation, and the widespread adoption of different mass media was seen as pivotal for the effectiveness of communication interventions. The media were regarded both as channels and indicators of modernisation whereby they would serve as agents of diffusion of modern culture as well as suggest the degree of modernisation of any society (Lerner, 1958; Inkeles & Smith, 1974; Waisbord, 2001).

Evolving perspectives in Communication for Development

The dependency perspective arising out of the Latin American Scholars who attempted to explain the underdevelopment of their region vis-à-vis the Western European nations, offered a Marxist critique to the modernisation theory of West. Dependency theorists, while dismissing the modernisation approach as being rooted in positivist, behaviourist models maintained that the underdevelopment of nations cannot be attributed to internal characteristic of nations alone, but results from interconnections between external and internal variables (Tehrani, 1996). According to the dependency perspective underdevelopment was the result of a complex phenomenon whereby external constraints on peripheral, newly de-colonised nations within the global structure interplayed with internal variables to reinforce the monopoly of the West.

Dependency theory saw development and underdevelopment as interrelated processes and argued that the condition of the underdeveloped nations was not a stage in the process of evolution towards development, but rather the result of extant international structures. It maintained that Western, monopolist, capitalist powers at the Centre ensured continued economic dependence of the peripheral nations by reproducing social, economic and political structures in accordance with their own interests. Dependency theory was also critical of the mass media centric approach of the modernisation paradigm and asked for a more systematic analysis of the patterns of media ownership and control (Servaes, 1996). While on one hand dependency approach championed the cause of socio-economic and political struggle of self-determination by the Non-aligned Nations, on the other hand it put its weight behind demands for equitable flow of information across the globe and initiation of a 'new world information and communication order' (Servaes & Malikhao, 2008).

The Non-aligned Nations' Movement (1960 – 1980), started with the newly formed states of Asia, Africa and socialist countries like Cuba, China

etc., and was at that time seeking the rights of political, economic and cultural self-determination against the imperialist forces. It looked at development as a political process and sought for de-colonisation of information from the influence of Western media dominance. These debates compelled the United Nations and its associate agencies to take up the issue of 'free flow' of information across the globe as articulation of the right to 'freedom of expression' enshrined in the Universal Declaration of Human Rights (Movius, 2008). The International Commission for the Study of Communication Problems or the MacBride Commission (1977) was formed to enquire into the problems of communication in contemporary society particularly relating to mass media and news, and to suggest a new communication order to solve these problems against the backdrop of technological innovations and raising complexities in international relations so as to further peace and human development. The MacBride Commission Report (1980) titled *Many Voices One World* observed that new technologies open paths for a new era of communication, they also pose significant threats for ensuring freedom of expression as harnessing of its potential required considerable capital and control over resources. The structures of communication were thus no more neutral than its content and were considered as a force vested with 'absolute and omnipresent powers'(p.142). An improvement in the status of communication was inextricably linked with an overall improvement in societal conditions becoming less oppressive, more equal, just and democratic.

The report thus emphasised that communication can no longer be regarded merely as an incidental service and its development left to chance. It recommended institutionalisation of national communication policies linked to overall political, economic, social and cultural development of the people; democratisation of communication and strengthening of national media to avoid dependence on external sources. The report noted that developing countries should end their dependence on external sources of communication and overcome the problems posed by inadequate infrastructure and other resources. It said -

The critics from the developing countries have found, by experience that the theory of "free flow" is invalidated by the overwhelming preponderance of information circulated from a small number of industrialised countries into the huge areas of the developing world. In order to be really free, information flows have to be two-way, not simply in one direction. The concentration of news agencies, telecommunication facilities, mass media, data resources, manufacturers of communication equipment in a small number of

highly developed countries does, in fact, preclude any chance of a free flow between equals, a democratic exchange among free partners (UNESCO, 1980, p.142)

It recommended that developing countries should plan the installation and development of adequate technologies and infrastructures required to become self-reliant in communications capacity. Communication technologies were to be implemented for satisfying people's 'basic needs' through 'development support communication'. The committee also recommended for extension of media production facilities to rural areas in order to "facilitate production of programmes relevant to community development efforts, stimulate participation and provide opportunity for diversified cultural expression." The commission's report was adopted by UNESCO even while it faced severe criticism of being supportive of government control of media and infringing on journalistic freedom.

