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### **Transformation of the mechanisms of economic activity in the conditions of structural changes in the economy**

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#### **Abstract**

The tendency of GDP decline was noted even under favorable conditions in the energy resources market, which is explained by structural macroeconomic problems. Network, market and hierarchical structures are considered, their comparative characteristics are carried out. The advantages and limitations of network forms of economic organization are revealed. Data on the dissemination of information and communication technologies as a basis for the development of network mechanisms of economic activity are given. It is concluded that it is necessary to synthesize all three types of structures for the implementation of an effective industrial maneuver in the structural policy of the state.

*Keywords:* Economic development, network structures, traditional structures, information and communication technologies.

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#### **1. Introduction**

For today, the Russian economy is characterized by the raw material orientation of development, the trend of technological dependence, amorphous economic growth and its quality. Speaking about economic growth in modern conditions, it should be noted that it involves not only increasing the parameters of GDP, but also actual implementation of competitive advantages in the areas of technological, social, industrial and industrial development. According to the Federal State Statistics Service, in 2003 the GDP of Russia increased by 7.3% in comparison with the previous year, in 2004 - by 7.2%, in 2005 - by 6.4%, in 2006 - by 8.2% , in 2007 by - 8,5%. However, in 2008, there was a tendency to reduce it: GDP grew by only 5.2%, and in 2009 its volume fell by 7.8%. Since 2010, the growth has been restored: in 2010 - 4.5%, in 2011 - 4, 3%, in 2012 - 3.5%, 2013 - 1.3%, 2014 - 0, 6%, and since 2015 there has been a negative growth rate (-3.9%), (-0.2%) for 2016 [4].

#### **2. Causes of the economic downturn**

Despite the obvious raw material dominance in the Russian economy, analyzing the dynamics of GDP, one can not help but notice that in addition to a sharp decline in GDP in 2009 during the

crisis (the average annual price for Brent oil was \$ 61.9 per barrel) a sharp decline in 2013 and 2014 at fairly high average annual prices for Brent crude oil (108.8 and 98.9 dollars per barrel, respectively) [3]. Thus, it can be concluded that there is no direct correlation between the GDP index and the price of oil. Nor can it be argued that the anti-Russian sanctions introduced in connection with the Ukrainian crisis are the determining factor in the country's GDP decline in 2013-2014, since they began to be introduced in March 2014, and the economic effect of their adoption is certainly accompanied by certain time lag. The decline in GDP is due to the internal macroeconomic problems of the country, due to the need for the economy to move to a new quality of economic development, which is impossible without a structural shift that implies a reduction in the share of material production and an increase in the proportion of non-material production, the creation of high-tech production, and the deployment of an industrial maneuver in the state's structural policy.

### 3. Models of economic development

N. Akindinova and E. Yasin singled out two main models of economic development that do not exclude each other, but one of them dominates:

1. hierarchical, which is characterized by clearly expressed subordination of some entities to others, centralization in management and decision-making;
2. market-network, characterized by the activities of subjects on the basis of mutually beneficial cooperation, and not by a directive approach [1. 6].

The current stage of the development of the economy is characterized by a structural transformation of the most reproductive process, in which consumer preferences become dominant and, consequently, new mechanisms of economic activity are required that maximally meet the new structure of the economy. From the author's point of view, such mechanisms in the modern economic system can be network structures, one of the fundamental principles in which is the desire to maximize profits based on the most complete satisfaction of consumer preferences.

### 4. The most significant characteristics of network structures

Network structures differ from traditional ones in almost all basic principles of functioning. The most important characteristics that differentiate network structures from hierarchical and market ones are presented in the table.

