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# Editorial

Dear Colleagues!

You are holding in your hands the new edition of the journal *Archiv EuroEco*, which was released by the Editorial Board of European Scientific Society in Hanover. Among authors there are specialists representing various fields of economy, ecology and human sciences.

Journal *Archiv EuroEco* highlights researches on all aspects of economy and ecology, with particular emphasis on investigations that develop new concepts, new technologies and methods that test economic theory, or that lead to an increased appreciation for the diversity of economic and ecological phenomena. Theoretical, analytical, experimental, historical, and descriptive approaches are all appropriate, though preference is given to research and synthesis that leads to generalizations potentially applicable to other species, populations, communities or ecosystems.

Modern human science forms a fairly complex, interrelated and multidisciplinary science, whose successful development is based on regular communication and cooperation of specialists with different backgrounds. We hope that our journal *Archiv EuroEco* will make its best in bringing together specialists from different countries and therefore improving the quality of the environment and human being.

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## RECTOR

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The Rector of the "Institute of economics, management and law (Kazan)" is Dr. Timiryasova Asya Vitalievna (PhD in economic studies). Asya Vitalievna is an author of more than 90 scientific works, 10 monographs, a lot of textbooks and articles. She was awarded with many Diplomas and Awards for active pedagogic and public activity.



## About the Institute

"The Institute of Economics, Management and Law (Kazan)" (IEML) was founded in 1994 by the initiative of the Ministry of Education of the Republic of Tatarstan and the Commission for the Public Education in order to fulfill the needs of the Republic in educated professionals in the spheres of market economy and law. Its founder and the First Rector, Dr. Vitaliy Timiryasov, one of the distinguished alumni of Kazan State and Moscow State Universities, laid the best traditions of classical university education in the foundation of a new school.

Nowadays the Institute is the largest private higher educational institution in the Republic of Tatarstan and the entire Volga region.

## The Structure of the Institute

The training of high-qualified specialists takes place at 5 departments: Department of Economics, Department of Law, Department of Psychology, Department of Management and Engineering Business, Department of Service, Tourism and Public Catering, and at 4 schools (Information technologies, Industrial Management, Design, and Foreign languages).

There are also 7 branches of the Institutes, as well as the College giving the vocational education, the Institute for business learning, the Institute for distance learning, and a School for post-graduate studies.

## Our Achievements

The Institute is among 100 best Russian higher educational institutions and in 5 top best private institutes of Russia, it has the official "European quality" golden medal for implementation of the "Management of Quality" system (ISO 9001:2008).

The quality of education in the Institute is additionally proved by the fact that, according to the Federal Competition Results, since 2012 the Institute has received 226 budget places. This number of budget places is the largest among private universities in the Republic of Tatarstan.

Institute of Economics, Management and Law is also the leading higher educational institution in the Scientific and Educational Cluster in Trade, Hospitality Industry and Services in the Republic of Tatarstan.

The Institute implements lively international activities. There are students exchange programs with the University of Trier (Germany), the University of Arizona (USA) and others. The students of such majors as IT technology, Management and Psychology, have a chance to take part in double degree programs with leading international Universities. The full list of the Institutes' international partners can be found at its site.

Of course, the good functioning of the Institute is a result of good management.

## In short...

Whether you are a recent school graduate, a senior scholar or a businessman, the Institute of Economics, Management and Law has something to offer you, would it be the educational opportunities, an implementation of a business idea or innovative research plan, or a project of cooperation. Everyone is welcome at our Institute and we do our best to meet every individual need.

Last but not least, the Institute is located in the beautiful city of Kazan, the capital and largest city in the republic of Tatarstan, Russia. Often called the "Third Capital of Russia" and "Sports Capital of Russia", this multi-ethnic, multi-cultural city provides its residents and visitors with a multitude of business opportunities and fascinating leisure activities.



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# A Word to the Reader

In our fast-paced and dialectically mixed world problems of humankind are coming into force. Global problems of modern age, vision of future world, harmonization of individual and social life, solution of these and many other problems will be defined by qualities of individual both as subject and object of civilizational and innovation development.

The current crisis is resulting from one-dimensional priority of material values, directives of popular materialism which is generating vision of a human being as employee–manufacture. Techno-humanitarian gap between technology development level and culture is distorting a true human role in evolutionary development of the world. Just the human creativity is the ground of his active participation in development of a new civilization.

It is known that the future is arising from present. And the present is calling for development a new human science. The new science had to be natural and humanitarian synthesis: subject for study – a human being, his research methodology – is taken from the humanities; method – theoretical modelling- is taken from natural sciences. And basics of such synthesis are already created by efforts of domestic and, in some degree, foreign researchers.

Research papers devoted to socio-humanism as the basics of a new civilization will be published in our new magazine.

Problems of humanology will be studied as human phenomena from the new perspective – the system theory of human capital assets.

The range of problems investigating in the magazine is rather completely describes a human being as individual, a member of social medium and suburban resident (biosphere). The range of these problems includes: structural energy and life; humanity; national wealth; human capital assets and life quality; ergodynamic model of a man; energy and time; socio-humanism and human qualification.

All these problems viewed in indissoluble unity with development of market economy and its problems. Place and role of a human being in economy, problems of ecological and economic education, young people learning, generation of ecological sense in the outside world will take the principle place in the magazine. Problems of individual, of his harmonious development, improvement of human capital assets will be the focus of attention of the magazine.

*Prof. LEV KURAKOV,  
Prof. VLADIMIR GOLUBEV,  
Prof. VITALY BUSHUJEV*

# EINIGE AUSGANGSPUNKTEN DER LEHRE VON DER NOOSPHERE



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Im 2013 Jahr jährt sich der einhundertfünfzigjährige Geburtstag des hervorragenden Wissenschaftlers Wladimir Jwanowitsch Wernadskij (1863–1945).

Alle wissenschaftliche russische Öffentlichkeit wird dieses Jubiläum feiern.

Wernadskij leistete einen wichtigsten Beitrag zur Entwicklung der Naturwissenschaft, im Wissensgebiet der Geochemie, Geophysik, Mineralogie, Radiologie, Biogeochemie usw. Er war Direktor des von ihm begründeten staatlichen Radiuminstituts.

Wernadskij erarbeitete eine Gegenwartslehre von der Biosphäre, als ungeteilte Hülle der Erde, Lebendiger Stoff, der als planetarisch-komische Kraft funktioniert. Nach seiner Meinung übergeht die Biosphäre in ihrer Evolution in höchsten Stadium der Noosphäre. Vor ihm benutzten dieses Fachwort Leroi Gouzman (1911–1986) und Teilhard de Chardin (1881–1955). Einen wichtigen philosophischen Beitrag zur Entwicklung der Biosphärenwissenschaft leistete

Teilhard de Chardin, der französische Paläontologe, Geologe, Anthropologe, Philosoph und katholischer Theologe. Schardins Hauptwerke "Der Mensch im Kosmos" bildet den Versuch einer universalen christlichen Weltdeutung auf evolutionistischer Grundlage. Auf der Basis spiritueller Erfahrung sucht er Ergebnisse der modernen Naturwissenschaft, insbesondere die materialistische Evolutionstheorie (seit C. Darwin), und die christliche Heilslehre und Heilsgeschichte in Einklang zu bringen. Dabei geht er davon aus, dass die Materie, um Geist (in Gestalt des Selbstbewusstseins des Menschen) hervorzubringen, als Urmaterie bereits beseelt gewesen sein müsse; je komplexer die Materie in ihrem Äußeren (Molekülbildung usw.) werde, um so deutlicher trete ihr Inneres (als Bewusstsein) in Erscheinung, um sich schließlich im Bewusstsein des Menschen ihrer selbst bewusst zu werden.

**ABSTRACT:** The social-economic efficiency of cooperation based on voluntary joint action is the main argument to support this movement on current stage of development. The article highlighted some aspects of social and economic efficiency of cooperation in the agrarian sphere. To determine this effectiveness the current approaches were investigated, possibilities of their improvement were revealed.

**KEYWORDS:** agrarian sector, reform, efficiency, cooperation, integration

Auf dieser Stufe der Evolution, dem qualitativen Sprung von der Entfaltung der Organischen, der "Biosphäre" zur Entfaltung des Geistigen als "Noosphäre", wird der Mensch zum Träger der weiteren Entwicklung, die sich Teilhard de Chardin in einer mystischen Vision als teleologische Entwicklung des Kosmos zu einer einzigen Weltkultur, dem "punkt Omega" denkt; dieser wird auch als das göttliche Zentrum des Kosmos, das absolut letzte, transzendente Prinzip der Irreversibilität und Personalisation beschrieben, kennzeichnend für die evolutionäre Aufwärtsbewegung sind Beschleunigung und Konvergenz.

Seine Lebensansichten über den weiteren Sinn und die Bedeutung der Noosphäre in der Menschenevolution entlehnte er der antiken Philosophie, wo "der Nus (griechisches Wort, als Zentralbegriff war. Später entstand das lateinische Wort "Noos" mit dem gleichartigen Sinn. Der Begriff "Nus" bedeutete auch Vernunft, Geist, Intellekt, Gedanke, Sinn, Ordnung usw.

Die Lehre vom Nus als Zentrum des Weltalls formulierte der griechische Philosoph Anaxagoras (um 500–428 v.u.z.). In seinem Hauptwerk "Über die Natur". Er behauptete, dass die Welt mit ihren zahlreichen Dingen, Lebewesen usw. durch eine immer mehr um sich greifende Sonderung verschiedener Stoffe entstand. Da die Sonderung nicht vollständig ist, existieren immer noch alle Homoiomerien in jeder einzelnen Erscheinung, deren Charakter lediglich durch das Übergewicht einer bestimmten Homoiomerienart gekennzeichnet ist. Den Anstoß zur Sonderung der Stoffe gab der Nus, der feinste und reinste aller Stoffe,

der Denkstoff, der aber ebenfalls materiell aufzufassen ist.

Die Welt wurde dabei als ein einheitliches materielles Ganzes aufgefasst. Die Pythagoreer waren die ersten Vertreter des philosophischen Idealismus. In den Zahlen bzw. Zahlenverhältnissen sahen Sie die Grundprinzipien der Welt.

Nach Heranklitos (544–483 v.u.z.) vollziehen sich alle Dinge nach einem allen Erscheinungen gemeinsamen Gesetz (dem Logos), und in der Einheit und dem ständigen Kampf der Gegensätze das Wesen der Welt.

Demokrit, Platon, Aristoteles, die Vertreter der klassischen Systeme der antiken Philosophie versuchten philosophische Systeme zu begründen, die sowohl die vorangegangenen naturphilosophische, als auch ethische, logische, geseologische, politische und ästhetische Fragestellungen integrierten und weiterentwickelten.

Demikritos (460–371 v.u.z.) wandte die Atomistik auf alle Gebiete der objektiven Realität, wie auch der menschlichen Erkenntnis an. Nach seiner Meinung sei die Mechanik der Atome das wahre Wesen der Welt.

Platon (427–347 v.u.z.) sieht diese wahre Welt des Seins in der Welt der Ideen, die eine selbstständige Sphäre darstellt, und in der Idee des Guten gipfelt.

Aristoteles (384–322 v.u.z.) sieht für jedes Wesen das höchste Glück darin, dass es seine Natur verwirklicht. Die Natur des Wesens des Menschen ist aber die Vernunft, die Fähigkeit des Vernunftgebrauchs selbst bringt Befriedigung bzw. Lust mit sich.

In der stoischen Philosophie hatte große Bedeutung die Weltvernunft (Logos). In der Tugend, d.h. im naturgemäßen Leben, in der Übereinstimmung des Menschen mit der Weltvernunft (Logos), sahen die Stoiker das höchste Lebensziel. Solcherweise ist in der Philosophie seit Anaximandros, Pythagoras und Empedokles die Weltordnung, das Weltall, gegenüber Chaos nicht nur das Geordnete, sondern auch das durch seine Harmonie, Schöne.

Die Lehre von Nus (Noos) gebraucht man in der Philosophie des Mittelalters, der Renaissance, der Neuzeit.

Die Interpretation des Nus als ‘ unbewegten Bewegter ‘ begann bereits in der Schule bei Straton und führte in der arabischen Philosophie bei Avicenna und Averroes zu einen materialistischen Pantheismus. Von hieraus sind über Giosdam Bruno und den Tendenzbegriff von Leibniz Entwicklungslinien bis zur Naturphilosophie Schellings erkennbar.

Einen wichtigen Beitrag zur Entwicklung der Noosphäretheorie leistete Gottfried Wilhelm Leibniz (1646–1716), Mathematiker und Philosoph. W. Leibniz war eine hervorragende Persönlichkeit, führte ein sehr interessantes Leben, bereiste viele Länder:

Frankreich, die Niederlande, die Schweiz, Italien, Österreich, den Süden Deutschlands. Er diente als juristischer und diplomatischer Berater, als Mitglied im Revisionsgericht, College de France, in der Academie des Schiences, als Bibliothekar und Hofrat in hannoverschem Dienste. In Hannover war Leibniz als technischer Berater tätig. 1700 kam er mit Unterstützung der Königin Sophie Charlotte zur Gründung der Societät der Wissenschaft in Berlin, deren Präsident Leibniz auf Lebenszeit wurde.

Leibniz kam mit vielen berühmten Gelehrten wie A. Arnauld, N. Malebranche, P. Nicole, E.W. von Tschirnhaus, C. Huygens, R. Boyle, R. Hooke, J. Pell und Collins, B. Spinoza und Leunwenhoek, mit M. Malpighi, V. Viviani und C.F. Grimaldi zusammen. In 1711, 1712 und 1716 kam Leibniz mit Peter dem Ersten zusammen und erarbeitete für ihn die Vorprojekte auf dem Gebiet der Ausbildung und der Staatsverwaltung.

Leibniz integrierte vielen Ideen der antiken, mittelalterlichen Philosophie und der Renaissance Philosophie und neue Ideen seiner Epoche im Gebiet der Kernphysik und der angewandten Physik. Er schuf neues Lehren von der Monade und der prästabilierten Harmonie, ihre Kraft und gewann mit seinem eigenen System größeren Einfluss als Leibniz.

Er ist seiner Zeit zweihundert Jahre zuvorgekommen. Aber sein eigentliches philosophisches System ist damals keineswegs in seiner Tiefe begriffen worden.

Wir werden die Lehre von der Monade betrachten.

Leibnizsche Philosophie folgt dem Grundsatz, dass das begründende Prinzip nicht von der Art des Begründeten sein kann, wenn ein Regress ins Unendliche vermieden werden soll. Bei Leibniz wird Gott erstmals nicht als die erste Ursache einer Ursachenkette verstanden, sondern als der “außerhalb der Reihe” liegende zureichende Grund für das Bestehen der Kette als Ganzer.

Zentralbegriff der Leibnizschen Welterklärung ist die Monade, eine einfache, nicht ausgedehnte und daher unteilbare Substanz, die äußeren mechanischen Einwirkungen unzugänglich ist, in deren spontan gebildeten Wahrnehmungen (Perzeptionen) sich jedoch das ganze Universum spiegelt. Während Gott, die oberste Monade, nur deutliche Wahrnehmungen hat und damit die gesamte Entwicklung des Universums überschaubar, sind die Wahrnehmungen der geschaffenen Monaden größtenteils unbewusst (Apperzeptionen). Während die “Seelenmonaden” noch über Bewusstsein und Gedächtnis verfügen können, können die “nackten Monaden” dagegen als die “wahren Atome”, die unausgedehnten Bausteine der ausgedehnten Materie betrachten werden: In ihnen

spiegelt sich das Universum nur noch unbewusst, das heißt, diese Monaden sind eingebettet in den universalen deterministischen Zusammenhang der physikalischen Welt.

An dieser Stelle hat Leibnizscher Kraftbegriff seinen Ort: Während R. Descartes die Physik aus den Stossbewegungen ausgedehnter Korpuskeln entwickelte, das Universum anschaulich geometrisch konstruierte und, von der statischen Kraft als physikalischer Modellkategorie ausgehend, die Konstanz der Bewegungsgröße  $mv$  (Masse mal Geschwindigkeit) fälschlich als universal gültiges Gesetz behauptete, nimmt Leibniz, dabei C. Huygens folgend, die Kraft zum Aufsteigen oder "Lebendige Kraft"  $mv^2$  als Maß der Bewegung, für das er einen Erhaltungssatz postuliert. Leibniz unterscheidet zwischen der "toten" virtuellen Kraft (conatus) und der lebendigen Kraft ("impetus"). Die "conatus" entspricht dem Begriff einer "nackten Monade":

Sie selbst ist nicht durch eine räumliche Bewegung definiert, enthält diese aber virtuell, und aufgrund der Kontinuität aller räumlichen gleichzeitigen wie zeitlich sukzessiven Momente des Universums ist in diesem einen Moment die gesamte vergangene und zukünftige Entwicklung der Welt "unbewusst" enthalten. Sind also die Monaden die "wahren Atome des Universums", so gleicht doch keine der anderen, jede hat ihren eigenen Individualbegriff ("principium identitatis indiscernibilium", Prinzip von der Identität des Ununterscheidbaren). Dass zwei scheinbar gleiche Dinge nur numerisch, das heißt nur durch verschiedene Raum- oder Zeitkoordinaten unterschieden sein können, liegt lediglich an der unklaren Vorstellung des Menschen. Doch müssen nach Leibniz für diese unterschiedlichen Koordinaten logische Gründe in den Monaden selbst liegen, denn die Differenzierung der Phänomene kann sich nicht sekundär aus gleichförmigen Elementen entwickeln. Die Welt besitzt damit notwendigerweise einen maximalen Reichtum von Momenten und in diesem Sinne der größtmöglichen Mannigfaltigkeit ist die Welt die bekeine willkürliche Einrichtung der Gott-Monade, sondern notwendiger Ausdruck der Kompatibilität aller Monaden in der kontinuierlichen Ordnung von Raum und Zeit. Leibnizsche Theorie von der Monade tritt in Verbindung mit der physikalischen Theorie des Feldweltraums, der Quantenfeldtheorie, Teilchentheorie, mit dem Welle-Korpuskel-Dualismus und der zeitgemäßen Theorie von der Struktur der Vernunft. Der Weltraum der Vernunft ist hierarchische, mehrdimensional, energetisch-informativische Struktur, zusammengesetzt aus Monaden. Oben dieser energetischen Pyramide befindet sich die Höchste Monade. Die Seelen von Menschen bestehen aus Monaden, die niedrige

häufigkeitswellenkraftliche Charakteristik haben. Aller Weltraum befindet sich in Bewegung. Der Mensch ist ein Teilchen dieses Weltraums, einer Fraktal (die Zelle) der kosmischen Vernunft. In den Weltraum dringen verschiedene Energieströme. Viele Gelehrten entdeckten diese Ströme. Isaac Newton hatte das Licht als einen Strom von Korpuskeln aufgefasst. Christian Huygens entdeckte Interferenz und Polarisation und entwickelte die Maxwellsche elektromagnetische Theorie des Lichts.

Mit der Deutung des lichtelektrischen Effekts durch Lichtquanten, Photonen erweckte Einstein 1905 die Korpuskulartheorie des Lichts zum neuen Leben. 1923 konnte Arthur Holly Compton Streuversuche nur als Stoss erklären, bei dem Röntgenlichtquanten einen Teil ihres Impulses an die gestoßenen Elektronen abgaben. Die Gelehrten entdeckten den Dualismus des Weltraums.

Aus einem Symmetrieempfinden für Dinge der Natur erforderte deshalb sagte Louis-Victor De Broglie, dass nicht nur für das Licht, sondern auch für die Materie dualer Charakter eigen sein müsse. Jeder sich bewegende Körper müsste auch Welleneigenschaften haben. Einem Körper der Masse "m", der sich mit der Geschwindigkeit "v" bewegt, kommt dabei die Wellenlänge  $\lambda = h/(mv)$  zu, wenn 'h' plancksche Wirkungsquantum ist. Für äußerst schnell bewegte Elektronen erhielt De Broglie eine Wellenlänge etwa im Röntgenstrahlgebiet. Diese genannten Beispiele zeigen, dass der Mensch als das kleinste Teilchen des Weltraums der Vernunft die harmonische Wechselwirkungen mit ihm durchführen muss. Ein weiteres Ziel der Menschheit ist die Verbreitung der Vernunft im großen Milchstraßensystem.

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# THEORETICAL BASIS OF THE TECHNOLOGY OF PEDAGOGICAL DESIGNING

**ABSTRACT:** The article reveals the author's vision of design technology and presents the basic requirements and components of project activities to ensure changes in the educational environment in achieving effective development results of a school child.

**KEYWORDS:** technology of pedagogical design, design theory, teaching activities, design objects.



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and Law, Russia*

The specific character of the present stage of the world progress makes the design activity popular for kinds of professional activity of the experts occupied in any area of material and non-material production. The educational sphere is not an exception. Dynamics of innovation processes in education has defined the necessity of wide introduction of design technology into the process of activity of educational institutions.

Effective realization of the named necessity and promotion of design practice among pedagogical workers assume analytical judgment of design theory and allocation of the main provisions making scientific bases of technology of pedagogical design.

Consideration of design as specific activity of teachers is built with a pillar on modern theories of design and the design activity, presented in the tractates of V.P. Bepalko, A.N. Dahina, V.V. Davidov, E.C. Zaire-Beka, Z.I. Lavrenteva, S.M. Mihajlova, G.B. Kornetova, V.E. Rodionova, etc.

The structural elements of the theory are the conceptual tools opening essence and meaning of those or other terms, used for a designation of design and its elements; common factors and principles of design; its typological characteristics as type of social activity.

Application of methods of theoretical research in work with scientific sources is directed on realization of object — to state theoretical bases of technology of pedagogical design.

The term *design* (from the Latin *projectus* — *thrown forward*) has the certain autonomy, typologically separable from other types of intellectual and socio-cultural activity. V.P. Bepalko who has initiated research of pedagogical design, considers it as «creation of pedagogical object in a material type (the drawing, the description, the calculation), allowing actual experimenting with object and optimization of

its structure, a content, functioning with a pillar on criterion-based conclusions» [1, p. 28–29].

The lead analysis of the definitions opening essence of concept «pedagogical design», allows to pick out following characteristics of design as type of pedagogical activity:

- Belongs to intellectual and socio-cultural activity, has the typological features determined both own specific character, and a specific character of object on which it is directed;
- Goal-based on the solving problems of transformation, perfection (or improvement) of pedagogical objects taking into account common factors and principles of their development;
- It is built on the basis of the analysis of the present condition of pedagogical object (phenomenon) and the forecast of desirable results;
- Efficiency is expressed in development of new shape of system, the description and process of which stage-by-stage construction are given in the project;
- Includes as a unit procedure project development, its realization, diagnostics and monitoring of the achieved results.

Consideration of design as type of pedagogical activity provides the analysis of the researches turned to pedagogical activity (to N.V. Kuzmin, L.M. Mitin, N.N. Nikitin, V.A. Slastenin, A.I. Scherbak, etc.). The given analysis allows to see that pedagogical design as any other activity of the teacher, assumes mandatory availability of «the teacher and the one who he teaches, brings up, develops» [2]. Results of design somehow transform interaction between the teacher and pupils, and a primary objective of pedagogical design just as training and bringing up activity of the teacher is a

accomplishment of main objective of education — (from a position of requirements of Federal state standards — subject, meta-subject, personal progress).

The difference between pedagogical design and other types of pedagogical activity consists means, ways of its realization, and functional destination of design activity.

Pedagogical design represents difficultly structured system of activity including following elements:

- Subjects of design (their plurality as feature of pedagogical design mark S.I. Dvoretzky, E.I. Murasova, I.V. Feodorov) [3, p. 129];
- Objects (a pedagogical system, a pedagogical process, a pedagogical situation);
- Objective (an ideal concept of expected result), principles, means and methods of design;
- Design strategies (J. Johns allocates lineal, iterative and adaptive strategy depending on which there is a sequence of actions) [4];
- Criteria indicators to identify progress.

Result of design is the pedagogical project which acts as original pedagogical interpretation of the realized needs and the social control. Creating the project is carried out with observance of the technology of design.

Emphasizing the concept «the technology of pedagogical design» as a key concept of article pre-determines a necessity to define a content of the term *technology* correlatively to a content of design in education (or formation) area.

The conducted analysis allows considering technology of pedagogical design as set of methods and means, step-by-step procedure of technological operations, the technological instructions used for transformation of pedagogical objects (phenomena).

The following act as the valid requirement in technology of design: procedure of design should be built with a pillar on scientific knowledge, in view of pluralism of opinions, an admissibility of pedagogical eclecticism; the structure of means and methods of design reflects a rational parity of the theory and practice, scientific (deductive, inductive) and unscientific (intuitive) methods of knowledge. In technology of pedagogical design a combination of the formalized and non formalized approaches of the research, according to V.A. Ganzen's opinion, is one of their procedural requirements [5, p. 5].

Requirements of unity of time, continuity, integrality, consistency (or systemacity) of converting actions should be included in a content of technological instructions to design. The essence of a principle of unity of time consists in a necessity of rethinking of experience of the past and a possibility of its dialectic

progress in the project, proceeding from demands of tomorrow, normative acts which are in a stage of consideration.

In the implementation of step procedures of design it is important to observe the continuity and criticality concerning the past and planned future facility. Integrity, consistency of transformative actions mean that the developing project in the field of designers' attention is not only the system as a whole, not just each element of the system that generates its integrity, but also the elements of the environment, influence and impact that can play both positive and negative (deterrent plans) role in the implementation of the project purpose.

Technology of the pedagogical design involves defining the boundaries of the project situation. Extension of the boundaries (divergence) in the design means space extension of intended function of the project. Transformation within the borders through the recess of innovations built on the basis of selected solutions to target goals represents another strategy for project activities (convergence).

Submitted (or represented) design strategies emphasize its procession in the sequence of states of the object being transformed, the allocation of new tasks and a new action plan to address them. Design technology becomes a bridge (or link) between theory and practice of project activities. The task of pedagogical technology is to answer the question "how?".

Design technology as a set of prescribed incremental actions is directly related to the design factors. Design factors are situational and form four groups: the external environment (everything that surrounds the educational institution); technology work in an educational institution ; strategic choice leadership of the organization in relation to its goals, the behavior of teachers. It's possible to consider each group of factors separately concerning the design procedure on own experience. Project *Optant* aimed at creating conditions for professional self and personal development of pupils, was developing taking into account features of the environment in conducting career guidance, offers of the educational services market and staffing needs of the labor market.

In developing the content of the draft not only the proximal external environment, but also among the entire region, which in 2004 was included in the experiment for testing the Concept profile training in high school were taken into account.

The factor of work technology in an educational institution in the development of the content of the project *Optant* envisaged the creation of new growths based on educational technologies, which is built on the basis of educational interaction.

As part of testing the idea of the profile approach to the training organization of high school in the project activities *Optant* were included methodical seminars to improve career guidance teacher competence; amended the content of mathematics education, taking into account the profile of the class (for example, economic profile class was developed a course "Fundamentals of Mathematical Statistics"), developed and tested the updated system of diagnostics and monitoring the professional development of the individual optant (Latin *optans (optantis)* — *wishing*, a person having the right to choose).

Communication of a factor of teachers' behavior with a planned project description involves the incorporation in step procedure of action measures to improve the readiness of teachers for innovation activity. Standards of readiness are reflected in the structure of personality, its orientation, competence, personal qualities. Each of the selected components in the personality structure of teachers should be considered as a matter of design, with the definition of relevant tools and methods that can ensure its development.

It can be a methodical seminar on the development of innovation culture of the teacher; management meetings in order to increase the number of active participants in the project, the methods of moral and material incentives (or encouragement) of teachers who are actively involved in the development and implementation of the project, etc.

Technology of pedagogical design includes risk identification and analysis of new growth in terms of causal relationships. The design procedure provides for the elaboration of measures aimed at warning risks or reducing their consequences. For example, among the new growths introduced into the education system of the Republic of Tatarstan is Singaporean education technology. The project approach to its implementation is not only phased program of actions taken on the scale of the republic, its settlements, some educational institutions, but also the identification of possible risks that may be connected with a change in attitudes towards the content and the technological scheme of educational interaction.

Scientific approach to design, based on the ideas of synergy suggests that in ongoing project activities should be allocated objects for a *provocation*, should be provided funds and resources in its organization. For example, for the *Optant* project as the object of provocations were selected professional interests of a schoolboy. The project involved activity aimed at increasing awareness of students about professions, with the aim of awakening their interest in forming their professional plans, starting with the choice of a profile training in high school.

Actualization of the ideas and principles of synergy in technology design allows teachers to give it a new direction. The object of the design is the development of personality, thereby opening the possibility of registration and objectification forms its development.

According to I. Frumin, B.D. Elkonin, design becomes a new form of mediation *between perfection and reality* [6]. For implementation of the project possibilities to manage the process of personality development (students, teachers) is necessary consistency of natural laws of human development with artificially generated pedagogical (management) model. In particular, in *Optant* program the building artificial models of professional development of the individual student is based on the features of personality development in the stages of amorphous option and option; requirements of the current situation of social progress, the idea of the profile of high school, etc.

Inclusion of the term *model* in the article content, facing the theoretical basis of technology pedagogical design, determines the relevance of not only disclosure of the term, but also a process by which the model is created.

Designing widely resorts to modeling, which as is specified by V. E. Radionov, acts as a means of *representation and transformation of object which is not yet a reality* [7, p. 37–38]. Development of models (simulation) is adopted in the methodology of science as a method of scientific research of various objects on their models – analogues of a particular piece of natural and social reality.

The inclusion of simulation in design procedure will allow creating a diagrammatic image of the desired reality, which is oriented towards achieving the project objectives. Since the structural elements in the model of the ideal optant person can be distinguished as follows: activity aimed at the development of practical and social spheres; consciousness, scrupulousness in relation to the business; curiosity focused on the external world and on in this world, the willingness to self-improvement, self-development.

The developed model of personality, modern lesson, creative teachers, etc. can become the basis of the next step of designing — developing criterion-measuring material that will allow estimating with more reliability completed transformation in terms of their purpose.

Implemented in the survey study of project activities undertaken in the educational establishments and its products (projects) allows to allocate design stages, their sequential passage which will ensure the quality of the project, and hence its performance. Work on the project includes: identification and justification of the project's relevance, the wording of its goals and objec-

tives; justification selected stages of transformations and their implementation mechanisms, the definition of the expected results and tools for measuring them.

The next stage of the design is revision of existing teaching resources, determination the sources and mechanisms of increasing these resources. An important stage of design is to create a plan of work, role distribution and functional purpose (a very important element of this phase is to develop technological instructions for project executives).

On the basis that any project, making changes, destroys the stereotypes, one of the design stages becomes an impact on public opinion, the popularization of ideas in the teaching environment and parent community. The effectiveness of reforms depends on the efficiency of these activities. Thus, the teacher who is *infected* with the idea becomes to participate more actively in its implementation, showing a creative approach to the injected new growths.

An important step is the formation of design scripts of transformative actions in realization the ideas of the project, the creation and training of a business team, carrying out planned activities, a monitoring tracking changes, updating of the project and plans for its implementation. The final stage of the project becomes the analysis and synthesis of the results of design and report on teaching community that will facilitate the dissemination (or spread) of project ideas on a large scale.

Mastering design technology by educators ensures that the conducted research to draw some presumptive conclusion: technology pedagogical design is a set of series-parallel connected and subordinate chains of actions, each of which can have its own object (thing), focusing on the task of developing the effectiveness of the implementation of the state's education policy creatively developing in the author's projects.

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# CONCEPTION OF IMPLEMENTING INCLUSIVE EDUCATION CONSISTENT WITH MAINTAINING CONTINUITY ON VARIOUS LEVELS OF EDUCATIONAL SYSTEM

**ABSTRACT:** the work is devoted to pressing problem of inclusive education development in contemporary Russia. The author shows inconsistencies and restraint in statutory and regulatory activity at implementing inclusive concept in educational establishments. The main part of the article unfolds the author's thinking of implementing organizational, psychology and pedagogical aspects of inclusive education consistent with maintaining continuity in various levels of educational system: pre-primary education, elementary school, basic school, senior school and vocational educational institutions. The framework components to maintain continuity may become thorough diagnostics of personality development, monitoring and making a portfolio of achievements in learning and social skills of the students.

The key factor in implementing inclusive concept is the teachers' professional willingness to work with people «with different educational needs and abilities .on all levels of education.

**KEYWORDS:** inclusive education, social exclusion, mental barriers, health saving concept, the Federal State Educational Standards of Basic Education, continuous education.

The new idea in development of contemporary education in Russia turns to be implementing inclusive concept in the activities of educational establishments on different levels. However, putting the inclusive concept into practice is going on without a due elaboration of its scientific and pedagogical aspects since the notion of this kind of education is not clearly defined.

From the one hand, the notion *inclusive education* is understood as availability in an educational establishment groups for students with limited health capacities (LHC). From the other hand, it implies distance training; several other points of view also exist. But none of these approaches can be attributed to practice of inclusion. The above types of education do not in full measure realize the main designation of inclusive education concept: forming adaptive and



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social skills for people with limited health capacities and at the same time bringing up moral qualities and the sense of tolerance in the participants of educational process with good health. At present most of the researchers in the field of inclusive education studies consider it in the context of disabled children training. [1], [8]. A more thorough approach to the essence of inclusion being in full compliance with UNESCO priorities we find in the works written by members of the Institute of Inclusive Education at Moscow State University of Psychology and Education. These works present various models of integration into groups of children with good health and children with limited health capacities. [5], [6], [7]. These works can be regarded as the guidance in putting inclusion into practice.

The problems of inclusive education are hotly debated by not only teachers' community it also interests parents, politicians and public organizations. Some people vote against inclusion what witnesses the availability of certain barriers on the way of inclusive education development and creation of inclusive society granting to each person equitable opportunities for self-realization in an open environment.

To understand the essence and designation of inclusive education we must focus on the definition given by UNESCO «The notion «inclusion» must comprise the ways of integration cultural, political, racial, ethnic, sexual and language variety» [2]. From this point of view all children (and adults) are dif-

ferent, not similar to each other and possess certain distinctions. In this context inclusive education means complete adaptation of education/bringing-up process to each student with a view of diversity specific character and distinctive features of each individual.