Though the debate following the MacBride Commission's report did not alter the international communication scenario substantially yet it proved to be a forerunner of the debates, in highlighting the implications of monopolistic practices on local cultures, people and their economies. By equating the right to communicate, right to participate and form informed decisions with the spirit of democratisation, the commission could successfully shift emphasis from ensuring plurality of sources to ensuring a two-way reciprocal process of communication in the international discourse.

New Challenges of Globalisation

Globalisation and liberalisation marked a dilution in the framework of the three-tier world system of First, Second and Third Worlds, and relegation of the Centre-Periphery continuum which could now be found in every region. This prompted consideration of a new concept of development emphasising cultural identity and multidimensionality. The 'global' and 'networked' world of today, characterised by its distinct regional and national entities, now had to confront multifaceted crises. Apart from the obvious economic and financial crisis, there are social, ideological, moral, political, ethnic, ecological and security crises (Servaes & Malikhao, 2008). This made the previously held dependency perspective more difficult to support owing to the growing interdependency of regions, nations and communities. This followed from the assumption that there are no countries or communities that are self-sufficient and function completely autonomously; nor are there any nations whose development is exclusively determined by external factors. A new viewpoint on development and social change thus emerged from this

criticism of the dependency approach which proposed for a ‘bottom-up’, self-development approach from the perspective of the local community whereby both the ‘centre’ and ‘periphery’ could be studied independently as well as their inter-relationship (FAO, 2005).

During the period 1987–1996, communication research also highlighted the need to conduct more policy studies and institutional analysis of development agency coordination. This was followed by the need to research and develop indigenous models of communication and development through participatory research (Servaes, 1995).

Participatory Communication: An Alternative Ideology for Development

The need for participation of local communities; the need to give due importance to their knowledge and practices; and the need to engage in dialogic communication through decentralised media systems started gaining ground among communication practitioners and development theorists alike during the 1980s and 1990s (Huesca, 2008, p.180). The mass media centric top-down approach to development was thus taken over by the bottom-up, participatory approach to development. The notion of participatory communication dwells on the importance of cultural identity of local communities, and of democratisation and participation at all levels - international, national, local and individual. By this, the concept of participation is considered etymologically to be at the core of the word communication and hence significant for the success of development. According to this philosophy, participatory communication is seen as a dialogical process whereby members of the community democratically guide the process of change for their own community, for the benefit of the majority. Unlike the modernisation theorists, participatory theorists and practitioners emphasise sensitivity towards local cultures and contexts for the success of development communication. In the participatory development process the earlier ‘subjects’ or ‘receivers’ of the modernisation approach would have a larger say in the process of decision-making (Dagron, 2008; Servaes, 1995).

Participatory theories argued for a redefinition of development communication through abandonment of the persuasion bias inherited from propaganda theories and reorientation towards a model of information exchange. It called for the systematic utilisation of communication channels and techniques to increase people’s participation in development. The emphasis was no longer to be on creating a need for the information being disseminated but on disseminating the information for which there was already a need. Participatory development communication needed to move

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away from being media-centric to becoming more people centric so as to inform, motivate and train rural population at the grassroots (Communication Initiative Network, 2010).

