

Convergence and Regulatory Issues in Information and Communication Technology Industry of Pakistan

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Abstract:

The aim of this short review is to highlight the importance and challenges coming from the convergence of technology, especially in information and telecommunication sectors. This review will shed light on the current regulatory framework and technology convergence. Technology convergence has challenged the regulatory structure across the globe by offering tremendous services and opportunities for the development of the technological sector. The paper concludes that the issues must find out for designing any regulatory framework for the industry.

Keywords: Technology Convergence, Regulation, Information and Communication Industry.

1. Introduction

With the development of new technology and the advancement of information and communication industry, the regulation has been challenged. These advancements and development resulted in the convergence of broadcasting and telecommunication industries. Countries around the globe worked day and night for establishing a regulatory framework and strategy after the bombardment of contemporary changes. One of the regulatory framework strategies is a convergent strategy. Convergence is defined as the process of integration of different technologies for cross-sectional purposes like the use of the same technology for different services etc. [1].

Initially, the Communications Ministry of Pakistan was responsible for the function of regulating Telecommunications, roads and Post & Telegraph. But with the passage of time Information technology and telecommunication were placed in the hands of the Ministry of Information Technology. But even then the convergence of broadcast and IT sector and telecommunication regulatory framework was not taken into account.

Lately, two separate regulatory authorities, Pakistan Telecommunication Authority (PTA) and Pakistan Electronic Media Regulatory Authority (PEMRA) were established for telecommunication and broadcasting regulation respectively.

The following are the main objectives of the research.

1. Analysis of the current regulatory framework in Pakistan.
2. Identification of technological convergence issues.
3. Identification of solutions to solve technological convergence challenges.

2. Technological Convergence:

It is defined as an advancement of technology through which borders between different industries eliminated. Different services from different industry can be offered only when the technology converged. The concept of convergence of technology within the telecommunications sector also witnessed the dramatic changes in the context of technology, its services and infrastructure [2].

Study of different models followed in different countries studies has shown that telecommunication technology convergence resulted in many regulatory problems and created severe conflicts. There are different

regulatory frameworks in different countries for telecommunication and broadcasting industry. In some countries, the sectors are regulated by one body while in others they are regulated by a single regulatory body.

A Push and Pull Phenomena: Studies have envisaged that with this ongoing development on technological convergence, the developed countries will move towards a greater policy harmonization in the long run especially under the forces of international competition, globalization, regional integration and the de-regulation of domestic economies on the national structure.

In order to facilitate a complete convergence of the communications industries, Technological convergence has, therefore, acted as the 'push' factor while the promise of an information economy was the 'pull' factor. It has encouraged the nation-states to take 'pro-active' steps to remove all regulatory barriers.

Telecom Convergence: The concept of Telecommunications convergence was introduced by American Telephone and Telegraph (AT&T) in 1928, but has evolved in the 21st century to dominate the market positioning of telecoms operators. It is reflected in the product portfolio operators offer (vertical integration), and in the channels through which their products are sold and serviced (horizontal integration). Telecommunication convergence is a disruptive technology.

Communication media includes electronic media, telecommunications media and broadcast media were discrete business operations providing distinct services. Broadcasting, voice telephony and on-line computer services were operated on different platforms: TV, radio sets, telephones and computer. These were managed by different Business Support Systems. Different broadcasting media were regulated differently by different regulators [3].

Telecom Media Convergence is about crossing multiple industries and the companies are no longer companies confined to their own markets. Fixed, mobile, and IP service providers can offer content and media services, where Content providers are consistently looking for new distribution channels, while equipment providers can offer services directly to the end user. Convergence is the combination of all these different media into one operating platform. It is the merger of telecom, data processing and imaging technologies. This convergence is ushering in a new epoch of multimedia, in which voice, data and images are combined to render services to the user on one platform.