In a similar way the problem is treated in the Federal Law «Of education in the Russian Federation» dated December, 29, 2012, №273-FZ, art. 2, clause 27 defining «inclusive education» as: «providing equal access to education for all attending classes with a glance to variety of specific educative demands and individual capabilities» [10].

At present educational research community discusses the core, significance and, most often, necessity to carefully approach this social and pedagogic phenomenon and each who votes either «for» or «against» inclusion have a point there.

Regarding inclusive education through the prism of democratic processes deepening and in the context of guidepath to eradication of social exclusion we confirm that this education being a new philosophy to gain future advancement.

Inclusive education is founded on a health saving approach to the development of educational process as a whole hence it promotes acceleration of the society moral invigoration and people tolerant attitude to each other.

Ideas of inclusive education are laid as a foundation stone in new Federal State Educational Standards of all levels: from pre-school to vocational. Brief overview of inclusive approach to Federal Standards is given below:

- Federal State Educational Standard for pre-primary education: while being elaborated the Standard made allowance for certain specific educational demands for particular categories of children including children with limited health capacities. Among other goals the Standard outlines providing the possibility to form educational programs with different levels of complexity and orientability with a view of the nursling's educational demands and capabilities. The Requirements for the main educational programmes structure (OOP) state the following: the content of the correction work and/or inclusive education is included into a program if it is planned to be developed. Moreover, the Requirements define special conditions for training and bringing up children with limited health capacities and disabilities. The necessary conditions for diagnostics and correcting developmental disabilities and social adaptation disorders are to be provided by the Standard as well as the specifications for elaborating individual programs of disabled children rehabilitation.
- Federal State Educational Standards for primary school consider provisions for efficient implementation of primary school basic educational programs, the necessity to provide special conditions for children with limited health capacities and disabilities. The Requirements for the main educational programs structure (OOP) state the following: availability of correction work program providing improvement of disorders in physical or (and) mental development for children with limited health capacities and rendering aid in acquisition of the main educational programs for primary general education. The Program must identify specific children's educational demands and individually oriented psychological, medical and pedagogical aid. The Standard also defines special conditions for training and bringing up children with limited health capacities.
- Federal State Educational Standards for basic school: the standard is focused on age and individual peculiarities of pupils including educational demands of children with limited health capacities and disabilities. The Requirements for the basic educational programs structure (OOP) state the necessity of correction work program providing improvement of disorders in physical or (and) mental development for children with limited health capacities, overcoming their difficulties in mastering the basic program to support this category of children. The Program must identify specific children's educational demands and individually oriented psychological, medical and pedagogical aid to comply with admissible mental load level defined with the help of medical staff; taking group and individual correction classes; rendering technical assistance (by a special helper) to this category of children.
- Federal State Educational Standards for senior school: the Requirements for the basic educational programs structure (OOP) state the necessity of organizing correction work for students with limited health capacities and disabilities. Correction work program must be directed to implementation of complex psychological, medical and pedagogical support of the trainees with a view of their health condition and special needs, improvement of disorders in physical or (and) mental development for children with limited health capacities, rendering them aid in mastering the basic educational program. To support this category of children it is necessary to provide necessary conditions for training and bringing up children with limited health capacities and disabilities, to form open barrier-free environment

for life-sustaining and educational activities.

As it is seen from the analysis of Federal State Educational Standards the idea of inclusive approach to general education flows through all standards but unfortunately, it is not thoroughly developed in the documents designed for vocational education and training.

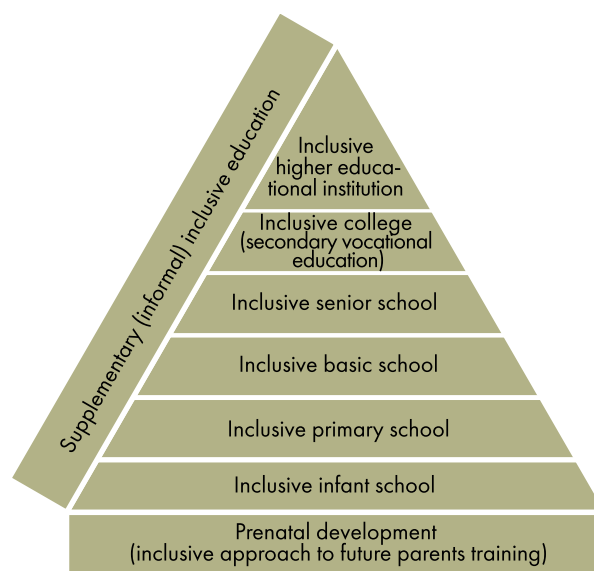
According to our reckoning the success of inclusive education system is determined by the following five organizational-pedagogic stipulations.

1. Existence of Accessibility comprising appropriate architecture of facilities and workplaces, compassionate relations between teachers and children, parents and each other.
2. A scientifically grounded system of integrating trainees in mixed groups, freedom from segregation and barrier free training environment for each child in close propinquity to his house.
3. Teaching staff's complete professionalism and operational excellence of the inclusive establishments' responsible executives who are to possess the skills of reflection and facilitation.
4. Organizational culture and the spirit of mutual understanding in an educational establishment, involvement of all participants starting from director, Board of Education Head and the Minister right up to servitorial staff in the educational process.
5. Integration of inclusive educational establishment with social institutions to allow utilizing socio-cultural area in context of social adjustment for subjects of inclusive education.

Needless to say that we do not call for artificial system of inclusive education *grafted* from the above and outside: inclusion cannot be implanted as a plantlet. True inclusion will be put into practice only in case of educative-nurturant environment being created to comprise all those stipulations mentioned above. But meanwhile in our country the inclusive education system and the model of inclusive education establishment remain to be an important problem into which too few enthusiasts have researched. They try to elaborate an inclusive educational establishment being «in the image and likeness» of other countries' experience without due notice of specific character inherent to certain multicultural aspect of development. No comprehensive concept of inclusive education with due account for continuity of all standards of education has been created in our country yet.

Let us present continuing education in the form of a pyramid where the base being inclusive pre-school educational establishments. Then each stage of this pyramid will be the levels of education. The most im-

portant periods of inclusive concept implementation turn to be pre-school and school education in particular. But theoretically an ideal model of continuous inclusion shall comprise training activity at prenatal stage. i.e. development of a personality before and after birth [4]. The basis of forming children's development and social adaptation is laid at this particular time. And at the stage of vocational training significant losses of untapped resources become apparent.



1. Educational standards serve as an interlink in putting the idea of inclusive education continuity education/bringing-up process into practice. The idea of inclusive approach to organization of education/bringing-up process is laid into Educational Standards but it requires essential follow on development and clear definition of the inclusive education core. Detailed definition would make possible to ensure uniformity of requirements in an organization and provide a teacher's technical support at work in inclusive groups.
2. The second approach to implementing inclusive education continuity lies in diagnostics procedures of psychological and pedagogical support for inclusive education subjects: monitoring of development processes, social adaptation and interpersonal cooperation in groups of inclusive type. Such diagnostic complex with a glance to trainees' age factor and their «exceptional nature» has been already developed by our Institute and can be presented to the public in the near future.
3. Continuous monitoring of inclusive group subjects evolvement will make possible to create a portfolio of trainees, to watch dynamics of

change and tendencies of development and monitor personal and social factors of their successful «inclusion» in education/bringing-up process.

4. To provide continuity in the work of teachers at different levels it is necessary to carry out a kind of a «revision» determining the teaching staff readiness to operate in the context of inclusive groups and to provide conditions for scientifically grounded and practice oriented training system for the teachers to master the inclusive education technologies.

Nowadays this work is not of systematic nature, most of the programs are not authorized by an appropriate education board. That is why teaching staff and senior executives of educational establishments cannot follow the right track to form inclusive educational environment in an infant or basic school. To put into practice inclusive training we need a person being an educationary – facilitator engaged in self-reflection, a sensitive integrative personality possessing certain knowledge in the field of medicine, being competent in developmental psychology, defectology, physiognomy, and educational technologies. In a word, it should be a dedicated teacher, a compassionate tolerant person.

5. A coordinating center capable to accumulate research in the field of inclusive education theory and supervise introduction of the best practices based on scientific investigation to designate them to be used by teachers and senior management could have become the Ministry of Education and Science of the Republic of Tatarstan.

Thus, we can state that the Republic of Tatarstan has a strong demand in development of inclusive education system and all opportunities for it to be implemented.

But is our Republic ready for complex and efficient introduction of inclusive training into every day activities of educational establishments?

Local studies of individual educational organizations, among which a special emphasis should be made at Kazan Research Technical University (KNITU) – Kazan Aviation Institute (KAI) named after A.N. Tupolev, witness that the Republic possesses the scientific community to a higher specification studying the potential adaptability of people with limited health capacities against the background of professional training.

The studies carried out under the leadership of Doctor of Engineering, professor Kochergin A.V. deserve to be specially recognized [3].

Having got an approval of the RF Education Minister, D.V. Livanov, our Institute of Economics,

Management and Law focused efforts on the development of inclusive education methodological support creating a pilot model at the premises of the Institute. At the present time the Institute possesses a sole in the Republic chair of «Theoretical and Inclusive Education Science» with 3 Doctors of Education, 4 Candidates of Pedagogic and Psychological Sciences. Other scientific men of the Institute, students in further education and Master's Degree Students joined the above studies of inclusive education technologies adaptation to practice. Thus, we can say, that a scholar school in research of inclusive education ways and methods is now being formed. For the time being our research creative team counts 12 persons but it is replenished by our partners and teachers engaged in practical training who find us and offer their services. Over a relatively short period of time we prepared and published 8 textbooks of methodics, 1 work book for bachelor's degree recipients called «Education Science, Psychology and Inclusive Education Technology», 1 monograph «Inclusive Education Pedagogics»; proceedings of three international conferences on inclusive education and methods of aesthetic influence in social work, 15 science-method and methodologic seminars were held in Kazan and regions of Tatarstan encompassing more than 3000 teachers of different education levels. Moreover, we made 15 joint work agreements within the frames of pilot test areas at the Institute. An International Centre of Inclusive Education with partner organizations from 20 countries and continents (Asia, Africa, America, Europe, Russia) not including physical persons was organized on the base of the Institute. We have also developed a laboratory under the name of «VERA» for testing inclusive education technologies and implementing the unique programmes of adaptation, social-psychological rehabilitation and resocialization for people in hard circumstances. At the present time the Centre «VERA» is engaged in appraising the intervention Program for adaptation and training Nursery children with multiple health problems based on a grant received from the National Charity Fund. In inclusive training groups we also realize the charity Program of resocialization for people serving their sentence in penal institutions. For the first time ever in the Republic of Tatarstan we train 10 Magister's and 63 Bachelor' degree recipients in «Psychologic Teacher Education» (specialty «Pedagogics and Psychology of Inclusive Education» including the groups with budget financing). In the near future 32 members of a therapeutic pedagogy profession will be graduated from our Institute.

As can be seen from the above our Institute is ready to become a research guidance center for inclusive education support in the Republic of Tatarstan.



But inclusive education is not a goal in itself. The development of education system in Russia in the context of inclusive education ideas is determined by democratic processes in a rapidly globalizing world.

In the opinion of Timiryasova A.V. to put into practice the world's tendencies in education we need «developing social partnership, refining structure, content and qualitative assessment of vocational education and training in compliance with West European quality standards» [9]. These words are intended to focus our attention on training of proficient personnel at first hand for education, i.e. training for education. Within the context of social and cultural phenomenon education being possible to exert influence over the processes of social development, we regard inclusive education as the future way to moral and tolerant community of people with equitable educational and social opportunities.

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# PRIVATE MEDICAL INSTITUTIONS GAIN OVER MUNICIPAL ONES IN THE COMPETITION FOR CUSTOMERS

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## Introduction

The market of medical services in Russia starting with 1992 together with traditionally existing public and municipal institutions was broadened due to the emergence of private medical preventive institutions, which inevitably led to competition in this industry.

Provision of fee-based medical services is regulated by the Constitution of Russian Federation, Civil Code of Russian Federation, law «On foundations of health protection of citizens in Russian Federation». In art. 7 of the Constitution of Russian Federation health protection comes among the tasks of the social state, also, it recognizes protection (securing) of two basic rights by the state – the right to a decent life (characterized by the minimal range of free amenities for the person, which is provided by the program of state guarantees of provision of free medical assistance for citizens of Russian Federation), and the right to free development (opportunity to access supplementary fee-based amenities).

At present, the area of fee-based medical service where medical services act as goods is actively expanding. Annual growth rate of supply in the market of fee-based medical services makes on average 10-12%.

Competition in the market of medical services of Russia causes outflow of consumers from public medical institutions in favor of private ones. This is first of all accounted for by dissatisfaction of the population with provision of free medical assistance. The second reason is population income growth, advance in living standards of people, which leads to emergence of consumers willing to pay for quality medical services. The

## ABSTRACT

*Objective:* to detect factors employed by medical preventive institutions in the market of medical services to achieve competitive advantages.

*Methods:* assessment of opinions of leading scientists on the problem under study; field marketing research based on questionnaire survey and selective personal interview.

*Results:* found that 68% respondents are not satisfied with provision of medical services by municipal healthcare institutions for certain reasons. Most discontent is caused by waiting turn in a doctor's office for more than an hour, absence of specialized doctors, quality of service, indifferent attitude of doctors to patient, and other reasons.

*Academic novelty:* most attractive aspects of fee-based medical centers have been defined, among which respondents named no lines, presence of specialized doctors, quality services.

*Practical relevance:* achievements of fee-based medical institutions attracting the attention of clients due to higher quality service provide the basis for sharing experience by municipal medical institutions.

**KEY WORDS:** fee-based medical services, competitive advantages, competition, competitiveness, consumer satisfaction, service attractiveness.

third reason is increase in employment, reducing spare time of people today and their unwillingness to waste time waiting on the line.

The above-mentioned facilitates development of the market of private medical care and enhances the interest to studying problems of competitive advantages.

The notion of «competitive advantage» evolved in historical retrospective. One of the first most fundamental researches on this issue was the work of A. Smith. In his work «An Inquiry into the Nature and Causes of the Wealth of Nations», he put forth the theory of «absolute advantages» in solving issues of foreign trade. Absolute advantages, in the opinion of A. Smith, emerge with those countries which secure minimal expenses to manufacture certain goods [1]. The theory of advantages was further developed in the

works of D. Ricardo who introduced the notion of «comparative costs» [2]. In his opinion, every country should mostly produce and export goods with relatively less production costs.

Transferring the views of the classics of economic theory to the economic processes of modern realities, we will note that their teachings leaned only on the one side – on the production costs. In addition, the area of their research touched upon competitive advantages in foreign trade with other countries. Our research deals with intra-industry competition in the framework of local markets.

The concept of advantages based on low costs put forth by the classics is still relevant for homogeneous groups of goods displaying the same properties. In today's competitive rivalry, this competition, in M. Porter's apt phrase, was named «advantage in costs». In addition, he considers advantage in costs not as the only factor of success and together with that pays a lot of attention to competitive advantages based on differentiation of goods [3].

A renowned specialist in the area of management and strategic marketing J.J. Lambin also pays attention to the importance of costs naming them «Leadership strategy at the expense of cost savings», but he does not view them as the only prerequisite for competitive advantages [4]. In the opinion of J.J. Lambin whose opinion we fully share, sustainable competitive advantage is achieved by companies conducting constant and systematic analysis of market demands, offering effective goods for the market which are intended for target groups of buyers and possess special features differentiating them from goods-competitors [5]. He defines competitive advantages as «characteristics, features of a product or a brand which create certain dominance of the company over their direct competitors. The mentioned dominance is relative, defined compared to the competitor taking the best position in the market or in the market segment» [4].

In today's economy, search for competitive advantages for the main part stepped out of the area of costs into the area of differentiation of goods and services. At present, the critical factor appears to be not so much *издержки*, but the uniqueness of selling proposition, exclusiveness and quality of goods. This opinion is shared by many contemporary authors [6, 7, 8].

Competitive advantages ensure «competitive selection» for the strongest market participants, the opportunity to be distinguished among others and take sustainable positions. The category of «competitive advantage» is implicate with the category of «competitiveness». Both categories reflect leadership of the enterprise and its product in the market. From the standpoint of positive assessment, the mentioned cat-

egories are of the same vector: if something is competitive, it consequently possesses competitive advantages; if it possesses competitive advantages, it consequently is competitive. The more competitive advantages the organization has, the higher its competitiveness, rate of survival, effectiveness and viability. In essence, competitive advantage is combination of features and characteristics which give the organization dominance over competitors.

The key issue in the research is the answer to the question: which factors determine competitive advantages in terms of the specific product in the specific market?

We find the answer to the set questions, for example, in the work of G.D. Antonov. He reasonably notes that «competitive advantages represent a system possessing some exclusive value which gives dominance over competitors in economic, technical and organizational areas of activity, the opportunity to more effectively manage the resources they have». G.D. Antonov joins the whole combination of factors determining competitive advantages, into the following groups: economic, structural, scientific-technical and technological, information, spatial, non-material (reputation assets: company name, its trademarks, relationships with consumers, suppliers, the state and society.), non-legal, infrastructural» [6, p. 40].

We especially like the position of the above-mentioned author who among non-material factors of competitive advantages includes «reputation assets: company name, its trademarks, relationships with consumers, suppliers, the state and society». This circle of factors belongs directly to the area of marketing research, as well as the «existence of databank of the market, sellers, buyers, competitors». The analysis of G.D. Antonov's position convinces us that the above-mentioned author emphasizes factors ensuring competitive advantages of a certain enterprise at large. At the same time, he does not reveal factors influencing the contentedness of consumers with the offered goods and services.

The more competitive advantages difficult to copy by competitors the company has, the stronger the position of the company in the market is. Market environment is constantly developing, that is why, being influenced by external factors, competitive advantages of the company can lose their relevance or disappear altogether. Any competitive advantage the company possesses at present, will ultimately be eliminated by actions of a competent rival possessing sufficient resources. To successfully sustain the competitive advantage, the company must be way ahead of the rivals, taking one strategic attack after another.

O. Malygina offers to view competitive advantages in three areas: factors of temporary competitive

advantage, factors of long-term competitive advantage, competence competitive advantages [7]. We believe it is not exactly correct to divide competitive advantages the way O. Malygina did, into those three groups. While the first two groups deal with the temporal aspect, the third classification group, unlike them, is not time bound and can belong both to short-term and long-term perspective.

Long-term competitive advantages are manageable, hard to copy by competitors parameters of internal environment of an organization, development of which provides such characteristics as consumer value, uniqueness, novelty of the product.

We agree with the position of F.N. Vinokurov who considers that the matter of competitive advantages depends on the industry where the company functions. Companies working in high-technology industries will link their competitive advantages «to technical superiority, product or technological innovations, for companies working in the mass market, this may be brand awareness, low costs, location, etc.» [9].

The problem of competitive advantages being applied to medical services has not been sufficiently covered in the literature of the subject. The most significant contribution to this issue was made by M. Porter. He writes, «...acute lack of comparative information and absence of objective criteria of the activity results assessment in the system of medical services create for hospitals and doctors incentives for competition based on what is on the surface: comfortable surroundings, up-to-date equipment, wide range of services, engaging manners of doctors, and even... high price» [3, p. 517].

In the market of medical services in Russia, there emerged a competitive environment determined by alternative forms of ownership. Together with municipal medical institutions, the competitive environment is made by private medical institutions striving by way of competitive advantages to attract clients treated previously by only municipal institutions. This enhances relevance of studying competitive advantages applied to medical services.

Medical industry has its specific factors of competitive advantages, spoken about in the work of A. Akopyan, V. Murashov, R. Bochkarev. In their opinion, competitiveness of a medical service is built not upon «hard» (i.e. measured in absolute units), but upon «soft» (measured in relative units) parameters [10, p. 98]. Those parameters can be acquired by only survey methods.

Since the main person for whose sake competitive advantages are created is the buyer, we detected factors by which the buyer is guided while choosing a medical preventive institution.

## Results of research

To detect the main factors making a medical service attractive for consumers, we arranged the marketing research by the method of personal interview in March 2013. 420 people aged 20 to 65 were surveyed, of them 306 women (73%) and 114 men (27%). As for distribution of respondents according to social background, they were mainly office staff – 52%, workers – 17%, then management – 12%, pensioners – 9%, other categories made the rest 10%. The surveyed were asked an open question which allowed to define factors influencing the consumer's choice of a health care provider, implying that the consumer gives preference to the deliverer who offers a service equipped with competitive advantages attractive for the buyer.

As a result, we defined a list of factors meaningful for a consumer while choosing a medical institution (fig. 1).

We divided the detected factors influencing consumer preferences, into three groups according to the level of their significance.

The first group includes the most significant or critical advantages:

1. Professionalism of doctors;
2. Up-to-date equipment;
3. Guaranteed result of treatment;
4. Quick service;
5. Amiable disposition of personnel.

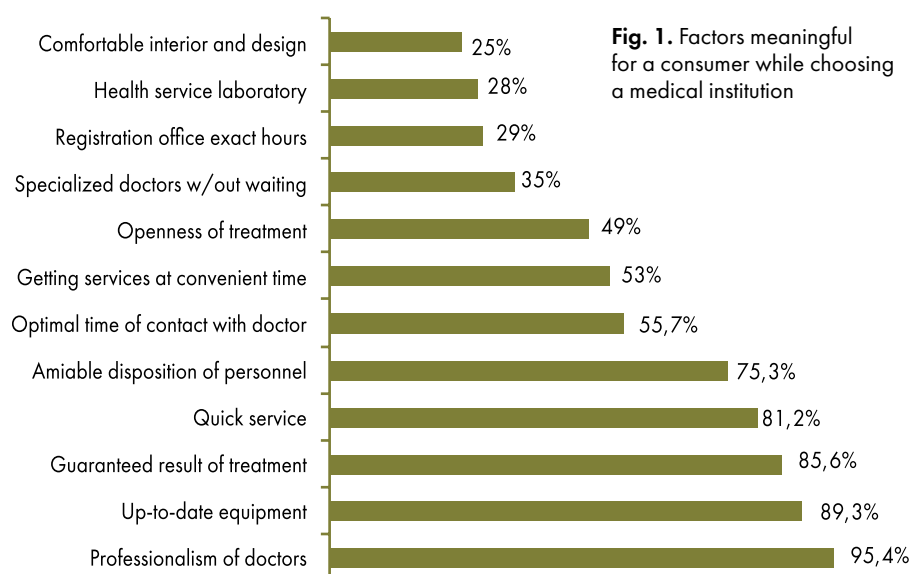
Into the second group respondents included advantages which are desirable:

6. Optimal time of contact with doctor;
7. Getting services at convenient time;
8. Openness of treatment;
9. Appointment with specialized doctors without waiting.

Into the third group the surveyed included the least significant advantages:

10. Registration office exact hours;
11. Healthcare laboratories;
12. Comfortable interior and design.

The analysis of the notion of «competitive advantage» reflected in the works of many authors [3, 4, 5, 7, 8, 10] and results of field research aimed at empirical detection of factors significant for consumers, allowed us to state the essence of competitive advantages of medical services. By competitive advantages we understand combination of unique characteristics and features of medical services satisfying demands of consumers, presence or absence of which determines success of medical institutions in the market. The unique characteristics of competitive advantages reflecting the specifics of medical services include, for



instance, opportunity to get professional assistance of specialized doctors, advanced technologies and up-to-date equipment, guarantee of long-term effect from the provided service, being served at the needed time without waiting on the line.

The marketing research allowed us to define the degree of satisfaction of patients with the quality of medical services, and consequently competitive advantages by combination of characteristics and features of medical services [11].

We conducted the research based on materials of Naberezhnyye Chelny, Republic of Tatarstan, yet its main regularities and conclusions are of trans-territorial character and will be helpful for comparative analysis with other cities.

All the surveyed at least once in a lifetime applied for fee-based medical assistance, and 84% got it both in municipal and in private medical institutions, 16% – only in fee-based ones. Further, almost half of the surveyed (46%) applied for fee-based services forcedly (there was no opportunity to get the necessary assistance for free), 37% did that voluntarily, 17% – forced by circumstances (urgent examination was necessary). Attitude of most respondents to fee-based medicine is negative (57%), positive – 27%, indifferent – 16%. Besides, most respondents are convinced that free high-technology assistance is unavailable in the city – 86% think so (respondents note only fee-based opportunity), and only 14% consider it accessible.

The second stage of the research was detection of the degree of contentedness by the services of private medical centers. Most respondents apply for medical services less than once a year – 34%, once a year – 26%, once half a year – 20%, once in three months – 10%, other variants 10%. Most frequently they go to fee-based medical centers for diagnostic services – 55%, for specialized doctors services – 28%, undergo medical tests in fee-based centers – 10%, for other services – 7%.

While choosing fee-based medical centers, respondents consider most attractive: no lines (71%), presence of specialized doctors (55%), quality services (40%), a small amount of them indicate

other factors, such as: appointment at weekends and days off, consideration of personnel, comfortable interior, etc.

14% are fully satisfied with the services of private medical centers, more satisfied than not – 76%, more dissatisfied than satisfied – 9%, not satisfied only 1%. Meaningful factors while choosing a fee-based medical center are, in decreasing order: professionalism and competence of doctors; results of treatment; quick service; up-to-date equipment; service culture; amiability, attention and the doctor's concern with the patient's problems; cleanliness; «quality-to-price» ratio; sufficient information about the treatment process; amiability of nursing staff; comfortable interior.

Attitude of doctors to patients in private medical centers is for the main part, in the opinion of respondents, diligent – 70%), very diligent – 26%, indifferent – 4%. Attitude of nursing staff is estimated, correspondingly, as follows: diligent – 66%, very diligent – 25%, indifferent – 9%. Attitude of front desk personnel is estimated mainly as diligent – 61%, very diligent – 29%, indifferent – 10%.

During the conducted research, we detected cases of negative attitude of patients to municipal sector of medical services compared to private ones. The main complaint sounded by patients is long lines to visit the doctor. The forced communication of the healthy and sick on lines leads to recontamination, discontent of patients, irritability, which, in turn, influences the doctors' work. Some respondents noted cases of absence of specialized doctors. Personnel problems naturally affect the accessibility and quality of provision of services. Several respondents noted cases of bureaucracy which, in the opinion of the respondents, is not always justified.

Advantages of private medical centers were found: keeping time of visit (on average 40 minutes for a patient), opportunity of consultation with a specialized doctor which allows for more precise diagnostics, urgent tests and examinations, employment of additional methods of examination, up-to-date equipment

and opportunity of acquiring what is lacking, advanced training. Negative points include irregular working hours, yet salary of doctors in private medical centers did not change for the last 5 years, unlike in public ones.

Reasons were detected for which patients give preference to private medical preventive institutions:

- professionalism and competence of doctors (only high qualified specialists with experience are invited to work in private clinics, moreover, they have an opportunity to continually improve their skill attending various seminars and training programs);
- prevalence of positive outcomes of treatment;
- quick service (in fee-based centers conduct pre-appointment for a visit, where each patient is allotted certain time, average of 40 minutes); up-to-date equipment (to raise its competitiveness, private clinics employ the latest technologies), service culture (in practically all private medical centers there exist rules of communication standards with patients where they are viewed as important persons and are treated correspondingly, patients database is worked out which is studied by the doctor prior to the visit),
- cleanliness and comfort (in private clinics, they created comfortable interior in compliance with all sanitary-hygienic standards, and shoe wrappers are distributed free of charge, unlike in municipal polyclinics), sufficient information about the treatment process (doctors explain to the patient the root of his problem speaking over the treatment procedure) and many others. Medical services in fee-based clinics are provided every day, in some of them with no days off, unlike in municipal medical institutions.

### Conclusions

Private medical preventive institutions win the competitive rivalry due to provision of higher quality fee-based medical services and diligent attitude to demands of consumers, and municipal medical preventive institutions lose by these factors. Yet, municipal institutions solve a serious social task providing free medical services for the population. One of the problems of municipal medical institutions is underfunding.

From our point of view, it is necessary to further develop private-public partnerships in the sphere of medical services, to attract resources of private business, initiative, entrepreneurial zeal together with state healthcare institutions.

It is necessary to launch mechanisms of convergence, benchmarking, interpenetration and sharing best practices between municipal and private medical institutions. This will allow in the framework of private-

public partnership to improve quality of medical services due to provision of high-technology medical assistance, competitive advantages and marketing focus on meeting the needs of consumers in the best way. As a result of such partnership and competitive rivalry, consumer is a winner.

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# MODERN TENDENCIES OF THE DEVELOPMENT OF INNOVATION ENTREPRENEURSHIP IN THE SPHERE OF RESEARCH AND DEVELOPMENT

**ABSTRACT:** the paper presents a description of modern tendencies of the development of innovation entrepreneurship in the sphere of R&D which are implicit in a conceptual scheme which reflects the dynamics of changes of innovation structures in the space; (centralized – dispersed R&D): (concurrence – cooperation).

**KEY WORDS:** research and development; entrepreneurial firms; innovation strategies.

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The phenomenon of entrepreneurship in the theory of innovation economy has been paid more attention over the last years. The entrepreneurial firms are expected to be the main driver of innovation in the XXI century. But, at the same time, the modern empirical data suggests that "the entrepreneurs who produce high-level impact on the economy" represent a relatively small part of the entire entrepreneurial body [7].

The definition mentioned above refers to the entrepreneurs whose business activity intensifies the degree of competition, provides the greatest potential for created new jobs, and stimulates economic growth. Although scientists have marked the importance of the "high impact" entrepreneurship, the conditions that contribute to the activity of such people and businesses, organizational mechanisms remain relatively underexplored. In this paper, we analyze the development tendencies of innovative strategies of innovative companies, taking into account the role of the business sector.

It is generally agreed, that the business sector is composed to a greater degree of small and medium enterprises (SMEs) or small autonomous units of large organizations. Modeling of innovative activity of small entrepreneurial firms (small and medium enterprises - classification according to Rosstat: SMEs) encounters several problems, which are as follows: In the process of modeling and estimating results one should take into account both quantitative and quali-

tative parameters; Among these parameters there are: nonmaterial input parameters, such as stable size and age of the enterprise; the degree of stability in relation to national circumstances, business climate, and other institutional factors.

Conceptual models of SMEs are traditionally based on the priority principles of industrial relations in this sphere. However, these principles used to be interpreted in the way that led to the previous models oriented mainly on financial result forecasting (paying capacity evaluation, profitability, bankruptcy probability, etc.). Modern researchers believe that various parameters must be included in the model, as well as those that differ from traditional accounting indicators [5, 19].

There are many reasons why the "traditional" models based on financial indicators are not suitable for SME result assessing. In particular, it is because statistical methods are sensitive to assumptions about the "normal" proportions in the enterprise structures, technical and financial requirements. Apart from that resolution, they are based on statistically controlled financial forecast, and may actually provoke bankruptcy. The provoked bankruptcy is a big problem for SMEs [19, 20]. However, quantitative models are still preferred more than purely human expert judgment.

The two non-financial parameters were offered as part of alternative approach, which drew the attention: the stable size and age of an enterprise [9, 12]. It was found that when such nonmaterial variables are used

together with the financial indicators, efficiency of predictive models is significantly improved [7, 12].

It turned out that the size of the enterprise, as well as its rate of growth, are inversely related to the probability of bankruptcy, and that SMEs usually fail within the first years after starting [9, 10, 16]. Other researchers have found that in general the probability of survival increases with the increase of years of the firm.

The third main problem in creating functional models of innovation activity of SMEs is that the model should be able to show the change which is caused by the influence of many factors mentioned above. Traditional models often ignore these changes and consider SMEs as a homogenous group [15, 19]. In addition, changes in the nature of SMEs require a complex approach to understanding their activity. Thus, so as to assess the work of incubators, some experts discuss various approaches with the help of which incubators chose candidates to be admitted to their membership. [8] Other researchers are studying the path followed by companies in their technological development [2, 13]. The results of SME activity research at different stages of the technology life cycle are also of great interest.

The fourth problem is connected with the difficulty of the optimal use of the limited information on the activities of SMEs available from accounting reports. In case of large companies, a sufficient number of features of the production relations can be estimated according to the information from the available financial documents, but the financial information presented by small firms is often unreliable. Small firms are not required to disclose their financial situation publicly.

Most of SME model have been created to meet the needs of traditional users of performance evaluation models, such as banks and other financial institutions [6, 16, 19]. However, these models are difficult to be used as a basis for the formation of organizational practice.

There are few models that could be easily used by entrepreneurs who lack knowledge in the theory of finance and accounting. They include "business platform model," which came into use in the nineties of the last century [13]. This model can be used to decide which issues should be focused on and to use the eight management principles so that their firms will develop steadily.

To be theoretically described the structural nature of SMEs requires the model that would not only help to examine the environment, within which the enterprise is run, in what way environmental factors influence the enterprise's activity, but also to include these factors in the management tools [10]. Because of the fact that the modern economy is becoming more

and more open, mobility and flexibility of SMEs give them a competitive position over larger companies. Organizations can benefit from the use of information technology in their daily activities. This implies that they must also manage network effects, ensuring stable operation [2, 5, 18].

In general, the models connected with the activities of small businesses can be divided into two big groups. The first group consists of models that provide sustainable growth, and use control methods with the help of measured economic indicators.

The second group of business models is focused on predicting the development, which is based on a complex approach with the definition of the sustainable functional qualities of the enterprise. The models of this group can be further divided into two sub-groups: the theory of stable dynamics and financial models of paying capacity forecasting. In this analysis, we dwell on the first subgroup models.

However, it should be pointed out that until recently the main part of applied research and development in the world has been carried out by large multinational corporations, which is defined historically, or, in terms of institutionalists, according to dependence on the distance covered.

Evidence given by researchers at the macro level, confirms the present main role of industrial laboratories of large corporations.

We can also define indicating possible reasons for this situation in scientific literature. So there are descriptions of quite usual situation, when employees of a large corporation create a local network with suppliers and institutions that produce knowledge, when geographical proximity plays an important role, especially - encourages the spread of implicit ("soft", "tacit") knowledge and skills [3, 5]. Such tacit knowledge is necessary for transfer and sharing of information, which proves to be essential condition for successful implementation of research and development.

The development of information and communication technologies has become the basis of generating the idea of "death of distance", which was further reflected in the fact that research and development have become more free and common. And this, in its turn, it led to the formation of an alternative to the dominance of large enterprises as the center of industrial research and development.