Participatory theories evolved from two major theoretical approaches. One credited to the dialogic communication philosophy put forth by Brazilian educationist Paulo Friere in his *Pedagogy of the Oppressed* (1983); and the other from the self-management and empowerment perspective of UNESCO developed during the 1977 meeting in Yugoslavia (Servaes, 2008 p.171). Friere argued that subjugated people should be treated as fully human subjects in any political process. He believed that the average citizen was not an empty vessel into which facts could be poured, but he should be treated as a knowing being. Every individual has capacities of reflection, conceptualisation, critical thinking, and making decisions for planning and social change. According to him action and reflection are organically interconnected and are dialectic processes that lead to the process of ‘conscientisation’ whereby there is free dialogue prioritising cultural identity, trust and commitment. His approach has been called “dialogical pedagogy” which defined equity in distribution, empowerment and active grassroots participation as central principles in development and understood it as a process of individual and community self-determination (Communication Initiative, 2010; Servaes, 1995; Berrigan, 1979).

UNESCO’s discourse on participatory communication stems from right to information section in Article 19 of the Universal Declaration of Human Rights:

Everyone has the right to freedom of opinion and expression; this right includes freedom to hold opinions without interference and to seek, receive and impart information and ideas through any media and regardless of frontiers.

It is based on the concepts of access, participation and self-management with each indicating differential levels of public involvement (Berrigan, 1979):

- i. Access refers to the use of media for public service. It may be defined in terms of the opportunities available to the public to choose varied and relevant programmes, and to have a means of feedback to transmit its reactions and demands to production organisations.
- ii. Participation indicates a higher level of involvement of the public in management of communication systems. Here the public is

Every individual has capacities of reflection, conceptualisation, critical thinking, and making decisions for planning and social change.

involved in the planning, decision making and production processes of communication enterprises.

- iii. Participation may infer no more than representation and consultation of the public in decision-making. On the other hand, self-management is the most advanced form of participation. In this case, the public exercises the power of decision-making within communication enterprises, and is fully involved in the formulation of communication policies and plans.

The Friereian and UNESCO perspectives, though widely accepted as normative theories of participation, have distinct ideologies about the levels of participation that may be allowed and the nature of the communication enterprise. While UNESCO advocates for a progressive process of participation, for Friere there can be nothing short of absolute participation. Again, while Friere looks at communication by the oppressed public, UNESCO looks at an institutional perspective to communication (Servaes, 1995).

The outcomes of participatory communication can be seen either from the social movement perspective or the project-based institutional perspective. From both the perspectives the tangible outcomes can be observed at least at three different levels. Firstly, at the individual psycho-social level it provides the courage of ownership towards problems and the commitment to solve it; secondly, at the skills level it emphasises the acquirement of competencies and capacities to engage with a developmental problem; and thirdly, at the institutional level or the level of community development to bring about required reform (Tufte & Mefalopulos, 2009).

White (cited in McKee, 1994, p. 215) had summarised ten major reasons for the adoption of participatory approach in development projects:

- i. more will be accomplished;
- ii. services can be provided at a lower cost;
- iii. participation has intrinsic values for participants, alleviating the feeling of alienation and powerlessness;
- iv. participation is a catalyst for further development efforts;
- v. participation leads to a sense of responsibility for the project;
- vi. participation guarantees that a felt need is involved;
- vii. participation ensures that things are done the right way;
- viii. participation ensures the use of indigenous knowledge and expertise;
- ix. participation brings freedom from dependence on professionals;
- x. participation brings about conscientisation, that is, it helps people

understand the nature of the constraints which are hindering their escape from poverty.

Arnstein (1969) argues that levels of citizen participation can range from non-participation and mere tokenism as a substitute for genuine participation where people are allowed to have a voice through information and consultation. A progression of this is where citizen participation leads to citizen power in terms of decision making and management.

