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# FORMING OF INFORMATIZATION STRATEGIC PROSPECTS FOR UKRAINE IN CONDITIONS OF WORLD ECONOMY GLOBALIZATION

**Urgency of the research.** The main strategic objectives and principles of the information society in Ukraine lies in the fact that the development of the information society and the introduction of new ICT in all spheres of society is determined by a priority of national public policy.

**Problem setting.** It is determined that the priority of national economic policy, which is focused on long-term internal growth factors, is the formation of an information model based on the concept of informatization of Ukraine.

Analysis of recent research and publications. A retrospective statistical analysis, as well as the legal framework for previous years showed that the process of information development in Ukraine was satisfactory though there are problems that resist development strategy of informatization in Ukraine.

Uninvestigated parts of general matters defining. For effective management of information issues in Ukraine and entering the world competitive level, it is necessary to examine in more detail the mechanism of interaction of macroeconomic components of socio-economic status of the main factors of process informatization.

The research objective. Study of informatization factors of Ukraine, defining relationships of components of informatization of Ukraine and it's macroeconomic indicators. On this basis, to develop practical guidance and strategic direction to form a concept of informatization in Ukraine.

The statement of basic materials. To determine the dependencies of targeted macroeconomic indicators on the factor the system components participating in the investigated processes was defined, factor (partial performance components Informatization of Ukraine) and effective signs formed (GDP indices of global competitiveness and network readiness) and regression analysis based on data for the period 2010-2016 were applied.

**Conclusions.** Based on calculated multivariate regression models of dependencies of macroeconomic factors on examined indicators of information allowed to form a conceptual model of the process of informatization of Ukraine in a strategic perspective.

# ФОРМУВАННЯ СТРАТЕГІЧНИХ ПЕРСПЕКТИВ ІНФОРМАТИЗАЦІЇ УКРАЇНИ В УМОВАХ ГЛОБАЛІЗАЦІЇ СВІТОВОГО ГОСПОДАРСТВА

Актуальність теми дослідження. Основні стратегічні цілі та засади розвитку інформаційного суспільства в Україні полягають у тому, що розвиток інформаційного суспільства та впровадження новітніх ІКТ в усі сфери суспільства визначається одним з пріоритетних напрямів державної вітчизняної політики.

Постановка проблеми. Визначено, що пріоритетним завданням вітчизняної економічної політики, яка орієнтована на довгострокові внутрішні чинники зростання, є формування інформаційної моделі розвитку на основі концепції інформатизації України.

Аналіз останніх досліджень і публікацій. Ретроспективний статистичний аналіз, а також законодавчої бази за попередні роки показав, що в Україні процес інформаційного розвитку мав задовільні результати, хоча існують проблеми, що протидіють реалізації стратегії розвитку інформатизації України.

Виділення недосліджених частин загальної проблеми. Для ефективного управління в питаннях інформатизації України та виходу на конкурентоспроможний світовий рівень, необхідно більш детально вивчити механізм взаємодії її макроекономічних складових соціальноекономічного стану з основними факторами розвитку процесу інформатизації.

Постановка завдання. Дослідження чинників інформатизації України, визначення взаємозв'язків складових інформатизації України та її макроекономічних показників. На їх основі розробити практичні рекомендацій та стратегічні напрями з метою формування концепції інформатизації України.

Виклад основного матеріалу. Для визначення залежностей цільових макроекономічних показників від факторних визначено систему складових, які приймають участь у досліджуваних процесах, сформовано факторні (часткові показники складових інформатизації України) і результативні ознаки (ВВП, індекси глобальної конкурентоспроможності та мережевої готовності) та застосовано регресійний аналіз на основі даних за період 2010-2016 рр.

Висновки. На основі обрахованих багатофакторних регресійних моделей залежностей макроекономічних чинників від досліджених показників інформатизації дозволили сформувати концептуальну модель розвитку процесу інформатизації України у стратегічній перспективі

**Keywords:** informatization; regression analysis; regression model; factor and effective signs; target macroeconomic indexes; constituent of informatizaton; the concept of information; strategic perspective.