But, most companies continue to choose the support strategy of their main R&D base of the existing sites, because it allows them to benefit from economy of scale thanks to the growth of production and local networks with which their researchers interact closely.

In addition, the excess of knowledge received from research activities contribute to higher rates of



innovation, the growth of entrepreneurship and productivity gain in geographically bounded areas.

Comparative assessments obviously depend on the type of economic sector and the business considered. In case of market-driven industries, such as food processing, innovative activity depends on geographical proximity, in case of industries, such as chemicals or electronics, the concentration of all enterprises and units in a single place is more preferred.

Taking into account the prespecification data observers point up the following main strategies of innovation development. The performance strategy of the main scientific - technical base refers to the first variant of the strategy: research in this case is carried out centrally, and local R&D activities are response to the need to adapt to the local market. Thus, choosing a location for the innovation center is determined by the relevant markets.

The alternative variant of the strategy is the strategy to increase the main scientific – technical science and technology base: innovative actions are developing in a place where potential of the technology is obvious, developed in the same scientific and technical sphere. These new local actions together with the central current of innovative actions lead to the enterprise knowledge base increasing. During the 1990s the strategy to increase the main scientific - technical base began to take on greater importance.

The determinants of local scientific - technical potential cover the availability of highly qualified staff and quality of available infrastructure. At the same time, the surrounding scientific information environment can be considered more broadly. Experts point to the importance of the presence of regular users and/or specialized suppliers that can stimulate the company to develop its local R&D potential [1, 4].

M. Porter states that not only these factors are of great concern, but also the "innovation climate" in a broader sense, including such aspects as financial climate, infrastructure, and other typical macroeconomic factors of adjustment of innovative action tools. [4] Furthermore, the costs in modern economy do not make difference in the choice of innovation activity localization. The really important criterion is the quality of innovation product, rather than R&D expenses.

Scientific papers today present the tendencies that can be reduced to the main five ones determining the changes in the organizational structures of research and development. Fig. 1 shows the author's own understanding of these tendencies.

Innovative strategies of industrial corporations are positioned in the space determined by the vectors: (centralized – dispersed R&D): (concurrence – cooperation).

The first tendency is the fact that enterprises with centralized structures, grouping in the national economy, are beginning to adapt to the international public opinion, i.e. are geared to outside markets.

Research also confirms that innovations are becoming more and more evolutionary, and non-linear; strengthening of interactions between the firm and its external environment is becoming typical of them.

It is becoming more apparent that it is necessary to adapt to the needs of both the local and the global market. This implies a change of direction from locally-central (ethnocentric) to geocentric organizational structure (tendency 1 in Fig. 1).

The second tendency of development is increasing of the number of so-called units of excellences. These unites are becoming important sources of new knowledge, which will satisfy the identified requirements. These strategies are shown as tendency 2 in Fig. 1. These tendencies may determine the further development of ethnocentric, as well as geocentric centralized structures.

The third tendency is that the state management and R&D organization control by industrial, national and international enterprises are reduced in favor of greater autonomy and authority of decentralized research organizations that acquire flexibility and creative potential, and whose number is increasing. In this regard, importance of information exchange and coordination between innovative enterprises is increasing. Cooperation increase causes greater integration and formation of network structures. (tendency 3 in Fig. 1).

The fourth tendency is characterized by specialization increase of various enterprises within the branch, as well as function distribution between various departments. Centers of Excellences are being created; they are designed to coordinate the activities of innovative units, reduce the risk of research effort duplication, and strengthen the innovation work, in particular by means of synergy (tendency 4 in Fig. 1).

The fifth tendency is to increase the network interactions within the production chains, which will enable the optimal profitability of economic activity and coordination between various production units. In a certain sense, it's a new type of centralization, especially when the number of innovative units is reduced to the limited number of centers of excellence.

The mentioned above tendencies are complementary, and, at the same time, in the areas of their intersection there is tension that arises because of ambition to choose the best combination of the organizational types discussed herein.

The two other recent tendencies in the organization of innovation processes and R&D are the model

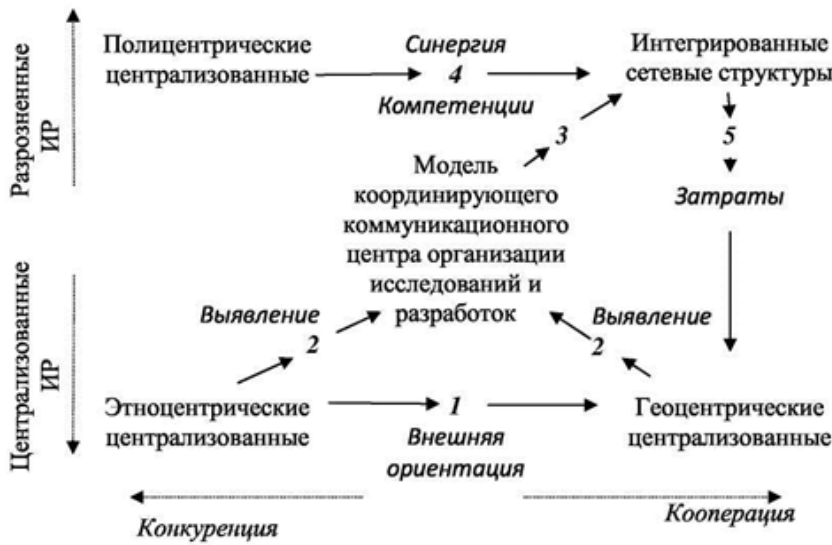


Fig. 1. Development of innovative strategies of industrial corporations

of "open innovations" [4, 5] and the model of "innovations controlled by the user" [11].

The details of the model of "open innovations" can be expressed in the way that firms can and should use external ideas, as well as internal ideas, and internal and external paths to the market, in their effort to promote their technologies.

Even the leading companies can no longer perform their innovation efforts independently, but they must open their networks and cooperate with others. The companies consider "open innovations" as a mechanism for closer cooperation with external partners, that is: clients, consumers, researchers or other people who may have knowledge relevant to the needs of their company. When opening the High Technology University of Eindhoven, Philips, for example, created all the conditions for the implementation of "open innovation" model.

The term "innovations controlled by the user" means that in certain economic sectors users play a key role and constitute the main source of innovative ideas. These are, for example, sports industries, equipment and health care, personal hygiene means, and computer applications.

Experts confirm that "in order to provide people with really meaningful resolutions, instead of technological capabilities, the needs of the people from the earliest stages of development should be taken into consideration" [17]. Such work requires flexibility, responsivity, which is currently a feature of only small innovative enterprises. Thus, in the light of current tendencies in the development of innovative strategies entrepreneurial firms are becoming increasingly important.

Considering the existing tendencies in the devel-

opment of innovative strategies under the conditions of Russian entrepreneurship, it is possible to notice that the most appropriate existing situation may be the strategy of business structure development within larger organizations (probably enterprise clusters of the similar specialization) with an active support and participation of the state, as the coordinating and partner center.

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# DEVELOPING SPORTS TOURISM IN THE CITY OF SOCHI

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## Introduction

Tourism and sport are integral cultural apparatus that play a vital role in shaping the modern-day society. It is important to note that Tourism and sport aid in accelerating the rate at which different nations are developing close relationships and the diverse social groups are able to understand and appreciate each other's cultural differences (Getz & McConnell, 2011, p.327). Sports tourism offers an opportunity for sport tourist to discover the world, meeting new people and cultures, self discovery, playing sports and attaining physical fitness.

Sport tourism is experiencing a momentous boom in pace with the markets trending towards intensification of physical fitness, recreation and relaxation and development of new destinations. Furthermore sport tourism is being appreciated across the globe for its role in enhancing tourism development as well an opportunity for economic growth for the local and national development (Hritz & Ross, 2010, p.120).

Supporting sport tourism and its economic prospective assists tourism players restructure supply and categorize demand. From the World conference on sports and Tourism, it was noted that sport tourism is emerging as an integral component in the discovery and growth of new destinations and revival of diminishing destinations (Kaplanidou & et al, 2012, p.247).

## Sport Tourism Development

Heritage and culture have a say in making tourism destinations offer unique attraction with sports becoming a contributing factor. Different sporting activities and sports venues are a symbol of distinctive expression of the traditions of the destination and City of Sochi is no exception. For example Sports stadiums

such as Wimbledon and Wembley are known for tennis and football respectively and regarded as the divine homes of respective sports (Kaplanidou & et al, 2012, p.244). The city of Sochi best bet for sport tourism attraction and contentment lies in the mountain region, Krasnaya Polyana, where Olympic skiing and snowboarding proceedings were held.

Tourism development authorities should come up with policies, regulations and institute proper sport management team to ensure that the arenas in the Olympic Park in Sochi remain valuable in hosting most prestigious and high status tournaments in the future thus promoting and developing sports tourism. Alberts (2011, p.28) states that with time, each venue, for instance Olympic Park, will build its own aura of heritage. Each connotes a noteworthy expression of the heritage and traditions of Russia. Cases in point, unique cultural fundamentals of a destination include baseball which represents U.S.A while tae kwon represents Korea just a few to mention (Hritz & Ross, 2010, p.131). This form of sports tourism constitutes an integral and distinctive part of tourist experience at the destination.

There have been investments in infrastructure which has enabled the area city of Sochi have adequate tourism infrastructure to cater for the demands of the sport visitors. There area has been more accessible with the Aeroflot making frequent flights into Sochi airport. Efforts have also been made in the road systems with newly major roads and feeder roads connecting key areas. Furthermore to accelerate the rate of sports tourism development, fast and efficient trains have been developed making the area more accessible than before (Chalip & McGuirty, 2007, p.275).

The arenas in the Olympic Park in Sochi were the most costly Olympics to have ever been hosted pumping in more than \$50 billion dollars worth of investment. This propelled the construction of a sports Disneyland in remote area of Sochi. The sports arena has the capability of staging soccer, Formula One, skiing and snowboarding. In planning the Sochi Winter Olympics games, all construction projects had to conform to blueprint and guideline objectives so as to harmonize with the existing landscape and architecture (Gronskaya & Makarychev, 2014, p.45). A variety of energy-saving equipments and techniques, for example heat pumps provided additional energy in the event of ice making, were initiated for this event

(Getz & McConnell, 2011, p.333). These innovations had plenty of benefits where common interest in sport and environmentalism were encouraged. In addition, the safeguarding of environmental features that catch the attention of both dynamic and sport tourists enhance visitor satisfaction; promote the status of the sports event destination as sparkling and attractive (Kotze,2014,p.290).

Tour operators and travel agents have observed that the Olympic park in Sochi, offers adequate facilities for sports visitors and other tourists in terms of shopping malls, hotels and resorts, an amusement park and conference space. With snow situations that encompassed the whole lot from athletes racing down slopes affected by the dense fog during the Games, uncertainty surrounds how ski and snow-board bums experienced will offer baring in mind that stiff competition is expected from more reputable nations across Europe( Kaplanidou & Vogt, 2010, p. 545).

During the winter games,Krassnaya Polyana 's shopping malls, restaurants and hotels and vicinity bars provided a more attractive and appealing experience to visitors than the concrete Olympic park (Kotze,2014,p.287). Enveloped by picturesque mountains decorated with gondolas, Sochi provides eye catching scenery for visitors diversifying sport tourism experience.

### Challenges Faced By Sochi

Sports tourism development in Sochi has also faced various challenges. There has been significant drop in accommodation prices after the end of the Sochi Olympic Games. For example, four to six nights did cost about \$7,000 to \$11,000; the price tag has taken nose dive a day after the closing ceremony with a night costing about \$100 (Gronskaya & Makarychev, 2014, p.48).Intensive marketing and promotions have to be undertaken to salvage sports tourism. This should also extend to neighboring countries since the economic, social and technological benefits can be fully attained.

Furthermore stiff competition from other nations with winter getaway options, for example the Swiss Alps .City of Sochi which was in the past considered as a war zone, it's uncertain if Sochi would be alluring compared to other well known destinations. The Olympics usually carry an aura of distinctiveness as well as the hosting destination. Therefore it is important to portray and protect the unique image of the ski villages through proper marketing and promotions activities (Kaplanidou & Vogt, 2010, p.562). As much as the Olympics were staged in Sochi, it does not out rightly translate to a tourist hot spot.

### Conclusion

The process of democratization, which is the avenue through which formerly restricted opportunities are opened up for utilization, is a terminology that applies to the development of sport and tourism (Hillary and Hooper, 2004, p.180). Nevertheless the forces of globalization and democratization have had considerable implications in sport growth and development processes in sport tourism (Hallmann & et al., 2010, p.50). As much as City of Sochi offers adventurous images of beautiful mountains favorable for skiers in the winter and gorgeous beaches in the summer, accessibility is tedious long overhaul flights to Moscow then a two hour flight to Sochi. With its unique features it without a doubt that the city of Sochi has a long term potential for sport tourism.

Cognizant that information and figures on sport tourism is inadequate because it has only in recent times come into view as a separate discipline, the Russian government should conduct research that is aimed to assess the role of sport tourism in tourism development generally in the supply of city of Sochi as a destination by the major tour operators (Alpullu et al, 2013, p.38).

It is worthwhile to note that there has been an increase in fitness and health consciousness across societies. The growing awareness on the importance played by sporting activities in urban regeneration and urban imagery, and the capability to leverage tourism opportunities that is highly linked with sports events thus present developments in sport tourism are undergoing contemporary trends that need to be appreciated (Sirali,2004).

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# HYMANOLOGY IS ONE OF THE MAIN LINES OF SCIENCES DEVELOPMENT IN XXI CENTURY

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The world over is undergoing an acute social and humanitarian crisis. i.e. a crisis of a human being and the development model. This crisis shows up in global problems among which the major problems are: cleavage (of countries, world, people) into rich and poor, pollution of environment, arms race, low birthrate in developed countries, drop in the cultural standard, morality, etc.

The cause crisis is in a deep and ever increasing discrepancy, dissonance between material and perfect, between level of technological development and consciousness of a human being, between natural science and humanities. The gap between the humane component of development and the technology-related one makes the technical and humanities gap. And specifically it is natural for the liberal society. All problems of humanity both present and historic and future are reducing to the problem of evolutionary quality of the human being.

The central problem for the world over is to close up this gap, to turn from pure industrial development to technical and humanities harmony. Engineering and natural sciences are avancer à grands pas. But the principal science on which the settlement of this problem depends, the quantitative human science, in deed, is absent.

In that regard L.N. Tolstoy, the greatest thinker of all times, (in his work "So what are we to do?") wrote: ... "if there is no science dealing with what is mission and good for the human being, there can be no true sciences and arts as there is a countless number of ranges of science and art (I would like to emphasize the word "countless" as I understand it in its precise meaning); and if one fails to know what are mission and good for all human beings, it's impossible to choose

among the countless number of subjects and, as a result, if there is no such science, all other sciences and arts turn to be an idle and harmful sport as it happens in our place".

Any science supposes that there is its own theoretical apparatus, quantitative principles and methods of research. In the absence thereof, we are dealing only with pre-sciences – sciences of qualitative knowledge. The inductive method – from particulars to generals, method of induction of information is applying in them. Shortcomings of the inductive method are well-known: subjective assessment, neglect of essential factors, exaggeration or lessening of contributions made by other, etc. Examples are legion in science. The inductive method should be controlled and corrected by the deductive method: from generals to particulars, from principles of socio-natural development to social medium and to the human being.

Human qualification depends on whether his life meets objective (i.e. independent of any human being) socio-natural principles. And these principles are revealed by human science – humanology (human study).

Principally, humanology is the synthesis of natural and humanities. Scientific view of the world is forming on the grounds its principles. The person holding such view of the world is willfully making his own life. He aspires to harmonize to self, society and nature. The purpose of humanology is to see humanity, the place the human being takes in nature and society, his purpose. And, as a result, to contribute in development the generation of people satisfied with their life.

If the individual fails to know for what reason and purpose he came into being, what is the point of his life, what is the evolutionary dependent trajectory of socio-natural development, he cannot be to the full satisfied with the life both his own and the society. As a result a social chaos and the feeling of meaninglessness of life are arising.

The principal science of the XXI century is human science. The human being, at one time, is the development purpose and the development tool. On the grounds of the previous developments [3,4] we would like to propose the following structure of humanology: 1) theory of socio-natural development; 2) humanity; 3) human being in biosphere; 4) human being in social

medium; 5) problem of time and harmonious development of human being.

We would like to address to the questions of principle subject to settlement within the frameworks of the specified structure.

1) *Theory of socio-natural development*: from the general energy perspectives it deals with performance and evolution of systems which are non-equilibrium in reference to environment (“steady equilibrium”) under the assumption of internal equilibrium in the systems themselves (“maintain equilibrium”). With regard to the above mentioned introduction and application of the concept “structural energy” ( $F$ ) are of fundamental importance. It bears a relationship to the work of thermodynamically-reversible process of generation (“building”) of the system of elements. The structural energy is the system capability: the more this system is, the more the work the system is performing (under otherwise equal conditions). The progress criterion is in increase of structural energy (full or specific, calculated per mass unit, as the system type may be) in length of time ( $t$ ):

$$dF/dt > 0 \quad (1)$$

When discussing driving forces and limits of development the dialectic method is usually applied. But the dialectics is insufficient for total characteristic of development. Development means generation of anything “new”. It takes place due to settlement of dialectic opposites. As a result, development includes three components: two opposites and “a new” (third), hence the denomination – trialectic.

Generally, development proceeds in accordance with the fundamental law of trialectic. We can formulate it as follows: dialectic opposites of the world are settling in the course of arising “a new” one, which makes a harmonious synthesis of opposites subject to settlement. In doing so the principle of reasonable being, known from the earliest time, “enough is as good as a feast” is settling down.

The dyad development paradigm of unity and “struggle” of opposites does not take into consideration the creative component of the matter. “Struggle” of opposites comes to victory of one of them. But what about development here?!

As is known [3,4], the biological progress is basing on opening any new resource and by virtue of mechanisms of cooperation, complementarity of functions, compromises, harmony - that is in compliance with trialectic. As regards competitive mechanisms, “struggle” (for existence), they play another role – they are eliminating lagging “technologies”, eliminating retrogression.

The theory of natural selection, Darwinism meets the dyad paradigm and tangential to progress. But this is an especial case, consequence of general error of mankind concerning natural laws of development, domination of the dyad paradigm. Based on it social disparity, wars, revolutions and etc., considered to be natural and inevitable. Abidance by the dyad paradigm led humanity to the modern civilizational crisis.

In fact, the global law of development is different – the world is moving to harmony. So, the radical change of worldview of humanity and development path are necessary. According to trialectic, contact of opposites “progress-retrogression” has the following meaning. On the rising stage of development there is a progress, but up to a certain point. In the following, on the descending stage, it is inevitably replacing by retrogression. And the modern “material” civilization (in the major focus of which is meeting the material needs of people) has its limits. Unavoidably “a new” - another non-material (socio-humanistic, moral) civilization - supplants it. The modern stage of development meets to socio-humanistic transition [3,4].

2) *Humanity*. Starting out from existing definitions [5] and basing on theoretical apparatus of ergodynamic [3,4] there is the following formulation of human phenomena: “The human being is an open, dynamic, self-renewing bio-socio-moral structure possessing potential for reproduction and working (taken as a whole) in a certain range of biostructures”.

Bio-socio-moral entirety of individual failed to be reflected in the theory of human capital assets laid down by Western economists (among them are Nobel Prize winners G. Becker and T. Schultz). In their works the individual is treated as a social being, and his capital assets are estimated from the perspective of human qualification as the working person.

The system theory of human capital assets [3,4] researches individual in unity of biological, social and moral sources. We can write the value of  $H$  of the capital assets of the individual as follows:

$$H = V + J + D \quad (2)$$

where components of the capital assets:  $V$  – vital capital (description of physical health),  $J$  – intellectual capital, and  $D$  – moral capital (description of individual as a working person and bearer of public morals, as relevant).

Capital assets make potential: the higher it, the more individual works (taken as a whole, including “brainwork”). According to ergodynamic [3,4] development of any individual takes place when its capital assets are growing:



$$dH/dt > 0 \quad (3)$$

The condition (3) is simply interpreting with regard to social medium as a whole when specific capital [1,2] is considering (calculated per one individual, dollar/person). With regard to individual the condition (3) meets the rising stage of vital development (to 14-16 years). In the following the vital capital is decreasing (as one ages). At the same time the intellectual and moral capital assets of the developing individual are asymptotically growing at lifetime.

The problem of human being resource management - use of human potential (capital assets) for meeting needs (desires) of individual - is a major problem. As is known, there are "deficiency" and "growth" needs. "The deficiency" needs are needs of personal safety: food, house, clothes, safety, etc. "The growth" needs, inherent in "deficiency" one, are needs ensuring harmonious development of individual: freedom, love, dignity, etc. Realization depends on external (social environment) and internal factors of the individual himself. As a result we are dealing with environmental implementing and realization of personal potential (notwithstanding the border between them is rather relative).

It is considered that meeting of "deficiency" needs is the basis for harmonious development of individual. But there is a question: if there is any limit for "the deficiency" needs? Let's lay down the following postulate:

*No "growth" needs will arise if there is no limits for "deficiency" needs.*

This theorem demonstrates an evolutionary inferiority of liberalism focused on maximum profit and on meeting soaring material needs. The overall practice of capitalism with its orientation on maximum profit, super-wealth and money worship are holding up this theorem. This resulted in poverty, wars, personal degradation, ecological problems, in other words, in everything that destroys ecos (systems nature-human being-society). Orientation on "the growth" needs is consciously forming "from above" (through advertising, mass media; the Russian television is working hard in this sphere).

The "growing" needs are forming "from below" – by human being himself. Neither liberal, nor welfare state will contribute to it. On the contrary, under a slogan "human rights" the priority of freedoms over duties is actually declaring and this, unavoidably, results in permissiveness – to the kingdom of "deficiency" needs. Free human development is a principle of a welfare state. But it supposes equivalence for development both positive and negative human qualities, examples are legion. The nature of any "growing" needs is culture (a true one, not mass culture which provides domina-

tion of "deficiency" needs). And the church is playing a certain role in formation of the "growing" needs.

Any individual who is abiding "supreme values" is a "social and spiritual human".

A true realization of individual is related to implementation of its evolutionary mission. The following statement we will recognize as a postulate:

*Any individual to the fullest possible extent can realize himself if his mode of life meets the laws of eco-socio-humanistic development.*

And such individual has an optimistic turn of mind: he is harmonious, in good agreement (in equilibrium with) with himself, other people and nature.

On the contrary, if the mode of life chosen by individual is contradicting natural and humanitarian laws of development, such individual will drop out of general evolutionary process. He is a pessimist and failure: he is always disappointed, dissatisfied with his life and himself, and, as a result, is inclined to antisocial behavior.

The environmental realization is characterized by inclusiveness of individual in social environment, how significant for social medium taken as a whole are results of his work. Development of social medium, described with such values as specific (calculated per one individual) national (country) capital (*SNC*), production of specific national capital (*PNC*), quality of life index (*I*) are measurable parameters of life quality. The more these indexes, the higher the environmental realization is.

3) *Human being in biosphere*. The problem is discussed from the perspective of trialectic. The opposite "biosphere – individual" can be settled as follows. Individual is associated with biosphere – this is a direct association (Fig. 1). In turn, individual is transforming nature (feedback). Transformation, humanization of nature is acting for progress but up to the certain point, and retrogression is changing it. In turn "management" of biosphere (by fossil fuels consumption, eco-management, etc. [6]) is progressive only but up to the certain point. In harmonious social medium there is an optimizing control – balance between natural and non-natural environment components.

**Biosphere — human being**  
**Progress — retrogression**

**Biosphere under control**

**Fig. 1.**  
Scheme of settlement opposites  
"biosphere – human being"

In Russia 2013 has been declared the year of environment protection. Meanwhile, the problem of environment is not limited to its protection, but, as is evident from the foregoing, is of rather dissimilar nature. Fundamental nature of life is to change the living environment for to adapt it for life to the maximum extent possible. The parent example is succession on recent volcano lava flow when initially lifeless lava turns into fertile and swinging and entertaining life is filling it. Human being makes the same thing with his life environment but on a large scale.

Any man-made change of environment is naturally determined, unavoidable and even desirable occurrence. But this change must be for good of human being. And this takes place if the change is of a certain scale not exceeding “the anthropogenic limit of the Earth” – the maximum anthropogenic load which increasing results in degrading of Ecos (the global system “nature - human being - society”) [4]. Transformation of environment to the certain point is a progress of ecos. But its excess results in retrogression.

Therefore we need no “environment protection” but humanization of life environment, its optimal transformation for to make it convenient for living. And in this case the ecological component is of the most importance. Humanization of life environment will promote growth of human qualification, increase in human capital assets, including health capital, intelligence and morality.

4) *Human being in social medium.* This problem consists of a number of components.

*The system theory of the capital* considers the capital as a part of a large picture, taking into consideration its components: physical capital, human capital assets, social, natural (and any other types of capital which failed to be taken into consideration: cultural, demographic, financial) [1-4]. A new interpretation of human capital as the sums of three components vital, intellectual and moral resulted in introduction of a new concept – socio-humanistic state.

*The concept of national wealth and life quality* makes it possible to put in perspective development of countries worldwide and regions. The national wealth (capital of any country, region) is one of the most important characteristic of social medium – potential for development. National wealth of the countries worldwide is estimating in formulations of the World Bank, and human qualification – in the United Nations Development Programs (UNDP). And the World Bank estimates future consumption in the countries worldwide for average life of one generation (25 years). This factor is not directly relevant to national wealth. But within the frameworks of the system humanology

all capital accumulated in the countries worldwide is estimating. As the human development index (HDI), applied in UNDP works, is of subjective speciality, it is introduced by inductive method. Socio-humanism studies the life quality index (LQI) which is developing by deductive method and taking into consideration the most essential components of life quality. The proposed method of calculation of national wealth is an alternative to the method of the World Bank, and the LQI is the development of UNDP approach.

The developed technique makes it possible to calculate national wealth (the country capital) and the life quality index for all countries worldwide and constituent entities of the Russian Federation [1,2]. Their rating under these figures has been specified.

*The theory of socio-humanistic state* is constructible by deductive method – on the grounds of general theory of socio-natural development. Any socio-humanistic state is a natural stage of development in the line “liberal-social-socio-humanistic state”. If in the liberally state “the economic individual” is operating and in the social state – “the social individual”, in the socio-humanistic state there is “a social and moral individual”. At the heart of any socio-humanistic state there is a human being, his harmonious development (which means the associated growth of components of the human capital – vital, intellectual and moral), advancing growth of the human capital. The economy is no longer a purpose; it turns to be a mean of harmonious development of human being. In recent times the state with regulated market economy through the tax system and social policy oriented on harmonious development of individuals is the optimum. Simultaneously settlement of both social and ecological problems will start.

The trialectic method with reference to the socio-humanistic state means, at least, the following. Socio-humanism is a settlement of opposite “capitalism – socialism”, their harmonious synthesis. The opposite “democracy – authoritarianism” is settling by strong state with most democracy to the fullest extent. Rights (freedom) are associated with duties, their opposite is settling by authority of law. Progress is ensured by associated harmonious growth of components of the country capital. Growth of material wealth (physical capital) of individuals is one of the progress components but up to a certain point, above this point the said growth becomes a retrogression factor. The opposite “wealth – poverty” is settling by the middle class. The gap between the rich and the poor is optimal. Increase in the gap between them means social retrogression and may lead disaster (revolution). The middle class is one of the main subjects of the progress. The opposite “hired labour – employee-employer” is

significant only on the first stage. In the following the collectivist forms of ownership by which the opposite “public – private ownership” are settling will have the more significant role.

“*The consumer society*” is progressive only up to the certain point of satisfaction of needs, after its overrunning there is retrogression. And modern times are meeting such point (first of all we have in mind the developed countries). So, transition from “consumer society” to “the society of social humanism” is in line with trialectic – it is supported by evolution.

*Socio-humanism* – is ideology of any socio-humanistic state. According to socio-humanism life is a supreme value of existence. The individual himself is the principal wealth of human being, but not any external circumstances of his life. As compared with material values, the humanitarian values are of higher priority (anyhow, they should be in harmony with each other). Directive of popular materialism “social being determines consciousness” has no any feedback link which can be charged with stability of social systems in which it is involved. Simultaneously two opposite directives should be applied: not only “social being determines consciousness”, but “consciousness determines social being” as well. No individual belonging to the socio-humanistic civilization needs “everything”. He needs only the things that promote his self-realization and development of his creativity. The popular materialism, directive “serving to yourself” are destroying civilization from the inside. In socio-humanism moral has got a special tone: the individual who understands that life is a supreme value is a moral person. And he is conforming his life to this principle.

*The socio-humanistic project* for Russia, which has been developed by a group of authors [7], is one of practical applications of socio-humanism. Unlike most of projects aimed on social restructuring which are forming under inductive method, the socio-humanistic project is based on a deductive method – from the theory of socio-natural development to the theory of the socio-humanistic state. Therefore the project has got a necessary scientific base.

From the data relating to calculation of national wealth and the life quality index for all countries worldwide [1,2] it follows. In accordance with the life quality index Russia lies in 73rd place in the world; and in accordance with the human capital index it lies in 162nd place. Reasons for such disadvantaged position are low birth rate and low life span, high level of suicidality and high crime rate, considerable social differentiation and some other factors. Conclusion: the country is undergoing an acute socio-humanistic crisis – crisis both of human being and the development model. Evolutionary supported way for solving

the crisis is socio-humanistic transition, generation of socio-humanistic state.

*The world socio-humanistic project* [8] is an extension of the Russian project. The world as a whole is in an acute systemic crisis as well, this crisis is related to resource and environmental restrictions for economic growth. But capitalism is always aspiring to get the top profit and the demand to constrain margins is unnatural for it.

The main defect of the existing “material” civilization is a low “price” of individual, low-low level of humanitarian values in their system ranking. The world of materialism does not meet the evolutionary requirements of the modern age.

In a new century a socio-humanistic transition is expected, this will be a transition to new civilizational mode where “the social and moral person” will act (unlike “economic person” and “the social person” – the entities of liberal and social states). This is the purpose of development set by the World socio-humanistic project. The scientific basis of the World project is similar to the Russian project.

5) *Problem of time and harmonious development of human being*. The calendar (physical) time is not enough for quantitative description of evolution. Evolution time is a description of changes in structural energy of systems. This time is a secondary, and changes are primary. As there are no changes in future, the time in future is “a virtual time”. Time in the past period has been fixed in memory (individual, collective), and, consequently, this is “a subjective time”. Objectively there is only a present which continuously generating and passing in past.

The humanitarian time of individual is defined by his structural energy or (in terms of value) capital. So, there are components of humanitarian time: vital, intellectual and moral. The humanitarian age of individual differs from his calendar age, and speaks of the individual level of development. The human qualification index (HQI) is defined by difference between its humanitarian and calendar ages.

In accordance with trialectic any individual will develop in the line of harmony when everything is in accordance with the principle “enough is as good as a feast”. It means the associated growth of components of the human capital: vital, intellectual and moral. A true meaning of the life of a human being, a meaning prescribed by general laws of development is in self-development, movement towards own harmony and socio-natural harmony. In accordance with the positive psychology [9] the main qualities of “the social and moral person”, the entity of the socio-humanistic state, are: wisdom and knowledge; humanism and love;

courage; fairness; moderation; moral. On any essential points values of “social and moral person” are in agreement with religions values, including, Christianity. Creativity is considered to be the main force modifying the world. Creative individuals are defining both intellectual and moral capital of the country, competitive ability of nation.

Natural and humanitarian synthesis assumes formalization of humanitarian concepts and development in humanitarian sphere the knowledge of quantitative models. Humanology is dealing with the mathematical models of moral development, creativity, antisocial behavior and etc.

Common regularity of human evolution is in movement to “the harmonious human being”. But it is realized as the main tendency. Any specific individual can follow it, but as well he can run in opposite direction. Any particular development pathway is defined both by external and internal factors. It is important to know that prevent from harmonious development of individual, and how to overcome all these obstacles. The following factors are of essence.

*Distortion of meaning of life.* Ordinary representation of the meaning of the life is satisfaction of needs – first of all deficiency (material) needs, and then, after they will be satisfied, satisfaction of growth (cultural) needs. But, as a rule, individual of the masses is focusing on satisfaction of material needs: he is satisfying such needs but cannot satisfy them in full. And as regards cultural requirements either there are no such requirements, or there is no time or energy for their satisfaction. A crude materialism “social being determines consciousness” is dominating.

Meanwhile, a true meaning of the life is differing; it is in harmonious development of a human being. Development is primary and needs are secondary. No true, innermost, evolutionary significant needs are coming from outside, they are forming within “the developing individual”.

*Pseudo-elite.* Both power and money are representing it. Its purpose is to hold and to increase power and money. It considers the human being as a mean but not as a purpose. True elite is different. In it “the developing individual” who is moving towards “the harmonious individual” is operating.

Replacement of “pseudo-elite” by true elite is the most important condition for realization of socio-humanistic transition. For this purpose the socio-humanistic education which is synthesis of education and upbringing is necessary. Its wide introduction will promote development and expansion of evolutionary worldview specific to socio-humanism. The individual with such worldview, basing on democratic procedures, will be able to cut “pseudo-elite” out on social sidelines.

*Absence of any social procurement for harmonious human being.* Under current conditions the power and money are making a social procurement. And it is to earn a top profit on hired labour. Not without reason the liberal theorists are reduce the human capital assets only to one of its components – to intellectual one which is characterizing the individual as an employee. There is an order – an order for high performer. The employer is not interested in any consciousness of the employee. Besides, morality of the employee can prevent from earning the top profit and break the common practice.

The order for harmonious human being will appear only in the socio-humanistic state.

*Discrepancy between status of individual and his evolutionary quality.* The modern society is domination of materialism. That’s why the status of the individual in the society also has material background. It does not inspire internal work of the person, his aspiration to self-improvement and harmonious development.

The status of individual in socio-humanistic society will begin to be defined by its evolutionary quality (harmonious development indices).

*The wrong values and priorities system.* The values and priorities system takes root into masses “from above” through mass media to justify the existing fitness of things and the anti-evolutionary way of life of “higher-ups” such as overconsumption.