Participation and empowerment as the conduit to development effectiveness

The concept of empowerment is closely linked with the discourse and practice of development. Though widely used as an alternative strategy to the traditional way of promoting development, it has been considerably difficult for scholars to come up with an appropriate definition for the same. While some call it “the ability to make decisions”, others consider it to be an “improvement in the quality of life of the marginalised” (Rowlands 1995; Kabeer 2001). Philosophically it is rooted in Friere’s (1983) concept of putting an individual in the centre of his own life whereby empowerment involves a transformation in his personal awareness. *The World Bank in its Empowerment Sourcebook (2002)* defines empowerment as “the expansion of the assets and capacities of poor people to participate in, negotiate with, influence, control, and hold accountable institutions that affect their lives” (p.11).

In its broadest sense, empowerment is the expansion of freedom of choice and action. Its long-term objective is to humanise and alter the structures of power within society. However, though closely related to concepts of power and control, empowerment does not necessarily mean mere decentralisation or participation. While decentralisation may indicate return of power to local communities, it need not necessarily empower the marginalised in the presence of a strong local hierarchy. Again, participation can be an effective tool to bring about empowerment, but is not a goal in itself. Only when the objective is to involve the powerless in the formulation of strategies and development policies and the selection of programmes, and in their monitoring and assessment, an appropriate environment for empowerment is created (Rowlands 1995; Kabeer 2001).

Empowerment is also defined from the rights based perspectives. The rights-based approach is a conceptual framework defining human development based on international standards for human rights. It includes,

apart from empowerment, the link with rights, accountability, participation, lack of discrimination and attention to vulnerable groups. By this, the individual is placed at the heart of policies, becomes the owner of his own rights and the driving force behind his own development (FRIDE, 2006).

There is also an institutional perspective to empowerment, whereby it necessitates certain structural changes in the unequal institutional relationships. Formal and informal institutions in society are characterised by laws and rules embedded in state, private sector, and civil society organisations at the local, national, and global levels. Social institutions are also bound by norms of kinship, cultural practices and restrictions. Poor people are generally excluded from participation in institutions that make the decisions and administer the resources that affect their lives. Changing unequal institutional relations depends in part on top-down measures to improve governance—changes in the laws, procedures, regulations, values, ethics, and incentives that guide the behaviour of public officials and the private sector. This requires rules and laws and investment of public and private resources to strengthen the demand side of governance. These changes can create the conditions that enable poor women and men to exercise their agency (Narayan, 2002).

The World Bank (2002) identifies four characteristics that can change the power relations between the poor people and powerful actors to facilitate empowerment: access to information, inclusion and participation, social accountability, and local organisational capacity (Narayan, 2002). The empowerment perspective to poverty reduction indicates strong linkages between empowerment and development effectiveness at both the societal and grassroots level. Narayan (2005) informs us -

Empowerment approaches can strengthen good governance, which in turn enhances growth prospects. When citizens are engaged, exercise voice, and demand accountability, government performance improves and corruption is harder to sustain. Citizen participation can also build consensus in support of difficult reforms needed to create a positive investment climate and induce growth. In addition, the empowerment agenda supports development effectiveness by promoting growth patterns that are pro-poor (pp. 3-4).

For development practitioners there are also strong statistical findings available to indicate a cause-effect relationship between participation and better project performance whereby increasing participation directly causes better project outcomes (Isham, Narayan & Pritchett, 1995).

When citizens are engaged, exercise voice, and demand accountability, government performance improves and corruption is harder to sustain.

By 1990 an alternative perspective to development was developed by the United Nations Development Programme (UNDP) which shifted the focus from economic development to human development whereby the emphasis was more on enhancing people's capabilities and enriching the quality of their lives rather than relying on the power of the market forces to end poverty. By this, poverty was seen as a multidimensional phenomenon and not simply as lack of material well-being. Poverty also encompassed poor health and education, deprivation of knowledge and communication, inability to exercise human and political rights and the absence of dignity, confidence and self-respect. Human development was seen as a process of eradicating such poverty by enlarging people's choices, building human capabilities and by enabling them to participate in the life of their community and in decisions affecting their lives (UN, 2007). Based on the virtues of efficiency, equity and freedom; and moving away from the basic needs approach, human development attempt the following:

