Research Article

THE IMPACT OF THE DEVELOPMENT OF COMMUNICATION SERVICES ON THE OVERALL SERVICES OF THE REGION

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ABSTRACT

The modern economy is at the stage of development of the information society, called the market economy based on "knowledge", in which the exchange of information plays the most important role. To date, a significant proportion of world innovations, discoveries and achievements of science and technology are directed precisely at the sphere of information exchange and storage, which ensures effective interaction between subjects of economic relations and their wide access to world information resources. In such respects, the share of communication services is significant. When writing the article, we will explore the relationship between the trend of information services on the general share of services provided in the Fergana region.

KEYWORDS

Services, communications, growth rates, regional statistics, regression analysis.

INTRODUCTION

Information acquires a special place in the economic system of each state, and the main factors that ensure the full development of the economy are the areas offering communication services, and the production of information technology and software [1-4]. An analysis of global trends shows that the progressive countries of the world pay special attention to the transition to a market economy, as a result of which the share of the total number of people employed in the national economy in the information industry is constantly growing [5-9].

MATERIALS AND METHODS

Information becomes the main lever that ensures the effective development of the economy of the Republic of Uzbekistan as a whole, as well as enterprises and organizations operating in a particular industry in the region [10-12]. The lack of information turns into a very significant problem since the participants in economic relations are forced to adapt to external and internal, sometimes instantaneous, changes in the economic situation, to make important decisions in the face of uncertainty. To more accurately determine the share of communication services in the total volume of services, we take the statistical data of communication services and the total volume of services provided in the Fergana region for 2010-2021 as the object of study [9-14]. We will try to investigate the growth rates of communication services in the example of one region and draw a conclusion on the scale of the state.

Table 1. Data on communication services and the total volume of services in the region for 2010-2021

Of the year	Services, total Y_i (billion sum)	Communication Services X_i (billion sum)
2010	1471.3	71.9
2011	2041.8	160.6
2012	2707.0	238.6
2013	3,532.0	305.3
2014	4472.8	361.3
2015	5256.0	414.0
2016	6670.7	484.4
2017	7602.2	554.0
2018	9,237.9	644.9
2019	11,684.1	659.7
2020	13,361.4	768
2021	16,816.5	905.2

We are looking for the relationship between the communication service and the total volume of services provided in the region in the form of the following linear equation:

$$Y = f(x, e)$$

To find the corresponding regression equation can be generated in the MS EXCEL spreadsheet. At the same time, we need to enter data into the MS EXCEL spreadsheet and use the correlation section to find the relationship between the indicators. We consider the data as a logarithmic type of correlation analysis trend and get the following graph.
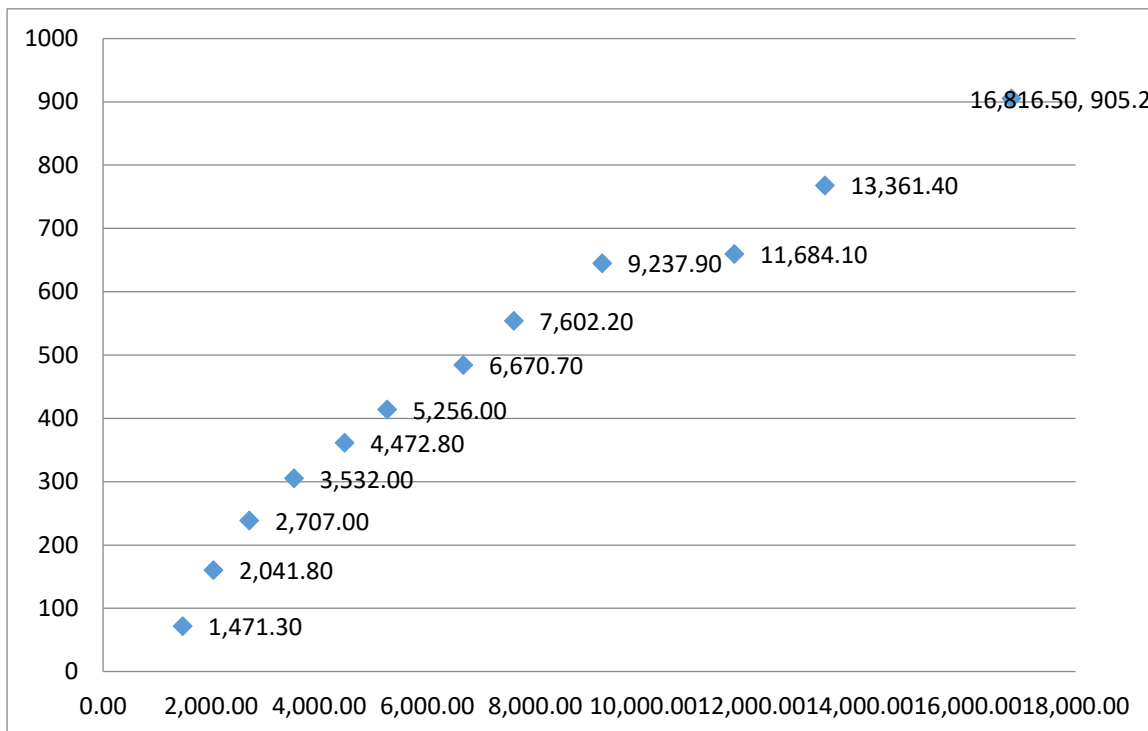