Socio-humanism sets evolutionary grounded values, moderation -freedom-dignity against the wealth-power-glory triad of liberal values.

*Injustice.* Lack of justice everywhere and in everything is patrimonial line of the present time. Injustice gives rise to alienation of people from each other, deprives of motivation for intellectual and spiritual self-improvement. As a rule such work gives no tangible results and does not result in growth of universal justice.

The opposite situation will be in a socio-humanistic state.

*Inborn “negative moral”.* The person possessing “negative moral” generally holds

(“occludes”) negative, “bad” in himself, while “good” gets seeped through him, without stopping down, without leaving a trace. Such person is suppressed by life, he can see around only processes of decomposition and disintegration, dissipation of structural energy.

This phenomenon can be negotiated on the way of socio-humanistic education.

*Adverse information.* Information gain as a whole is favorable for development. But the increase of adverse information share in the information flow is

adverse for development of the individual. It will result in the growth of assumed “negative moral”.

A correct ideological and cultural policy of the state is necessary to overcome the influence of negative information thus meaning the movement to the socio-humanistic state.

*Mass culture.* In fact, it is a counter-culture. It addicts base instincts of a person, substituting the main function of culture – harmonious development of the person - with its antipode: “free” development of pejorative qualities. The television makes especially headway on this issue.

The public sphere should make a call for a new policy in the field of culture. First of all it is necessary to retreat from its commercialization.

*“Oblomovism (apathy)”*. Inborn laziness, egoism, unwillingness to be embedded into public structures – that is the character that can be quite often encountered in the real world (especially in Russia). This character is adequately portrayed by Russian literature’s classics (A.I.Goncharov, A.P.Chekhov, etc.). The phenomenon’s nature may be connected with the fact that such person may be at the descending stage of life cycle of his patrimonial predecessors.

*A lack of evolutionary determined world view.* All the factors specified above including other negative ones are of their specialty and are resulting from their root cause: A lack of “correct” that is scientific proved, world view both at the individual level and at the social and state level (the established ideology). Socio-humanism appears namely as such world view. It formulates the development purpose: Harmonious development at the level of an individual, the maximum use of one’s potential on the basis of the “growing” needs; diligent satisfaction of the “deficiency” needs (at the level of their “rationality”) and ultimate promotion to development and satisfaction of the “growing” needs at the state level. Socio-humanism formulates a way of achievement of this purpose: evolutionary one, using “pure means”, taking into account a principle of relative coincidence of the purpose and result of development.

The person who is not matching the positive human qualities covered above is an “average” person of the rank and file, not capable and not wishing to develop oneself harmoniously; the person who does not have any idea of true evolutionary determined meaning of the life. But a person possessing the contradistinct socio-humanistic qualities is the degenerating person.

We would like to note the following in the conclusion. Sustainable (without accidents) development assumes balance (stability) of society as a whole and the existence of its small part being at evolutionary advanced level. Stability is characterized by such concepts as public mentality, collective consciousness.

Stability is secured by the main, little progressing ranks. The devoted individuals impair the stability and advance progress. “The developing person” and “the harmonious person” both belong to genuine social elite, being a basis for formation of a socio-humanistic system.

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# VICTIMIZATION MONITORING OF CORRUPTION-RELATED CRIME IN THE REPUBLIC OF BELARUS

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Issues of monitoring anti-bribery and corruption policy efficiency in the contemporary world are paid much attention in various studies. A great many of research papers devoted to this matter were published over the last years. However, new trends and non-conventional approaches to the assessment of corruption status and fight have recently emerged. Among these scientific trends directed to efficiency measures evaluation is the monitoring of victims in statistical figures of corruption indices what we called as «victimization monitoring of corruption» [11, p.51; 12, p.164; 13, p.12]. We consider it to be one of the components in the system of corruption victimology (anticorruption victimology) [8, p.38]) directed to the assessment of corruption condition in the state and society through detection, description and explanation of victimology trends. [14, p.107-111; 15, p.43-46].

Experience of contemporary Russian criminology has shown that detection, description and explanation of victimology trends in the corruption status and efficiency of measures for its fight is possible to implement by various means including the use of the available statistical information of the corrupt victims. [1, p.21-22; 2, p.30-32; 3, p.27-31; 4, p.8-17; 5, p. 286-289; 6, p.31-38; 7, p.112-114; 9, p.19-23; 10, p.42-45; 16, p.91-97].

Here we should agree on conditions that not all the countries present complete statistical figures of legal wrongs, lawbreakers and their victims on open access. In view of current traditions the governmental statistical agencies make available on official websites only the most significant information where the victims of crimes including corruption are not mentioned at all.

## ABSTRACT

*Goal:* To evaluate consequences of corruption crime in the Republic of Belarus based on the official figures of statistics.

*Methods:* the study being implemented is grounded on the universe dialectical method of perception making possible to investigate social phenomena in their interrelation and general scientific methods based thereon.

*Results:* the main social-demographic characteristics of the corruption- crime victims in the Republic of Belarus are disclosed.

*Scientific Novelty:* for the first time ever in criminology science the given work investigates the issues of victim monitoring in corruption crime statistics based on the figures submitted by the appropriate authorities in the Republic of Belarus.

In consequence of victimization measurement of corruption crime in the Republic of Belarus it has emerged that most of corruption crime victims are accounted for corruptive embezzlements, abusive exercise of power or misuse of authority. A good number of physical persons become victims of authority transgression or bribery but victims of failure to use authority appear to be just a few.

In the Republic of Belarus victims of corruption crime mainly become its citizens and the share of foreigners in the total structure of victims is insignificant.

The practical relevance of the given study lies in the fact that monitoring of corruption crime consequences in the Republic of Belarus can be used at working out the measures of the given crime victimization prophylaxis. The results received within the given study can be also used for the process of education in the field of anticorruption training.

**KEYWORDS:** corruption, corruption crime, victims of corruption, the Republic of Belarus, statistical key figures, corruption victimology, anti-corruption monitoring.

A pleasing exception from the rule turned out to be the information of registering and preliminary investigation of crimes in the Republic of Belarus made available to the public on official website «criminolog. rf» (criminologists of the Russian Federation) [20]. This information database contains both criminal's personal characteristic and social - demographic data over the period of 2002 – 2012. So we have taken ad-

vantage of the opportunity to monitor the corruption crime in this country since only such measure can give additional indices characterizing the corruption status and tendencies of its transformation.

The choice of chronologic frames in victimology monitoring is stipulated by the fact that namely since 2007 in compliance with sublegislative legally enforceable enactments in the Republic of Belarus to implement statistical observation the List of Corruption Crimes [17] was authorized and subsequently revised and itemized in December 2011 [18].

At present in compliance with this List the offenses punishable by the Criminal Code of the Republic of Belarus and stated below are determined to be corruption crimes:

- 1) art. 210 (Embezzlement by way of abuse of office);
- 2) p.2 and 3 art. 235 (Legalization ("laundering") of offense-related material valuables acquired by appropriation of corporate opportunities);
- 3) p.2 and 3 art.424 (Abuse of authority or official misconduct);
- 4) p. 2 and 3 art. 425 (Office holder's lack of action);
- 5) p.2 and 3 art. 426 (Transgression of authority or abuse of power);
- 6) art. 429 (Extralegal participation in entrepreneurial activity);
- 7) 430 (Bribe-taking);
- 8) 431 (Giving bribe);
- 9) 432 (Mediation in bribery);
- 10) 455 (Abuse of power, transgression of authority or failure to use authority).

Victimization data according to these corruption crimes in particular we shall analyze throughout the period under consideration just ignoring the fact that before 2012 other (advanced) List of Corruption Crimes have been in force.

We made a statistical analysis of corruption crime indices in the Republic of Belarus over the period of 2007–2012 having shown that on the territory of the country 13 871 corruptive crimes, 7 615 corruptive offenders were registered and the damage thereof amounted 109 560 375 015 rubles. A record of 990 victims or aggrieved persons due to corruptive crimes has been kept over the same period. Within the timespan under review the dynamics of detected corruptive crimes looks as follows: in 2007 on the territory of the Republic the number of corruptive crimes made 2235, in 2008 – 2225, in 2009 – 2518, in 2010 – 2636, in 2011 – 2452 and in 2012 – 1805. Over two last years we can clearly see the tendency to diminishing in the field of corruptive crimes detection and record. Yet at the same time the number of recorded and accom-

modated corruption offenders in this country turned out to be the following: in 2007 as many as 1100 of them were detected and held criminally liable, in 2008 – 1138, in 2009 – 1368, in 2010 – 1454, in 2011 – 1380 and in 2012 – 1175. And here again we see that in the timespan of three years the number of persons held liable for committing corruptive crimes has been significantly reduced. According to our reckoning this tendency is stipulated, in the first place, by reduction of total number of corruptive crimes being detected by law enforcement organizations in the Republic of Belarus, i.e. decline in their professional activity to search such crimes and offenders (see fig. 1).



**Fig. 1.** Quantitative indices of corruption-related crimes in the Republic of Belarus (2007–2012)

At implementing victimization monitoring we should invoke a reservation that in the Republic of Belarus according to articles 49-50 of the Criminal Procedure Code only physical persons can be qualified injured or aggrieved [19], i.e. made provision for so called anthropological approach to victims. [8, p.20]. What calls attention to itself is that most of the corruptive offenses in the Republic of Belarus is committed harmlessly to a victim and only one in each 14 case law-enforcement authorities upon availability of reasons arrive at a decision to admit a physical person to be an injured party. To corruptive offenses with no victim can be related such acts as detected legalization ("laundering") of offense-related material valuables acquired by appropriation of corporate opportunities, illegal participation in entrepreneurial activity and mediation in bribery because over the period under review no one natural person was admitted an injured

party therein. Meanwhile 288 corruptive offenses of the above-mentioned category were detected and recorded and 165 persons having committed them were held criminally liable over the same period of time. Victimization monitoring of quantitative indices in the Republic of Belarus showed that in 2007 as many as 199 persons were admitted an injured party and recorded as victims of corruptive offenses, in 2008 – 114, in 2009 – 156, in 2010 – 216; in 2011 – 141; in 2012 – 164. The analysis of this statistics clearly demonstrates differently directed variations in quantitative indices of corruptive offense victims at relatively stable quantity of recorded crimes and detection of persons committing thereof. According to the number of recorded victims the corruptive offenses can be divided into several groups: with large number of victims, with substantial number of victims and with small quantity thereof.

One of the main indices in victimization monitoring of corruption-related crimes is structural constitution of their victims. The first group encompasses persons aggrieved from embezzlement by way of abuse of office (art. 210 in the Criminal Code of the RB). Within the period under review their number amounted 276 what made 27,9% of total number of corruptive offense victims. Not so many as in the above group – 213 persons or 21, 5% of victims in determined abuse of authority or official misconduct (p.2 and 3 art. 424 in the Criminal Code of the RB) as well as victims of abuse of power, transgression of authority or failure to use authority (art. 455 in the CC of the RB) – 207 or 20,9%. This group of aggrieved persons makes 70,3% in total structure of corruptive offense victims.

A sustainable quantity of victims was recorded among such crimes as abuse of authority or official misconduct (p.2 and 3 art. 426 in the CC of the RB) – 135 persons or 13,7% and giving bribe (art.431 in the CC of the RB) – 133 persons or 13,4% of total structure of corruptive offense victims in the Republic of Belarus. A small quantity of victims was recorded in the category of bribetaking (art.430 in the CC of the RB) – 24 persons or 2,4%, though the total number of victims from bribery (both giving bribe and bribetaking (art. 430-431 in the CC of the RB) is quite sustainable and makes 157 persons or 15,9% of total structure of corruptive offense victims in the Republic of Belarus.

The structural analysis of corruption-related crimes in the Republic of Belarus witnesses that most often the residents of the country become victims of «corruptive embezzlements» and «abuse of power», a sustainable number of people suffer from «transgression of authority» and bribery but victims of failure to use authority are just a few.

One of the most important indices in victimization monitoring is social - demographic characteristics

of victims in criminal corruptive behavior expressing their corruptive victimity. In our opinion corruptive victimity should be understood as either impartial possibility and/or capability («proneess») of an individual to become a direct or indirect victim of corruptive behavior or incapability to protect oneself from such behavior. The analysis of statistical information made by us proves the fact that most often the victims of corruptive offenses become men - 719 or 72,6% and only 271 or 27,4% are women. Hence, corruptive victimity of Belorussian men are much higher than that of women.

If to arrange the victims into groups according to their social status it can be seen that mostly workers become victims of corruption-related crimes, hence, they are more liable to be corruptive offense victims. Their detected and recorded number as victims in the period under review amounted 289 or 29,2% in total figure of corruptive offense victims. Slightly less people among the victims of corruptive offenses have become persons without a permanent income source (neither working nor studying) – 256 or 25,9%. A substantial number of corruptive offense victims turned out to be employees – 74 or 7,5% and pensioners - 58 or 5,9%. Rather small number of victims appeared to be among the students of educational establishments – 15 persons or 1,5% and foreigners - 25 or 2,5%. A large proportion in the structure of corruptive offense victims in the Republic of Belarus fell into other social groups – 273 natural persons or 27,6%.

The quantitative data of criminal statistics in the Republic of Belarus envisage victims grouping according to age category: a) under the legal age, b) persons at the age from 18 to 29, c) persons at the age from 30 to 49, d) persons at the age from 50 to 69 лет; e) persons at the age of 70 and elder. Among the victims of corruption-related crimes the group of 18- 29 turns out to have the largest proportion: 419 of them were detected and recorded what makes 42,3% in the total structure of corruptive offence victims.

Slightly less victims was recorded in an age group of 30-49: 389 or 39,3%. Far less corruptive offence victims we see in an age group of 50-69: 151 persons or 15,3%. People in an age group of 70 and elder have become victims of corruptive offences as much as 21 times and in the total share of all victims they made only 2,1%. The least corruption victimity due to objective cause is characteristic to persons under legal age: they are only 10 or 1%.

In this regard it is safe to assume that the most corruptive victimity in the Republic of Belarus is inherent to people aged from 18 to 29 and the less corruptive victimized being under 18-s.



The key element in victimization monitoring of corruption-related crimes appears to be detection, description and explanation of its negative consequences capable to influence over the victims and their behavior. Quantitative indices of criminal statistics in the Republic of Belarus apart from the amount of material damage caused comprise such additional indicators that determine physical trespass, i.e. the number of wounded and killed.

According to the data studied within the period under consideration 3 persons were killed and 7 people got wounds of varying severity as a consequence of corruption crimes in the Republic. So, it can be said without prejudice that as a result of committing corruptive crimes 10 people in the Republic of Belarus have suffered from physical trespass, what makes 1% in total number of corruptive offense victims. As a rule, corruptive offense victims sustained a bodily injury are natural persons suffered either from the officials' transgression of authority or failure to use authority.

Victimization monitoring of corruption-related crimes in the Republic of Belarus enables us to draw certain conclusions.

In the first place, the Republic of Belarus could manage to arrange the system of crime reporting that takes into account not only qualitative indices of the offences and persons having committed them but also the record of victims including physical trespass. The above mentioned data being reported make possible to carry out statistical analysis of corruption-related crimes rate in the Republic, its negative consequences for society and to implement anti-corruption victimization monitoring characterizing the victims of corruptive offenses.

In the second place, primarily the Republic of Belarus' citizens appear to be corruptive crime victims but the share of foreigners serving in this quality is quite negligible in total structure of this type of crime victims.

In the third place, most of the corruptive offense victims were harmed from corrupt embezzlement, abuse of power or abuse of official position, a substantial number of natural persons became victims of authority transgression and bribery but victims of failure to use authority are just a few.

In the fourth place, most often the victims of corruptive offenses become men and only a few of them are women. Hence, corruptive victimity of Belorussian women is 4 times lower than that of men.

In the fifth place, at arranging the victims into groups according to their social status it can be seen that mostly workers become victims of corruption-related crimes - their number makes up nearly a third of all corrupt crime victims as is also the persons with-

out a permanent income source (neither working nor studying). The least number of victims appeared to be among the students of educational establishments.

In the sixth place, among the victims of corruption-related crimes the age groups of 18- 29 and of 30-49 turn out to have the largest proportion making 80% in the total structure of corruptive offence victims but the less corruptive victimized being under 18-s.

### Credits

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# ASSESSMENT OF EFFECT OF LARGE INVESTMENT PROJECTS ON DEVELOPMENT OF INVESTMENT POTENTIAL OF REGIONS OF RUSSIA AS EXEMPLIFIED BY UNIVERSIADE 2013 IN KAZAN\*

## ABSTRACT

*Objective:* development and testing in Russia of methods of assessment of the effect of individual managerial decisions on modification of investment attractiveness of the region

*Methods:* institutional, cost and systemic approaches were employed, as well as econometric modeling

*Results:* new methods of assessment of the effect of individual managerial decisions and measures on the level of investment attractiveness of the region are suggested and evaluated as exemplified by assessment of the effect of preparation and hosting Universiade 2013 in Kazan on investment attractiveness of the Republic of Tatarstan. Employment of the mentioned methods is illustrated by assessment of the consumer potential growth in the Republic of Tatarstan.

*Academic novelty:* methods of assessment of the effect of managerial decisions and measures of regional level on investment attractiveness of the region are offered, a number of regression models is built allowing to assess the effect of large regional projects on the consumer potential of the region of Russia as exemplified by the Republic of Tatarstan.

*Practical value:* The suggested methods are universal and can be applied when assessing any large regional project in Russia, in any of its subjects.

**KEYWORDS:** methods of assessment of investment attractiveness of the region, investment potential of the region, consumer potential of the region, investment risks, Universiade

## Introduction

Professional literature covers approaches to assessment of investment attractiveness of the region quite extensively. Factors favoring investment climate have been determined. Yet, few works are dedicated to issues of theory and practice of management of investment attractiveness of the region. Experience shows that to get significant results, management of investment attractiveness must be of long-term character. Effective management of investment attractiveness depends on



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operational, precise and complex assessment of every managerial decision. The present article is dedicated to working out methods of assessment of the effect of individual managerial decisions on modification of investment attractiveness of the region.

## Literature review and research methodology

Investment attractiveness of the region is a complicated versatile parameter. According to the most common definitions of investment attractiveness, it represents generalized characteristics of a combination of social, economic, organizational, legal, political, cultural prerequisites determining attractiveness and advisability of investment into certain economic system [1], [3], [6].

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For its assessment, it is necessary to employ systemic approach and mechanisms of modeling economic processes, which makes it possible to properly consider the diversity of factors and conditions of investment influencing the development of the Russian Federation subjects.

At present, a lot of research has been conducted in the area of assessment of investment attractiveness of different economic subjects. There are the following approaches: those based on financial and economic assessment of individual investment projects; methods, based on the assessment of the financial condition of economic entities; complex methods of assessment of investment attractiveness of industries and regions.

To solve the task set in the present research, it is worthwhile to analyze the existing approaches and methods of assessment of investment attractiveness of regions, applied in practice around Russia. They can be divided into three groups.

The approaches of the first group are based on detecting a key factor of investment attractiveness of the region. For example, K. Guseva considers as such factor «market response of regions»; for I. Zulkarnaev, «society institutions» play a dramatic role in forming and sustaining investment attractiveness; T. Lukyanenko notes the necessity to form a positive opinion about the investment object; A. Stetsenko and E. Beniksov consider the «image of the region» as an essential factor of investment attractiveness. Among the key indicators of investment attractiveness are dynamics of gross regional product, rate of change of industrial products manufacturing volumes; the level of legislative development in the area of investment activities; development of investment and capital markets. The reviewed approaches are relatively simple while conducting analysis and calculations, and they also have a high level of universality. The drawback of these approaches is limitation and incompleteness of assessment of factors of investment attractiveness. The methods in the mentioned case are not of A. Privalov, methods of the second group are multiple-factor; they use a number of factors considered of equal value in the context of its effect on investment attractiveness of the region. In its turn, each factor is determined by a number of indicators. Among them, indicators of investment potential are used, as well as different indicators of economic environment; the level of market infrastructure development; as well as other financial, economic and institutional factors. The listed approaches are employed by M. Knysh, B. Perekatov, A. Privalov, Y. Tyutikov. Among advantages of this approach are its comprehensiveness, opportunity to make conclusions about the perspectives of development of Russian regions in investment area; to conduct

comparative analysis of the level of investment attractiveness of different regions, to determine the degree of implementation of the existing investment potential; employ standard and relatively precise and valid statistical methods (application of correlation analysis, for example). This group has its drawbacks, among them inconsistency of assumption of the equal effect on investment attractiveness by different factors, insufficient justification of choice of the combination of factors of investment attractiveness, as well as indicators characterizing them. Apart from that, conducting the correct comparison of regions by the level of investment attractiveness with the mentioned approach is rather difficult.

The third group of approaches supported by E. Anankina, G. Marchenko, O. Machulskaya, is also based on the analysis of a wide range of factors, but investment attractiveness of the region is viewed as an integral characteristic determined by investment potential and combination of investment risks. The method of the rating agency «Expert-RA» belonging to this group of methods is well-known and widespread. Overall investment potential of the region, according to this method, includes: financial, manufacturing, resource-based, consumer, innovative, infrastructure, labor and institutional components. Overall risks of the region include political, economic, financial, social, environmental, crime, legislative risks [2]. Main advantages of the suggested approach are wider and multilateral choice of factors completely reflecting contemporary processes of development of post-industrial economy, justified grouping of factors convenient for a potential investor in the market conditions (investment potential and investment risks), relevance of the grouping of factors (and the methods on the whole) to the international practice in the area of monitoring and assessment. The presented methods are not perfect either: it is not always that the procedure of aggregation of aggregate components of investment potential and investment risks is properly justified. Apart from that, the methods do not reflect the interconnection of indicators of investment potential and risks. Besides, value of a number of indicators is determined based on subjective expert judgement.

The approaches to assessment of investment attractiveness of regions presented above are based on employment of a number of methods which can be divided into three groups:

1. Economic and mathematical methods.
2. Methods of factorial analysis.
3. Methods of expert judgement.

The most frequently used economic and mathematical methods are correlation analysis, optimization

methods, economic and mathematical modeling.

In contemporary conditions, one of the most widespread methods is that of expert judgement. Unlike the first two groups of methods, expert judgement includes not only quantitative, but also qualitative analysis allowing to use not only statistical data, but also non-regular, one-time information without numeric expression, as well as rich experience of experts at assessing the perspectives of development of social and economic systems. Under the conditions of development of institutional economy, institutional (non-economic, qualitative) factors exert even more effect on investment attractiveness of the region, among them attitude to foreign entrepreneurs, the level of trust between participants of market relationships, etc.

Together with the methods of expert judgement, statistical methods of calculation of averages for indicators by sampling are employed, as well as methods of calculation of the (mean value) indicators, and also methods of calculation of average weighted aggregates. Criterial gradation and weighing-out procedure are most vulnerable to subjectivity.

The procedure of aggregation of indicators characterizing investment attractiveness of the region allows to build up the rating of investment attractiveness of regions and their grouping by a number of features reflecting conditions of investment and the overall level of usefulness for investors. The mentioned rating is an important indicator when taking investment decisions.

Researchers [6], [10] widely extend on the main positive and negative sides of the existing methods of building up the rating of investment attractiveness. Their advantages are considered to be:

- 1) validity of the received results due to cooperation of experienced experts in the analysis;
- 2) ranking regions by factorial methods with employment of statistical data reflecting the situation in the region;
- 3) considering interrelations of many factors in factorial methods with the differential approach to various levels of economic systems.

Among the drawbacks, the authors note:

- 1) inability to determine the real distance between the rating participants;
- 2) subjectivity of expert judgement, especially when choosing weighted coefficients; to get a more precise result, it is suggested to use options of assessment with equal competence and an option of competence self-assessment, when all experts assess their competence answering each question; in the second option, when compiling group judgement, the assessment of each expert is weighed by weighted

- coefficients of competence indicated by them [7];
- 3) published generalized ratings do not allow to get an impression about the system of statistical indicators by which final assessment is formed;
- 4) low promptness of ratings due to delays in gathering, grouping and analysis of statistical information by state statistical authorities and consequently, low degree of verifiability of the results of the rating procedure;
- 5) analysis of mainly macroeconomic aspects at the expense of microeconomic indicators (as consequence of attempts to adopt foreign practices of assessing investment climate).

Many authors also note other disadvantages of Russian methods of compiling ratings of investment attractiveness (see for example [4], [10]):

- 1) despite their development while employing principles of the needed variety of components and minimal sufficiency and their goal orientation, they do not provide full impression about the region; this drawback, however, is inherent to any procedure of modeling social and economic systems, among them the procedure of forming ratings;
- 2) at the same time, the rating uses certain factors, such as: attitude of regional bodies officials to businesses; attitude of the population to privatization outcome revision; attitude of the population to local and foreign entrepreneurs; the potential of transportation system modernization, attitude of regional authorities to foreign investors, etc., which are hard to interpret; it is necessary to specify or eliminate the effect of these factors from the analysis.
- 3) in most of the existing methods of assessment of investment attractiveness of regions, industry indicators are not presented to a proper degree, industry opportunities of the region are not taken into account, as a result, important supplementary information required by the investor is lost.

Summing up the above, we can conclude that it is necessary to develop new, embracing contemporary realia, complex methods of assessment of investment attractiveness of Russian Federation subjects, taking into account all factors and conditions of regional development (including industrial, institutional ones), based not only on the long existing methods, but also on others, alternative ones, allowing regional authorities and investors to get supplementary information. While assessing investment attractiveness of the region, it is necessary to consider specific interests of different groups of investors for whom values of indicators of

investment potential and investment risks may differ.

Management of investment attractiveness of the region is a difficult task. It is not easy either to assess the effectiveness of managing it in the region. The task is to some extent simplified if we consider the effect of individual measures and managerial decisions on investment attractiveness of the region, or, to be more exact, on a range of specific factors which determine it.

We will define the effect of Universiade 2013 in Kazan on investment attractiveness of the Republic of Tatarstan. Priority in the research will be given to receiving of quantitative characteristics of such effect.

In the process of preparation and hosting Universiade 2013, a number of sports facilities were constructed, the road traffic and transportation infrastructure of Kazan significantly improved (the construction industry secured a lot of orders), the international image of the Republic got better, which gave a new impetus to development of tourist industry in the region, growth of consumption in the market of educational services in tourism, trade, hospitality, etc. There happened a significant development of information and communication systems, as well as reforming of institutional environment in the Republic. In terms of the most frequently used structure of investment attractiveness of the region, hosting Universiade 2013 facilitated growth of financial, consumer, infrastructure and institutional potential of the Republic.

We will assess the consumer potential growth in the Republic of Tatarstan. We will assess the effect on consumer potential, viewing growth of potential domestic demand of the population of the Republic as a result of reviving in industries involved in preparations to Universiade 2013.

## 2. Data characteristics

Preparation to the Universiade led to revitalization of a number of industries in the Republic, on the whole, the volume of delivery of goods, works, services grew, and correspondingly, gross regional product increased. Growth of these indicators will lead to growth of aggregate income of the population. Total expenditures of the population also went up (these facts are confirmed by the statistical data for several previous years, also including the Republic of Tatarstan). In addition, the level of domestic investment activity increased, and it also influences investment attractiveness of the region (Table 1).

Data in Table 1 clearly show that the crisis of 2008 exerted influence on the correlation of the presented indicators. In particular, following 2008, the percentage of income of the population in GRP of the Republic of Tatarstan grew from 69% to 82%, in the post-crisis period the indicator never decreased to the

pre-crisis value. In addition, the percentage of expenditures in the income amount of the population also grew from 93% to 98% (Fig. 1).

Hence, we can implicitly make a conclusion about exceeding rate of salary growth as compare to rate of labor productivity growth. During the post-crisis period the percentage of savings of the population of the Republic of Tatarstan decreased in their aggregate income from 7% to 2%.

First, the mentioned facts prove negative in the long run. Second, the influence of the crisis of 2008 significantly affected the structural correlations of indicators of the Republic of Tatarstan, so it must be taken into account in regression modeling.

The interconnection between growth of population expenditures, investment activity and increased delivery of goods, works and services in the Republic is assessed on the basis of econometric modeling. By way of empirical data, we took key indicators of financial and economic activity of the Republic of Tatarstan for 2003-2012 presented in reports of the regional body of the Federal Service for National Statistics for the Republic of Tatarstan (further referred to as Tatarstat), displayed in Table 1, in Graph.1.

## 3. Results of econometric modeling

Results of building up the regression model of assessment of the effect of growth of volume of GWS delivery on income of the population of the Republic of Tatarstan are presented in Table 2.

where D2 – dummy variable taking into account the influence of the crisis of 2008 (its inclusion confirms the hypothesis of modification of quantitative stochastic interconnection between variables presented in the model in the post-crisis period as compared to pre-crisis, starting with 2009).

Statistical significance of the coefficient before the dummy variable mathematically confirms structural transformation of the model presented in Table 2, in the post-crisis period.

A similar model of assessment of the effect of GRP on the investment activity of the region, expressed by the indicator of investment volume in the Republic per year, is presented in Table 3.

Functional dependencies corresponding to the above regression models are as follows:

$$\begin{aligned} \text{INCOME} &= 22,4002 + 0.6429 \cdot \text{GSW} + 107,7089 \cdot \text{D2} + \varepsilon, \\ \text{INVEST} &= -24.30623088 + 0.323424459 \cdot \text{GRP} + \varepsilon. \end{aligned}$$

In the above expressions  $\varepsilon$  – regression error.

Data in Table 4 show close connection between income and expenditures of the population of the Republic of Tatarstan. In addition, in the post-crisis

period, the model saw structural shift expressed by increased percentage of expenditures in income and decreased level of savings of the population.

where DD – dummy variable taking into account the influence of the crisis of 2008 (its inclusion confirms the hypothesis of modification of quantitative stochastic interconnection between variables presented in the model in the post-crisis period as compared to pre-crisis, starting with 2008).

Regression equation corresponding to Table 4 model looks as follows:

$$\text{CONSUM} = -14,3289 + 0,9683 \cdot \text{INCOME} + 21,1434 \cdot \text{D2} + \varepsilon$$

All developed models are well specified: coefficients at independent variables are statistically significant; moreover, probability of confirming the null hypothesis by all t-statistics is practically equal to zero (far less than 1%); value of Durbin-Watson statistics for all models is close to two (which is relevant for regression models built by dynamic series); indicator R<sup>2</sup> for all models exceeds 95%, which emphasizes the fact of explaining over 95% fluctuations of the dependent variable as a result of building the model; the F-statistics value is quite high for all models, which characterizes their common high level of specification.

The built models are fully economically justified. Positive signs before coefficients of independent variables of the models confirm the positive effect of GRP on income and expenditures of the population, as well as on investment volume in the region for the report year.

In this way, by employing parameters and functional dependencies of regression models, it is possible to assess growth of domestic investment and expenditures of the population as a result of certain growth of GRP. Domestic investment and expenditures of the population are direct indicators of investment attractiveness of the region. First, capability of regional residents to co-fund investment projects exerts favorable influence on conditions of investment: lowers risks for outside investors, increases the degree of flexibility of investment schemes, etc. Second, expenditures of the population of the region demonstrate the potential ability of the population to buy goods, pay for works and services, they form domestic aggregate demand in the region – the indicator which characterizes response of practically any investment project implemented there. Thus, the reviewed indicators characterize both investment potential and investment risks of the region, which, when combined, determine its investment attractiveness.

In the period of preparation and hosting of Universiade 2013 provision of goods, works, services

will grow in the Republic of Tatarstan. Consequently, investment attractiveness of the region will increase during that time. We will use the regression models built earlier for quantitative assessment of growth of investment attractiveness of the Republic of Tatarstan as exemplified by a number of economic indicators of the region.

Volume of construction works, expenses for measures in environmental protection and healthcare will make 117,2 bln.rub.

In addition, the total operating budget of Universiade 2013, including expenses on organizational measures for its preparation and holding, will make 11,7 bln.rub. for 2010-2013.

Therefore, the total budget of the Universiade will make 128,9 bln.rub. Correspondingly, at this cost there will be goods manufactured, works implemented, services provided. Distribution of the mentioned amount by year in the period of preparation for Universiade 2013 in Kazan gives us initial information for assessment of growth of income and expenditures of the population, as well as increasing investment activity during that time.

#### 4. Conclusions and results of research

Applying the results of building regression models, the earlier received functional dependencies corresponding to the detected stochastic connections, as well as data on distribution of budget expenditures for Universiade 2013 in 2009–2013, it is possible to assess growth of income and expenditures of the population and domestic investment activity as a result of preparation to hosting Universiade 2013 in 2009–2013 (see Table 5).

Thus, as the outcome of the conducted research, the methods of quantitative assessment of the effect of large-scale regional managerial decisions and measures on the level of investment attractiveness of the region have been suggested and tested. The mentioned methods can be used as a basis for current and long-term management of investment attractiveness of the region. In the forthcoming research, we plan to continue improvement and extending the area of application of the created methods.

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**Table 1.**  
Key social and economic indicators of the Republic of Tatarstan in 2003–2012, bln.rub.

Indicator	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
GRP	305	391	483	606	757	923	885	1002	1276	1415
p/h, th.rub	81	104	128	161	201	245	234	265	336	371
Investment	70	100	139	161	215	273	277	328	393	464
Construction	31	45	71	87	124	157	165	178	220	287
income	194	242	334	423	523	641	720	837	921	1098
expenditures	179	226	308	390	485	620	707	811	903	1076
Delivery of GWS*	282	370	500	612	758	933	867	1070	1345	1467
Income/GRP	63%	62%	69%	70%	69%	69%	82%	84%	72%	78%
Expenditures/Income	93%	93%	92%	92%	93%	97%	98%	97%	98%	98%

\* GWS – goods, works, services

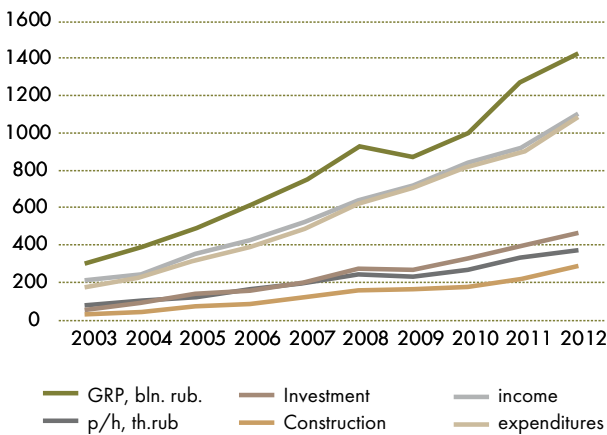


Fig. 1. Key social and economic indicators of the Republic of Tatarstan in 2003-2012, bln. rub.