- Social progress through better access to knowledge and health services
- Growth with equity for all sections of people including women
- Participation and freedom in terms of empowerment, democratic governance, gender equality, civil and political rights and cultural liberty
- Sustainability for future generations in ecological, economic and social terms
- Human security against chronic threats like hunger and abrupt disruptions such as joblessness, famine, conflict, etc

Following this, the Human Development Reports (HDR) published by UNDP compiled for different countries are drawn on four main parameters and the overall ranking of a nation in the country HDR is decided after collating data based on all the four indicators as follows (UNESCO, 2000; UNDP, 2010):

- HDI (Human Development Index) indicates a summary measure of human development,
- GDI (Gender-related Development Index) is HDI adjusted for gender inequality,
- GEM (Gender Empowerment Measure) measures gender equality in economic and political participation and decision making, and
- HPI (Human Poverty Index): captures the level of human poverty.

This creates a benchmark to evaluate the progress of nations across different regions of the world. The UNDP through its HDRs went on to identify that there were huge disparities in levels of economic progress, education and gender equality among nations. While Latin America, Europe, Central Asia and Middle East accounted for less than 10 percent of the world's poor, the other 90 percent were spread over East and South Asia and Sub-Saharan Africa. There was also a high prevalence of infant mortality and other diseases like HIV/AIDS in these regions. Experiences were also vastly different at sub-national levels and for ethnic minorities and women (WDR, 2000/2001).

Faced with this picture of global poverty and inequality, the international community set itself several goals for the opening years of the twenty first century, based on discussions at various United Nations conferences. These international development goals, included reducing income poverty and human deprivation, promoting democratic governance and creating possibilities for sustainable development. The UN Millennium Summit 2000 identified eradication of extreme poverty as a priority agenda for world development and set specific targets, mostly by the year 2015, to achieve standard measures for protection of human rights, assuring democracy and good governance, supporting the vulnerable, and promoting environmental sustainability (UN, 2007).

The Millennium Development Goals (MDGs) adopted by world leaders as a follow-up to the summit are a set of comprehensive and specific development goals agreed upon for wider cooperation on the development agenda. The eight time-bound goals provide concrete, numerical benchmarks for tackling extreme poverty in its many dimensions. They include goals and targets on income poverty, hunger, maternal and child mortality, disease, inadequate shelter, gender inequality, environmental degradation and the global partnership for development. They are the following:

- Goal 1: Eradicate extreme poverty and hunger
- Goal 2: Achieve universal primary education
- Goal 3: Promote gender equality and empower women
- Goal 4: Reduce child mortality
- Goal 5: Improve maternal health
- Goal 6: Combat HIV/AIDS, malaria and other diseases
- Goal 7: Ensure environmental sustainability
- Goal 8: Develop a Global Partnership for Development (UN, 2007)

The signatory nations to the Millennium Declaration have unanimously committed to take up strategies to achieve each of the goals by the target date and initiate various projects following individual national priorities.

Information and Communication Technologies (ICTs) for Development

Various global initiatives for sustainable development prompted the UN agencies to recognise ICTs as key players in the fight against global poverty and as effective tool in helping the developing countries to achieve the MDGs. UNDP identified some strategic areas for ICT related interventions in development. These include among others, building a national strategy on ICT for Development (ICT4D); undertaking capacity building measures and awareness campaigns; and promoting e-governance for better citizen participation and transparency (Hamel, 2010).

In this context it becomes imperative to understand what exactly constitutes 'Information and Communication Technologies'. ICT consists of the hardware, software, networks, and media for the collection, storage, processing, transmission and presentation of information (voice, data, text, images), as well as related services. ICT include functions that support both communications in various forms as well as information storage, retrieval, analysis and sharing. It can be split into Information and Communication Infrastructure (ICI) and Information Technology (IT). ICI refers to physical telecommunications systems and networks (cellar, broadcast, cable, satellite, postal) and the services that utilise them (Internet, voice, mail, radio, and television). IT in turn refers to the hardware and software of information collection, storage, processing, and presentation (World Bank, 2010).