Dynamic Convergence of Telecom and Media in Modern Era: The prime result of convergence at a macro-business level is the merger of the telecommunications and media industries. Today the world is experiencing the convergence of regulations, Technology and Services. Convergence in Technology has already started without any formal introduction due to advantages that are brought to the table because of the economies of scale, bundled services, better infrastructure planning, and a one-stop-shop scenario. It has also become easy for the investor, the regulator and the public at large to benefit [3].

One of the forces behind convergence of Telecom, IT and Broadcasting is the "Internet Multimedia" platform and "New Generation Network" architectures leading the way through disruptive Internet Protocol, which has been relentlessly driving convergence [4]. Pakistan Telecommunication Authority, in the interest of the country, investors and the public has been a proponent of Convergence [3].

3. Regulatory Bodies in Pakistan

The following are the regulatory bodies responsible for the regulations of information and communication industry in Pakistan.

Pakistan Electronic Media Regulatory Authority:

Pakistan Electronic Media Regulatory Authority is a regulatory body came to being under PEMRA Ordinance 2002 for facilitating and regulating electronic media in Pakistan. It enjoys wide power in regulating the electronic broadcasting sector under the prescribed power vested in it through the ordinance [5][6][7]. PEMRA has many mandates some of them are explained in preceding lines. PEMRA was established to facilitate, regulate and operate electronic media for national and international audiences. This shows that PEMRA has a wide area for regulation and represents the importance of the body. Education, entertainment and information are its primary mandates. PEMRA aim is to provide the audience information with quality and standards. It regulates for enhancing information's quality, promotes education and awareness among the public and provides the entertainment. It is the duty of PEMRA to look after the regulations which are necessary for bringing improvement in all the above mentioned three fields. It is responsible for making such regulation which

maintains or increase the standard or quality of information which broadcasters are providing to the audience. It also set standards for broadcasting quality education to the people and for entertaining them in a manner not to affect them negatively. The purpose of information, education and entertainment is to influence the behaviour of the audience positively. To increase the variety of media channels accessible to the Pakistani people new steps have been taken. Variety of broadcasting channels means news channels, current affairs channels, religious channels, health channels, art/culture channels, science and technology channels, economic development channels, music channels, sports channels and channels/media regarding other subjects of the audience and national interest have been introduced. This is one of the most important mandates of PEMRA regulations which covers all aspects of its regulations. Establishment of good governance and transparency in its functions is another important mandate of the Print and Electronic Media Regulatory Authority [5][6][7].

Pakistan Telecommunication Authority:

PTA stands for Pakistan Telecommunication Authority, it is a regulatory body responsible for regulating the telecommunication sector regarding their operations, establishments and maintenance. It was formed through Pakistan Telecommunication Re-Organization Act, 1996 [13]. The purpose PTA is to establish a regulatory regime for the telecommunication sector. It looks after all of the telecommunication related technology and services of telecommunication industry in Pakistan. PTA encourages competition in the telecommunication industry. It is against market monopolies and is working on zero per cent tolerance for such behaviours. It provides equal opportunities to all of the telecommunication services providers and ensures competition in the industry. 3G and 4G license issuing shows that the PTA encourages competitions and provides equal opportunities for all [14]. Pakistan Telecommunication Authority grants licenses for telecommunication systems and services to a telecommunication services provider through a transparent mechanism. It monitors the industry services and systems and regulates the monitoring process. Beside this, PTA can also reject a license issued by it to telecommunication service providers anytime if it violates the prescribed rules and regulation. PTA also regulate License fee and other necessary charges.

Frequency Allocation Board:

Frequency Allocation Board (FAB) is a body which deals with the assigning of Radio Frequencies with associated technological parameters for wireless communications. It was established under Pakistan Telecommunication (Re-organization) ACT 1996 to take over responsibilities of Pakistan Wireless Board.