**Table 2.**  
Regression model of assessment of the effect of growth of indicator of GSW delivery on income of the population of the Republic of Tatarstan

Included surveys: 10, Sampling 2003–2012		Dependent variable INCOME – income of the population of the Republic of Tatarstan (per year)		
Variable	Coefficient	Standard error	t-statistics	Probability of H0 hypothesis
C	22,4002	31,1890	0,7182	0,4959
GSW	0,6429	0,0483	13,3202	0,0000
D2	107,7089	37,0416	2,9078	0,0227
R2	0,9898	Mean value of dep. Variable		592,9756
Durbin-Watson statistics	2,2664	Probability by F-statistics		0,0000

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**Table 3.**

Regression model of assessment of the effect of growth of gross regional product GRP on the investment volume in the Republic of Tatarstan

Included surveys: 7, Sampling 2003–2012		Dependent variable INVEST – investment volume of the Republic of Tatarstan (per year)		
Variable	Coefficient	Standard error	t-statistics	Probability of H0 hypothesis
C	-38,763	8,992	-4,311	0,003
GRP	0,348	0,010	33,927	0,000
R2	0,993	Mean value of dep. variable		241,047
Durbin-Watson statistics	2,302	Probability by F-statistics		0,000

**Table 4.**

Regression model of assessment of the effect of income of the population of the Republic of Tatarstan on their expenditures

Included surveys: 10, Sampling 2003 – 2012		Dependent variable CONSUM – расходы населения of the Republic of Tatarstan (per year)		
Variable	Coefficient	Standard error	t-statistics	Probability of H0 hypothesis
C	-14,3289	5,7064	-2,5110	0,0403
INCOME	0,9683	0,0144	67,3179	0,0000
DD	21,1434	8,2567	2,5608	0,0375
R2	0,9997	Mean value of dep. Variable		570,398
Durbin-Watson statistics	1,263	Probability by F-statistics		0,000

**Table 5.**

Dynamics of growth of key indicators of the Republic of Tatarstan as a result of preparation to hosting Universiade 2013 in 2009 -2013

Indicator, bln.rub.	2009	2010	2011	2012	2013	Year avera.
Growth of population income	7,31	15,18	37,45	15,28	7,67	16,57
Growth of population expenditures	7,16	14,87	36,70	14,97	7,51	16,24
Growth of investment in the region	3,95	8,21	20,27	8,27	4,15	8,97
Growth of population income, %	1,0%	2,1%	5,3%	2,2%	1,1%	2,3%
Growth of population expenditures, %	1,0%	2,1%	5,2%	2,1%	1,1%	2,3%
Growth of investment in the region, %	1,5%	3,1%	7,6%	3,1%	1,5%	3,3%

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# DEFINING PRIORITIES OF MANAGEMENT OF INVESTMENT ATTRACTIVENESS OF THE REGION AND THEIR CONSIDERATION IN THE FRAMEWORK OF IMPLEMENTING LARGE SPORTS EVENTS \*

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## Introduction

Investment attractiveness of the region is a prerequisite condition of its wide investment activity and effective of social and economic development of regional economy.

Management of investment attractiveness of the region is a complex task. It is not easy either to assess the effectiveness of managing it in the region. The task is to some extent simplified if we consider the effect of individual measures and managerial decisions on investment attractiveness of the region, or, to be more exact, on a range of specific factors which determine it. The objective of the present work is development of methods of quantitative assessment of the effect of large-scale regional managerial decisions and measures on the level on investment attractiveness of the region as exemplified by assessment of the effect of

## ABSTRACT

*Objective:* forming priorities of management of investment attractiveness of the region and their consideration in the framework of implementing large sports events as exemplified by the Republic of Tatarstan.

*Methods:* Institutional, cost and systemic approaches were employed in the work, as well as econometric modeling.

*Results:* Investment attractiveness of the region is not only viewed in the work as its objective aggregate characteristic, but interests and positions of existing and potential investors are also considered, considering which priorities of development of investment climate of the Republic of Tatarstan are formed. Methods of assessment of the effect of managerial decisions and measures at regional level on investment attractiveness of the region are developed and conformity of the mentioned changes to the chosen priorities of regional investment policy as exemplified by assessment of the effect of Universiade 2013 in Kazan.

*Academic novelty:* priorities of development of investment climate of the Republic of Tatarstan are formed, methods of assessment of the effect of managerial decisions and measures of regional level on investment attractiveness of the region are offered, a number of regression models is built allowing to assess the effect of large regional projects on the investment potential of the region of Russia as exemplified by the Republic of Tatarstan.

*Practical relevance:* The suggested methods are universal and can be applied when assessing any large regional project in Russia, in any of its subjects.

**KEYWORDS:** investment attractiveness of the region, regional investment policy, Universiade, investment potential, investment risks, methods of assessment of investment attractiveness

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preparation and hosting World Student Games 2013 in Kazan.

### 1. Forming priorities of management of investment attractiveness of the region as exemplified by the Republic of Tatarstan

While assessing investment attractiveness, it is possible to analyze many macroeconomic indicators, characterizing effectiveness of functioning of regional economy: foreign trade turnover, domestic regional product, volume of industrial production per head, level of capital investment, living conditions of the population, level of consumer prices, level of unemployment, average monthly salary of the population, average housing for the population of the region.

Assessment of investment attractiveness of the region must include assessment of investment attractiveness of the region itself, taking into account regional institutional environment, political situation, level of development of institutes of corporate management, taxation regulations, etc. In addition, in assessment of investment attractiveness of the region it is necessary to consider financial and economic conditions of individual objects of investment: enterprises, industries, other subjects of economic activity.

While studying investment attractiveness of the object of investment, the analysis is basically confined to essential indicators of effectiveness of investment projects and deals, among which are payoff period, internal rate of return, net present value, profitability index.

It is commonly considered that investors, when choosing a region to invest their funds, are guided by its investment potential and level of investment risks, combination of which defines investment attractiveness of the region. Structure of indicators of investment attractiveness of the region is discussed in more detail in [1]. Yet, behavior of each investor is different. The same factors of investment attractiveness present different benefit to different investors, and in this case it is a subjective characteristic.

In this way, raising competitiveness of the region by creating maximally favorable conditions for investment and start-up and development of businesses is one of the most important goals of regional economic policy.

To define strategic guidelines in forming investment attractiveness of the region, we will study opinions of potential and existing investors of the Republic of Tatarstan based on an independent survey of the «Price-waterhouseCoopers Russia» company in April 2011.

According to the survey, factors of competitiveness of the Republic of Tatarstan are [3] (see Fig. 1):

1) large potential of consumption growth, existing developed market channels, equal distance

from several cities with a million-plus population (this group of factors was noted by over 80% of polled investors);

- 2) low salary in the region (noted by about 80% investors);
- 3) existing support of large projects on the part of regional authorities, relatively low administrative barriers (about 60% investors);
- 4) existing technologically equipped and convenient business grounds: SEZ «Alabuga», technoparks, technopolices, business incubators (noted by over 40% investors);
- 5) real willingness of regional authorities to promptly solve problems of investors, keep promises, respond to feedback; openness of authorities in issues of attracting investments (indicated by about 40% investors).

Of great importance is the fact that about 70% investors noted a steady tendency of increasing attention on the part of the authorities of the Republic to the issues of investment policy, significant sustainable improvement of investment climate for the last three to five years.

Among the main advantages of conducting business in the Republic of Tatarstan, the polled investors named:

- 1) relatively low level of bureaucracy barriers, no serious problems when registering a business, getting licenses, permissions and approvals received at regional level (90% investors);
- 2) tax exemptions for companies implementing investment projects in conformity with the Law of the Republic of Tatarstan «On investment activity» (about 60% investors).
- 3) relatively developed infrastructure (50% investors);
- 4) image of the region; high level of development of petrochemical industry, machinery and construction industry; growing market channels in automobile manufacturing and construction (50% investors);
- 5) tax exemptions, customs privileges and commercial benefits for residents of special economic zones (45 % investors);
- 6) effectiveness of cooperation with the government, in part thanks to «Electronic Government» (20% investors);
- 7) interest of the authorities of the Republic of Tatarstan in innovative development of the Republic: creating infrastructure for development of innovation – technoparks and business incubators, holding venture fairs, innovation contests; creating scientific research centers of

federal significance, as well as support of a range of innovative production in the Republic.

The first above-mentioned advantage belongs to investment risks, the rest characterize investment potential of the region.

Summing up the opinions of polled investors, we can conclude that difficulties of conducting business in Tatarstan are not significant. Existing difficulties are mostly connected with problems of federal jurisdiction, with development of infrastructure, with peculiarities of education and personnel training. Solution of these problems – in the opinion of investors – is a matter of time. Among the main difficulties of conducting business in Tatarstan most frequently noted are the following:

- 1) lack of qualified personnel for a number of professions, low level of knowledge of foreign languages (first of all, English), low labor productivity (over 60% investors);
- 2) high prices for energy sources and public utilities, high degree of indeterminacy of their dynamics, limitations for gas supply (about 60% investors);
- 3) absence of information about the situation in the region, adequate advertising of the region in Europe, poor awareness abroad (about 30% investors);
- 4) advanced development of Kazan compared to other regions of Tatarstan in terms of social and transportation infrastructure (about 30% investors).

During the survey, investors gave their recommendations for defining priorities of development of business and regional investment policy (see Fig. 2) [3]:

- 1) further lowering of administrative barriers, transfer to the «one window» system (80% investors);
- 2) modernization of transportation system (80% investors);
- 3) increase of effectiveness of state investment and support of investment projects, use of alternative forms of state participation in support of business (75% investors);
- 4) further development of social infrastructure (60% investors);
- 5) modernization of education and increase of labor productivity (40% investors);
- 6) expanding measures of support in the area of innovations, encouragement of innovation.

Effective development of the Republic of Tatarstan in trends corresponding to the above-mentioned priorities is possible in the framework of preparation and hosting summer Universiade 2013 in Kazan.

## 2. Realization of priority trends of management of investment attractiveness in the framework of implementation of the Universiade 2013 project: data and econometric analysis.

In the present work, the effect of Universiade 2013 in Kazan on investment attractiveness of the Republic of Tatarstan is assessed by a number of trends. [1] has already suggested methods of assessment of raising consumer potential of the Republic of Tatarstan as a result of hosting Universiade 2013 based on econometric modeling. Priority in this work was getting quantitative characteristics of such effect. Sustaining the chosen priorities, the present work suggests development of the mentioned methods for assessment of other factors and components of investment attractiveness of the region as exemplified by the Republic of Tatarstan.

In the process of preparation and hosting Universiade 2013, a number of sports facilities will be constructed, the road traffic and transportation infrastructure of Kazan will be significantly improved (the construction industry will secure a lot of orders), the international image of the Republic will get better, which will give a new impetus to development of tourist industry in the region, growth of consumption in the market of educational services in tourism, trade, hospitality, etc. Significant development of information and communication systems is expected, as well as reforming of institutional environment in the Republic. In terms of the most frequently used structure of investment attractiveness of the region, hosting Universiade 2013 will facilitate growth of financial, consumer, infrastructure and institutional potential of the Republic.

[1] made assessment of raising consumer potential of the Republic of Tatarstan. The influence on consumer potential is assessed based on assessment of growth of potential domestic demand of the population of the Republic as a result of revitalization of industries involved in the preparation of Universiade 2013. We will assess infrastructure potential from the standpoint of its influence on labor productivity in the Republic.

As a result of preparation for Universiade 2013, it is planned to construct and redecorate 64 sporting facilities, consequently, resource-based potential of the region will increase.

Further we will demonstrate how the increasing number of sporting facilities can influence investment attractiveness of the Republic of Tatarstan. Already at present, sports activity of the population of the Republic of Tatarstan significantly increased due to putting into operation of new sporting facilities. A number of research shows that doing sports and fitness reduces

infection rate of the population, consequently, labor productivity of working-age population increases, labor potential of the Republic of Tatarstan grows higher. G. Obydennikov shows in his work that the percentage of teaching staff regularly doing sports at one of the Udmurt universities having achieved 31%, and the percentage of those non-regularly doing sports 68%, there appeared to be reduction of infection rate of the mentioned group of employees by 17% [4] (Table 1).

We will define the dependence of infection rate of the population of the Republic of Tatarstan on the level of their sports activity. As analyzed indicators, we will consider the number of those doing sports and fitness per 1000 people in the Republic of Tatarstan (indicating it as SPORT) and the number of days of temporary disability of working-age population of the Republic of Tatarstan due to illness (calculated for 100 working people) in 2004 – 2012 (indicating it as ILLNESS), data on which are presented in reports of the regional body of the Federal Service for National Statistics for the Republic of Tatarstan (further referred to as Tatarstanstat, see Tables 1, 2).

As a result of building a range of econometric models, we got the final version of the regression model including the above-mentioned indicators (see Table 3).

Flash-forwarding more detailed characteristics of the built model, we should sum up the results of regression modeling. As a result of forming the model, it has been proved that growth of sports activity of the population, including physical training, reduces overall time of temporary disability of economically active population due to illness. The mentioned effect happens at a two-year lag (time delay), that is, increasing sports activity of the population in the current year of 2012 will exert reducing effect on infection rate in two years, in 2014. The degree of this effect is quantitatively determined by the parameters of the built model (see below).

The regression model presented in Table 3 is well specified: coefficients at independent variables are statistically significant; value of Durbin-Watson statistics of the model is close to two (which is relevant for regression models built by dynamic series); indicator  $R^2$  exceeds 82%, which emphasizes the fact of explaining over 82% fluctuations of the dependent variable as a result of building the model; the F-statistics value is rather high, and probability of confirming its null hypothesis is less than 5%, which characterizes the common high level of specification of the regression model.

In addition, the outcome of the model corresponds to common sense and results of other research: the model proves that growth of sports activity reduc-

es the number of days of disability of the population. Confirmation of this fact follows due to the negative sign of the coefficient before the independent variable SPORT(-2). In the model presented in Table 3, there are lagged variables. The value of the lag is indicated in brackets after the variable name.

The dynamic series of the ILLNESS variable contains serial correlation. To eliminate it from the model, the model includes the autoregression variable ILLNESS(-1) as explanatory variable. In addition, regression analysis allowed to define the time delay (lag) of the effect of growth of sports activity on infection rate of the population, two time periods (two years) in duration, and as a result, the independent variable SPORT is taken in the model with the lag (-2).

To define contribution of the SPORT variable in explanation of the dynamics of the ILLNESS indicator, we will eliminate the autoregression variable from the model (see Table 4).

The sought contribution of the SPORT variable in explanation of the dynamics of the ILLNESS indicator illustrated by the indicator  $R^2$ , equals 62%. Thus, the SPORT variable explains 62% fluctuations of the ILLNESS indicator.

In this way, regression modeling defined quantitative interconnection between sports activity and labor productivity of working-age population, which is defined by the factor of disability due to illness:

$$\text{ILLNESS} = 861.6490 - 0.9610 \cdot \text{SPORT} (-2) + \varepsilon,$$

or

$$\text{ILLNESS} = 860.6757 - 1.1888 \cdot \text{SPORT} (-2) + 0.0697 \cdot \text{ILLNESS} (-1) + \varepsilon, \quad (1)$$

where  $\varepsilon$  – regression equation error.

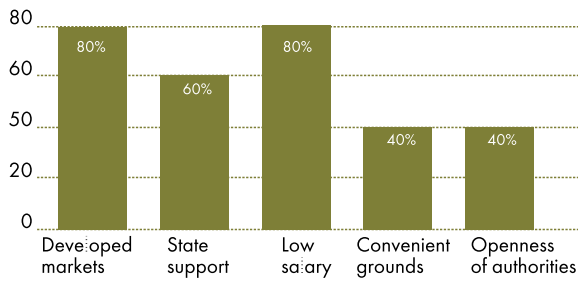
According to the above equation, to forecast the level of disability of working-age population due to illness next year, it is necessary to know the infection rate this year and sports activity last year.

It should be noted that the above results comply well with the results of a similar research we conducted two years ago. The final view of the corresponding equation for 2004 -2010 was [2]:

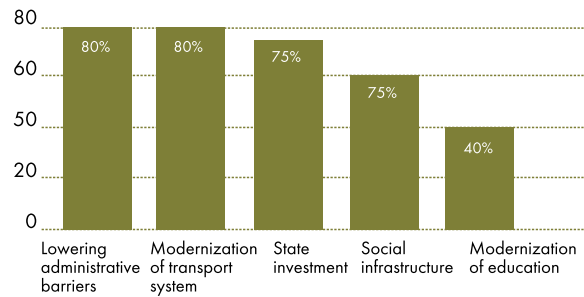
$$\text{ILLNESS} = 563.2563 - 0.2500 \cdot \text{SPORT} (-2) + 0.2746 \cdot \text{ILLNESS} (-1) + \varepsilon, \quad (2)$$

As it is seen from the parameters of the mentioned model, the regression model is quite stable, yet sensitivity of the indicator of infection rate to the level of sports activity in the Republic of Tatarstan grows significantly (see equations (1) and (2)).

In addition, it should be noted that increase of the number of people doing sports by 1% reduces,



**Fig.1.** Main competitive advantages of investment in the Republic of Tatarstan in the opinion of investors (in brackets there is the percentage of the polled investors indicating the advantage) [3].



**Fig.2.** Priorities of development of the Republic of Tatarstan expected by investors

**Table 1.** Number of those doing sports and fitness per 1000 people in the Republic of Tatarstan in 2004–2010

Indicator	2004	2005	2006	2007	2008	2009	2010	2011	2012
Number of those doing sports and fitness per 1000 people	149,0	150,4	155,4	173,5	190,4	205,5	231,3	265,2	289,5

**Table 2.** Dynamics of indicators of temporary disability of working-age population of the Republic of Tatarstan (calculated for 100 working people)

cases							
	2006	2007	2008	2009	2010	2011	2012
Total	57,8	63,1	60,8	62,7	60,9	57,0	55,9
IL*	49,6	53,7	51,9	52,9	51,1	48,3	44,9
days							
	2006	2007	2008	2009	2010	2011	2012
Total	753	789	794	800	793	722	698
IL*	685	715	720	717	713	651	624

\* IL – of them by infection rate.

**Table 3.** Regression model of assessment of the effect of sports activity of the population on infection rate of working-age population in the Republic of Tatarstan

Included surveys: 5, Sampling 2006 – 2010		Dependent variable ILLNESS		
Variable	Coefficient	Standard error	t-statistics	Probability of H0 hypothesis
C	860.6757	45.97463	18.72067	0.0000
SPORT(-2)	-1.188807	0.274130	-4.336651	0.0123
ILLNESS(-1)	0.069702	0.032263	2.160422	0.0968
R2	0.826773	F-statistics		9.545522
Durbin-Watson statistics	1.936681	Probability of null hypothesis by F-statistics		0.030008

**Table 4.**

Supplementary autoregression model of defining contribution of the SPORT variable in explanation of the dynamics of the ILLNESS indicator

Included surveys: 6, Sampling 2005 – 2010		Dependent variable ILLNESS – volume of investment of the Republic of Tatarstan (per year)		
Variable	Coefficient	Standard error	t-statistics	Probability of H0 hypothesis
C	861.6490	60.52814	14.23551	0.0000
SPORT(-2)	-0.961006	0.333157	-2.884544	0.0344
R2	0.624641	F-statistics		8.320595
Durbin-Watson statistics	1.134139	Probability of null hypothesis by F-statistics		0.034405

other conditions being equal, temporary disability of working-age population of the Republic of Tatarstan for ten days a year, calculated for every 100 working people.

According to the data of the state public institution «Employment centre of Kazan», economically active employed population of Kazan at the end of 2012 makes 609,7 th. people. That is why the above-mentioned (1%) increase of sports activity of the population in Kazan will lead to reduction of disability due to illness by 60970 person-days a year. So, labor potential of the Republic of Tatarstan will grow without attracting more manpower. In addition, labor productivity of the employed population will increase.

We will assess growth of infrastructure potential as a factor of investment attractiveness of the region. During preparation for Universiade 2013 in Kazan, road traffic and transportation infrastructure was developed. To ensure accessibility of the Universiade facilities, the following objects were constructed: 12 road junctions, 23 city motorways, major repair of 73 city streets totaling 123 km, 42 pedestrian crossings; construction of the first line of Kazan metro totaling 17,3 km and 10 stations was completed; the air-terminal complex of the international airport «Kazan» was reconstructed.

Development of road traffic and transportation infrastructure in the framework of preparation for the Universiade allowed working Kazan dwellers to save on average 40 minutes during commuting. Conventional working time savings per worker made 165 hours a year (based on 248 working days in 2012). On the whole for Kazan, economically active population can save 94,4 mln. man-hours or 11,8 mln. person-days at the minimum, based on 8-hour working day. Using the mentioned released time to implement their em-

ployment duties, economically active Kazan dwellers could produce works for the amount of 2108 mln.rub. a year, based on 160-hour working month and average salary for Kazan 28,6 th.rub. a month in 2011 (data of the Committee of economic development of Kazan).

Tourist potential of the Republic of Tatarstan as a result of hosting Universiade 2013 must increase significantly. This statement is indirectly confirmed by the results of hosting the Olympic Games in Barcelona – a vivid example of a positive effect of the Games on the development of infrastructure and improvement of tourist potential of the host country (the number of tourist visits to Barcelona increased twice in 2000 compared to 1991). Although huge capital investments into infrastructure made by the authorities of Barcelona were a heavy burden on the city budget, and the budget of Barcelona in late nineties was deficit-ridden, those expenses secured economic growth and development of the city in the long run as a result of decreasing need of the city in investment. In addition, growth of the tourist industry proved positive for increase in revenue of the city.

Compared to other subjects of the Volga Federal District, the Republic of Tatarstan possesses a unique tourist and recreational potential. This makes the Republic of Tatarstan an ideal region for development of different kinds of tourism and hospitality industries. Tourism in Tatarstan is one of the most promising areas of social and economic development. For the last five years, the tourist influx to Tatarstan grew 2,5-fold, at the annual average growth rate of 12–18%, making at the end of 2010 about 1 mln. people. Volume of provided tourist services in the Republic in 2010 made 5,2 bln. rubles going higher 2,4-fold compared to 2005.

Yet, the tourist potential of the Republic could remain just potential. Success of this international

project depends on the work of many people, effectiveness of cooperation of many interested parties in using the legacy of the Universiade. In case events unfold optimistically, total revenue in tourism of the Republic of Tatarstan will make tens of billion rubles during the planning period up to 2020.

### Conclusions

Thus, preparation and hosting summer Universiade 2013 in Kazan potentially significantly increased investment attractiveness of the Republic of Tatarstan. Moreover, noticeable progress is achieved in all priority trends of development of the Republic of Tatarstan indicated by investors in the poll of the «Pricewaterhouse Coopers-Russia» company concerning investment attractiveness of the Republic of Tatarstan in 2011: administrative barriers are lowered; modernization of road traffic and transportation system took place; effectiveness of state investment was enhanced, the range of forms of state support of businesses and innovations broadened; social infrastructure developed further; educational system is to rise to the new level, labor productivity of economically active population increased.

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# ISSUES OF POLITICAL STRATEGY IN DEVELOPING INNOVATION SYSTEMS

## ABSTRACT

*Objectives:* determining main trends of policy in the field of scientific research and innovations promoting in European countries.

*Methods:* economical – statistic and abstract – logical.

*Results:* the tendencies of policy in the field of scientific research and innovations promoting mainly in European countries were elicited. The comparison of the main criteria inherent to the world's innovation systems was made and significant divergences in the directions of development for the European, third world countries and Russia were determined. At considering the establishment of pan-European institution of science and innovation support we outlined the factors determining steady interaction between scientists' work and the spread of learning.

*Scientific novelty:* the analysis of research and development structure and their expenditure budget for the countries with various levels of per head income, determination of directions of innovation systems development for countries of Europe and Russia.

*Practical relevance:* making allowance for analysis of the world's innovation systems establishment in European countries at elaborating the national policy.

**KEYWORDS:** world's innovation systems criteria, political economics of R&D, the area of studies.

## Introduction

As it is seen from the studies of sources in the field of scientific research and innovations [2; 4], the concept of strategic management of innovation systems in the modern context is in close correspondence with understanding the concept of policy applicable to research and innovations.

Designation of research fields were changing in the course of time and by early 1990 it has become evident that the term «policy» is not quite adequate to the field of research because many scientists engaged therein pinpointed their attention upon economic affairs in the sphere of technologies as well as on R&D management. The research area formed recently and called *political economy of R&D*\* focuses studies on the countries' «competitive advantages» and takes



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into consideration primarily structural economical indicators such as manufacture on an industrial scale and increase in employment correlating them with positive effects of innovation activities.

At the same time the objectives of «political economy of R&D» are determined by the function of social well-being in the countries that defines social priorities (for instance, transport, medicine, environment protection, etc.) and the structure of key branches of industry. The studies within the frames of this new discipline show that in the countries with different income per head we can also see the differences in the structure expenditure budget of research and development [1]:

1) the budget of private expenditures for R&D (as % of GDP) in the countries with high income per head (1,39%) is larger than social budget (0,70%) and the ratio of R&D /GDP makes nearly 2,09%;

2) in the countries with an average income per head private and social expenditures for research and development are practically equal (0,44% и 0,42%). An average indicator R&D /GDP amounts about 0,86%;

3) in the countries with low income per head social expenditures budget for R&D (0,39% of GDP)

\* The English abbreviation for  
“research and development”= R&D.

is more than private expenditures budget (0,25% of GDP), apparently because the structure of industrial sector is not powerful enough to support high private expenditures.

As it can be seen from the national survey in the USA [1], most decisions on R&D expenditures are taken at the industrial enterprises. Thus, the corresponding processes of determining the objectives are not concentrated in the direct government control zone. The budgets of the American industrial enterprises form approximately 62% of all R&D funds. In Europe this indicator makes 54% at certain scatter of percentage (from 45% in Great Britain to 70% in Germany). In China, Singapore and Taiwan financing of enterprises as the share of general expenditures for R&D ranges from 60% and more. However, the government officials supervise innovation activity concerning R&D/GDP.

In China the value of this indicator over the period of 1996–2009 has grown threefold: from 0,6 up to 1,7%. And this rise happened to be within the period when Chinese gross domestic product annually grew by 12%. China expenditures for R&D in 2010 amounted to 141 billion dollars at nominal value of purchasing power that made more than 12% of all world's R&D expenditures.

Considering the facts of innovation development in Japan, China, South Korea and a number of developing economies we cannot but notice that in all these countries within the period of 1996–2007 rates of R&D growth were higher than in knowledge-intensive economies. In the European Community, the USA and Japan the growth of R&D expenditures was changing within the range of 5,4–5,8%, while in South Korea this index made 12%, in Singapore and Taiwan it was at the level of 9,5–10,5%.

European political leadership unwishes to put up with this situation. A report on Innovation Union 2011 [4] states that Europe must become «Innovation Union» where innovation firms will provide highly competitive employment opportunities, innovations will come up with decisions meeting today's demands of society. This organizational initiative is called upon competitive growth of economics (it is necessary to overcome the innovation gap in the regions of Europe), solving of several social and cultural problems (it is required to bring the studies to focus of social problems).

To implement EC program a system of three-level monitoring was worked out. The achievements on main directions according to «European Strategy 2020» are assessed at the first level (in particular, the shares of governmental and private investments in R&D as percentage of GDP) as well as the corre-

spondence of development with the selected directions. The tool of assessment at the second level is the table of performance indices for «Innovation Union» (Innovation Union Scoreboard – IUS) [5] published for the first time in early 2011. The table presents data according to 25 key indicators of innovation activities and is kept up to date annually. The third level is closed by analytical strategic report being submitted once in two years.

At this stage the gap between the European Community and its world's rivals is kept and even extended, primarily, due to insufficient business community contribution to research and development. So, over the period of 2000–2007 despite GDP total growth the European Community demonstrated slowing down R&D intensity, within the term of 2007–2009 this indicator has grown a bit: from 1,85 to 2,01%. This growth can be explained by positive influence of economic reforms commenced after Lisbon Convention adopted in 2005. R&D intensity within the period of 2000–2009 has grown in 24 EU Member States (in particular, in 2006–2009) though in 2010 a number of countries failed to achieve the objectives stated in 2005.

Another matter of EU executive management's concern appears to be the fact that a part of innovation works are brought outside European borders. In 2008 24% of the world's R&D expenditures fell at the European Community while in 1995 this figure made 29%. Most obvious is the retardation in the private sector expressed as the ratio of business expenditures for R&D to GDP – in Japan and South Korea they are twice more than in Europe. In China business expenditures for R&D in 2008 made 1,12% of GDP therewithal since 2000 they grew 30 times faster than in the European Community.

The dynamics of staff assistance in the sphere of science and technologies make the Europeans possible to hope for the best. Annually the European Community trains 940 thousand of professionals who get diplomas of tertiary level in the field of new technologies (within the period of 2000–2008 the number of degrees conferred in EU countries grows annually by 4,9%). Each year in Europe 111 thousand of people get doctor's degrees what is twice as much as in the USA. However, the European Community invests in the higher education 2,5 times smaller than the USA and the share of private investments is very low. As can be seen from the above the economic effect in training of American specialists is higher if to count according to specific expenditures. A real break-through made China in 2009: six million of postgraduates commenced training while in the European Community

they amounted about three million and in the USA only 0,2 million. We should mark with concern that in Russia this figure hardly exceeded a million.

Establishing European practice of scientific and technical development

The founders of the economic trend adopted by the European Community believe that Europe must move towards technological development in the context of ever increasing world's competitiveness. But other experts express reservations due to the fact that current discourse in European innovation theme is grounded on its implicit definition as the means of providing for foodstuff supply or services on the market [2; 7].

In this regard it is helpful to address to history of establishing contemporary system of European science management. Research engineering at European level is presented under the slogan of research «Europeanisation». Moreover, the decision to organize pan-European agency of «boundary» research financing can be interpreted in different ways. For instance, it was also discussed as a part of advanced projects in further research integration. In the same way it may be considered within the frames of fulfilling the Lisbon agenda aimed at EU transformation into «the most competitive and dynamic economy in the world based on knowledge» [4].

As far back as 1950-s not long after the end of the World War II academic elites of some knowledge communities in Europe began to make effects for extending national research area. In substance, they strained after establishing of pan-European system of science financing in view of fundamental studies support and forming principles similar to that of National Scientific Fund in the USA.

At bottom, that was the attempt to import from the USA the institutes of research management without regard to local context. At that time the process of creating an organization at European level was restricted by weakness of European institutes and individual countries' strivings to national autonomy what, among other things, included accelerated search of national research areas being badly associated with each other. Obviously, more extended factors existed such as low level of market development including labour market and weak integration. As far as Europe intended to create a market «being destitute of nationality» to take into consideration «the stateless science» was far too much for that time. [6, p. 224].

Nevertheless, within the following decades the organizations of European level appeared in such fields as nuclear research and molecular biology. For instance, in 1952 European organization for Nuclear Research was created and later on, in 1957, EUROATOM

what made a key milestone in forming the European Community. The European organization for Nuclear Research as a project was supported by the group of opinion leaders in physics providing its lobbying in the European governments. Keep in mind that the first Europe-wide scientific organization came into existence in a specific area of research that requires coordination of teamwork at supranational level, expensive equipment and adoption of international standards of its operation as well as safety and security arrangements. Furthermore, the field of nuclear physics was characterized by intensive competition with the USA.

In 1964 pan-European Organization of Molecular Biology was created and later, in 1974 a European biological laboratory was established.

Speaking generally, this initial period of creating Europe-wide organizations is defined by the influence of organized elites in some scientific fields and who had a bearing on higher political quarters. These elites acted as «change leaders» but there were no «change activists» due to underdevelopment of European institutions and lack of proper support at national levels.

European Organization of Cooperation in Scientific And Technological Research was founded in 1971 and European Science Foundation (hereinafter referred to as ESF) in 1974. These organizations support various directions of research including social sciences. This being said, their structure provides the basis for individual researchers' international cooperation but not for the science in a broad sense at the international level, i.e. they only render assistance in organization of international meetings or, as it is the case with ESF, just coordinate the national research programs arranging international expertise but don't possess their own funds.

ESF was founded as a part of large-scale program to draw the research financing and science support to the international level. ESF is ideologically associated with the concept of European Research Area that lays down a strategic aim of overcoming «harmful» fragmentation of science in Europe and achieving «better organization of European research work» in compliance with the provisions for the development of research area to be more dynamic configuration than «15+1» [6, p. 220]. This program comprised other devices of financing, for instance, «ERANets», Technological Platforms and Networks of Excellence.

The necessity of Europe-wide organization of science and innovation support is explained by the experts in the following way: «the spacial range of positive effects in knowledge flows» considerably changes depending on institutional context as well as on characteristics of technological area. In particular, organizational borders can be interrupted by knowl-

edge flows. Such borders are evident between state research institutions and private companies but they also exist between various companies. The variety of knowledge can also explain some phenomena of its passing through area irregularity. Let us say, depending on specialty and the degree of the industry development division of incarnate knowledge can impede knowledge flows [3, p. 197].

The survey data among other things witness that advancement of implicit knowledge, being a necessary attribute of any study, and its absorption require more than simple geographic proximity. The significance of institutional context is also brought to the fore by the leading scientists studying the so-called «edge effects» [3, p. 198]. Within the frames of EU administrative fragmentation most often impede knowledge surplus. The intensity of knowledge flows considerably diminishes as far as passing through the borders of the countries even if they are neighboring. Thus, in the issue of such reasonings EU kept elaborating various programs of research. But governments still jealously safeguarded their sovereignty and were opposed to further expansion of EU role in the sphere of science and engineering. Consequently, all the programs originally had to be approved by the Council of the European Parliament and only then to be launched. To avoid this provision in 1983 «a framework program» amalgamating all research programs in technological fields was put into practice.