In the 1990s expansion of the telecommunication network was considered to be the catalyst for economic growth and social development – a strong telecommunication network indicating a vibrant economy. Telecommunications for development theory focused on the benefits of the use of interactive telecommunication technology for economic growth and social integration over the persuasion and attitude change theory of the modernisation approach. The theory emphasised the role of the state in investing in improving the telecommunications network which would in turn improve the delivery of public services and would promote economic and social integration. The emphasis was on improving the channels of communication, delivery of public services and reduction in the high transaction cost. The multiplier effect of telecom investment on GDP was likely to be higher because of both the direct and indirect effect that this investment had on production (Hamel, 2010).

Since then information and telecommunication technology innovations have come a long way from telecom, television and radio to the new age technologies of internet and mobile telephony with the higher potential of fostering economic and social growth by providing better interconnectivity within and among nations, societies and communities. ICTs have an enormously important role to play in building the social capability to generate information and to apply knowledge for sustainable development. A well-developed information and communication network infrastructure that is adapted to regional, national and local conditions, and rendered accessible and affordable, can accelerate the social and economic progress of countries, and the well-being of all individuals, communities and peoples (WSIS, 2003).

Many developing nations are considering harnessing ICT as the means to transcend existing structural and historical weaknesses in the economic, political and social spheres. UNDP (2004) indicates that ICTs have the potential to leverage human development, whereby technological change gets intrinsically linked with economic growth and improvement in human capabilities. Advances in digital technology and the concomitant ‘digital revolution’ can usher unprecedented changes in production processes, commerce, government and education and create new forms of economic growth to benefit all sections of the population.

Advances in medicine, agriculture, energy, communications, etc. can directly build human capabilities through improvement in health, longevity, knowledge and greater participation in social, economic and political life. It can also expand human choices through productivity gains and increase in income. Human capabilities in turn, through creative application of education, can trigger further technological change which can be harnessed for building human capabilities and expanding choices (UNDP, 2004, p.17).

ICT is seen to impact development in multifaceted ways ranging from increasing economic opportunities to facilitating human development. Some of the areas where implementation of ICT can lead to positive development and contribute towards achieving the MDG’s were analysed by UNDP through indicator based analysis. While the supply side indicators would pertain to availability of personal computers, internet facility, density of telephones and the like; the development potential of ICT was analysed through its impact on different sections of the society including the vulnerable sections and its potential to improve efficiency and speed in institutional operations. The deployment of ICT for development necessitates creation of a supportive governance and appropriate legal framework. ICT in governance

can improve opportunities for various vulnerable groups to have access to and participate in the process of human development. If poverty reduction is the most important economic application of ICT, providing access to better governance practices is the most significant action for ICT within a democratic society. Growth of ICT, protection of human rights, sustenance of democracy and good governance are all connected into a virtuous spiral where each concomitantly helps in the propagation of the other (Girard & Siochrú, 2005; Slater & Tachi, 2004; Mansell, Samarjiva & Mahan, 2002).

E-governance as good governance

Governance refers to the coordination and use of various forms of formal or informal types of interaction and institutional arrangements in the policy-making, development, and service processes to pursue collective interest. It is the societal synthesis of politics, policies and programmes. Government, as distinct from governance, indicates the institutions and agents that perform the governmental function and acts with authority to create formal obligations. Governance need not always be performed by governments alone. Private firms and associations, or non-governmental organisations (NGOs) can also engage in governance, sometimes in association with government bodies, with or without governmental authority (UNESCO & NIC, 2005; Anttiroiko, 2004).