**Ключові слова:** інформатизація регресійний аналіз; регресійна модель; факторні та результативні ознаки; цільові макроекономічні показники; складові інформатизації; концепція інформатизації; стратегічні перспективи

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**Urgency of the research.** Recently in Ukraine, attention is paid to strategic planning services in the field of information at the international level. Measures taken during recent years for the adoption of legislative and regulatory acts for information and technology professionals (ICTs), converting of national and regional references to theelectronic form, development of ICT-infrastructure, and others allowed to depict meaningful results of ICTs that have been widely adapted in key areas in the field of innovation, in the instrument of modernity and in the field of excellence. The purpose of the development of information in the country is formed in the Action Plan to implement the Program of the Cabinet of Ministers of Ukraine and the Strategy for Sustainable Development "Ukraine-2020" Law of Ukraine on the main principles of the information society in Ukraine, Ukrainian Education Act "On approval of methods of formation of indicators of information society" by the Verkhovna Rada of Ukraine "On approval of informatization of the legislative process in the Parliament of Ukraine for 2012-2017 years "and other legislative acts [1-5].

**Problem setting.** Ukraine, according to the Helsinki Declaration, hwas suppose to decide as for the prospects of innovative development based on their competitiveness. Thus, by Verkhovna Rada of Ukraine [5] recommendations of parliamentary hearings "Economic Policy of Ukraine: current issues" was approved and determined that the priority of economic policy, which is focused on long-term internal growth factors, is the formation of an information model of development based on the concept of informatization of Ukraine. Among others, this problem belongs to the most important.

Analysis of recent research and publications. Thus according to the Law of Ukraine on the main principles of the information society in Ukraine in 2007-2015 it is noted that "the development of information society in Ukraine and introduction of new ICT in all aspects of life and activities of the state and local governments determined a priority areas of state national policy" [1] and within the limits of the law the main strategic goals of the information society in Ukraine was defined.

The results areperformed in international rankings – for the last year can be observed fast growth of the position of Ukraine as for composite indexes of information society and e-government. Thus, within the Index of readiness for network society, published by the World Economic Forum [6], Ukraine in 2016 took 71 playce, while in 2015 it took 81 place, and in 2014 and 2013 did not rise above 73 and 75 position, although in 2009 Ukraine embraced the best position - 62nd place. In the Index of e-government development UN Ukraine raised from 59 place in 2010 up to 27 in 2013 and 2015. Readiness Index of Ukraine regions for the informatioal society (the Index) is an important tool of information and analytical support of state policy in the field of information. The composition of the Index readiness regions of Ukraine to the information society index component includes the use of ICT, which is based on six subscripts that characterize the use of ICT in business, state and local government, health protection, culture, education, and households population; and index component factors in the development of the information society, which includes subscript describing the state of human capital, economic environment and ICT infrastructure in Ukraine.

During recent years the Index has become a widely used tool for the development, implementation and adjustment policies of the Information Society at the national and local levels. The index makes it possible to evaluate the current situation, to identify the most problematic areas in terms of digital divide regions and identify areas behind barriers to the development of information society in Ukraine. Quantitative indicators as indices can be used for comparative assessment of the situation in Ukraine in the field of ICT and formulating goals for its further development [7].

A retrospective statistical analysis of previous years shows that the process of information development in the crisis of 2008-2009 in Ukraine generally had (so as in majority of the countries) satisfac-

tory results [8]. Ultimately, these landslides, both in the financial system and the real economy have not happened. In particular, the volume of scientific and technical work on informatization of the country (in actual prices) was continuing satisfactory trend (no exception 2008-2009), although their share in GDP over the past few years significantly reduced. Other problems in the aspect of informatization of the national economy may include: lack of an effective information strategy, lack of modern network infrastructure, inadequate legal framework, lack of national information policy.

Though, regardless the problems that oppose the implementation of informational strategy of informatization of Ukraine, it should be noted that for twenty-five years of independence Ukraine in the framework of previous programs and strategies, the foundations of the current national information system were started, efforts to develop the sector of information were launched, research and development, the formation of innovative infrastructure, modernize the economy through technological innovation

Let's analize the change in the position of Ukraine during recent years compared to 2014-2016 according to some indicators, components of the Global Competitiveness Index [9], which determine the state of informatization of Ukraine (Tab. 1).