It also evaluates spectrum management tools, review national frequency spectrum plan and suggest a strategy for spectrum utilization. FAB also looks after the international coordination and agreements with other bodies regarding different satellite and terrestrial-based networks of communication according to international telecommunication union. Monitoring/recognition of spectrum and blocking illegal wireless stations or installations are also managed by this board.

4. Conclusion:

There are three regulatory bodies in Pakistan for regularization of broadcasting and telecommunication industry. Like other technologically advanced countries, in Pakistan also technological convergence is new and demanded from industry experts and lawmakers to find out a strategy and regulatory framework in such a manner to face the challenges of modern technology and its offerings. As in Pakistan three bodies PEMRA, FAB and PTA are regularizing the sector, there are many issues which need to be addressed so that the sector work and prevail in the modern market. In addition to many other issues, pricing, content and development issues are the most important.

It is concluded from the review that separate organizations for regularization of media and telecommunication sectors face serious issues. Some of the areas are given to both of the organizations while some important areas like internet etc. do not come under any of them. There are many issues in service providing by both broadcasting and telecommunication industry in the current regulatory structure of Pakistan. Some of the important issues are issues regarding spectrum, issues regarding license, issues regarding contents etc. It is also evident from that in the coming years, the issues will further increase and the current structure of regulation may face severe challenges in future.

5. Recommendations:

The following recommendations are made:

1. Extensive research is needed to find out the issues in the current regulatory structure.
2. Convergence should be accepted as an opportunity for the development of the sectors.
3. Finding a solution is necessary for the issue.

6. Research Utilization

The findings of the research will shed light on making the regulatory framework of Pakistan and other countries like Pakistan efficient and effective. It will overcome many of the current issues in the regulatory system of the ICT industry in Pakistan. It will also help the regulatory staff and engineers from all of the area of the ICT industry in formulating the consumer-friendly strategy for regulation and investor's friendly strategy for easy investments in the sector.

References:

- [1] Network convergence definition
- [2] Nystrom, A., 2007. What is convergence? Perceptions from finish telecommunications sector. In: Proceedings of the 18th European Regional ITS Conference, Turkey.
- [3] Blackman, Colin (1998). "Convergence between telecommunication and other media". *Telecommunication Policy* **22** (Elsevier Science Ltd.): 163–170. Retrieved 22 September 2011.
- [4] Shin, Dong Hee, Won - Yong Kim, and Dong-Hoon Lee. "Convergence Technologies and Layered Policy Model: Implication for Regulating Future Communications." Conference Papers -- International Communication Association (2006)
- [5] Drucker S. & Gumpert G.(2000), 'Converging technologies, converging nation, converging regulations in a new media age' *Intermedia* Vol. 28(6/7), p.16.
- [6] OECD, 1992. Telecommunications and broadcasting: convergence or collision. Information Computer, and Communications Policy Series 29, OECD, Paris.
- [7] Fransman, M., 2000. Convergence, the Internet and Multimedia: implications for evolution of industries and technologies. In: Bohlin, E., Lundgren, A., Thorngren, B. (Eds.), *Convergence in Communications and Beyond*. North Holland, Amsterdam.
- [8] Mueller, M.L., 1997. *Telecom Policy and Digital Convergence*. The Hong Kong economic Policy. City University of Hong Kong Press, Hong Kong.
- [9] Nystrom, A., 2007. What is convergence? Perceptions from Finnish telecommunications sector. In: Proceedings of 18th European Regional ITS Conference, Turkey.
- [10] http://www.pemra.gov.pk/pemra/images/docs/legislation/PEMRA_Rules_2009.pdf
- [11] http://www.pemra.gov.pk/pemra/images/docs/regulations/Distribution_Service_Operations_Regulations_2011.pdf
- [12] <http://www.pemra.gov.pk/pemra/images/docs/regulations/>
- [13] http://www.pemra.gov.pk/pemra/images/docs/regulations/Television_Broadcast_Station_Operations_Regulations.pdf
- [14] <http://www.pemra.gov.pk/pemra/images/docs/legislation/coc.pdf>