# Informative and communicative technologies as a factor of increase industrial efficiency production: regional aspect

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Summary. In the article the factor of increase industrial production efficiency is explored in a region – the informative and communicative technologies. Meaningfulness and components of the informative and communicative technologies are explored, their definition are given. Influences of the informative and communicative technologies are set on efficiency of industrial production in a region. Keywords: the technologies, the industrial production, a region, the informative and communicative technologies.

#### INTRODUCTION

The tendencies of developing economic processes are lead, that information pierces practically all spheres of economy. In this connection the question about informative cooperation consideration of economic subjects will not be full without researching information technologies. Their application directly affects on curvature of the informative field and on distribution and information transfer in spacious, and in time. In modern informative society unauthorized penetration to the informative resources is one of the most widespread crimes. Information is getting to all directions of state activity, society, citizen. Consequently, government and separate region are spare considerable attention to providing of the proper informative systems protection. In society all anymore technologies that lie in the basis of many administrative processes, social, informative and communication are get more valuable. Similar technologies are acting considerable part in the unique systems of energy supply, in the systems of motion by a transport air and railway. At the planning of informative and communication technologies it is necessary to take into account a risk factor and make efforts for its minimization or provide safety ICT.

### **OBJECTS AND PROBLEMS**

In domestic and foreign scientific economic literature there are many works, devoted to researching of information problems, informative and informative communication technologies, their role in economic processes Abdeev R.F. [1], Gritsenko V.I. [3], Minuhin S.V. [6], Panshin B.N. [8], Poppel G. B. [9], Prihotniy D.G. [10], Vasilyuk V.Ya. Klimchuk S.O. [12], Voices O.V., Ohrimenko S.A., Horoshilov A.V., Martin U.Dg. [13], Yasin E.G. [14], Zavgorodniy V.I. [15]. Ivahnenkov S.V. [17]. However for the reason that in their illumination are retrace a lot of indefiniteness and lacks of coordination that extent stipulates actuality of their detailed research, these questions are enough new and they are provided with the great dynamics of development.

Research the question efficiency increasing of public production is the purpose of the article through technologies information, informative and communication as one of the main factors of influence on economy region development.

### RESULTS AND DISCUSSION

In present condition the great part in economic development of society and functioning of enterprises is acted by informative and

communication technologies (ICT). The appearance of new information technologies, based on a wide introduction of the computing engineering facilities, the connection, the systems of telecommunications, information become the attribute of the state permanent providing activity and necessary, the legal entities, the public associations. Informative and communicative technologies have already become the part of everyday life in state establishments. As a result, the normal life of society is depend on the of functioning informative rightness communicative technologies. Moreover, become the most important object for the attack from the hostile side for society (or the separate state). An informative sphere becomes not only one of the most important spheres of international cooperation, but also is the object of rivalry.

The most developed countries translated management into creative information technologies of a new higher level in the last decade. They include a new informative cycle such as work of information, its transmission, processing of using for object transformation, achievement of new higher aims [14]. The subsystem of information management is intended to promote a level and authority of the automated systems of region management [8].

The informative influence on the state, society, citizen now is more effective political knife, economic and even military. Countries with more developed informative infrastructure is setting technological standards and giving the resources to the buyers, it determine the forming terms and activity of informative structures in other countries, substantially affect on developing of their informative spheres [12].

Among the basic tendencies of the modern information technologies development it is possible to select such as creation of the unique incorporated informative environment; possibilities of the outsourcings access of information; introduction of intellectual creative facilities of information treatment; convergence and integration of the dedicated informative systems [17].

Consideration of informative and communicative technologies determination should be noted that information technologies and telecommunications in the common understandingit is simple information transfer, inalienable one from other.

Row of scientists are understanding in scientific labours under information technology all «aggregate of forms, methods, facilities of informative automation activity of in different

spheres and above all things at a region management» [2,11]. In this time they are limited only by the questions of automation management, planning and projection.