Table 1. Comparative characteristics of network and traditional structures

Principle of functioning	Market structures	Hierarchical structures	Network structures
Prerequisites for the formation	Commodity-money relations	Control over the allocation of resources	Information and Communication Technologies
Coordination mechanism	«Invisible hand»	Higher authority	Interests of the subjects of the network
Level of information exchange	Only within the price aspect	Unilateral exchange	Unlimited communication
Information permeability of the economic environment	Low	Medium	High
The nature of the links	Horizontal, vertical	Subordinate	Horizontal

between participants	depending on the type of market		
Reasons for joint activities	Economic feasibility	Directive	Benefit optimization
Duration of the relationship	Only for the duration of the transaction	Longer than in the market structures	Long-term relationships between network members

Source: compiled by the author

A number of foreign researchers dealt with the problems of determining the network mechanisms of economic activity, analyzing their key parameters and peculiarities with respect to the traditional mechanisms of economic activity. So, according to Bradford De Long and Michael Frumkin, the principles on which a market economy is based may not be as important in a networked economy as:

- the product loses the property of "exclusivity", in connection with which it becomes more difficult to determine the orientation and volume of demand;
- In the networked economy there is no fierce competition, as in a market economy, because of this, such properties of a market economy as "competition for limiting the manifestation of private economic power, return on investment and labor efforts in accordance with the added social value" are not used in network structures;
- the relationship between the seller and the buyer does not end after the transaction, they have a longer period [2. P. 4-5].

J. Podolnik and K. Paige documented the advantages of network structures in hierarchical terms in terms of the following characteristics:

- mastering new skills or knowledge;
- obtaining legitimacy;
- Improvement of economic functioning;
- Managing resource dependency [6. P. 4].

They also note the high coordination in the activities of network forms of economic activity and the ability to adapt quickly to changes in market conditions due to easier manageability in comparison with hierarchical structures [6. P. 8].

Network structures are most adapted to the current realities of forms of economic activity because of the flexibility of management and the ability to adapt to rapidly changing conditions, the tendency of their penetration to virtually all levels of economic activity is evident today.

## **5. Information and communication technologies as a basis for the functioning of network mechanisms of economic activity**

The following statistics characterizing the dissemination and application of information and communication technologies in Russia illustrate the wide dissemination and intensive development of information and communication technologies as a basis for the operation of network mechanisms of economic activity.

Table 2. Indicators characterizing the development of information and communication technologies in Russia

Indicators	2010	2011	2012	2013	2014
Number of organizations in the ICT sector at the end of the year, thousand units.	138	145	150	155	159

Gross value added in the ICT sector, bln. Rub.	1354	1539	1795	1825	1940
Share of organizations using personal computers in the total number of organizations, percentages	93,8	94,1	94	94	93,8
Percentage of organizations using the Internet in the total number of organizations, percent	82,4	84,8	86,9	88	89
Relative density of organizations with a website, in the total number of organizations, percent	28,5	33	37,8	41,3	40,3
Share of households with personal computers in the total number of households, percent	55	60	67	71	71
Share of households with access to the Internet, in the total number of households, percent	48	57	60	69	70
The proportion of the population that ever used the Internet in the total population aged 15-72 years	48	58	66	71	74
The proportion of the population using the Internet almost every day in the total population aged 15-72 years	26	33	41	48	52

Source: compiled by the author on the basis of data [5].

As can be seen from Table 2, to date, information and communication technologies are used by the overwhelming majority of organizations and their share is steadily growing, in addition, the information and communication technology sector itself is growing every year in terms of the number of organizations and the gross added value generated by them. The number of households and individuals with personal computers and Internet access also has a positive dynamics, which indicates the penetration of network structures into all relationships of business entities regarding the production, distribution, exchange and consumption of goods. However, it is premature to talk about the replacement of traditional structures by the network economy, since network structures are not able to satisfy the interests of society and ensure the implementation of strategic state goals. Originating spontaneously in order to optimize their benefits, the network structures are poorly regulated and are not completely oriented to the development of the real sector of the economy and social needs. Since network structures are characterized by mobility, long-term investments in the modernization of the production and technical complex are beyond their sphere of interest.

## 6. Conclusion

Thus, despite a number of advantages of network structures in comparison with hierarchical and market ones, it is advisable to harmonize them harmoniously within the framework of economic activity, which will allow creating high-tech production that meets the goals of output of final consumption goods with high added value and purchasing power of the population, a new technological platform. Only the deployment of an industrial maneuver in the structural policy of the state, assuming a transition to a promising technological structure, will allow the transition of the economy to a new quality of economic development.

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