Similarly, the concepts of e-government and e-governance are also distinct from each other. E-government is the carrying out of government business transactions electronically, usually over the internet, but including all the related real-world processes. It is understood as the use of ICT like internet, World Wide Web, and mobile phones to deliver information and services to citizen and businesses. E-government indicates a process of reform in the way governments work, share information and deliver services to external and internal clients for the benefit of both the government and the citizens, and the business that they serve (UNESCO & NIC, 2005). In e-government, ICTs are employed to promote more efficient and effective government, by making it more accessible, cost effective and accountable to the citizens. E-governance on the other hand means the application of ICT to the system of governance to ensure a wider participation and deeper involvement of citizen in the decision making process (UNESCO & NIC, 2005; Bhatnagar, 2004; Prabhu, 2004; O'Neill, Undated).

Though the concept of democracy is not intrinsic to the concept of governance, yet democratic governance is usually conceptualised as the dominant political norm and ideal (Anttiroiko, 2004; Poster, 1995). Thus e-democracy or digital democracy becomes a natural corollary to from

e-governance. It serves to bring back the citizenry into the political process and facilitates increased participation. Democratic e-governance is defined as:

Technologically mediated interaction in transparent policy-making, development, and service processes in which political institutions can exercise effective democratic control within a representative system of government and, more importantly, in which citizens have a chance to participate and effectively influence relevant issues through various institutionally organised and legitimate modes of participation. (Anttiroiko, 2004, p. 40)

E-governance can be employed at three hierarchical levels of maturity, to be introduced sequentially based on the preparedness of the government and the level of interactivity or participation allowed. The first and the most basic level is the informational level whereby ICT is employed to provide access to static government information. The second is the interaction and transactional level which pertains to enhancing public involvement by allowing citizens to interact and provide feedback to government officials. At this level citizens are allowed to submit forms, apply for licences, register vital records like birth and death, and make payments online. The third and ultimate transformational level is whereby all citizen services are being delivered online and the citizen can vote and express opinion on public decisions online (UNESCO & NIC, 2005).

E-governance is recognised as the means to provide SMART governance – SMART being the acronym for Simple, Moral, Accountable, Responsive and Transparent governance. By employing ICT in the process of governance coupled with other institutional reforms, governments are expected to overcome corruption and achieve ‘disintermediation’ or elimination of middle-man between the government and the people (Prabhu, 2004). According to UNESCO (2005) the benefits of employing ICT in governments include:

- Improved and enhanced delivery of government services
- Empowerment of citizens through greater access to government information and ability to interact and participate
- Enhanced transparency and increased accountability of the government
- Increasing the internal efficiency and revenue generation by the government
- Improving the relationship between the government and the citizen

ICTs can thus help improve the economic status directly through e-commerce applications and indirectly through access to varied kind of business information. It can empower people by inducing transparency and accountability and also by building a smooth interface with the government.

Towards a Communitarian Perspective: Social Capital, Development and Community Informatics

Though technology was seen as a vehicle of social change, its diffusion was neither universal nor uniform. The disparate diffusion of technologies among the underdeveloped nations, societies and communities was consistently highlighted by *'The Missing Link Report'* (1985), UNCSTD Working Group on IT & Development (1995), and World Summit on the Information Society (Geneva 2003 - Tunis 2005). While the international community was committed to build a 'people-centred, inclusive and development-oriented Information Society' (WSIS, 2005), the gap in 'tele-density' of the 1980's was being reconstructed in the next decade as the digital divide, threatening to exacerbate the existing informational inequalities.

It was acknowledged that ICTs would have a differential impact when diffused differentially across nations and social groups and there was a need to integrate national and regional ICT strategies into a process of participatory and interactive learning and planning. There was a shift from top down to participatory, global to local, technological to social solutions to development problems. It was required of developing countries to combine indigenous and external capabilities to foster a knowledge-based development involving combinations of tacit knowledge, electronic information, access to networks, and other social, cultural, and economic resources. Grassroot intermediaries and the involvement of the community were identified as the key factors to ensure local ownership and the availability of content and services that respond to the most pressing needs of the communities (Mansell, 1999).