In Y. Macgovan researches is determines technologies information as «calculable possibilities increased on electronic data-bases and bound together by the front-rank telecommunication systems» [11]. Determinations of informative and communicative technologies in other editions are pointed «as the using of the and communication computing engineering networks for creation, collection, transmission, saving and treatment of information for all public life spheres » [9]. It is necessary to mark that the denoted authors have advantages because they extended notion ICT and delivered it to all spheres of public life. Examining scientific labours of question researchers, it is possible to assert ,that they [14] entered notion ICT and select base technologies such as technology of microelectronic components, technology of providing; technology of software; technology of communications. But, analyzing the examiner list of technologies, it is necessary to add what determination is seen to us enough narrow and limited, and interpretation is limited in the dual understanding: in historically ICT is examined as the phenomenon characteristic only for the present level of human civilization development; the ICT is founded only on technique achievements and not taken into account its subsequent possible development in time, ICT is conjuncture phenomenon.

On these reasons they do not expose all essence of this economic category, it is necessary for mostly complete idea of modern economic development questions. The ICT determination as the technologies is oriented for the receipt, treatment and distribution (transmission) of information, [4] in our understanding it is more adequate. Analyzing the certain part of scientific sources, it is possible to do a conclusion: in whole informative and communicative technologies could be defined as an aggregate of methods and principles, that lie in the basis of collection, treatment, transmission, saving and presentation of information in all spheres of human activity.

In the above-mentioned determination the ideal information is materialized in different second forms - this information. It is needed to mark that in imitation of the transmission not only the transmission in spacious is meant, but also in time, in force of that information is indissoluble related to memory, and a data (memory) carrier moves in

time. Informative and communicative technologies are acting double part.

- 1. They are accountable for the transmission between people of the operative information which is necessary for realization by them current activity.
- 2. The task of information transfer in time is fixed on ICT, it is accountable for the transmission of form information which is called knowledge.

In accordance to this double function it is turning up the double function of co-operation ICT on human society and on an economy in whole. Doubling is become apparent in. At first, it is co-operation on the material factors of public production, but not straight, but through a man, through the personal factor of production forces.

Secondly, it is an influence on the speed and volumes of information, which is passing between people in the process of co-operations, including economics.

The ICT, in turn, is uniting two oppositions: accumulation (saving) of information; distribution (transmission) of information. These oppositions are simultaneously found in indissoluble unity, as saving of information – its transmission in time and other information, before it would be anywhere passed, it must be well-kept on transmitters, but at the transmission in spacious it is also passed in time. The ICT side, which is related to the information transfer in spacious, is predominate in the fundamental mass of the relations between people, accordingly, it would be having substantial advantages at economic cooperation of subject management. The ICT is showing the economic relations: in the information transfers between the subjects of these relations, in smoothing or creation the economic informative field.

It is possible to add that the information which is circulates between the subjects of these relations, is also operative information. The economic intensification of co-operation development will be providing that ICT side, which is accountable for the information transfer in spacious, improvement of its methods, modes. The influencing of this side ICT will be expose advantages before all in the distributing spheres, exchange and consumption, touching directly production.

The other ICT side is influence on the accumulation (by saving) of information and on production forces of society. The development of ICT side affects on knowledge accumulation speed. Such aspect of the ICT is touching exactly the basis of material production – direct

production; it is affects on production forces development of society. For this reason, there is the necessity of such factor revision that will be characterizing the public development as a degree of development ICT.

In the development of production forces and economic relations, where is a question of such consideration factor which is used in characterizing the public development as a degree of development ICT, there is the necessity of role and value ICT revision. The factor, which is not, simply characterizes the level of production forces in society, but also pierces all structure of public development; it is the degree of ICT development. The ICT come forward to one of the basic factors of society development so far as they are responsible for people co-operation [5,7].

Accumulation of knowledge and development of production society forces are found in certain dependence in public life, which is based on the methods of collection, treatment, saving and information transfer, from one individual to other.