Table 1
Ukraine's positions by the indexes-components of the Global Competitiveness Index, which determine the state of informatization

determine the state of informatization				
	Index	2014-2015	2015-2016	
	Infrastructure	68	69	
1.	<ul> <li>Transport anf infrastructure</li> </ul>	88	91	
2.	Technological readiness	85	86	
3.	<ul> <li>Technological borrowings</li> </ul>	114	103	
4.	<ul> <li>Use of ICT</li> </ul>	69	80	
5.	Correspondence of business to the modern demands	99	91	
6.	Modernization of productive procees	95	68	
7.	Innovation	81	54	
8.	<ul> <li>Ability to innovation</li> </ul>	82	52	
9.	<ul> <li>Quality of scientific-researches instituts</li> </ul>	67	43	
10.	Company's expences for research and developement	66	54	
11.	<ul> <li>Cooperation of universities and industry as for researches</li> </ul>	74	74	
	and scientific developements			
12.	State purchase of the high-quality products	123	98	
13.	Existence of scientists and engineers	48	29	

As you can see in Table 1, in overall ranking of some indicators —components of global competitiveness, which are determined by the condition of informatization of Ukraine, our country has lost it's positions for the last two years. For example, ranking by the index of "infrastructure" decreased for one point down to 69 place. As forcomprehensive index of "technological readiness", Ukraine worsened it's posisions for one place dowm to 86 place.

According to the majority of the composite indicator "Innovation" components our country has enforced its position and moved from 81 to 54 place. By all the accounts, this subindex includes, Ukraine improved its position, including the ability to innovate - improving for 30 positions ( $52^{nd}$  place), the quality of scientific research institutions (from 67 to 43 place); companies spending on research and development (from 66 to 54 place). According to these two parameters: the procurement of high technology products and the availability of scientists and engineers, significant improvement in the position of Ukraine is observed as well. The exception is the rating in terms of "cooperation between universities and industry in research and scientific development", where Ukraine has not changed its position, remaining at 74 positions.

In the rating "Compliance with current requirements of business", Ukraine has moved from 99 to 91 place. The position of the state in terms of "Modernization of the production process" is significant,

Ukraine has improved its ranking getting from 95 to 68 place.

Uninvestigated parts of general matters defining. However, recent analysis of changes in the components of the Global Competitiveness Index, which determines the state of informatization of countries, revealed a number of problems that slow down the growth of its level in Ukraine. For effective management of informatization of Ukraine and getting to the world level of competitiveness, it is necessary to examine in more details the mechanism of interaction of macro-economic components of socio-economic status of the main factors of the process of informatization in our country, for example, using regression analysis.

**The research objective.** Researches on the factors of Informatization of Ukraine, defining relationships of components of Informatization of Ukraine and its macroeconomic indicators. To develop practical guidance and strategic direction in order to form a concept of information in Ukraine on the base of the computed mathematical economic models.

The statement of basic materials. Let's start with system components participating in the investigated processes. When considering the impact of some signs of effects on other circuit features that characterize this phenomenon, distinguished features and effective factor.

As indicators, let's consider the following macroeconomic indicators Ukraine: 1). GDP. 2). Global Competitiveness Index (GCI). 3). Networked Readiness Index (NRI).

In order to determine the target depending on macroeconomic indicators, which are effective from factor, based on previous research, let's consider the following partial indicators of the main components of Informatization of Ukraine (Tab. 2).

Partial indicators of the main components of Informatization of Ukraine

Index	Conditional denotation of Index			
Target macroeconomic indicators	Conditional deflotation of mack			
GDP	<b>y</b> 1			
Global Competitiveness Index				
Networked Readiness Index (NRI)				
Efficient governance				
Availability of laws relating to ICT	<b>X</b> <sub>1</sub>			
The effectiveness of the legal system in dealing with complex issues concerning network	$x_2$			
Intellectual Property Protection	$x_3$			
Government guarantees in the procurement of advanced technology	$x_4$			
Use of ICT and effectiveness of government activities	$x_5$			
The number of procedures to enforce a contract	$x_6$			
The number of days to enforce a contract	$x_7$			
Infrastructure efficiency				
Software	<i>Z</i> <sub>1</sub>			
Availability of of new technologies	<b>Z</b> <sub>2</sub>			
Mobile Network Coverage	<b>Z</b> 3			
International Internet traffic	<b>Z</b> 4			
Secure Internet servers / million. people. population	<b>Z</b> 5			
Basic rates for broadband Internet	<b>Z</b> <sub>7</sub>			
Competition in Internet telephony	<b>Z</b> 8			
Efficiency population use				
People who use the Internet	<i>k</i> <sub>1</sub>			
Cellphone	$k_2$			
Households with personal computers	<i>k</i> ₃			
Households with Internet access	$k_4$			
Fixed Broadband	$k_5$			