The program implementing could have become possible due to industrial development and formation of European political elite. However, the national support kept to be relatively low being reflected upon coordination types, from the one hand, and on adopted principles of principle of subsidiarity, from the other hand.

A special focus will be on the story of European Scientific Counsel establishing (hereinafter referred to as ESC) within the period between 2002 and 2004. In the late 2004 a decision was taken to include the program IDEAS into tenders according to the 7th EU frame program and to appoint ESC as an official executive. This proposal adopted in April of 2005 marked the change of missions, functions and ESC management.

The experts make pointed reference to participation in the abovementioned process of the then existing Director General of microbiological laboratory, professor F. Kefetos, and Kh. M. Gago, a physicist, having later become a political leader. In October 2003 an open letter of ESC establishing support signed by 45 Nobel Prize Winners from Europe was sent to a special research commissioner of that time, F. Basken. Moreover, the representatives of 52 research organizations

in all fields from Europe signed another letter having become a trigger in a start of Initiative on European Science Development.

As it is believed and all the scientists beginning with Marshall outline that spacial separatedness weaken steady interactions and the spread of learning. Later economic geography and endogenous growth models explained the differences in regional special aspects of economic development growth by geographically stipulated specific character of knowledge outer effects, increase of deviations and restraints of economic advancement.

Based on the talking points including those mentioned above the European politics was formed on the principle of subsidiarity (confirmed in Maastricht Agreement adopted in 1992), what meant that EU could undertake actions only in the cases where the actions of other countries were not sufficient. In this way the concept of European added value in the research has been formed: «Until the present European added value was defined as cooperation of research teams in different countries. Now it is high time to give a new definition of the added value concept including the principle of making possible for the researchers in any European state to compete with other scientists on the ground of advantage. But to gain real advantage in the research competition must become a part of a new front-rank definition for European added value» [3, p. 225].

It is noteworthy to mention the problems emerged from adopting conditions of cooperation with ESF and special aspects of negotiations held in Great Britain, Italy, Spain, France and Holland. So, in Great Britain the scientists were in fear that their quite mature institutionalized system would be eroded by creation of the Scientific Counsel at the European level. «The position of British political Establishment will be better understood in the context of common skepticism to «everything European» and what is more definite, in relation to incredibility of the Scientific Counsel's capability to do away with bureaucracy» [6, p. 227–228].

Another example sets France: instead of opposing ESC establishment it took advantage of the debates to institute its own scientific counsel. Early in 2007 the National Agency of Studies was founded in France and allocation of research financing became implemented mostly according to project principle. Consequently, all the nations essentially changed their system of research financing as well. After ESF establishing the situation with national agencies for financing studies is better reflected in European Union Research Organizations Heads of Research Councils–(EURO-HORCs) [6].

Considered all, the processes of arranging science support at the European level should be interpreted as the sequence of attempts to slacken tension between «areas of research» and «national space of research» in this case being a restricting element. The propulsive force of these processes was academic elite or elites. They felt constrained within the frames of national research spaces and had a power to influence over politicians' intussusceptions of the given situation.

But there exists one exception — Framework Programmes being promoted by production sector and emerging European political elites; while all other organized structures were advanced by scientific and academic elites. Indeed, «Europe rich in effective resources» is one of seven leading initiatives constituting the Strategy 2020 EC. Hence, efficiency of resources use is the area of special attention in terms of innovation in the structure of seven EU programs (and its successor — «Framework Programmes for Research and Innovations Development up to 2020»).

It should not be left unmentioned that an essential role in expanding national research areas play biologists. But their role is somewhat different in terms of organizing biological laboratories and ESF. «Independent» biologists originally acted as academic elite, moreover, they used their experience and influence to form the European science elite. This came as no surprise: biologists were the group being especially restricted in the possibilities to carry out research since they had a certain experience and impact on the process of Europeanisation to lead others away in view of influencing political aspirations. This sphere is international and is based on up-to-date equipment and laboratories which are, as a rule, located in certain places. The access to these laboratories is extremely important both for an individual science worker and for a research team.

Foundation of such organization as ESF became possible due to mobilization of all European academic elites, conjoint work of political organizations of European level and reaching commeneurability of research areas. However, the given «technological approach» is opposed. A number of experts suppose that in many EU Member States the current vision of innovations holds us in ideologically vicious circle. It is obvious that «today's economic, social and ecological crises will not be resolved by a large quantity of the same technological phenomena that brought us to the current situation» [7, p. 79]. Making allowance for the scale and irreversibility of harmful impacts on environment and, hence, on the current and future generations we have practically no time for wishful thinking. In the soonest possible time the change of orientation for innovations from market forms to more socially sig-

nificant and ecologically viable is in insistent demand. The situation calls for drastic measures to adopt more comprehensive concept of innovation comprising not only its technological forms but non-technological, social, institutional and behavioral forms.

The authors to support the above theses on this issue declare that environmental research and health survey are the key factors of all innovation forms because they stimulate making nonroutine technological, behavioral and ascertained decisions ultimately providing ecological stability, i.e. prerequisite for steady development of all other forms of innovation [2].

In practice, the abovementioned means the participation in «responsible innovations», i.e. in such processes where as far back at early stages we provide the analysis of potent adverse impacts of all new products, services and procedures on health, social medium and environment. Responsible innovations also involve the requirement of minimizing adverse effects of already existing products, services and processes as well as applying precautionary principle to avoid serious non-reversible losses. Moreover, responsible innovations must deal with ethic dilemmas that may escort the innovation what means the ability to admit mistakes and consequently, to change the course.

Europe must not miss a historical opportunity to take on a liability for the research programs, innovation policy of safe development and call the rest of the world for following this track.

Considering the possibility to utilize the given political measures in Russia applying the method of analogues we find out that the initiatives taken by the RF Government in summer and autumn of 2013 in relation to the Russian Academy of Science and Russian science as a whole are directed not so much to integration into global research areas as to destruction of national research space, to be more exact, what is left of it. And here we see the obvious interest of corporations being not at all Russian that show sluggish participation in this process but transnational companies. Unfortunately, in Russia we could hardly hear the votes supporting national science interests.

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# INNOVATION ACTIVITY IN AGRICULTURE: A CROSS NATIONAL COMPARISON

**ABSTRACT:** the paper analyses the results of a cross national comparison of innovation activity in agriculture in different countries which are identified by incomes and specialization. The Russia's situation deserves special concern: the innovation potential of the national agriculture turns out to be lower than the average for the group of poor countries. Besides the paper presents such sphere of innovation activity as patenting and intellectual property protection which has been seriously changed and there is a necessity for Russia to develop this sphere intensively especially when the entry into WTO is taken onto account.

**KEYWORDS:** agriculture, innovations, cross national comparisons.

In the context of world's economic development, the agricultural sector starts becoming a focus of attention again for public people, economists and representatives of other sciences all over the globe. Agriculture had temporarily disappeared from the world's developing business lists in 1980-1990, and had only become the key aspect in the beginning of the XXI century, partly because of negligence and underinvestment [1, 7]. For Russia, the agro-industrial complex (AIC) starts being not only a development goal itself, but also it is a means to manage the lands, to provide food and, consequently, national safety and unity of the country.

Innovations are the most important factor of modern development, and in agriculture they have their specific nature which will be analyzed in this paper. According to statistics data analysis, Russian agricultural innovation sector, as well as the agriculture itself, is currently at the recovery stage, so the new forms are not completely developed, that's why we refer to experience review of innovation activity management in other countries, first of all in the USA and Europe in order to define the main innovation activity development prospects in this sector.

For thirty years (from 1976 until 1995) the world's agricultural research government investments had almost *doubled* in comparable prices, from around 11,8 US Dollars Billion up to almost 21,7 billion of dollars. This data also shows the new age beginning in the agricultural innovation sector: in 1990 the de-



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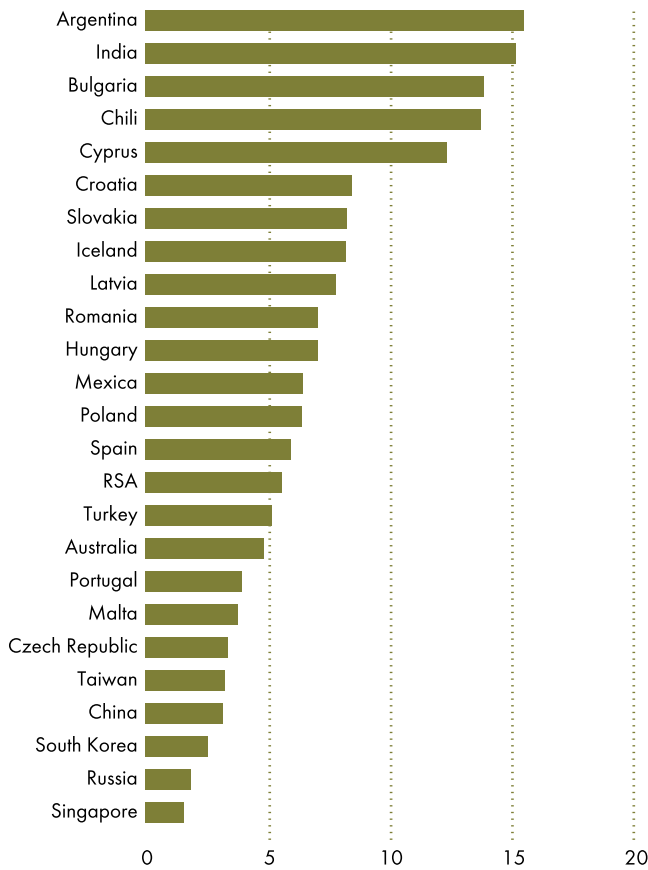
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veloping countries started making more efforts in the agricultural research government investments sphere than the developed countries [5].

For today, the difference in agricultural research and development (R and D) costs of different countries is obvious. Our paper analyzes R and D internal costs in agricultural sciences percentagewise to the total amount of R and D costs, according to the data of 2011 (fig. 1). It becomes obvious that the countries have a specialization in the directions of their scientific research, which is, by the way, supported in many different ways on the international level.

So, the list of leading countries in agricultural innovations sector includes the members of so called Cairns Group<sup>1</sup>. Summary data cannot show that the agricultural R and D costs were concentrated in several countries. Only four countries – the USA, Japan, France and Germany have formed two-thirds of 10,2 billion of dollars of research government costs, invested by rich countries in 1995. In the same manner, only four developing countries – China, India, Brasil and Southern Africa have invested 44% of agricultural research government costs in the developing countries in 1995, in comparison with 35% in the middle of 1970 [4].

<sup>1</sup> Cairns Group (association of countries, exporting the agricultural production, it was formed in 1986 in Cairns (Australia) for common protection of interests of the countries, participating in Uruguayan negotiations under the authority of General Agreement on Tariffs and Trade; main goal of the group — agricultural production free trade development assistance; in particular, the group supports prohibition against export subsidies and a number of government subsidies for support of agricultural production manufacturers; the group includes the following countries: Argentina, Australia, Bolivia, Brasilia, Canada, Chili, Columbia, Costa-Rica, Guatemala, Indonesia, Malaysia, New Zealand, Pakistan, Paraguay, Peru, Philippines, RSA, Thailand and Uruguay).



Source: made according to [2].

**Fig. 1.** R and D internal costs in agricultural sciences percentage-wise to the total amount of R and D costs

In spite of a stable long-term increase in *agricultural research and development* expenditure (Agricultural R and D) from 1970, many parts of the world had a fast and quite an expanding increase in Agricultural R and D expenditures within 1970 and in the beginning of 1980, in the first half of 1990 it dramatically slowed down. In rich countries the governmental Agricultural R and D expenditures increased only to annual 0,2% between 1991 and 1996, in comparison with annual 2,2% during 1980. Africa did not have any increase at all – continuation of more long-term tendency which started after a fast increase in expenditure in 1960, progressively interrupted by crises in 1980 and by government expenditure limitations in 1990.

Analysis of situation, based on per capital income, shows that the expenditures of low income countries were increasing more rapidly, so their general proportion in the global volume had increased from 19% in 1976 up to 28% in the middle of 1990. It should be mentioned, that such a tendency shows a comparative-

ly fast increase in Agricultural R and D expenditures in India and China, two big countries, the expenditures of which are dominating over the mean value in the group. Indeed other low income countries lose their positions. Their proportion in global Agricultural R and D expenditures had shortened from 8,7% in 1976 to 8,3% in 1996, plus it continues shortening at the present time.

Group of developed countries had spent in relative terms 2,64 dollars on Agricultural R and D expenditures of every 100 dollars of agricultural production in 1995, having increased them from 1,53 dollars, which they spent on 100 dollars of production two decades before. From 1975 the developing group's research intensity had increased, but such an increase was unsteady. In spite of that China had gained a big absolute proportion in total Agricultural R and D expenditures among the developing countries, in the middle of 1990 this country's research intensity was not higher than in the middle of 1980. In other words, China's research expenditures had increased as well as the agricultural sector itself had increased.

By comparison if we count the proportion of Russian Agricultural R and D expenditures according to the activity type [2] «Agriculture, Hunting and Fishing» (rub.) in the ratio of the index «Agricultural production» (rub.) in 2010, we will get the value 7,78 E –05. This is around 190 less than the expenditures of developed countries in 1975, even if in favor of Russian statistics we do not take into consideration «hunting and fishing».

Other indices of research intensity also show that the rich countries had spent more than 590 dollars per an agricultural laborer, having considerably doubled the corresponding proportion in 1976. Poor countries had only spent 8,50 dollars per an agricultural laborer in 1995, having increased the expenditures two times less than in comparison with 1976. Such differences between rich and poor countries may be explained in the following way: much less labor power in used in the agricultural sector of rich countries, so the absolute number of agricultural laborers had reduced quicker in the rich countries than in the poor ones. Agricultural R and D expenditures per capital income had increased at the average rate of 25% for the developed countries (from 9,6 dollars in 1975 up to 12,0 dollars in 1995) and of 79% – for the developing countries (from 1,5 dollars in 1975 up to 2,5 dollars in 1995). Agricultural R and D expenditures per capital income (in the context of both: total population and agricultural laborers) had shortened in Africa, the only world's region where such a situation had occurred.

According to different accounting version in 2010 Russia had a result from 9 up to 43 rub. per one agricul-



tural laborer. The fact is that «Science indicators» for 2013 provide information on type of economic activity «Agriculture, Hunting and Fishing» and on social and economic goals и «agricultural development» [2]. One way or another, Russia spends on these goals even less than the poor countries in 1976.

In the middle of 1990 almost one third of total investments volume (33 billion of dollars) in the world's Agricultural R and D expenditures was contributed by the private companies, including farms and agricultural processing companies.

The majority of these researches (94% from total amount) were carried out in the developed countries. The developing countries had the proportion of private research only at the level of 5,5%. Government funds provide almost half of the full support in the rich countries. Agricultural scientific research is an area where, in all the countries, the public sector dominates over the private one, as the source of support. More than half of world's governmental Agricultural R and D expenditures are made in the developing countries, while in the very countries only 1/3 of all the researches (public plus the private ones) are carried out. These facts show the role of private agricultural research.

Intensity gap in Agricultural R and D expenditures between rich and poor countries remains quite large and expanding. Thus, in 1995 the governmental research intensity of rich countries was four times than of the poor ones; in case of considering the summary expenditure (i.e. private and public one), the gap is more than eight times higher, i.e. the rich countries make around 5,4 dollars of the Agricultural R and D expenditures per 100 dollars of national total output in the agricultural sector.

Eightfold difference in the full intensity of Agricultural R and D expenditures shows the research financing flow gap between rich and poor countries. However, it is not only the amount of investment in the research and innovation activities which provide a country with an increased technological capacity and better rating position in cross national comparison of agricultural productivity, but it is also the available storage of knowledge.

Current knowledge and investment of previous expenditures in this knowledge depend on the type of science, institutional structures of the scientific environment and economic context, influencing the way this knowledge is used. Some scientific expenditures are very important for local scale of the used knowledge, but the same expenditures in the societies constantly ruined by wars, institutional insecurity and obvious crisis, may have much lower effect.

According to calculations of experts, in the ending of 1990 the amortization rate was 3%, and the

storage of knowledge in the USA was 11 times more than the volume of produced agricultural production. In other words, every 100 dollars of agricultural production were supported by the storage of knowledge almost equal to 1100 dollars. At the same time the actual storage of knowledge in Africa was less than the value of African agricultural production. So, the ratio of American storage of knowledge to American agricultural production was 12 times higher than the corresponding amount for Africa, and if we take the amortization rate equal to 6% instead of 3%, the gap between American and African relative indicators will be more than 14.

In the last quarter of XX century, the sponsors' initiatives on providing the agricultural information resources in the developing countries resulted in the foundation of International Agricultural Research Centers (IARCs).

In 1971 the developed countries representatives formed the Consultative Group on International Agricultural Research (CGIAR) [3]. CGIAR is a non-official association, which currently includes the developing and the developed countries, private funds, regional and international organization, co-sponsored by the Food and Agricultural Organization of the United Nations, the International Fund for Agricultural Development, the United Nations Development Program and the World Bank. This organization coordinates the system of International Agricultural Research Centers, controls the co-financing of these centers and the forum for discussions and establishment of technical research assignments.

The Consultative Group system was formed as a small one, between 1960 and 1964 it actually was one institute: the International Rice Research Institute (IRRI) [6]. Out of its start-up budget of 7,4 US Dollars Million in 1960, the total annual expenditures were 1,3 million of dollars to 1965. In 1970 four institutes within the group received the total amount of 14,8 million of dollars each year [3]. Progressing expanding of general number of centers during the next decade had resulted in a tenfold increase in nominal expenditures up to 141 million of dollars in 1980. During 1980 the expenditures continued growing, - considerably doubling in nominal values to reach 305 million of dollars in 1990. Growth rate had slowed down, but it was still considerable. However, in 1990, although the number of centers had increased from 13 up to 18, for today the number is 15 [3] – the financing did not grow enough to support the expenditure level of every centers, not to speak of growth rates.

Analysis of the available data provides some quantification on reducing of the international support for agriculture and researches, which have a direct

influence on the sector's development. Thus, although the European Community had increased the support level of the developing countries in 1987–1998, the agricultural direct support had been considerably reduced. In the ending of 1980 the agriculture received 12% from the total EC expenditures, and only 4% – in 1996–1998. For the previous decades the agricultural lending proportion of the World Bank had been reduced too (from average 26% in the first half of 1980 to 10% in 2000).

The World Bank's amount of loans differed for different countries, from 0.1 millions of dollars for Argentina in 1992 and Niger in 1997, to 136 millions of dollars for India in 1998, China – 68 millions of dollars, Ethiopia – 60 millions of dollars. [8].

From the middle of 1980 to 1997 the United States Agency for International Development had reduced the amount of agricultural research financing of less developed countries by 70%. In this context, Asian countries suffered heavily: amount of financing was reduced by almost 42 million of dollars in the middle of 1980 (according to the prices of 1999) to 1.1 millions of dollars in 1997 [10].

In order to research the agricultural innovation activity, it is necessary to define its result/product. In most cases, the product of agricultural innovations is the information which often belongs to the non-rival and non-excludable goods. Valuable information product can be easily copied or used by those who did not participate in the production process; this use does not limit the availability of information product to the other users.

Non-excludability and non-rivalry increase the social value of innovation, speeding up and reducing the value of promotion for the potential users, and lowering the price for the consumers. But at the same time, lack of excludability means lack of incentives for the private manufacturers. That's why this sector requires some kind of public intervention. Historically, incentives were not enough for the agricultural innovations, so the real technological progress was slow without public intervention.

From ancient times regents and governments had always supported the expeditions, going in search of new plants and animals, and the members of American Congress in XIX century distributed for free the seed packages of new cultures [5]. In XIX century Germany, Russia, several other European countries and the USA carried out institutional innovation activity in the form of agricultural research institutes financed by the state. For the previous century, these institutional innovations had extended over the globe, and for today almost 2/3 of resources, sent for the world's research, are provided by the public sector [4].

But the political climate of developed countries has changed towards more active participation of private sector in the research, connected with agricultural production technologies. Traditionally, innovations of the private sector were considerably concentrated on the processes inputs - agricultural innovations (resource provision), such as agricultural equipment, fertilization and crop protection chemicals, or on the postharvest technologies and marketing, where the market power and intellectual property rights (such as patents, copyrights and trade marks) were available and allowed getting the income from innovations.

In 1980 the confirmation of different life forms patentability in the USA and parallel development of biotechnologies for proving of alleged infringement, had made the service patents appear, as new strong incentives for agricultural biotechnology research. Besides, Bayh-Dole Act of 1980 encouraged the expending of patents and use of governmental financing in the researches.

Over the last years the use of patent systems in the developing countries and all over the globe has become more frequent because of the necessity to fulfill the TRIPS<sup>2</sup> agreement, essential condition of membership in the World Trade Organization [12].

Besides, many countries have enforced their patent systems as part of internal initiatives on modernization of national innovation systems. Some observers could conclude that these events show the increased influence of economics on the policy in the intellectual property sector. For today, many people and maybe even the majority support incorporation of patent system in modern innovation systems and economic development programs. However a significant minority has a different understanding, indeed, traditionally the economists had different opinions on the use of patents as a part of national policy [4, 8].

Defense of intellectual property rights implies the right to exclude the others from: 1) production and reproduction of patented products; 2) copying; 3) delivery for sale; 4) the process of sale itself or some other marketing activity; 5) export; 6) import; 7) indirect participation in one of the abovementioned activities (article 14 of the Agreement [11]).

Plant breeders' rights (PBRs), according to the Convention for the Protection of New Varieties of Plants (more famous by its French acronym: UPOV), protect the varieties which are considered to be new, homogeneous, distinct and stable from unauthorized activity related to the support of commercialization, the innovation criteria is less demanding than for the

<sup>2</sup> Trade-Related Aspects of Intellectual Property Rights (TRIPS).

patents. Variety can be considered new if it has not been commercialized before, during four years in the countries-members of the Convention or during one year in the applying country.

Distinctiveness means that the variety is obviously different from the other varieties which, as it should be known, have existed during the registration. Stability and homogenous demand means that the plant variety complies with its original description and keeps its corresponding characteristics when reproducing or distribution. These criteria do not interfere with the values or importance of distinct characteristics, but display the necessity to identify an adequately protected plant variety by using the available tools of modern biotechnology. For example, cultivars species of soya bean in the USA, distinguished only by the type of its flower, was protected by the corresponding variety patent.

Repeated reproduction of the protected cultivar for commercial sales is the infringement, but it is allowed to use idioplasm in the researches in order to produce the new cultivars species. So, plant breeders are protected from reproduction of the protected varieties by the competitors.

Besides, natural parent lines of hybrid grains were protected by the UPOV from use by the competitors in commercial hybrid production. But the breeders are free to use the protected variants for reproduction in their production areas and to protect new varieties, produced from the protected variants, while the farmers can keep the idioplasm for repeated usage, distribution or reproduction. Indeed, the UPOV original model did not imply that the exchange between the farmers or sale of seeds were prohibited by the countries-participants of the Convention [ 9, 11].

UPOV Act of 1991 had considerably expanded the rights of breeders; it defined that the variety, « basically produced » from the patented parent-plant, is covered by the same patent's protection. The basically produced variety is defined in the UPOV Act in the article 14 (5) (b) and (c). Besides and not without contradiction, the basically produced variety can be received by transformation or a number of other methods. Thus, for example, if an agro engineer takes the protected grain variety and transforms it into the variety with a genetic construction (for example, presence of genes of insect resistance), the produced grain variety is « basically produced variety » and protected based on its origin. While the UPOV Act of 1978 accorded the rights to exclude the others from the production for commercial marketing, offer of protected variety for sales and marketing, these rights were considerably expanded in the Act of 1991. Now the rights cover arrangement of conditions, export,

import and supply of the protected variety. Freedom in collaboration between farmers had also been weakened in the UPOV Act of 1991, limiting the exchange of patented seeds.

Both – the patents and the breeders' rights belong to the jurisdiction of the territory where they are registered. In search of wider geographic sphere of protection some experienced practical people have found out that the evaluation requirements in every country, including the tests and need in the local legal representation and possible translation of the documents can be equal to the price of international service patent protection [5].

Service patents are considered to be the strongest protection of intellectual property rights, including the inventions, processes and products, embodied in the material things. Basically, patent nominal premium (disclosure of an invention secret) must be equal to the amount of expenditures which could enable a person with ordinary competences in the corresponding profession to make such an invention. Usually invention information falls into the public domain in eighteen months after applying. Thus, one important advantage of patent system implies that the system facilitates the innovation information flow. Patents have a limited shelf-life, usually 20 years from the registration date and the property rights area is defined by the complaints, included in the patent which in case of litigation proceeding can be interpreted by the court, acting in accordance with common law.

Patent's issue does not mean that a patent bureau will directly protect the author's rights for the patented novelty/innovation from the infringement. It is more likely that a patent grants to its owner a legal right to *exclude the others* from inventing in the same manner as it is described in the document. Thus, the importance and power of patent systems directly depends on the effective legal system in terms of infringement prevention and penalization of infringers.

Although international agreements control the key patent aspects, the patents are issued by the national governments and have force only in a corresponding national jurisdiction. In order to protect a novelty in this country, a patent must be received in this country. Expanding of property rights over other countries are facilitated within the Patent Cooperation Treaty (PCT) controlled by the World Intellectual Property Organization (WIPO) [12].

For countries which are WTO members and which have concluded the TRIPS agreement, minimal criteria are the same.

Patents' values are extremely sophisticated. For example, while a popular licensed Cohen-Boyer patent earned more than 200 millions of dollars in license

payments, most patents bring income within the limits from zero to several thousands of dollars (it is implied that the expenditures are not always higher than income). It is not a surprise then, that the majority of inventions is patented only in one or several developed countries with big markets. Even very progressive biotechnologies were protected in few developing countries, in particular, where the patents of corresponding technology type were affordable. For example, none of a number of the key technologies of *Agrobacterium* is patented in more than four countries outside Europe, while a very popular «CaMV 35S promoter», widely used in transformation of plants, is patented only in European countries, Japan and the USA [5].

Confidential information (for example, lists of consumers, business plans, description of production processes, genetic lines for hybrid grains production), which has a commercial value, can be protected as a commercial secret if the owner hides it from the competitors.

Information, protected as a commercial secret, can include new genetic material, experts' remarks, specialist's ideas on processes and procedures related to the property and general innovations which need to be hid before publication of a patent application. Secret (or information) is not basically a property right, but the law acknowledges it as a personal right. This right, unlike patents and author's rights, is not registered until the owner of commercial secret uses reasonable endeavors to keep the secret.

If a commercial secret is disclosed, right holder can compensate the damage through court action, including court injunction and loss. However a product or a use of process does not infringe the commercial secret, if the secret information is revealed during an independent invention or received by some other qualified means (for example, from a published paper or at a workshop).

On the other hand, revolution in analysis of genetic material had created the technologies of genetic fingerprinting, which enables to find unauthorized reproduction or production in such a manner that the commercial secret's form could be used more often in the future.

Product's identity, as far as it is understood by a client, has a very important property – it can influence this product's value. Thus, a registered trade mark, under which different plant varieties or genetic line are sold, can become a significant protection of genetic value embodied in the product. Even upon conditions that it is not possible to copy a basic novelty, the customers often pay more for a trade mark version than a copy, relying on good reputation, especially in cases when final quality or property will not be very

obvious, as it stands in the situations with tolerance to herbicides or resistance to blasts. Gardeners will pay more for a trade mark variety, if this mark is known and approved by the consumers. Trade marks have an additional advantage in protection duration. Registration can be renewed for a moderate price while the trade mark is used. Also, according to Madrid Protocol it becomes easier to register a trade mark in other countries.

In spite of expanding of the intellectual property protection area, legal force and value are still a problem. It is especially obvious at the farm's level. Even in the developed institutional legal environment of the USA, farmers themselves may bring a case on property rights infringement before a court failing to post a profit, because the farmers' financial resources and assets are generally smaller than an average value of judicial process. Only restraining influence on other behavior of other people can justify such actions.

As the result, the scientists had invented new biological means to restrict the copying of idioplasm or property characteristics of biological objects, providing a chance for return on investments. A various number of technologies is considered within a general class, characterized as Genetic Use Restriction Technologies (GURTs).

GURTs are divided into two broad types: 1) *for variety level* (V-GURT); 2) *for typical characteristics* (T-GURT). In 1998 U.S. patent (5 723 765) was issued in cooperation between the Department of Agriculture of the USA and Delta & Pine Land company, American biggest cotton seed supplier by V-GURT technology. This technology enables a seed manufacturer to inoculate a seed with a specific regulator which makes a plant infertile, consequently making it impossible to economize [5].

Long before this type of physical protection could be transformed into a market technology, the prospect of producing the cultivars using V-GURT technology raised considerable objections of farmers and other non-government organizations. Although V-GURT's varieties had a potential to facilitate frequent problems of these groups related to transgenic seeds of second generation (the same yield or poor cross fertilization), critics called them «terminator's technologies», emphasizing that they could sterilize neighboring non-transgenic grain crops with drifting pollen or disadvantaged farmers, who could get the «terminator's» seeds by mistake.

On the other hand, T-GURT's technologies do not finish the variety's reproduction. Generations, cultivated from the conserved seed, will be fertile. But in order to make the protected characteristic appear this year, it is necessary to use an activator (for example,

some chemical). Experts think that T-GURT could be activated by spraying the composition with certain characteristics. Gene usage could be paid as half of price from the activator's purchase. If such a technology is possible, a farmer could wait until it is obviously necessary to use such a characteristic as a resistance to a certain disease, then he could additionally buy and use the activator, following the same scheme as chemical biocide. In this case the product's characteristic offers «self-defense», instead of «self-insurance» in risk management's terms.

At the same time the following disturbing facts are known: in India it was refused to register V-GURTs technologies, and V-GURTs were rejected by The Rockefeller Foundation and by Consultative Group on International Agricultural Research (CGIAR), but accepted by the Department of Agriculture of the USA (USDA), co-developer of original technology of cotton cultivation [11].

Finally, it should be noted that it is possible to protect the rights of physical property only by concluding the agreements in order to prevent distribution of genetic and intellectual constructions, included in the limits of something characterized as physical property. It can be relevant when regulating the rights of research results where a special genome or other biological material can be considered to be the property or physical property of their producer. For example, mice parents with some particular characteristics were successfully commercialized by using the actual delivery agreement without applying for patent protection. Technology transfer university offices become more often involved in realization of such alternative actions, which are simpler and less expensive – in both areas: time and money. This alternative can be used in production where an idioplasm supplier can rent or provide plant material to a farmer according to the agreement, and directly demand to keep the identity, legally protecting produced product's physical property.

The current international public opinion on intellectual property issues relating to agriculture is the result of the continuation of the complex interactions between many agents representing many different interests in different areas.

Thus, the given above overview of the state of affairs in the innovation field of agriculture of the leading countries in the world shows that Russian agro-industrial complex today faces a serious challenge, in particular because of with Russia's entry into the World Trade Organization. At present it is rather difficult to present the potential of accumulated knowledge in the quantitative evaluation (because of methodological inconformity, in particular), but the current compara-

tives suggest that its value can be next smaller than that of the leading agricultural producers in the world.

Under the circumstances, there is a clear need for not only strong investment in innovation sphere of agriculture, creation of interacting regional rural innovation systems, but also creation of the appropriate institutional environment.

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# DIE LEHREN AUS DER KRISE ZIEHEN — BLICK AUF FINNISCHE WIRTSCHAFT

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Die Wirtschaft in Finnland erlebte mehrmals schwere Zeiten. Dieser Weg war weder leicht noch schnell. Um den Lebensstandard von Schweden nach dem zweiten Weltkrieg zu erreichen, brauchte Finnland fast 40 Jahre!

Zwei sowjetisch-finnischen Kriegen folgten schwere Kriegsreparationen, die von 1945 bis 1952 geleistet wurden. Mit den Reparationszahlungen begann die Diversifikation der finnischen Wirtschaft, besonders in der Metallindustrie. Der Export von Finnland, der hauptsächlich aus Papier und Papierprodukten bestand, wurde immer vielfältiger.

Anfang der 50er Jahre begann eine neue Etappe in Beziehungen zwischen dem kleinen kapitalistischen Finnland und dem großen sozialistischen Staat. Das Handelssystem hatte sich komplett in ein bilaterales Clearing verwandelt, das bis Anfang 1991 funktionierte. Bei Clearingabrechnungen wurde eine Rechnungseinheit zur Zahlung verwendet. Erdöl und Gas wurden gegen Erzeugnisse der Metallindustrie u.a., Werkzeuge, Schiffe und Papierprodukte getauscht. Die ausgewogene Handelsbilanz wurde durch das Eingehen bestimmter Regeln aufrechterhalten. Dank dem Clearing konnte Finnland unter den Bedingungen der Nachkriegsjahre seine begrenzten Währungsreserven für die Entwicklung wichtiger Industriezweige verwenden. Die Fünf-Jahres-Regierungsabkommen zwischen zwei Staaten garantierten einen stabilen Absatzmarkt für Produkte der finnischen Industrie.

Das bilaterale Clearing hatte auch seine Nachteile. Es bestand die Gefahr, dass sich finnische Unternehmen auf die Produktion für die Sowjetunion orientieren würden, was sie von einem Abnehmer abhängig machte, für den sie auch ihr Exportpotenzial erhöhten. Und das hätte zur Isolation vom Weltmarkt führen können.

Seit Anfang 1991 wurde auf Initiative der Sowjetunion beschlossen, vom Clearing zum Handel auf Grundlage der frei konvertierbaren Währung zu wechseln. Zu diesem Zeitpunkt besaß die Sowjetunion konvertierbare Währung nicht in ausreichenden Mengen, was einer der Gründe dafür war, dass der Warenaustausch zwischen Finnland und der Sowjetunion stark zurückging. Für das auf den Handel mit der Sowjetunion orientierte finnische Business war das ein harter Schlag. Infolgedessen begann die Arbeitslosigkeit kontinuierlich zu wachsen und die Kaufkraft der Bevölkerung schnell zu sinken.