Fig.1. We consider the data as a logarithmic type of trend correlation analysis

This is where the equation comes from:

With logarithmic: $Y = 325.43\ln(x) - 2340.9$

$$R^2 = 0.9782$$

Based on the data, we take a logarithmic trend line, since the dependence ($R^2 = 0.9782$) is higher than with a linear one. This correlation analysis shows that between communication services and the total volume of services there is a significant dependence. Regression analysis shows that an increase in the factor of communication services by 1 unit leads to an increase in the total volume of the service sector by 325.43 units, and the influence of random factors on the result leads to a decrease by 2340.9 units.

In the next step, we will try to determine the share of communication services in the volume of the total predicate of services in the region. To do this, we use the percentage method of calculation, the result obtained is shown in Table 2.

Table 2. Share of communication services in total services in the region

Of the year	Services, total Yi (billion sum)	Communication Services Xi(billion sum)	Share of communication services in the total volume of services
2010	1471.30	71.9	0.048868
2011	2041.80	160.6	0.078656
2012	2,707.00	238.6	0.088142
2013	3,532.00	305.3	0.086438
2014	4,472.80	361.3	0.080777
2015	5 256.00	414	0.078767
2016	6,670.70	484.4	0.072616
2017	7602.20	554	0.072874
2018	9,237.90	644.9	0.06981
2019	11,684.10	659.7	0.056461
2020	13,361.40	768	0.057479
2021	16,816.50	905.2	0.053828

Fig. 2. Development of communication services
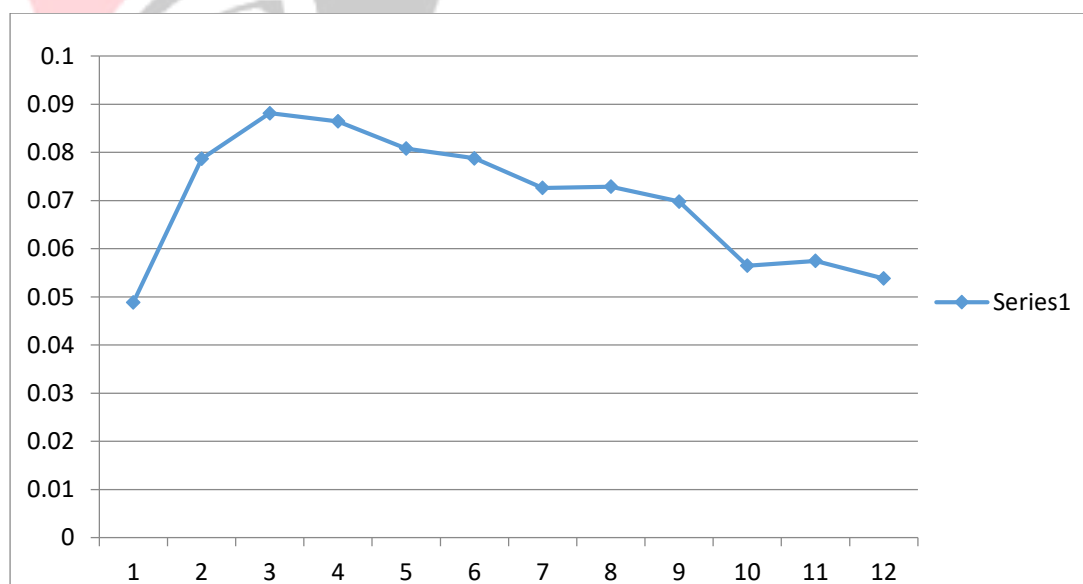
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CONCLUSION

Based on the above graph, we can conclude that over the past years, the pace of development of communication services has slowed down. This is due to various factors such as:

- Accelerated development of the communications network in the world

- Lack of qualified personnel in the communications technology industry

- Instability of supply and demand in the communications services market

- Insufficient level of literacy of the population in the use of communication services.

The solution to all sources of problems is to attract world experience in the development of the communication and information environment in Uzbekistan and the creation of an information society in the regions. Closest on the way to the information society are countries with a developed information industry, which include the United States, Japan, England, Germany and the countries in Western Europe. In these countries, for a long time, one of the directions of state policy has been the direction associated with investments and support for innovations in the information industry, in the development of computer systems and telecommunications.

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