

# Shift Towards Next Generation Networks (NGNs) for Sustainability: Evidence from an Emerging Economy

Abdul Rafay, University of Management and Technology, Lahore, Pakistan

Arsala Khan, University of Management and Technology, Lahore, Pakistan

## ABSTRACT

This paper examined the shift towards the Next Generation Networks (NGNs) like 4G from 2G and the role of technology for sustainable development in the telecommunication sector of Pakistan. WARID was one of the four cellular companies of Pakistan. All the big players in the market had auctioned for 3G/4G licenses but WARID remained distant from the process of spectrum auction. The paper investigated issues and decisions involved when WARID decided to launch 4G/LTE nationwide due to its technology neutral license. It was also studied that how this decision was necessary and beneficial for all internal and external stakeholders of the organization in terms of sustainability, customer satisfaction, technological advancements etc. The study used secondary data as well as unstructured interviews where interaction with the management/employees of the organization was deliberated to stimulate discussions and opinions.

## KEYWORDS

4G, Abu Dhabi Group, ARPU, Cellular, GSM, LTE, MNP, Networks, NGN, Pakistan, PTA, SIM, Technology, Telecommunication, WARID

## INTRODUCTION

It was 7:30 am in the morning and the atmosphere was quiet and serene. Jones<sup>1</sup> was sitting at his dining table enjoying his breakfast and going through today's newspaper. He liked this particular time of the day when the hustle of the day had yet not fully started. But while his eyes were on the paper his mind was thinking about tomorrow's meeting with the Chief Executive Officer (CEO) and board members. He was the Chief Operating Officer (COO) at WARID<sup>2</sup> and had been working in the telecom<sup>3</sup> sector for the last 10 years. WARID was the subsidiary of the Abu Dhabi Group<sup>4</sup> and for the last few quarters had been facing declined revenues. The past couple of months had been a roller coaster ride, starting from the rumors that the company was up for sale which affected the company's business and led not only to the loss of potential customers but also the existing customers. The financial analysts and specialists were confirming the company's windup keeping in view its performance. The reasons behind the company's possible fall were that it had strong footing in the urban areas but didn't tap the large consumer base in the rural areas of Pakistan.

Tomorrow's meeting was important as management has to decide the future course of action regarding the spectrum license<sup>5</sup> auction. Jones was aware of the fact that in midst of this situation his company needed a strategy to come back and reclaim its position but the biggest question was how? Jones had already completed the meeting sessions with the concerned departments and his

proposed action plan was ready to convince the top management to directly switch to LTE<sup>6</sup> network from GSM<sup>7</sup> network. He has to convince the Board of Directors (BOD) of the possible strength and existing resources of WARID and that this would actually help the company to retrace its position in the market and claim profits. He was deep in thought when he entered his office. He still had a day left to prepare for the meeting.

## **TELECOM INDUSTRY OF PAKISTAN**

### **General Overview**

Industry analysis requires careful examination of four basic things i.e. type of industry, nature of the technology, customer requirements/expectations and product life cycle (Porter, 2008). The cell phone sector of the telecommunication industry is of high velocity, technology of the sector is rapidly changing, customer expectations are high and fast evolving and product life cycles are short in terms of new packages and services.

The telecom sector is one of the fastest growing segments of Pakistan's economy and is a key driver to the growth. There are an estimated more than 100 million cellular<sup>8</sup> users and the sector directly or indirectly employs approximately 1.36 million people. Due to high growth rate, this industry has become back-bone of Pakistan's economy. It is providing many employment and investment opportunities due to high revenues generated via huge number of users of telecom services. Along with opportunities, this industry also provides vast facilities to communicate and connect globally in better, reliable and modern manner. Today, the telecommunication sector is one of the best developed technology sector of Pakistan.

Pakistan's telecommunication market is one of the hottest in the emerging economies. Pakistan is still an unsaturated market and with the falling cost of handsets there are plenty of new subscribers to go for. But eventually as in saturated markets, if mobile operators want to avoid simply competing on price, they will have to compete on superior services, innovative features and ease of use. Due to current developments of market convergence among Internet, cable and telecom industry there is a need of regulatory restructuring for creating a platform for timely relocation towards next-generation-networks (NGNs) like 4G<sup>9</sup> and beyond (Xia, 2011). For a country like Pakistan, it is necessary to analyze its market regulations and policies and other technological advancements for sustainable development. In developing countries like Pakistan, market analysis yields many factors creating an impact on 3G<sup>10</sup>/4G networks including the institutional aspects as well as indirect aspects that have impact on regulatory policies (Xia, 2012).

### **Market Segments**

The market segments, which telecom companies are targeting, include tech savvy urban youth, business users (due to the higher ARPU<sup>11</sup>), first-time subscribers in remote/rural areas and housewives.

### **Media Campaign**

It is necessary to notice the mobile phone advertising campaigns in Pakistan. A fierce competition for supremacy is going on between all telecom players. One sign is the media advertisements of these companies. As they fight for market; that battle is being conducted in print, electronic and social media. The quality and aggressiveness of the advertising campaigns indicate the level of effort to gain market share. The advertisements are vibrant and colorful, conveying a sense of excitement and empowerment. However, the pretty picture these advertisements paint is somewhat different from ground realities where poor quality cellular services have led PTA<sup>12</sup> to announce that punitive action will be taken if quality issues and regulatory non-compliances persist.

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