Gleichzeitig begann in Finnland eine Bankenkrise. Eine Deregulierung der Finanzmärkte Ende der 80er Jahre gab den Anstoß zur Zirkulation in der Wirtschaft des Landes bis dahin beispielloser Geldmassen. Preise auf dem Immobilienmarkt begannen stark zu steigen. Die Krise traf zuerst die Finanzbranche und dann die Wirtschaft des Landes im Ganzen.

Zu dem Zeitpunkt war Finnland noch kein EU-Mitglied, die Produktion wurde hauptsächlich exportiert und die finnische Mark war die Währungseinheit Finnlands. Die Krise hatte einen rein „finnischen“ Charakter. In anderen europäischen Ländern war die wirtschaftliche Situation noch ganz stabil.

Im Jahr 1991 war Finnland gezwungen seine nationale Währung abwerten zu lassen. Einerseits half die Abwertung der Exportindustrie auf die Beine zu kommen. Andererseits wurden viele Unternehmen, die für den heimischen Markt tätig waren, zahlungsunfähig. Die Abwertung der finnischen Mark führte dazu, dass die Rückzahlung der Auslandsanleihen zu einer erdrückenden Last wurde, weswegen viele Unternehmen Pleite gingen. Die Arbeitslosigkeit traf ein Fünftel der Erwerbsbevölkerung des Landes. Der Staat hatte bereits viele Schulden, die schnell weiter wuchsen. Die Krise hatte die ganze Wirtschaft betroffen. Der Abbau der Clearingsysteme und ein starker Rückgang der Exporte in die Sowjetunion verschärfte noch mehr die schwierige Situation in Finnland.

Was hat dann Finnland geholfen die Wirtschaftskrise zu überwinden?

Die wachsende Staatsverschuldung wurde im Rahmen des Programms der Haushaltseinsparung unter strenger Kontrolle gestellt. Im Ergebnis der Umsetzung dieses Programms konnte Finnland die Beitrittskriterien in die Europäische Währungsunion

ion (EWU) erfüllen. Im Jahr 2002 hat Finnland die finnische Mark aufgegeben und den Euro als Währung übernommen. Damit wurde der Abwertung ein Ende gesetzt. Allmählich begann die Arbeitslosigkeit zu sinken und die Kaufkraft der Bevölkerung zu steigen. Zehn Jahre nach der Krise waren Erfolgjahre. In diesem Zeitraum erwarb Finnland – ein vollwertiges EU-Mitglied seit 1995 – eine weltweite Anerkennung in Politik und Wirtschaft, wurde zum Land mit einem der höchsten Lebensstandards in der Welt.

Welche Besonderheiten hat die aktuelle Weltwirtschaftskrise im Vergleich zur Krise der 90er Jahre in Finnland?

Die Krise unserer Tage unterscheidet sich grundsätzlich von der Krise Finnlands der 90er Jahre durch ihr Ausmaß. Sie betrifft die ganze Welt. Die Ökonomen sind in ihrer Meinung einig, dass die aktuelle Finanzkrise eine direkte Folge der US-Hypothekenkrise ist. Außerdem befindet sich der finnische Staat in einer völlig anderen Situation. Finnland ist ein EU-Mitglied, sein Handel orientiert sich auf den ganzen Weltmarkt und die Währungseinheit ist nicht die finnische Mark, sondern der Euro. Die alte „Medizin“, d.h. die Abwertung der nationalen Währung, um Exporte zu erhöhen, ist nicht mehr möglich. Mit dem Exportwachstum zu rechnen, während andere Länder ähnliche Probleme haben, ist nicht realistisch.

Was sollte getan werden, um die wirtschaftliche Situation zu entschärfen?

Die Hauptmaßnahmen zur Belebung der Wirtschaft sollten nun auf den Inlandsmarkt Finnlands gerichtet werden. Und genau das wurde eine wichtige Richtung bei der Wirtschaftsbelebung, die der Gesellschaft Finnlands von der Regierung des Landes vorgeschlagen wurde.

Eines der Hauptziele ist nicht nur die Erhaltung der bestehenden Arbeitsplätze, sondern auch die Schaffung neuer Beschäftigungsmöglichkeiten. Geplant werden staatliche Projekte wie Straßenbau und –reparatur, Bau von öffentlichen Gebäuden und Wohnungen. Eine große Bedeutung haben staatliche Investitionen in die Ausbildung oder Umschulung. Die hohe Arbeitslosigkeit unter Jugendlichen in Finnland erfordert eine besondere Aufmerksamkeit seitens Behörden und der Gesellschaft im Allgemeinen. In erster Linie ist es erforderlich, die berufliche Bildung der jungen Arbeitslosen mit Schwerpunkten Fortbildung und Umschulung zu organisieren. Das Ziel dieser Maßnahmen ist es, die Konkurrenzfähigkeit von jungen Menschen auf dem Arbeitsmarkt zu erhöhen. Der Staat könnte auch die Unternehmen finanziell unterstützen, die bereit sind den jungen Menschen Arbeitsplätze anzubieten. Außerdem sollten für diese

Arbeitgeber Steuererleichterungen bewilligt werden, die ihre Arbeitskosten reduzieren könnten.

Die Weltfinanzkrise brachte ganz unerwünschte Folgen für die finnische Wirtschaft mit. Der Rückgang der Nachfrage nach finnischen Produkten führte zum Anstieg der Arbeitslosigkeit mit all ihren Folgen. Wenn noch hinzugefügt wird, dass zahlreiche Unternehmen geschlossen wurden, mit anschließender Verlagerung der Produktion in Niedriglohnländer mit schwachem sozialem Schutz der Arbeitnehmer, ist es nicht verwunderlich, dass die Arbeitsatmosphäre in Teams nicht die beste ist. Die Globalisierung und die daraus folgende steigende Konkurrenz hatten ihren Einfluss auf die Arbeitsbedingungen. Kurzfristige Arbeitsverhältnisse, angespannter Arbeitsrhythmus und Sorgen um den Arbeitsplatz sind für viele Arbeitnehmer zu einem richtigen Problem geworden. Im Land wächst im Allgemeinen die Unzufriedenheit und Müdigkeit. Die Kluft zwischen Arm und Reich wird immer größer, was zur Verschärfung der Beziehungen in der Gesellschaft führt.

Ich möchte noch ein Thema ansprechen, zu dem zur Zeit in Finnland viel gesprochen wird. Die finnische Regierung hat die Frage der Anhebung des Rentenalters aufgeworfen. In Finnland beträgt jetzt das Rentenalter im Durchschnitt 60 Jahre. Jedes Jahr steigt die Zahl der Rentner, die Zahl der Beschäftigten sinkt dagegen. Leider wird am Arbeitsplatz die Erfahrung der Arbeitnehmer ziemlich oft nicht ausreichend geschätzt. Man könnte annehmen, dass die neue Chefgeneration die Bedeutung der guten Atmosphäre am Arbeitsplatz besser versteht als ihre Vorgänger, aber das ist nicht immer der Fall. Die Nichtanerkennung des Arbeitsbeitrags von Arbeitnehmern führt zur Frustration und nach und nach zur Arbeitsunfähigkeit. Mit anderen Worten: Der Wunsch der Beschäftigten, so früh wie möglich in Ruhestand zu gehen, wird immer stärker.

Obwohl die Frage der Anhebung des Rentenalters für das Land sehr wichtig ist, wird dafür meiner Meinung nach eine Rechtsvorschrift nicht ausreichen.

Die Maßnahmen zur Belebung der Wirtschaft erfordern natürlich erhebliche Finanzmittel. In den letzten Jahren führte Finnland erfolgreich seine finanziellen Angelegenheiten. Aber um die wirtschaftliche Situation zu stabilisieren hat die Regierung beschlossen der Staatsverschuldung ein Ende zu machen. Sanierungsmassnahmen der Art verlangen jedoch erhebliche Aufopferungen von der finnischen Gesellschaft. Die Hauptsache ist allerdings, das Beschäftigungsniveau zu erhalten und wirksame Maßnahmen zu treffen, um das Land aus der Krise zu führen.

# HUMANISTIC FOUNDATIONS OF INCLUSIVE EDUCATION

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## 1. Introduction

Today it is becoming obvious that the development of Russian inclusive education is inefficient if only the method of extrapolation is applied - formal transference of the most successful foreign models of educational integration into the unchangeable conditions of education and upbringing of the Russian educational institutions, i.e. without its philosophy and theory comprehension. The lack of inclusive education methodology raises lots of issues connected with the mistrust and criticism concerning even the most humanistic idea.

Although *inclusion* as a scientific concept has appeared relatively recently, the inclusive model of obtaining education is the epitome of the immemorial humanistic dream of the humanity about the equitable world where there is no any group of people isolated from the rest, and the interests of any part of people are not suppressed by the interests and needs of others. The step towards those who are in trouble, who are very dependent on others because the former cannot survive without the latter, makes the essence of inclusion, i.e. the essence of the culture of the humane humankind. We should understand and admit the truth that the *inclusive education is a normal education*, i.e. such which should take place in a cultural, highly-civilized human society. Inclusion is not intermixing and implantation of someone "abnormal" into something "normal"; it is general, adequate for all its participants, education. There is a strong wish to believe that the day will come when we will not use the word "inclusion" at all, and we will say simply *education*, implying that all the best that exists in the system of education has already been integrated into it.

The process of inclusive education is the process within the frames of which this community provides

**ABSTRACT:** The modern day society cannot be regarded full-fledge if any group of people is experiencing discrimination. The process of inclusive education is the process within the frames of which this community provides humane educational conditions to implement the maximum of educational potential and personal needs of each individual of this community. Essentially, inclusive education is the result of humanity ideas development based on the exclusive value of the human personality, their uniqueness, the right for decent life whatever their physical or intellectual state is, the right to enjoy all cultural values of the modern civilization.

These fundamental ideas and concepts of inclusive education are covered in the article suggested. The correlation of realities and practice of the Russian inclusion with the theoretic-methodological bases of the world educational integration should help correct the integration processes in Russian educational institutions, overcome the mistakes having been made and their prevention in perspective.

In this article, there have been revealed new humanistic foundations of education, which teach their participants (children, teachers, psychologists, medical workers) to listen and accept different positions of experts in different profiles, to act in coordination and effectively in favour of the child's interests not on one-time but long-term basis, to be especially responsible and coordinated upholding learners' interests.

The article states clearly that the inclusion is the entire complex of serious changes: changes in the whole school system, in value systems, in understanding of teachers and parents' role and in pedagogics in general.

**KEYWORDS:** inclusive education, inclusion, ideas and concepts, educational potential, humanitarian technologies

humane educational conditions to meet the maximum of educational potential and personal needs of each individual of this community. Essentially, inclusive education is the result of humanity ideas development based on the exclusive value of the human personality, their uniqueness, the right for decent life whatever their physical or intellectual state is, the right to enjoy all cultural values of the modern civilization. "Inclusion is seen as a process of addressing and responding to the diversity of needs of all learners through increasing



participation in learning, cultures and communities, and reducing exclusion within and from education (Booth, 1996). It involves changes and modifications in content, approaches, structures and strategies, with a common vision which covers all children of the appropriate age range and a conviction that it is the responsibility of the regular system to educate all children" [5].

From the socio-philosophical sense, integration is understood as the form of the joint being of all people - common people and people with limited possibilities of activity. Integration in education is considered as each *pupil's right to choose* the place, method and language of tuition. For pupils with special educational needs in case they choose the general educational institutions, integration assumes creation of conditions adequate to the quality of special educational services, and *full inclusion* in educational process of mass educational institution (*inclusion*). For ordinary pupils educational integration means freedom of choice between the inclusive and common class and the ensured quality and pace of training provided by the educational standard.

The listed above ideas about educational integration and its successful realization have to be provided with specific philosophical positions, corresponding scientific theories and methodological approaches. Therefore, a new educational system meeting civilized challenges is necessary. The inclusive education system has acted as such system. Inclusion, understood in the wide sense as involvement of all children into general education process irrespective of their age, gender, ethnic and religious affiliation, previous educational achievements, development retardation or social-economic status, is one of the main guidelines of the modern education system development methodology.

## 2. Russian Context for Inclusion

It is significant that in the new *Law on Education* of the Russian Federation which came into force on September 1, 2013, the clear definition of the concept of "inclusive education" (Art. 2, item 27) has been given, and there are special articles in it aimed to take into account the educational needs of certain individuals. Thus, item 4 of article 79 states, "*Education of pupils with limited possibilities of health can be arranged both with other pupils and in separate classes, groups or in separate institutions that implement educational activity*".

This article of the Law suggests that inclusive education can be obtained at an educational institution of the general type in case it creates a special learning environment for children with special needs. At the same time, children with limited possibilities of health

can be trained according to variable-based curriculums in specialized classes. Children with severe intellectual disabilities and multiple disabilities of health can be trained in correctional developing rehabilitation centers.

To realize these humanistic provisions of the Law, there should be used the *means and technologies* which should be universal because education is for all and at the same time it is individual because everyone has their own educational possibilities, abilities and needs. In our opinion, the humanitarian *interactive training technologies* have such opportunities that allow to introduce inclusive education in full extent. Interactive ("inter" and "act") means to interact, to be in the mode of conversation, dialogue with someone or the computer.

One of such technologies is case-study. The ideas of the case-study method (a method of situational training) or the case method are rather simple:

the focus of training is transferred not to the acquisition of ready knowledge, but to its development, to the teacher-pupil, pupil-pupil co-creation; hence the fundamental difference between the case method and traditional methods – democracy in the process of knowledge obtaining when the pupil possesses equal rights with other pupils and the teacher in the process of problem discussion;

the case-study method promotes development of schoolchildren self-dependent thinking, the ability to listen and to consider the alternative point of view, to give reasons for their own point of view [3,45].

The "portfolio" technology (from Latin "port" – storage and "folium" – a sheet) also refers to the humanitarian technologies which are actively applied in inclusive training. The purpose of this technology application is to provide conditions for the maximum development of pupils' abilities, satisfaction of cognitive needs, personal competences in the process of education acquisition. In fact, the "portfolio" is a collection of pupils' various creative projects, a description of the main forms and directions of their educational and creative activity, such as participation in competitions, training and upbringing events, studying of additional training courses, performance of different creative tasks, etc. The "portfolio" technology allows to realize qualitatively and delicately the differentiated approach, to carry out the individualization of the educational process taking into account not only intellectual, but also physical abilities of pupils, without focusing attention on their "limited possibilities". Interactive technologies in the system of inclusive training are effective due to the fact that they allow to train each child according to the program which corresponds to their abilities.

### 3. Conclusions

Thus, inclusion is an entire complex of serious changes: changes in the whole school system, in value systems, in understanding of teachers and parents' role and in pedagogics in general. The necessity for the fast, flexible, fine adjustment and response in the interpersonal interaction imposes requirements on personal characteristics of all specialists of inclusive education and their competency. So, it is important that children should not be trained in isolation, but they should integrate into the society of humanist relations (where the main sense of inclusion is the personality involvement in the society), because "every child integrated into the educational process needs educational assistance and psychological support" [4, 58]. From the pedagogical point of view, the most appropriate here is the term "humane education", the basic principle of which is the principle of humanity as far as it concerns the character of the most benevolent relationship between the subject of the education (teacher) and the object (pupil). "The humanistic relations are a special type of relationship where the subjects may be teams..., but the personality of a human being is the direct subject of humanistic relationships" [2, 29]. Besides, the concept of inclusive education suggests application of various approaches, development and use of corresponding curriculums and educational programs, but its purposes - quality and result - are achieved, first of all, through the creation of general humanistic educational atmosphere, necessary conditions for all children without any exception, including children with limited possibilities of health.

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# STATISTICAL ANALYSIS OF TOURIST FOOD SUPPLY INDUSTRY

## ANNOTATION

*Objective:* The use of statistical methods of analysis in relation to the tourism industry supply.

*Methods:* The statistical method of observation and data grouping was used as well as the method of general indicators.

*Results:* The contemporary role of public catering was disclosed as a branch of economy. Features of the tourist food supply were shown. The statistical groupings of public catering services were presented on the basis of international and Russian classifiers. A brief characteristic of the organizational forms of tourist food supply was given. Estimates of the share of turnover of tourist food supply were made in the context of the analysis of the dynamics of turnover of catering

*Scientific novelty:* For the first time a comparative analysis of classification of public catering services in the Russian and international statistics was conducted. The impossibility to obtain accurate statistical estimates of the share of the tourist – consumers and tourist food supply turnover in the general structure of consumption of public catering services was proved.

*Practical value:* The ability to use the broad grouping method and statistical analysis of data in studies of trends in the development of the tourist industry.

**KEYWORDS:** tourism statistics, tourist food supply, classification of services, public catering turnover.

## Introduction

Catering industry is a combination of companies engaged in production, sale and consumption of food products. According to the Russian standards the food service is defined as "an independent branch of the economy, ..., that organizes food supply for population, as well as the production and sale of semi-finished and finished products, both at the catering enterprise and outside of it" [1].

In catering, there are some individual elements of material production, mainly related to the refining of foods and food storage. These operations represent a continuation of the process of production in the sphere of circulation. The main thing in catering - the production and consumption of services, so in a modern market economy catering relates to the field of non-production, that is, to the service sector.

In modern conditions the purpose of catering is to meet the needs of people in getting quality food



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services necessary for their normal life, and to maintain the efficiency of the entire system as a sub-sector of the catering economy. In other words, the role of public catering is not only in food preparation and provision of services to recover energy expended in the process of vital functions of human life, but also in creating a competitive and efficient sector of the economy.

A special feature of the tourist food supply is that it can not only be a mandatory element of the tourist product, but also an independent motive of the tourist activities. Obviously, during a tourist trip a man must eat, using a variety of forms of organization of their own food consumption (outdoor restaurants and cafes, restaurants in hotels, self-cooking during hiking and so on).

However, many tourists to familiarize themselves with the national cuisine of a country buy various gastronomic and drinking tours. During these tours they observe local customs, often becoming participants of holidays and carnivals. So, trips around Germany or the Czech Republic rarely go without visiting beer bars; in Spain - without the 'paseo and tapeo', that is, without a walk to bars and tasting snacks that are served with wine and beer.

## Classification of catering services in International and Russian statistics

According to the International Standard Industrial Classification of All Economic Activities (ISIC), adopted by the Statistical Commission of the United Nations in 2009 (4th version), catering services are reflected in section I «Accommodation and Catering», under the subsection "Performance of Catering Enterprises."

This subsection includes the activities of enterprises in this sphere, "providing fully ready meals or

beverages intended for immediate consumption, in the form of traditional restaurants, self-service restaurants and catering establishments selling prepared meals to go, as well as temporary or stationary stalls with seats with or without" [2, page 234].

Wherein, the international practice emphasizes that crucial is the very fact of offering intended for immediate consumption dishes, but not the kind of company that offers such dishes. In other words, a company service of any organizational and legal form will apply to catering services, if these services are associated with an immediate consumption of the dishes to be offered.

Three types of services are included into the subsection "Performance of catering enterprises":

- performance of restaurants and mobile public catering outlets, covering the performance of restaurants, cafes, fast food outlets, pizza delivery, and so on. This subgroup includes the provision of food to customers regardless of whether they are served by waiters or they serve themselves, whether they consume ready meals in service or take them out;
- catering, that covers mobile catering performance during special events or during a specified period of time and that covers leased public catering outlets which provide catering service at sports and similar facilities;
- performance of premises (bars, pubs, taverns, discos and so on) serving drinks - services on preparation and submission of drinks for consumption in the service area.

Russian practice is similar to the international practice classification of catering services. In the frames of section 'N' 'Hotels and Restaurants' National Classification of Economic Activities (NCEA), there are three groups with 55.3-55.5 codes: performance of restaurants (55.3), bars (55.4) and canteens at enterprises and institutions and delivery of catering products (55.5) [3, page 206-207].

For example, the group "performance of bars" includes the sale of beverages, manufacture and selling a large range of cocktails as well as appetizers and desserts for consumption on the premises (in bars, nightclubs, pubs and places of this type), sometimes accompanied by some form of entertainment.

In the implementation of statistical records it should be considered that in the 'N' section there might be the combination of types of performances. Thus, the sale of beverages is an independent activity, but it can be partially included in the activities of a restaurant or cafe. In this case, according to Russian

statistics methodological recommendations selling drinks will be classified together with the sale of culinary products in subclass 55.3 "Performance of restaurants."

Besides, performance of a restaurant, being as an independent type of activity, may also be included in the activities of placement. Indeed, any collective accommodation provides housing or temporary accommodation to tourists and other citizens. Thus it can only provide a place to stay, and may, along with the placement, provide additional services, including nutrition services.

### Organization of public catering

Catering enterprises differ with a variety of forms. The industry of tourist food supply includes restaurants, cafes, snack bars and other facilities. Catering enterprises differ depending on the culture and quality of service, as well as dishes and an assortment of dishes, number of seats, mode, and visitors' experience. A number of criteria is used for the classification of tourist catering industry; the most important of which are:

- nature of the activity;
- location;
- contingent of tourists to be served;
- range of products and services (specialization);
- hall capacity;
- form of service;
- class of service;
- business hours.

Detailed description of all of these classification groups are widely represented in the relevant academic literature and is not the subject of this article. We should only note that the most popular with tourists are restaurants. They are divided into two large groups: the classic and fast service. A classic restaurant offers not only a wide range of complex and expensive meals, high quality service, but also presents a convenience for a long and comfortable communication with a partner, to the interior aesthetic pleasure. The most important characteristic of first class restaurants is the pursuit of individuality. Their unique shape is complemented by a luxurious interior furnishings and a gourmet kitchen.

Fast food restaurants (bistros, diners, «fast food») are widely spread today as the current pace of life does not allow much time to spend on food. They combine reasonable prices, good service, and variety of dishes. For the mass tourists, who save their money, visiting these restaurants is becoming a prerequisite of traveling.

Under the mode of tourist food supply the catering enterprises provide services in the form of full board, half board, a special diet, and nutrition

for children and so on. Number of hotels have rooms which include a kitchen, mini-bars and can provide catering services to the room (on-call request), as well as at the enterprises operating at hotels. The hotel's popular tourist segment (especially for Russian tourists) uses the «all included» system. The 'all included' is a set of services that are provided in the territory of the hotel for free and unlimited. These services are included in the price of the tourist product and apply to both for the use in a hotel infrastructure (in whole or in any part, including participation in the animation programs), and food and beverages.

It should be noted that in modern conditions such form of the organization of public catering as a catering service is widespread. Catering (from the English word cater – 'cater') - a sector of food service related to the provision of services to remote locations, i.e., catering services for employees of companies and individuals in the indoor and outdoor service.

Catering businesses also perform serving of various events and retail selling of ready culinary products. In practice, under the catering not only cooking and service is understood, but also the service, catering, decoration and many other related services. At the same time catering technologies can be used in tourism. For example, catering in airports and on aircraft boards is very often carried out by catering companies.

In this regard, we also should note that the catering on an aircraft board — is one of the most important factors when making tourist trips. There is an expert opinion that 70% of impressions drawn up by an airline passenger and a tour selected depend on what kind of food was offered and the way they served it during the flight. On the one hand, this is due to the natural human needs for food and often during long tiring flights.

On the other hand, food consumption can be considered as one of the few things available to passengers during their stay in a confined space. Therefore, the image of the carrier, as well as a tour operator who has concluded a contract with the carrier for the transport service of tourists, largely depends on how well this service is provided.

From the economic positions it is not the ration of food itself that is important, but the costs of its organization and the possible benefits of proper management in that area. So, a case has become known, where one of the two competing Russian regional airlines began offering snack boxes during short flights. As a result, passengers were more likely to use the services of this company.

### Problems of statistical analysis of tourist food supply

In Russian and international classifications of catering services the division of these services by the

spheres of application is not envisaged, that is, there is no division of services for tourists and residents. Theoretically, this separation is possible, but practically to identify the share of tourists-consumers in the consumption structure of catering services, as well as provision of the evaluation of catering services for tourists, is very difficult.

Partly this problem can be solved if we consider catering facilities on the territory of Collective Accommodation Facilities (CAF). With certain reservations it might be assumed that tourists are all visitors to restaurants, cafes, bars, located at the CAF. According to a comprehensive survey of the tourist industry, conducted by the Russian Office of Statistics (Rosstat) in 2003, such facilities in Russia comprised 5194 units, of which 26.9% were hotel catering, and 73.1% — organizations specialized within the CAF [4, page 104].

Despite the strong growth of the catering market (opening of new cafes, fast-food, bistro, and so forth), the number of direct tourist catering facilities for such a big country as Russia, is not enough. If we compare the number of CAFs themselves with catering facilities within the CAF, it turns out that one CAF of a hotel type had 0.36 of catering facilities, and one specialized had 0.82. Thus, not all the accommodation facilities provided catering services. So, many non-categorized hotels, organizations of individual recreation, especially in the area of small business, had no owned or leased institutions (departments) of catering.

It should be noted that in 2009 the Russian Federal State Statistics Service (Rosstat) conducted a selected survey of performance of catering facilities in the tourism sector. 1170 organizations were surveyed, including not only the CAFs, but as well theaters, sports facilities, stations and so on. For each of these types of organizations parameters describing the situation with food have been calculated.

Table 1 contains the results of the survey in respect of only three types of organizations [5]. It is obvious that compared with the year of 2003 the situation has changed for the better. Thus, for each surveyed hotel there are 2.8 caterers. However, in this survey small businesses working in the tourist industry were not considered, among which there might not have been any registered catering facility.

Catering turnover is a key economic indicator of the food industry, which represents the proceeds from the sale and purchase of culinary products for the public for consumption on the premises, as well as for businesses and individual entrepreneurs to cater for different populations. According to the guidelines of the Russian Federal State Statistics Service (Rosstat) the catering turnover includes two elements [6]:

**Table 1.**

Key performance indicators of catering facilities in the tourism sector

Index	Type and number of the organizations surveyed		
	Hotels – 246	Railway stations, bus stations, ports, airports – 35	Specialized organizations of public catering – 670
Availability of public catering facilities, pieces	697	105	3123
Cafe	164	21	979
Restaurants	223	16	658
Canteens	46	8	692
Refreshment rooms	39	42	386
Bars	201	8	209
Snack Bars	24	10	199
Number of seats	44974	2067	226218
Service hall area for customers, thousand m <sup>2</sup>	187,5	5,1	939,9
The average number of employees.	11490	978	56986
Revenues from the provision of public catering services, mln. rubles	7506,0	300,8	67512,1
Expenses for providing public catering services, mln. rubles	6223,8	291,6	45092,1
Rents, mln. rubles	226,5	5,1	5299,0

1. Cost of sold to individuals, mainly for consumption on the premises, own culinary products (food, culinary products, semi-finished products), beverage, bakery, confectionery, bakery products and other food products without cooking.

2. Cost of own culinary products and purchased food products sold (released) (to the):

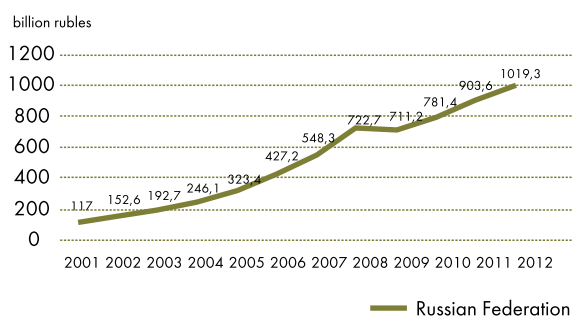
- employees of organizations with subsequent retention of wages; certain categories of the population (students in schools, pensioners, etc.) with partial or full payment by social security authorities, by tokens, coupons, and so on;

- social institutions (schools, hospitals, health clinics, nursing homes, and so on);

- homes by orders of the population;

- by orders of organizations and individual employers to workplaces; transports routing on land, air and water, to serve at banquets, and so on.

For the purposes of current statistical observation the catering turnover is generated on the basis of the corresponding index of unified forms of federal statistical observation. The results of the observations are published in the official materials of the Rosstat and are accessible to a wide public. Figure 1 shows the



**Fig. 1.** Dynamics of catering in the Russian Federation

dynamics of catering turnover in the Russian Federation. The growth of this indicator is obvious except the 2009 crisis year.

It is obvious that a certain part of catering turnover falls on tourists as well, since their holiday is not limited with the territory of a single hotel or boarding house. To identify that part with an absolute precision is not possible. However, in 2009 the Rosstat conducted an expert survey of catering managers, whose

purpose was to identify the proportion of the tourism component of the turnover of public catering [5].

Following the results of the survey it was revealed that the largest part falls on the bars — 20.9%, the lowest - on canteens (11.7%). Restaurants had 19.4% of tourist consumption, buffets — 15%, diners — 14.5% and cafes — 12.7%. If we take the minimum score as a basis, the turnover of the "tourist catering" according to our estimates, ranged 75-80 billion rubles in 2008–2010.

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# GENERAL THEORY OF TENSION OF BIOLOGICAL AND SOCIAL FIELDS

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The notion of tension of the field of legal liability is easily carried over to any types of social and biological fields<sup>1</sup>.

*Social field* is domain of personal and collective social states characterized by a definite tension value.

*Biological field* is domain of personal and collective biological states characterized by a definite tension value.

*Field of legal liability* is domain of possible states of legal liability – tensions of the field of legal liability.

There is infinite aggregate of biological and social fields.

*Types of biological and social fields:*

- 1). Personal and collective biological and social fields.
- 2). Field of personal and collective self-esteem.
- 3). Fields of biological and social needs.
- 4). Field of class contradictions.
- 5). Field of ethnic contradictions.
- 6). Field of racial contradictions.
- 7). Field of religious cleavage.
- 8). Field of interstate contradictions.
- 9). Field of intergroup and interpersonal conflicts.
- 10) Field of cosmo-telluric and bio-social contradictions.
- 11) Field of language mismatch.
- 12) Field of moral and legal contradictions.
- 13) Field of pedagogical contradictions.
- 14) Field of family conflicts.
- 15) Field of business (economic) contradictions.

*Total potential strength of a biological or social field* (TPSBSF) is aggregate tension module of a given biological or social field, a maximally possible (potential) level of tension in the system. This is a quantitative value demonstrating aggregate distance modulus from the coherence line to coordinates mismatch in

## ABSTRACT:

*The aim* of the article is to develop a general theory of tension of biological and social fields.

*Research methods:* 1) differential and integral calculus; 2) correlation and regression analysis; 3) mathematical modeling; 4) matrix analysis; 5) calculation of probabilities; 6) introspection; 7) supervision; 8) comparison; 9) deduction; 10) induction; 11) analysis; 12) synthesis.

*Scientific results obtained by the author:* 1) definition of social, biological field and the field of legal liability; the total potential and real field strength; field strength at a point; discrete and continuous tension of biological and social fields; concept of complex fields considered; 2) classification of biological and social fields; 3) it is proved that the higher the level of mismatch of the system, the higher the tension in this system (the relationship is positive and non-linear with constant acceleration equal to two); 4) it is proved that with coherence in the biological or social system tension module equals to zero; 5) it is proved that the field strength depends on its dimensions. General rule: the greater the dimension of the field, the greater its potential tensions; 6) matrix of tension in social fields of minimal dimension built (single social field: 3x3), and its discrete and continuous tension measured; 7) correlation matrix for the matrix of tension in social fields of the minimal dimension built (single social field: 3x3); 8) the ordinal matrix of tension size, the dimension of the matrix and the parameters of the equations describing the continuous tension of tension matrix investigated; 9) it is proved that in the tension matrix of any dimension maximum values of tensions of biological and social fields are concentrated at the ends of the inverse diagonal; 10) it is proved that in the tension matrix of any dimension minimum values of tension of biological and social fields are concentrated along the main diagonal; 11) coherence functions for matrices of large dimensions investigated; 12) integral and differential functions of normal distribution of consistency for the correlation matrix of the tension matrix 21x21 built; 13) a vector field of contradictions matrix built.

*Scientific novelty:* newly received scientific results.

*Practical value* consists in the possibility of implementation of research results in the development of the theory of biological and social fields, creating scientific public morality and law.

<sup>1</sup>Olkov S.G. Tension of the field of legal liability//Actual Problems of Economics and Law, 2013, №4.



the matrix<sup>2</sup> of «tension» (matrix of «contradictions», matrix of «mismatch», matrix of «justice», matrix of «coherence»). In other words, it is an indicator of the value of incoherence – the incoherence module of a system; a quantitative value demonstrating distance modulus from a given coordinate (GC) of the matrix of coherence to the coordinate at the coherence line (on the main diagonal of the matrix of coherence) (CC) corresponding to GC.

We shall accept the unit of measurement of tension of biological and social fields of  $1 \text{ jup} = 1 \text{ j}$ .

*Total real tension of a biological or social field* (TRTBSF) is aggregate tension module of a given biological or social field, a maximum level of tension in the system in a given space-time continuum.

*The higher the level of mismatch in the system, the higher tension in this system*, which has been picked up by conventional wisdom in the notion of «diametrically opposed views». It is evident that individuals holding diametrically opposed views experience tension of the greatest value between them. The notion of «cognitive dissonance»<sup>3</sup> in psychology reflects the measure of internal contradictions of a certain person, his/her coherence with himself/herself; the notion of legal or just sentence reflects the measure of coherence of judicial decisions with the legislation, inner conviction of the judges, public opinion.

With full coherence in a biological or social system, the tension module equals zero. With absolute mismatch, the value of the tension module depends on dimension of the matrix of the tension measure (measure of contradictions, measure of coherence, measure of mismatch, measure of justice) accepted for calculations.

*Strength of a biological or social field at a point* is tension module of a biological or social field at a definite point of the matrix of coherence of a given biological or social domain.

*Discrete tension of a biological or social field* is tension of a biological or social field accepted in modules of discrete values.

*Continuous tension of a biological or social field* is tension of a social or biological field accepted in modules of continuous values.

*Complex biological and social fields* include an amount of matrices of tension and represent aggregate matrices of tension which come out by adding plain (i) matrices of tension. In every living individual, as well as in a social group and humankind, we see an aggregate of tension, and here we need to know the mathematical theory of matrices in order to do corresponding calculations and measurements<sup>4</sup>.

The measure of coherence of any matrix or its elements is easily calculated with the help of correlation

coefficient, in particular, multiple coefficient of rank correlation (concordance coefficient), Pearson's linear correlation coefficient, and others. We performed such calculations for a system of judges, when it was required to find the measure of coherence of decisions in the system of judges<sup>5</sup>. Mathematical theory of random function<sup>6</sup> will be of help here, too.

