

## Directions for Improving Service Efficiency in Telecommunication Enterprises

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**Annotation:** In order to understand the role of services provided by telecommunications operators, to determine the presence of innovative technologies and to identify problems that arise among subscribers, we conducted an anonymous sociological survey among the population, as well as to measure several We have developed a system of indicators. The results of a sociological survey prove once again that innovation and new technologies ensure customer loyalty. It can be concluded from the answers that the reforms carried out in different years: expansion of the network, import of new technologies and their introduction serve to form loyal customers. The only way to be competitive is to import innovative equipment, especially to provide new services by offering internet services at affordable prices to increase customer loyalty.

**Keywords:** innovation, efficiency, telecommunications, elasticity, competitiveness, innovative.

**Introduction:** Since the 1980s, reforms have been implemented in the field of telecommunications in both developed and developing countries. Liberalization of the telecommunications sector significantly contributes to economic growth through the development and diffusion of information and communication technologies (ICT) in the economy. The openness of the telecommunications market and the quality of regulatory regimes are the main driving forces for the development of the ICT sector. However, in recent years, the growth rate of ICT use has been much lower than in the first decade of the 21st century. The reason for this is that in many countries, especially developed countries, if not the entire country, then at least in certain segments of the population, the penetration rate is approaching saturation. The rapid development of the telecommunications sector is also evidenced by the GSMA (Global Mobile System Association) 2021 report. According to this report, by the end of 2020, the number of mobile subscribers in the world reached 5.2 billion, which is 67% of the world's population, and almost 50% of the world's population uses mobile Internet. New subscriber growth is becoming increasingly difficult as markets are saturated and rural coverage is economically more difficult in the difficult financial climate of the telecommunications sector. Nevertheless, almost half a billion new subscribers are expected by 2025, which will bring the total number of subscribers to 5.7 billion (70% of the world's population), and this number will be represented by countries in Asia and Africa. . In 2020, mobile technology and services generated \$4.4 trillion or 5.1 percent of global GDP.

By 2025, it is expected to reach 5 trillion dollars, which allows intensive use of innovative processes that lead to increased efficiency due to the expansion of the use of mobile communication services. Also, during this period, 5G is expected to benefit all sectors of the global economy. Taking Armenia as an example, the Armenian telecommunications market is saturated in terms of subscribers, and competition for new services and low prices is increasing, but in parallel with all this, telecommunications continue to introduce new generation networks and new technologies to improve the quality of their services.

The purpose of the study is to determine the role of innovative technologies introduced in the telecommunications sector of Uzbekistan in increasing the competitiveness and efficiency of the network. For this purpose, data analysis and an anonymous sociological survey were conducted among the population aged 16-70.

**Literature review:** The faster new technologies are changed and introduced, the more flexible and faster telecommunications organizations must respond. A. Lange-Kepsynska, based on the results of her research,

believes that telecommunications organizations must have flexibility and the ability to react quickly in order to remain competitive in a market full of difficulties, otherwise they will fail. Research shows that many operators cannot respond quickly to rapidly changing market conditions because they still rely on manual processes, legacy systems and outdated IT infrastructures. A scientist named Dachyar concluded in his research that companies should develop new innovative strategies to improve the quality of services that help to retain the number of customers.

Good innovation can continuously improve both service quality and product quality. Innovations, the introduction of new technologies serve to increase the efficiency of the telecommunications sector and increase the level of competitiveness. Bourreau M. and Dogan P. consider the field of telecommunications to be a rapidly developing sector. The dynamic sector is characterized by a high rate of adoption of innovations. The competitiveness of the telecommunications industry is ensured by innovations in the following directions: innovations in the creation of new services and innovations aimed at creating alternative network infrastructures. Innovations in the creation of new services are mainly provided by telecommunication operators, and equipment suppliers provide innovations in network technology. Innovations in the equipment market are accompanied by their introduction into the telecommunications industry. Telecom operators must make decisions about when to introduce new technology and when to implement it, as implementing this process quickly can be expensive and risky. In recent years, mobile data services, which are the basis of mobile Internet, big data, cloud technologies, and the Internet of Things, have become widespread. From the point of view of telecommunications operators, as a result of the commercialization of 3G and 4G networks, mobile data transmission services have brought more revenue than traditional services (voice calls, SMS). Nevertheless, in this modernization period, new generation networks are still in the stage of disclosure, as the impact of new services provided by mobile data transmission has not yet been fully exploited.

It was concluded that traditional services are necessary, despite the fact that new services are currently the priority for telecommunications operators. Investments, network construction and user volume are important factors influencing the introduction of new services, but in practice most of the communication operators pay more attention to revenue and data transfer volume.

It is very important to maintain the number of subscribers at the stage of preparation for the introduction of new services. When the competition stage comes, it is necessary to pay special attention to the quality of the network, which is the basis of the competitiveness of communication operators. At the same time, the introduction of new services will help to increase the needs of subscribers, so the number of subscribers and the volume of further investments should also be taken into account. According to Chen's study, the number of communication operators achieving technical efficiency is decreasing every year, which shows the impact of Internet services. Telecom operators will continue to play an important role in providing broadband connectivity, developing networks and infrastructures, and improving their reliability and brand. Various studies show that in an increasingly competitive environment, organizations that focus not only on providing customers with basic services, but also on providing added value, will succeed, and only effective innovations will contribute to customer loyalty.

Based on the assessment of the impact of the real import of innovative technologies and non-innovative equipment on the real income of telecommunication operators of Uzbekistan from the second half of 2014 to the end of 2020, the study showed that the decrease of telecommunication income, the increase of the real import of innovative technologies. In order to understand the role of services provided by telecommunication operators, to determine the availability of innovative technologies and to identify problems raised by subscribers, we conducted an anonymous sociological survey among the population of Armenia. The survey results confirm once again that innovation and new technologies ensure customer loyalty. When asked why they use their operator's services,

34.5% of respondents answered that it is a good combination of quality and price, for 29.2% it is important to have a network, for 24% it is important to have flexible home Internet packages. . mobile communication and OTT service. From the answers given to this question, it can be concluded that the initiatives implemented in different years: network expansion, introduction of new technologies and their implementation serve to form loyal customers. We proposed the following industry indicators; 1. Elasticity of industrial turnover relative to active mobile subscribers 2. Elasticity of industrial turnover relative to the number of subscribers connected to the Internet 3. Elasticity of real imports of innovative equipment relative to active mobile subscribers 4. Innovative equipment by the number of subscribers connected to the Internet 5. Innovative equipment elasticity of real import to real income of the network 6. Ratio of real import of innovative equipment to real income 7. Real income of the network for active mobile subscribers 8. Real income of the industry. Sector corresponding to the subscriber for Internet access subscribers.

The only way to be competitive is to provide new services by importing innovative equipment, especially offering Internet services at affordable prices in return for increased customer loyalty (as shown by the survey results). By calculating these indicators, the government can monitor the performance of the sector periodically, every 3-5 years, and as a result, develop appropriate measures or strategies for the development of the sector, which will serve to increase the growth rate. does.

**Conclusion:** Analyzing the presented data, proposed coefficients and the results of a sociological survey, we came to the conclusion that the telecommunications sector of Uzbekistan is also saturated, because the increase in the number of subscribers does not increase the profit of organizations. . This can be explained by the fact that Internet services play an important role in increasing the number of subscribers, as a result of which people use less traditional services - phone calls, messages, and prefer new Internet-based services. Nevertheless, telecommunications operators continue to introduce innovative technologies and equipment, because only through continuous improvement and dynamic development can the number of subscribers be maintained, operators are also important.

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