Table 2

	Continuation of Table 2			
Mobile Broadband	<i>k</i> <sub>6</sub>			
The use of virtual social networks	k <sub>7</sub>			
Business productivity				
The use of ICT for "Business to Business" - operations	<i>I</i> <sub>1</sub>			
The use of ICT for "Business to Consumer" - operations	l <sub>2</sub>			
Science-intensive workplaces	l <sub>3</sub>			
Intensity of local competition	<i>l</i> <sub>4</sub>			
Number of days for starting a business	<i>I</i> <sub>5</sub>			
The number of procedures for starting a business	<i>I</i> <sub>6</sub>			
The effectiveness of e-government				
Index of e-government	$p_1$			
The success of the government in promoting ICT	$p_2$			
The index «E-Participation» - citizen participation in e-government				
projects	$ ho_3$			
Recognition of the importance of ICT by the state	$ ho_4$			
High-tech production				
Impact of ICT on the production of new products and services	S <sub>1</sub>			
PCT (Patent Cooperation Treaty) patents	<b>S</b> <sub>2</sub>			
Impact of ICT on new organizational models	<b>S</b> <sub>3</sub>			
Impact of ICT on access to basic services	S <sub>4</sub>			
The use of IT-technologies at the firm level	<b>S</b> <sub>5</sub>			
Capacity for innovation	<b>S</b> 6			
Efficiency of Education				
Internet access in schools	$t_1$			
The use of ICT in education and efficiency	$t_2$			
Level of personnel training	<i>t</i> <sub>3</sub>			
Higher education enrollment ratio	<i>t</i> <sub>4</sub>			
The quality of education	$t_6$			
The quality of mathematics and science education	<i>t</i> <sub>7</sub>			
Adult literacy rate	$t_8$			

We will apply regression analysis to determine the model odf depending on key macroeconomic indicators of the main components of the process of informatization of Ukraine. Will perform calculations using computational application package processing statistics Statgraphics Centurion based on [9, 10] for the period 2010-2016.

We calculate multifactoral regression linear model of dependence GDP  $(y_1)$  on components of the composite indicator "Eficient governance"  $(x_1 \div x_7)$  that characterize the development of informatization of Ukraine. Initial data show the results of the development of the model of multiple linear regression to describe the relationship between  $y_1$  and 7th independent variables. The equation of the model is:

$$y_1 = 285,451 - 192,527 x_1 + 73,3878 x_4 + 145,856 x_5 - 0,523338 x_7 R^2 = 0,8528, F = 23,16, DW = 1,8391$$

According to the equation we see that GDP  $(y_1)$  depends on the following components: the existence of laws relating to ICT  $(x_1)$  government guarantee for procurement of advanced technology use ICT  $(x_4)$  and the effectiveness of government activities  $(x_5)$ , and measures the number of days to enforce contract  $(x_7)$ .

The calculated model is statistically adequate, according to the calculated value criteria.  $R^2$  statistics indicate that the model explains how to set 85.2748% of variability in  $y_1$ . Adjusted  $R^2$  statistics, which is more suitable for comparing models with different numbers of independent variables is 81.5935%, standard error of estimation indicates standard deviation residues is 19.066. The average

absolute error is equal to 12.547 (average balances). The value of Durbin-Watson statistics (DW), which is equal to 1.8391, examines the remains in order to determine whether there is a significant correlation based on the order when they occur in the data. Since the *P*-value in the variance analysis table (Add. T) is less than 0,05, there is a statistically significant relationship between the variables at 95.0% confidence level.