Woolcock and Narayan (2000) argue that social interactions between communities and institutions shape their economic performance. They call for the incorporation of the concept of social capital, defined as the norms and networks that enable people to act collectively, into development policy alongside other technical and financial considerations. They propose that development interventions in all sectors and at all levels should undertake social institutional analysis to identify various stakeholders and their interrelations within the project continuum and facilitate consensus-building and social interaction among stakeholders with diverse interests and resources. According to Woolcock & Narayan, development interventions

should be assessed based on their impact on the social capital of poor communities and efforts should be made to improve social interactions and information exchange between social groups by supplementing face-to-face communication with modern communication technologies.

Poster (1995) argues that by its very nature, the internet and the form of politics and democracy facilitated by electronic communication is incongruent with the conceptualisation of Habermas' public sphere. (Habermas, 1964). He argues that in electronic communication, and more specifically the internet, virtual communities, comprising of people in remote locations who will probably never meet face to face, engage in discussion by sharing electronic signals or pixels over virtual networks. This has blurred the concepts between 'public' and 'private' communication and hence is in contravention with the philosophy of public sphere. There are, however, other studies (Ubayasiri, 2006) to emphasise that the internet creates opportunities of participation for large number of people in public discussion thus giving rise to a new form of public sphere – a forum where public opinion is shaped.

Pigg and Crank (2004) emphasise community, both as a setting and an outcome of social action, as constructed in cyberspace. Following social constructivist theories of communication technology they deconstruct the concept of social capital to understand the potential of ICT in its development. They suggest that "ICT has the capability to contribute to enhancing and extending social networks, providing access to resources that can be mobilised for action, enhancing solidarity in social groups, and supporting mechanisms of enforceable trust and reciprocity in transactions" (p.69). Their analysis distinguishes between information and communication as two distinct functions of ICT where the former helps in increasing social capital and the later helps in bonding social capital. Pigg and Crank emphasise that ICTs can have a positive role in strengthening social networks among communities and developing facilities for storage, retrieval and sharing of local knowledge.

McIver (2003) highlights that communities need to have a specialised informatics distinct from organisational informatics engaged in by governments. The characteristics of communities are highly unique compared to organisations which warrant a special focus while developing ICTs for communities. Community informatics is the specialised field concerned with the development, deployment and management of information systems designed with and by communities to solve their own problems. It considers the interrelationship between technology and society as a fully democratic and participatory process.

Community informatics allows people to share control of the decision making process around the economic, cultural, environmental and other issues regarding ICT-based projects. It empowers communities, who contemplate ICT-based solutions, to develop their own productive forces within the information society so that they can control the modes of production that evolve within it thus creating the possibility of preventing and responding to its threats (McIver, 2003; Girard & Siochrú, 2005). The open source and free software movements as modes of production are prime examples of the necessary elements of a community informatics that can enable communities to develop their own productive forces.

Conclusion

It thus becomes imperative from the discussion that the international discourse on development communication and the role of communication technologies as facilitators of social change has been a veritable evolutionary process shifting from perspectives of ‘technological determinism’ to ‘social shaping of technologies’. The underlying consideration that has emerged from this process impinges on the need for bringing about associated changes in institutional structures and approaches towards democratic participation in societies. This not ascertained, would mean celebrating technologies for their own sake and not realising that their potential can only be harnessed with appropriate inputs and changes in the way we produce, store, distribute and retrieve information and the way people use them.

Thus for viability and sustainability, ICT projects in developing nations must become sensitive to social, economic and cultural facets of the community where it is being experimented and aim at sustainability considerations which look at group based solutions rather than individual ones. Communities must be properly involved in the development and sustenance of their own ICT systems which are to be designed in an innovative and flexible manner appropriate for remote locations. This will not only create a sense of ownership and participation within the community but will also improve the credibility of technology mediated development initiatives, which otherwise remain estranged of communitarian perspectives.

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