Informative and communicative technologies lies in the basis of development production forces and simultaneously the production forces are motive power of ICT development, but the last are more primary for the material side of production forces. On that score it is possible to say that ICT – is the deep factor of developing forces production.

It is necessary to mark: that ICT is affect on the economic relations, their intensity, because they remove co-operation between people. Simultaneously it is a general category, because it pierces not only the aggregate of material-economic relations but also other public relations too. It is possible to assert that ICT come forward the fundamental basis of society life, affecting on production forces, and on development of economic relations and also on other spheres of public life, getting the active influencing reverse.

It is obviously, that ICT exactly characterize the human society on all stages of its development, but only, on a modern stage is becoming the basis of all society and acquire in comparison with the past periods of principle a new high-quality level. Also it is possible to speak about informative and communicative development of economy approaches, without casting informative and civilization approach side [18].

Examining their influence on accumulation of structural information, as a result, on the production of society forces, on the intensification of production relations, in which the ICT is determined. It is possible to look after informative

and communicative approach. Expedient the selection of two influence vectors is seen on a public ICT development in accordance to the above-mentioned duality of last – it is a structural vector, that describes influencing of that ICT side and it accountable the accumulation of structural information (knowledge) in society and operative vector, that describes influencing of the ICT side, which affects on circulation of operative information in society.

The characteristic feature of structural influencing ICT vector is a possibility to select such tendency: the ICT transitions which are accountable for accumulation (saving) of a new high-quality level. In subsequent it is accompanied by transition of production forces on a new high-quality level. It is necessary to add, that influence on the ICT structural vector is observe above all things on the material side of production forces, the influencing is not directly - the mediated through a human. In the field of economic cooperation subjects and above all things in the sphere of circulating the influencing of operative ICT vector is retracing.

On an intensification of co-operation the high-quality bound in technology of the ICT operative vector is substantially influenced. It is possible to make such example: the appearance of written language opened the possibility of territorial widespread states organization and appearance of the telephone and the radio affected on a forming of monopolies. Development of multinational corporations, large holding and also internationalization of economic life promoted the appearance and development of electronic communications. Exploring the scientific labours through this question, it is necessary to mark, that telecommunications definitely predetermine efficiency of many other economy sectors, for example, banking, transportations a passenger and Consequently, today there transformation of information in a commodity and international informative market creation [9].

Last years two high-quality changes of ICT vectors are coming, they are structural and operative. Accumulation of structural information is walked up to the border of high-quality changes from one side, of society cognition and from the side of nature cognition. In society it is the reason of substantial changes, consequently it is possible to establish transition on a new level of civilization – informative and computer.

Becoming of informative society is the characteristic sign of transition society for the new social-economic structure, changes, that takes

place in the social life, advancement to the successive management. All it causes difficulty during the economic analysis processes that happen.

The supervision after informative and communicative development technologies and conducting of the ICT development analysis is lying in the basis of long-term society development prognostication. In accordance to the conception of cyclic dynamics and the proper technological modes is becoming the innovation basic factor of economy growing.

Forecasting the development of perspective mode, it is possible to apply the proper actions from optimum development of economy.

In society there could be large technological changes at the development of ICT proper, consequently, the forecasting development of those or other ICT; it is possible to foresee the possible getting up in economy. Has not a necessity to examine, what technology, getting up will be thanks to. It is enough to predict the possible ICT development and after their development the structural changes in economy will be passing.

#### **CONCLUSIONS**

Analyzing the ICT influence on the development of society and economic relations, it is possible to select two vectors: the structural and operative influencing. Before abrupt intensification of accumulation structural information processes in society and changes of production forces which are conduce to the changing of the technically-economic modes, they brought over the high-quality changes of the first. Before intensification of economic agent's co-operation, the high-quality changes of the second are brought over.

equipment by information communication technologies is strike root and perfected on every agricultural subject, as such equipment allows to save charges administrative, considerably promotes efficiency of projectdesigner works, provides the effective planning, promoting potential of production. At the same time the introduction of the informative systems through informative and communicative technologies, as a rule, is bring to synergic effect in a successful activity of organizations, thanks to the increasing management efficiency which caused by conference of using the information technologies.