We calculate the regression model of dependence of Global Competitiveness Index  $(y_2)$  of the main components of Informatization of Ukraine that are included to compex index of "Eficcient governance":

```
y_2 = 6,0444 + 0,0768 x_1 + 0,134 x_4 - 0,3799 x_5 - 0,0038 x_7,

R^2 = 0,9584, F = 5,75, DW = 2,995
```

The built model has a relative statistical quality. This is confirmed by the coefficient of determination ( $R^2$ ), Fisher statistics (F) and Durbin-Watson statistic (DW). The significance of the regression coefficients in the model confirms the Student t-statistics. The explanation of the relative statistical quality of the developed models is the fact that almost all of them are important factors equations criterion for the t-statistic of Student and adequately describe the process of confirming statistics of Fisher have sufficient coefficients of determination, and the Durbin-Watson statistic shows that there autocorrelation residues which adversely affects the ability of predictive models. Gradually, however, predicting, we get a relatively accurate predictive value.

Investigated multifactoral regression linear model of dependence on Networked Readiness Index (NRI) ( $y_3$ ) from reduced component composite indicator "Efficient governance" is:

```
y_3 = -1,7621 + 0,7073 x_1 + 0,4614 x_4 - 0,0963 x_5 + 0,0059 x_7

R^2 = 0,9869, F = 18,77, DW = 2,995
```

The calculated coefficients of determination, Fisher statistics and Durbin-Watson statistics confirm the relative quality of the constructed regression models. This indicates that the calculated models are reliable and adequately describe the study process.

Thus, it is possible to conclude that the GDP indices of competitiveness and network readiness influencing factor such group of "Efficient governance":

- the existence of law, relating to ICT (legal ensuring information and communication activities);
- government guarantees for procurement of advanced technology (state support to provide advanced technology);
- use of ICT and the effectiveness of government activities (efficiency of government activities ICT);
- the number of days to accomplish a contract (the speed and level of ease for the performance of the contract).

With the help of package of processing statistics Statgraphics Centurion application we will compute multifactor regression models depending on macroeconomic indicators of the main components of informatization of the country group "The efficiency of the population". Appropriate analytical dependencies are as follows:

```
y_1 = 801,505 - 9,4258 k_1 + 7,7024 k_2 - 30,4257 k_5 - 206,089 k_7 R^2 = 0,9731, F = 9,03, DW = 2,8174

y_2 = 4,4565 - 0,0026 k_1 - 0,006 k_2 - 0,0053 k_5 + 0,1029 k_7 R^2 = 0,9982, F = 140,74, DW = 2,8174

y_3 = 2,4316 - 0,0263 k_1 + 0,0576 k_2 - 0,1196 k_5 - 0,7827 k_7 R^2 = 0,9698, F = 8,03, DW = 2,8174
```

On the next group of indicators that are responsible for infrastructure resulting efficiency indicators have the greatest impact following factors:

- Software (level of software).
- 2. Secure Internet server (level of network hardware).
- 3. Basic rates for broadband Internet access (tariffs for broadband Internet access).

Calculated multifactor regression model linear dependence of GDP, indices of competitiveness and network readiness (NRI) from reduced component composite indicator "Business efficiency" are as following:

```
y_1 = 863,792 + 30,277 I_1 - 60,6673 I_2 - 13,2892 I_3 - 31,4107 I_4
R^2 = 0,9224, F = 2,97, DW = 2,3519
y_2 = 3,1264 + 0,1949 I_1 + 0,0331 I_2 + 0,0032 I_3 - 0,0546 I_4
R^2 = 0,5044, F = 0,25, DW = 2,3519
y_3 = 8,3616 - 0,6851 I_1 + 0,4893 I_2 - 0,0626 I_3 - 0,3268 I_4
R^2 = 0,9906, F = 26,28, DW = 2,3519
```

Thus, it is investigated that factors are involved in the formation of the main macroeconomic indicators are:

- the use of ICT for "Business to Business" -operation (use of ICT in business);
- knowledge-intensive of working places (level of implementation of scientific developments in production);
  - the intensity of local competition (local competition).

Analytical dependence of multivariate regression linear models depending on GDP indices of competitiveness and readiness of network components reduced the composite indicator "Efficiency of egovernment" are as follows:

```
y_1 = 263,341 + 548,182 p_1 - 8,5013 p_2 + 85,3993 p_4

R^2 = 0,5651, F = 0,87, DW = 2,2066

y_2 = 4,2328 + 0,5147 p_1 - 0,1168 p_2 + 0,0164 p_4

R^2 = 0,7571, F = 2,08, DW = 3,1395

y_3 = 5,7028 - 1,9709 p_1 - 0,7182 p_2 + 0,4904 p_4

R^2 = 0,7191, F = 0,48, DW = 0,965
```

Thus, the calculated models shows that factor regarding performance of the group "The effectiveness of e-government" in the studied macroeconomic indicators affect the index of e-government, government success in promoting ICT and recognition of the importance of ICT state.

With the help of package Statgraphics Centurion we will compute multifactor regression models of dependence on macroeconomic indicators of the main components of informatization of the country from the group of "high-tech production" with appropriate analytical dependencies, which are as follows:

```
y_1 = -595,465 + 56,3151 \ s_1 + 10,4773 \ s_2 - 47,7278 \ s_3 + 154,789 \ s_5
R^2 = 0,9506, F = 4,81, DW = 3,3175
y_2 = 3,6077 - 0,251 \ s_1 + 0,0174 \ s_2 + 0,0104 \ s_3 + 0,3066 \ s_5
R^2 = 0,9908, F = 26,84, DW = 3,3175
y_3 = 4,5014 - 0,6393 \ s_1 - 0,1376 \ s_2 + 0,6609 \ s_3 - 0,0984 \ s_5
R^2 = 0,9837, F = 15,08, DW = 3,3175
```

Thus, the indicator group of "High-tech production" we obserbe indicators that are included in the respective regression models, namely the impact of ICT on the production of new products and services  $(s_1)$ , PCT-patent intellectual property  $(s_2)$ , the impact of ICT on new organizational models  $(s_3)$ , and the application of IT-technologies at the firm level  $(s_5)$ .

We will calculate multifactor regression linear model depending on GDP and studied indices of competitiveness and network readiness components of the composite indicator "Efficiency of education"  $(t_1 \div t_7)$ , describing the development of informatization of Ukraine. Initial data show the results of the development model of multiple linear regressions to describe the relationship between  $y_1$ ,  $y_2$ ,  $y_3$  and 7th independent variables. The equation models are as follows:

```
y_1 = 2184,3 - 116,169 \ t_1 + 182,253 \ t_2 - 335,335 \ t_6 - 197,553 \ t_7

R^2 = 0,9636, F = 6,61, DW = 3,0647

y_2 = 7,632 + 0,0383 \ t_1 + 0,0224 \ t_2 - 0,4546 \ t_6 - 0,4539 \ t_7

R^2 = 0,9811, F = 12,94, DW = 3,0647

y_3 = 10,8236 + 0,1678 \ t_1 + 1,4445 \ t_2 - 0,8923 \ t_6 + 2,6467 \ t_7

R^2 = 0,9333, F = 15,08, DW = 3,0647
```

As you can see from the developed models of information factors that have an impact on the studied macroeconomic indicators of the combined group "Efficiency of education" are: Internet access at schools, ICT use and effectiveness of education, quality of education, quality of mathematical and natural sciences - education.

We will calculate multifactor regression linear model of studied macroeconomic indicators GDP index dependence of global competitiveness and network readiness index  $(y_1, y_2, y_3)$  of the components of the composite indicator "Efficiency Infrastructure"  $(z_1 \div z_8)$ , describing the development of informatization of Ukraine. Initial data show the results of the development models of multiple linear regressions to describe the relationship between  $y_1$ ,  $y_2$ ,  $y_3$  and 8th independent variables  $z_1 \div z_8$ . The equation models are as follows:

```
y_1 = 42160,0 - 2,5492 \ z_1 + 151,339 \ z_2 - 416,433 \ z_3 - 472,765 \ z_8 \ R^2 = 0,9731, F = 9,05, DW = 1,6618 \ y_2 = 88,2903 - 0,0458 \ z_1 + 0,2278 \ z_2 - 0,7974 \ z_3 - 0,9335 \ z_8 \ R^2 = 0,7122, F = 0,62, DW = 1,6618 \ y_3 = -340,941 + 0,0742 \ z_1 - 0,3003 \ z_2 + 3,334 \ z_3 + 3,7457 \ z_8 \ R^2 = 0,8715, F = 1,7, DW = 1,6618
```

Thus, the GDP index of global competitiveness and network readiness index Ukraine in the group of indicators "Efficiency infrastructure" influential are:

- Software.
- Availability of new technologies.
- Coverage for mobile networks.
- Competition in Internet telephony.