#### REFERENCES

- 1. **Abdeev R.F., 2001.:** Philosophy of informative civilization. Progress, 254 p.
- Boguta A., 2011.: Zastosowanie monitoringu ip w systemie nadzoru budynkuLublin University of Technology. TEKA Commission of Motorization and Power Industry in Agriculture, Tom XIC, p. 9-17.
- 3. **Gritsenko V.I., 2008.:** Information technology: questions of development and application. Kiev, 272 p.
- Marcin B., Andrzej S. 2011.: Wykorzystanie srodowiska labview do budowy systemu nadzoru kontrolujacego parametry klimatyczne i techniczne w pomieszczeniach w gospodarstwie rolnym TEKA Commission of Motorization and Power Industry in Agriculture, Tom XIC, p.18-28.
- 5. **Martin U.Dg. 2010.:** Informative society. Problems and illusions. INION, 423 p.
- 6. **Minuhin S.V. 2010.:** Forming of the informative providing of the system of management business by the processes of enterprise. Aktualni problemi ekonomiki. № 10. p.70-178.
- 7. **Nawrocki W. 2008.:** Komputerowe systemy pomiarowe, wkil, Warszaw, 11, p.245-267.
- 8. **Panshin B.N., 2008.:** New information technology in the organizational systems of management // Sensorbased systems and machines, №1. p.7-13.
- 9. **Poppel, Goldstayn B. 2000.:** Informatsionnaya technology is millionth incomes. Economy, 238 p.
- Prihotniy D.G., 2002.: Socio-economic nature of informative product and informative resource. Finances and statistics, 174 p.
- Macgovan Y. 1990.: Telesommunications and global competitiveness / Vital speeches of the day. – N.Y., Vol. 57 № 1-2
- 12. **Vasilyuk V.Ya. Klimchuk S.O., 2008.:** Informatsiyna bezpeka dergavi. Course of lektsiy. Skif, 136 p.

- 13. Voices O.V., Ohrimenko S.A., Horoshilov A.V., Tihomirova V.P., 1996.: :Introduction to informative business: train aid. Finances and statistics, 240 p.
- 14. **Yasin E.G. 2000.:** Economic information. Statistics, 80 p.
- 15. **Zavgorodniy V.I. 2001.:** Complex defence of information in the computer systems. Logos, 201 p.
- Bicac A.O., 2008.: Bases of economic informatics. Minsk, 184 p.
- 17. **Ivahnenkov S.V., 2011.:** Informatsiyni tehnologii in organizatsii: navchalniy posibnik. Kiev, 349 p.
- 18. Marcin B., Andrzej S. 2011.: Wykorzystanie srodowiska labview do budowy systemu nadzoru kontrolujacego parametry klimatyczne i techniczne w pomieszczeniach w gospodarstwie rolnym TEKA Commission of Motorization and Power Industry in Agriculture, Tom XIC, p.18-28.

# ИНФОРМАЦИОННО-КОММУНИКАЦИОННЫЕ ТЕХНОЛОГИИ КАК ФАКТОР ПОВЫШЕНИЯ ЭФФЕКТИВНОСТИ ПРОМЫШЛЕННОГО ПРОИЗВОДСТВА: РЕГИОНАЛЬНЫЙ АСПЕКТ

## Ксения Серебряк

Аннотация. В статье исследован фактор повышения эффективности промышленного производства в регионе – информационно-коммуникационные технологии. Исследована значимость и компоненты информационно-коммуникационных технологий, предоставлены их дефиниции. Установлено влияния информационно-коммуникационных технологий на эффективность промышленного производства в регионе.

Ключевые слова: информационно-коммуникационные технологии, промышленное производство, регион.