The calculated coefficients of determination, Fisher statistics and Durbin-Watson statistic confirm the relative quality of the constructed regression models. This indicates that the calculated model are reliable and adequately describe the studied process. Thus, studies have shown the significance of the effects of certain factors in Ukraine that affects the development of information on the economic situation of the country, the state of network readiness and competitiveness of our country in the international space.

We apply the analytical results for strategic recommendations for the effective management of national processes information in the face of international globalization. As you can see, the implementation of the main strategic goals of information society development in Ukraine include both external



and internal factors of informatization of our country and covers all areas of the economy as well as concerns Ukraine's foreign policy [11].

The results of comprehensive evaluation of the process features of information in Ukraine and model components of information and relationship factors macroeconomic environment allowed to form a conceptual model of the process of informatization of Ukraine in a strategic perspective, schematic image is shown in Fig. 1.

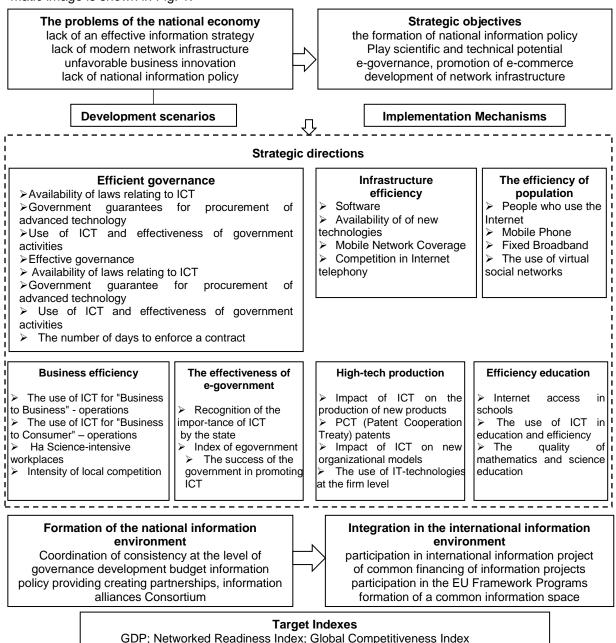


Fig. 1. Conceptual model of informational strategy of Ukraine [develodes by the author]

Thus, Ukraine has the following strategic objectives: the formation of national information policy, reproduction of scientific and technical potential, the development and improvement of e-government, e-government, stimulating the development of e-commerce and network infrastructure. Perform these tasks assumed by these effective tools, forming strategic areas:

- eficient governance,
- efficient infrastructure,
- the effective use of ICT population,
- business efficiency,
- the effectiveness of e-government,
- high-tech manufacturing,
- the effectiveness of education.

**Conclusions.** Using the obtained results from instruments of economic and mathematical modeling, based on the processing of statistical data of retrospective nature, assessing individual variables and their settings, found the interdependence of the most influential factors and calculated regression models macroeconomic indicators of the most significant generalized factors that characterize the development of informatization of Ukraine. This is a practical toolkit on management decisions for predicting tactical and strategic directions of informatization of Ukraine and its integration into the global information space.

The comparative analysis of interdependencies of the values of macroeconomic indicators and factors of information led to the general conclusion concerning the development of Ukraine for the growth of its socio-economic status, referred to the process of informatization of our country in the dynamics of unstable occurs against a background of complex behavior of business environment due to the lack of an effective and coherent state reform policy of information, existing scientific and technological potential as a driving factor in the aspect of development not realized that affects a fairly low level of informatization of Ukraine.

The conceptual model of an information strategy for Ukraine is developed. Implementation of strategic objectives for the development of informatization of Ukraine requires the following measures: effective governance, efficiency infrastructure, efficient use of ICT public, business efficiency, the effectiveness of e-government, high-tech, efficiency of education. Ukraine needs a coherent integration into the international information environment through participation in international information projects, financing of joint information activities, participation in EU framework programs, formation of common information space and so on.

Implementing of measures as for the development of informatization of Ukraine form the basis for the formation of national information environment, such as: facilitate coordination of consistency of at the level of governance, the development budget, information policy, provide partnerships, information alliances, consortia and development institutions.

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