Tension of a social field depends on its dimensions. General rule: the greater dimensions of a social field, the higher its *potential tension*. We will prove it by increasing the number of lines and columns in the matrix of justice.

Table 1 clearly shows that potential discrete tension of a social or biological field of minimal dimension (*TSFMD*) makes 8 *jups*. Tension of a continuous biological or social field of minimal dimension at a point is defined by the formula:  $U = x^2 - 4x + 6$ , where  $U$  – tension of a social field (in *jups*),  $x$  – deviation module of the social state from the line of justice. Hence, maximum potential tension of a continuous social or biological field of minimal dimension is defined by the value of integral of the function:  $U = x^2 - 4x + 6$ .

If we integrate the function:  $U = x^2 - 4x + 6$ , in the limits from -1 to 1, we will get:

$$\int_{-1}^1 x^2 - 4x + 6 = \frac{38}{3} = 12,66667.$$

This will be the combined maximum value of tension of the *continuous* stationary biological or social field (its potential tension).

The first derivative of the function of tension of the stationary field of minimal dimension (singular dimension):  $\dot{U} = 2x - 4$ , shows the rate of change of tension stationary social field, and the second derivative:  $\ddot{U} = 2$ , acceleration in the system of tension of a social field.

<sup>2</sup> Matrix is a mathematical object recorded in the form of a rectangular table of elements of the ring of the field (for example, whole, real or complex numbers), which represents an array of lines and columns, its elements appearing at their intersections. The number of lines and columns of the matrix are defined by the size of the matrix. Although historically, for example, triangular matrices were considered, at present they speak only about matrices of rectangular shape, as they prove most convenient and common.

<sup>3</sup> Cognitive dissonance (from Latin: *cognitio* — «knowledge» and *dissonantia* — «inconsonance, discordance, absence of harmony») — state of mental discomfort of an individual caused by collision of conflicting views in their mind: ideas, beliefs, values, or emotional reactions.

<sup>4</sup> Matrices can undergo the following algebraic operations: 1) addition and subtraction of matrices sharing the same dimensions; 2) multiplication of matrices, in particular, by matrix vector or field (that is, scalar).

<sup>5</sup> Olkov S.G. Analytical jurisprudence (methodology of jurisprudence). – In 2 volumes. V.2. – M.: Yurлитinform, 2013. P. 277–289.

<sup>6</sup> *ib.* P. 274–275.

We will increase dimensions of the matrix of a social field.

Discrete tension of a social field at transfer from matrix 3x3 to matrix 5x5 grew 5-fold and made 40 jups.

Continuous tension of a social field of dimensions 5x5 is measured by the formula:  $U = x^2 - 6x + 15$ .

The first derivative of the function of tension of the stationary field of legal liability:  $\dot{U} = 2x - 6$ , shows the rate of change of tension of the stationary legal field, and the second derivative:  $\ddot{U} = 2$ , acceleration in the system of tension of a social field.

If we integrate the function:  $U = x^2 - 6x + 15$ , in the limits from -2 to 2, we will get:

$$\int_{-2}^2 x^2 - 6x + 15 = \frac{196}{3} = 65,333 \text{ jups.}$$

For the matrix 11x11, we will get:

$U = x^2 - 12x + 66$ . By integrating it in the limits from -5 to 5, we get:

$$\int_{-5}^5 x^2 - 12x + 66 = \frac{2230}{3} = 743,3333.$$

### Dimensions of the matrix of tension

Selection of dimensions of the matrix of tension is a matter of taste. In fact, in order to fully describe any biological or social field, even an identity matrix is quite sufficient, as we can work with continuous and not discrete values. In this case, the distance between one and minus one covers and endless multitude of dots describing any theoretically possible state of a field.

For convenience of use (to increase vividness, and to escape small fractional numbers), fields of large dimensions can be considered.

In the matrix of contradictions of any dimension, maximum values of tension of biological and social fields are concentrated at the ends of the inverse diagonal, which is clearly seen in the diagram of tension and the matrix itself. In its turn, minimal tension of the matrix goes along the main diagonal.

Continuous tension of the matrix of contradictions of dimensions 21x21 will make:

$$\int_{-10}^{10} 0,999x^2 - 21,99x + 231 = 5286 \text{ jups, and}$$

discrete tension, 3079.

Coefficient of variation:

$$V = \frac{\sigma}{\bar{x}} \cdot 100 = \frac{33,47309}{146,619} = 22,8\%$$

### Conclusions

- 1) definitions of social, biological field and field of legal liability; total potential and real tension of a field; tension of a field at a point; discrete and continuous tension of biological and social fields; the notion of complex field is considered;
- 2) classification of biological and social fields;
- 3) proved that the higher the level of mismatch of the system, the higher tension in this system (positive and non-linear relationship with constant acceleration equal to two);
- 4) proved that with full coherence in a biological or social system, the tension module equals zero;
- 5) proved that tension of a field depends on its dimensions. General rule: the greater dimensions of a field, the higher its potential tension;
- 6) matrix of tension of a social field of minimal dimensions (singular social field: 3x3) built, its potential discrete and continuous tension measured;
- 7) correlation matrix for the matrix of tension of a social field of minimal dimensions (singular social field: 3x3) built;
- 8) ordinal matrix of tension size, dimensions of the matrix, and parameters of equations describing continuous tension of the matrix of tension studied;
- 9) proved that in a matrix of tension of any dimensions, maximum values of tension of biological and social fields are concentrated at the ends of the inverse diagonal;
- 10) proved that in the matrix of tension of any dimensions, minimum values of tension of biological and social fields are concentrated along the main diagonal;
- 11) functions of coherence for matrices of large dimensions studied;
- 12) integral and differential functions of normal distribution of consistency for the correlation matrix of the matrix of tension 21x21 built;
- 13) vector field of the matrix of contradictions built.

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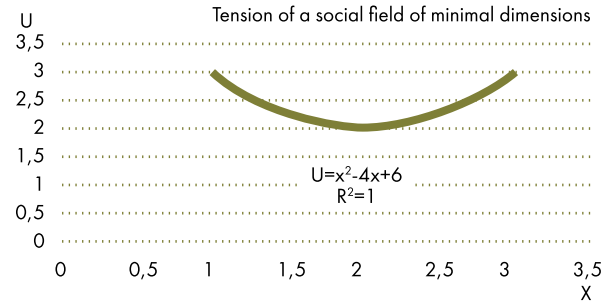
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**Table 1.**

Matrix of tension of a social field of minimal dimension (singular social field: 3x3).

	Judge №1				
Judge №2	standard	-1	0	1	Total
	-1	0	1	2	3
	0	1	0	1	2
	1	2	1	0	3
	Total	3	2	3	8



**Fig. 1.**

Formula and diagram of tension of a social or biological field of minimal dimension.

**Table 2.**

Correlation matrix for matrix of tension of a social field of minimal dimension (singular social field: 3x3)

	Column 1	Column 2	Column 3
Column 1	1	0	-1
Column 2	0	1	0
Column 3	-1	0	1

**Table 3.**

Matrix of tension of a social field of dimensions 5x5

	-2	-1	0	1	2	Total
-2	0	1	2	3	4	10
-1	1	0	1	2	3	7
0	2	1	0	1	2	6
1	3	2	1	0	1	7
2	4	3	2	1	0	10
Total	10	7	6	7	10	40

**Table 4.**

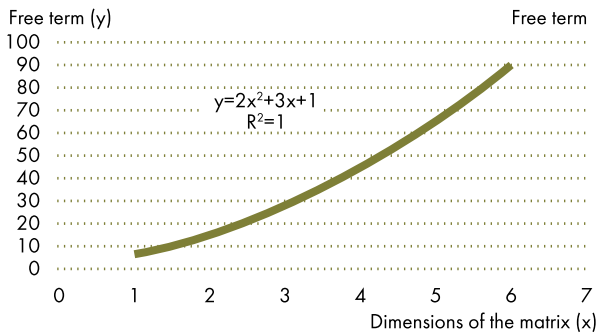
Correlation matrix for the matrix of tension of a social field of dimensions 5x5

	Column 1	Column 2	Column 3	Column 4	Column 5
Column 1	1	0,83205	0	-0,83205	-1
Column 2	0,83205	1	0,419314	-0,53846	-0,83205
Column 3	0	0,419314	1	0,419314	0
Column 4	-0,83205	-0,53846	0,419314	1	0,83205
Column 5	-1	-0,83205	0	0,83205	1

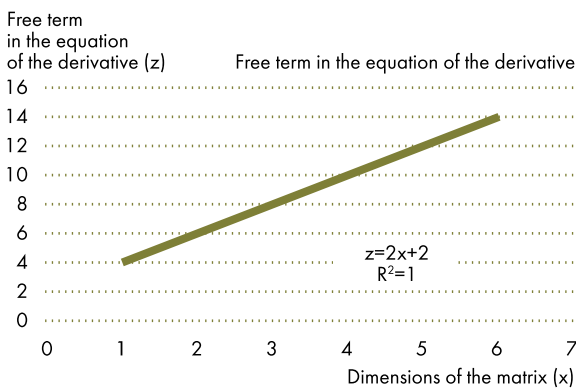
**Table 5.**

Ordinal matrix of tension size, dimensions of the matrix and parameters of equations describing continuous tension of the matrix of tension, as well as values of potential discrete and continuous tension

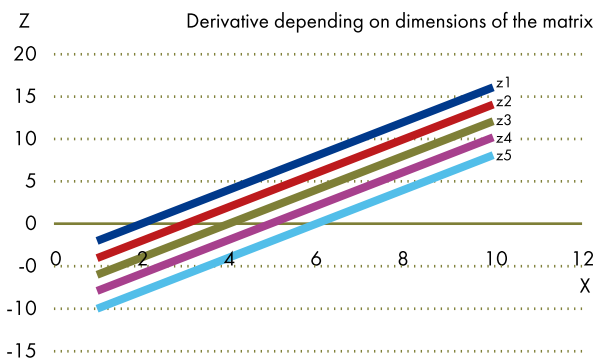
Ordinal matrix of tension size	Dimensions of the matrix of tension	Free term	Derivative	Acceleration	Ud	Un
1	3x3	6	2x-4	2	8	12,67
2	5x5	15	2x-6	2	40	65,33
3	7x7	28	2x-8	2	112	186,00
4	9x9	45	2x-10	2	240	402,67
5	11x11	66	2x-12	2	440	743,33
6	13x13	91	2x-14	2	728	1236,0
...						
10	21x21	231	2x-22	2	3079	5286



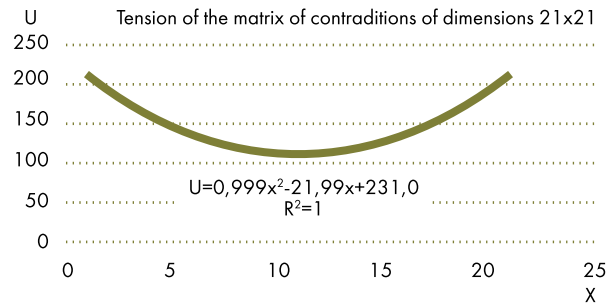
**Fig. 2.** Dependence of the free term in the equation of tension of the matrix of coherence depending on ordinal matrix of coherence size.



**Fig. 3.** Dependence of the free term in the equation of the derivative in the equation of tension of matrix of coherence depending on ordinal matrix of coherence size



**Fig. 4.** Derivative depending on ordinal matrix of coherence size



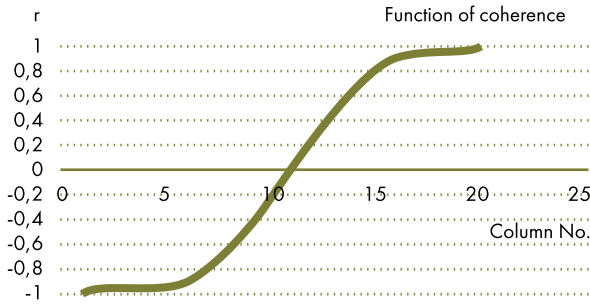
**Fig. 5.** Function of tension of the matrix of contradictions of dimensions 21x21

Ud
210
191
174
159
146
135
126
119
114
111
110
111
114
119
126
135
158
174
191
210

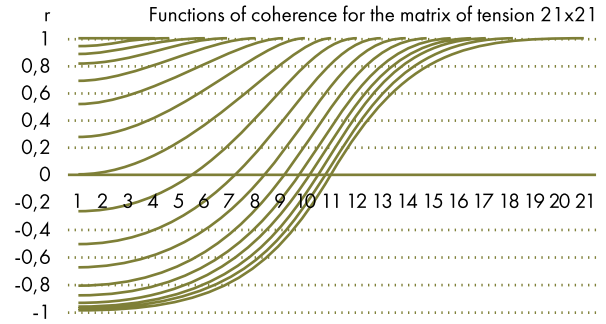
**Table 6.** Final values of tension by lines of the matrix of tension of the 10-th order

**Table 7.** Descriptive statistics for discrete tension of the matrix of the 10-th order

Descriptive statistics	
Mean	146,619
Standard error	7,304427
Median	135
Mode	210
Standard deviation	33,47309
Sampling variance	1120,448
Excess	-0,81639
Asymmetry	0,673056
Span	100
Minimum	110
Maximum	210
Sum	3079
Count	21



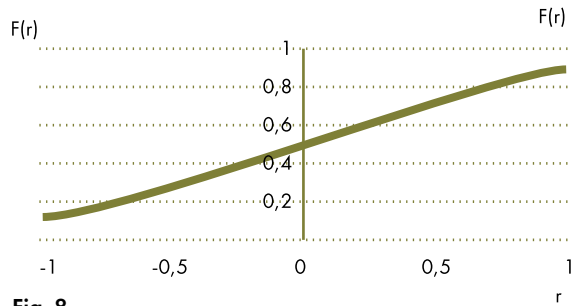
**Fig. 6.** Function of coherence built by correlation coefficients in the last line of the correlation matrix for matrix of tension 21x21



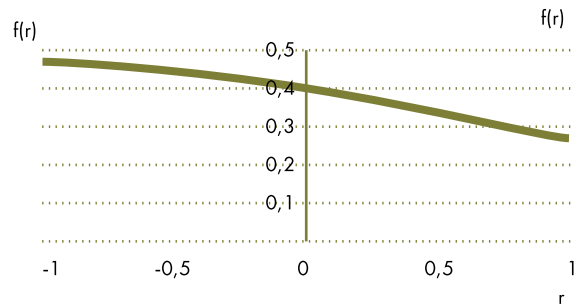
**Fig. 7.** Functions of coherence for the matrix of tension 21x21

**Table 8.** Integral and differential functions of normal distribution of consistency in the first column of the correlation matrix of the matrix of tension 21x21 ( $m=0$ ;  $\sigma=0,840345$ )

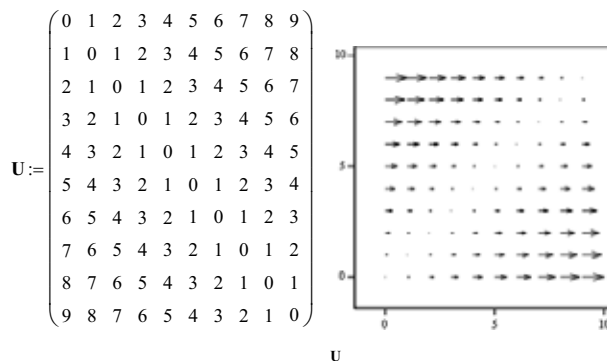
r	F(r)	f(r)
1	0,882974	0,273348
0,997756	0,882449	0,273527
0,989595	0,880523	0,274186
0,972008	0,876298	0,27563
0,940625	0,868501	0,278298
0,889279	0,855025	0,282913
0,80904	0,832163	0,290746
0,687768	0,793446	0,303995
0,512325	0,728956	0,325879
0,27735	0,629316	0,358651
-1,8E-17	0,5	0,397721
-0,27735	0,370684	0,430725
-0,51232	0,271044	0,450674
-0,68777	0,206554	0,46061
-0,80904	0,167837	0,465362
-0,88928	0,144975	0,467724
-0,94062	0,131499	0,468959
-0,97161	0,123799	0,469613
-0,9896	0,119477	0,469962
-0,99776	0,117551	0,470114
-1	0,117026	0,470155



**Fig. 8.** Integral function of normal distribution of consistency in the first column of the correlation matrix of the matrix of tension 21x21 ( $m=0$ ;  $\sigma=0,840345$ )



**Fig. 9.** Differential function of normal distribution of consistency in the first column of the correlation matrix of the matrix of tension 21x21 ( $m=0$ ;  $\sigma=0,840345$ )



**Fig. 10.** Vector field of tension of the matrix of contradictions

# FISKALFÖDERALISMUS UND DIE BESCHRÄNKUNG DER MACHT

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Hannover*



Eine der Hauptanliegen der politischen Ökonomik als Wissenschaft ist es, ein solches politisches System zu kreieren, bei welchem keines der Wirtschaftssubjekte oder einzelnen Individuen unbegrenzte Macht über andere Wirtschaftssubjekte oder Individuen ausüben kann. Um die faktische Macht einzelner politischer Interessen begrenzen zu können, wurden im Laufe der Jahrhunderte in den meisten Staaten der Welt gesetzliche Begrenzungen eingeführt, bei welchen Individuen einige Rechte, wie z.B. das Wahlrecht zugesprochen wurden. Demokratisch organisierte politische Systeme haben spätestens nach der französischen Revolution Standardinstitutionen entwickelt, die darauf abzielen, die Handlungsspielräume derart unter den Teilnehmern des politischen Prozesses zu verteilen, dass eine Diktatur oder eine Oligarchie erheblich unprofitabler gemacht werden kann.

Zu diesem Standardset einer Demokratie gehört die Gewaltenteilung, d.h. Mehr-Parteien-Parlamente, Gerichte und die ausführenden Organe. Diese sollen es vornehmlich der Exekutive schwer machen ihre de jure Macht zu überschreiten. Aber natürlich sind auch Machtmissbräuche seitens der Judikative oder Legislative durchaus realistisch. Leider ist auch das nicht die ganze Gefahr, nicht weniger wichtig ist es, dass die Minderheiten in der Bevölkerung nicht unterdrückt werden. Es geht prinzipiell darum, Tausenden Partikularinteressen soweit entgegenzukommen bis es nicht den anderen Partikularinteressen schadet. In der Praxis nennt man diesen Handel politischer Prozess. Dieser findet permanent statt. Ständig werden neue Gesetze beschlossen und somit de jure politische Macht neuverteilt.

Doch das demokratische System hat ein Defekt. Durch völlig unterschiedliche Erstaussstattungen der politischen Interessen mit Gelkapital, Sozialkapital

**ABSTRACT:** Viele Staaten tragen in ihrem Namen die Bezeichnung „Föderation“, was darauf hindeutet, dass diese Institution in der breiten Bevölkerung als ökonomisch sinnvoll bzw. wohlfahrtssteigernd wahrgenommen wird. Dieser Artikel gibt zunächst einen groben Überblick über die Formen des Föderalismus und analysiert Wirkungsweisen über welche der Föderalismus als eine politische Institution die Wohlfahrt der Bürger steigern bzw. Einfluss auf reale ökonomische Größen entfalten kann. Der Autor zeigt, dass fiskalischer Föderalismus, auch wenn seine Implementierung Probleme mit sich bringt, langfristig und unter gewissen Annahmen, einen horizontalen Wettbewerb herbeiführen kann. Dieser kann sich positiv auf die Rechtsstaatlichkeit auswirken, die Effizienz des öffentlichen Sektors steigern, das Informationsproblem einer modernen Gesellschaft mindern und über die Vielfältigkeit der öffentlichen Güter, insgesamt, zu einem signifikanten Nutzenzuwachs bei den Bürgern beitragen.

**KEYWORDS:** Fiskalischer Föderalismus, Föderation, horizontaler Wettbewerb, Institutionenökonomik

und Humankapital ist es nicht möglich durch die Einführung der gesetzlichen (de jure) Machtbegrenzungen, Chancengleichheit im politischen Prozess sicherzustellen, d.h. auch de facto Gleichheit zu schaffen. Vielmehr können einige politische Interessen ihre reale (de facto) Machtstellung weit über die vom Gesetz vorgesehene ausdehnen. Am Ende kann es so weit kommen, dass die demokratischen Institutionen von einer Art wirtschaftspolitischer Mafia kontrolliert werden. Dann wird der politische Prozess zu einer Farce, bei der de jure Macht einer Elite zur Ausbeutung der Mehrheit der Bevölkerung missbraucht wird.

Leider können solche Prozesse in den meisten Staaten der Welt beobachtet werden. Umgekehrt existieren nur einige wenige Staaten, wo es den Bürgern gelungen ist, wirksame Machtbegrenzungen sich selbst und den Vertretern der Bürger auf der politischen Bühne aufzuerlegen. Dann ist es ihnen gelungen, um die Metapher des großen Thomas Hobbes, zu benutzen, dem Leviathan die Hände zu binden. Dass diese Metapher keine Übertreibung ist, veranschaulichen Luxusgegenstände, die bei den obersten ukrainischen

„Staatsdienern“, bzw. beim ukrainischen Leviathan kurz nach der Revolution im Februar 2014 gefunden worden sind, nämlich Gold und ausländische Währungen, die er (ukrainischer Leviathan) seinem Volk in den vier Jahren der letzten Legislaturperiode entziehen konnte.

Dies war ein Versagen der Demokratie, soweit Demokratie als eine Möglichkeit sich gegen die Tyrannei zu schützen gesehen wird. Dabei zeigt sich, dass ein vermeintlich stabiles präsidentielles System sich als ein äußerst fragiles entlarven kann. Wenn es zusammenbricht, hinterlässt es eine konstitutionelle Ungewissheit, mit anderen Worten, es herrscht Unklarheit bezüglich der Einhaltung aller zu dem Zeitpunkt der Revolution abgeschlossenen Verträge und aller Verträge, die ab dem Zeitpunkt geschlossen werden. Für den Kommerz ist das eine katastrophale Situation, bei der nur noch kriminelle Investitionen, mit ihren extrem kurzfristig orientierten Profiten noch lohnenswert sind. Es wird deutlich, dass Demokratie als das allgemeine Wahlrecht leider nicht das alleinige Mittel gegen die Tyrannei sein kann. Auch Föderalismus, wie er in der Ukraine existierte, war kein großes Hindernis für die Schaffung eines zur Ausbeutung der Bürger gerichteten politischen Systems. Der Föderalismus schaffte bloß eine zusätzliche Ebene auf der die Staatsbeamten in „das System“ kostspielig integriert werden müssen. Am Ende kann Föderalismus sogar eine Stütze der korrupten Ausbeuterregierung in den Regionen werden, die für die Zentralregierung auf direktem Weg schwer zu erreichen wären.

Es können generell drei Arten des Föderalismus unterschieden werden: zwei Extreme, nämlich Verwaltungsföderalismus und Wettbewerbsföderalismus (oder auch fiskalischer Föderalismus) und eine Mischform, kooperativer Föderalismus. Verwaltungsföderalismus ist im einfachsten Falle, das feudale System, mit der königlichen Macht als Bundesregierung und die Fürstentümer als die zweite Regierungsebene. Das Merkmal dieses Systems ist, dass nichtsdestotrotz die Fürsten durchaus autonom sein können, müssen die Befehle des Königs befolgt werden. Das impliziert eine durchschlagende Wirkung des königlichen Befehls. Völlig anders ist es im fiskalischen Föderalismus, wo die föderalen Subjekte eigene Zuständigkeiten haben, auf die die Zentralregierung prinzipiell keinen Einfluss nehmen kann. Im kooperativen Föderalismus sind die Kompetenzen der beiden Regierungsebenen nicht eindeutig getrennt. Die Bundesregierung kann Einfluss auf die Entscheidungen der Länder nehmen, die Länder vertreten ihre Interessen jedoch über den Bundesrat und können somit Einfluss auf das Geschehen auf der Bundesebene nehmen. Ein Beispiel für diese Regierungsform wäre Deutschland, während

dem fiskalischen Föderalismus die Schweiz sehr nahe kommt. Russland stellt z.B. einen klaren Fall des Verwaltungsföderalismus.

Die Versagen des ukrainischen Verwaltungsföderalismus dem Leviathan der Zentralregierung die Hände zu binden haben viele Ursachen, die jedoch alles andere als ukrainespezifisch sind. Die zentrale Schwäche eines jeden *nicht* fiskalischen Föderalismus entspringt der Tatsache, dass für die Macherhaltung nichts wichtiger ist, als die Kontrolle über die Steuereinnahmen eines Staates, denn im nicht fiskalischen Föderalismus werden die gesamten Staatsausgaben zunächst in einen Topf geworfen und von dort aus wieder nach unten verteilt. In dieser Position ist eine Region oder ein Bundesland und konkret ein Gouverneur sehr abhängig von Geld, welches dann oft von der präsidentialen Administration kommt. Und jemand der abhängig ist, kann nie eine wirksame Begrenzung für den darstellen, von dem er abhängig ist. *Nur wer finanziell selbstständig ist, hat realen Handlungsspielraum.* Jedoch muss diese Aussage präzisiert werden. Denn natürlich hat auch einer von der Zentralregierung abhängiger Gouverneur Spielräume gegenüber politischen Interessen von denen er nicht oder weniger abhängig ist, bzw. die er nicht repräsentiert. Wichtig ist nur, dass die Interessen seiner Wähler für ihn zweitrangig sind und die Interessen seiner nicht-Wähler praktisch vernachlässigbar. Somit droht die reale Gefahr, dass die Ebene der Bundesländer im Verwaltungsföderalismus der Bevölkerung nur wenig Schutz gegenüber der Zentralregierung bieten kann. Somit degradiert Föderalismus von einer in der Verfassung proklamierten unabhängigen Regierungseinheit zu einem reinen Verwaltungsinstrument der Zentralregierung.

Damit die gesetzliche (de jure) Macht der Regionen auch real existiert, brauchen diese eigene Steuereinnahmen und eine Ausgabenautonomie. Eigene Steuern erheben zu dürfen bedeutet auch zwingend die Steuerbemessungsgrundlage und die Steuersätze mittels einer kollektiven Entscheidungsfindung (regionale Demokratie) in der Region bestimmen zu können. Ausgabenautonomie, bedeutet „frei“ bzw. im Einklang mit der Länderverfassung Ausgaben zum Wohle der Menschen in der Region zu tätigen. Diese Rechte müssen durch die Verfassung garantiert werden und haben weittragende Implikationen. Die Zentralregierung hat nun die Verantwortung für die Ausgaben, die ihre Zuständigkeiten auf der höchsten Regierungsebene betreffen. Dies ist entscheidend, denn in einem nicht-fiskalischen Föderalismus konnte die Zentralregierung die Ausgaben auf allen Ebenen zumindest beeinflussen ohne jedoch die Verantwortung für die Ausgaben auf Länderebenen tragen zu müssen.

Dadurch kam es zu einem klassischen externen Effekt, den wir nun mit einem Eingriff auf der Verfassungsebene, nämlich mit der Einführung des fiskalischen Föderalismus internalisiert haben.

Diese Reform hat sehr interessante Folgen: dadurch dass der Zentralregierung der Zugang zu einem großen Teil der Steuermittel versperrt ist, ist die Ausbeutung der Menschen nun schwieriger bzw. Investitionen in die Korruption weniger lohnenswert. Wenn politische Interessen nun über Investitionen in die Ausbeutung der Bürger investieren möchten, müssen sie nun nicht nur die Exekutive, die Legislative und die Judikative der Zentralregierung kontrollieren, sondern eben diese demokratische Institutionen auf beiden Regierungsebenen. Bei 15 Bundesländern sind es dementsprechend 16 Demokratien, deren Vertreter korrumpiert werden müssten. Das verteuert die Ausbeutung der Bürger drastisch. Und verteuert die Investitionen derart, dass sie kaum mehr von einer einzigen politischen Interessengruppierung bewältigt werden können. Aber natürlich besteht immer noch die Gefahr, dass in den verschiedenen Ländern unterschiedliche Interessen überproportionalen Einfluss ausüben. Dies kann grundsätzlich nie ausgeschlossen werden. Jedoch macht es der einsetzende Steuerwettbewerb innerhalb der Regionen, den korrupten Regionen schwer, gleich zu ziehen und Firmen und Haushalte anzuziehen, wenn sie relativ zu den „Nachbarn“ schlechter dastehen. Dies erhöht den Druck auf die Regierungen gegen die Korruption vorzugehen. Im Vergleich zur Situation ohne Fiskalföderalismus, fällt auf, dass dort kein entsprechender Anreiz vorzufinden war, was logisch ist, wenn man bedenkt, dass Regionalregierungen, Steuereinnahmen praktisch unabhängig von ihrer Leistung bekommen haben, während im Fiskalföderalismus die Regionen real Geld und Menschen anziehen und halten müssen um ihre Staatskassen füllen zu können.

Dadurch, dass Teilstaaten im Wettbewerb um den besten Standort für Individuen und den Kommerz stehen, kommt es zusätzlich zu einem Regulierungs- und Gesetzgebungswettbewerb. Die Geschichte zeigte an vielen Beispielen, wie Kleinstaatlichkeit und damit verbundene hohe Mobilität der Bürger zu einem enormen Kreativitätsschub und immer wieder zu Blütezeiten von Wissenschaft und Kunst geführt hatte. Aus der Notwendigkeit mobile Ressourcen anzuziehen, entsteht eine Art Systemlabor, in dem mit verschiedenen Regulierungen und Ordnungsrahmen experimentiert wird. Dadurch entstehen bessere menschenfreundlichere und Kommerzfreundlichere politische Systeme. Durch die regional unterschiedlichen institutionellen Rahmenbedingungen wachsen die einzelnen Regionen unterschiedlich schnell. Aus diesem Grund ist Wett-

tbewerbsföderalismus automatisch mit Ungleichheit verbunden, welche aber durch schnelleres Wachstum überkompensiert wird.

Nicht nur kann fiskalischer Föderalismus helfen, die Macht der Zentralregierung wirksam zu begrenzen und dadurch die demokratischen Institutionen zu erhalten. Eine ganz andere positive Folge rührt daher, dass einzelne Regionen den dort ansässigen Menschen, genau die öffentliche Güter anbieten können, die auf diese perfekt zugeschnitten sind. Natürlich besteht diese Möglichkeit theoretisch sogar im Verwaltungsföderalismus, doch meistens fehlen dort die Anreize dazu. Im fiskalischen Föderalismus bieten die Parteien in den Bundesländern ihren Wählern Programme an. Diese Programme enthalten unterschiedliche öffentliche Güter. Die Menschen wählen dann die öffentlichen Güter, die ihnen den größten Nutzen stiften und zahlen Preise (Steuern) für diese Leistungen ihres Staates. Und hier sind wir bereits beim nächsten sehr wichtigen Punkt angelangt, nämlich, dem hard-budget-constraint oder der Ausgeglichenheit des Haushaltes. Denn damit der Wettbewerb zwischen einzelnen Ländern gerecht stattfinden kann, bzw. die öffentlichen Güter in einem Bundesstaat nicht von den Steuerzahlern eines anderen Bundesstaates finanziert werden müssen, bedarf Fiskalföderalismus besonders wirksamer Beschränkungen der Steuerschulden auf Ebene der Länder. Staaten mit ausgeprägten Fiskalautonomien ihrer Bundesstaaten, wie die USA oder die Schweiz praktizieren konsequent die no-bail-out Klauseln, d.h. bankrotte Bundesländer werden von der Zentralregierung nicht „gerettet“. Die Staaten der Euro-Länder könnten legitim mit den USA oder der Schweizer Eidgenossenschaft verglichen werden. Der gravierendste Unterschied bestünde in der nicht Beachtung der no-bail-out Klausel in den Euro-Staaten.

Dass finanzielle Probleme einiger Bundesstaaten nicht auf die Ebene der Zentralregierungsebene verlagert werden dürfen ist offensichtlich (umgekehrt ist es genauso gefährlich, wenn die Bundesregierung ihre Schulden auf die Länder zu überwälzen versucht), bedeutet jedoch nicht, dass Schulden der Länder generell für etwas schlechtes per se erklärt werden sollen. Staatsschulden der Regionen sind ein wichtiges Merkmal ihrer Finanzautonomie und dadurch ein Zeichen der Seriosität des konstitutionellen Versprechens den Fiskalföderalismus auch in Zukunft beizubehalten. Während Demokratie als eine Garantie dessen interpretiert werden kann, dass die Bürger, auch in Zukunft noch, Kontrolle über die Regierung haben werden (z. B. indem sie diese abwählen können), kann Fiskalföderalismus als ein ebenfalls konstitutionelles Versprechen gesehen werden, nämlich darüber, dass



die konstitutionelle Vereinbarung über die kollektive Entscheidungsfindung nicht nur ein bloßes Versprechen ist, sondern nachhaltig und seriös beachtet wird. Alleine durch diese Garantie können wunderbare Prozesse in Gang gesetzt werden. Ein glaubwürdiges konstitutionelles Versprechen reduziert die Sorge über die Unbeständigkeit des politischen Systems bzw. eines Verfalls in die Diktatur. Dadurch, dass ein autokratisches Regime und dadurch auch Enteignungen nun unwahrscheinlicher werden, weil der gestärkte Föderalismus als eine Garantie der Beständigkeit der Rechtsstaatlichkeit und somit indirekt auch als eine Garantie für die Einhaltung der Verträge der Marktteilnehmer gesehen werden kann, glauben die Marktteilnehmer, dass ihr Eigentum nun sicherer ist. Erwartungen über Enteignungen in der Zukunft werden so in eine positive Richtung gelenkt. Es bedarf keiner Erklärung, welchen Einfluss dies auf die Finanzstabilität des Staates haben kann, die ja allgemein erwartungsgesteuert ist. Und führt auch dazu, dass sich der Planungshorizont der Marktteilnehmer weiter „nach hinten“ verschiebt, mit der Folge, dass mehr Investitionen profitabel werden und die Struktur der Investitionen in einer Ökonomie längerfristiger wird. Dies wird einen enormen positiven Effekt auf das langfristige Wirtschaftswachstum eines Staates als Ganzes haben.

Während in der Ukraine die meisten Oligarchen selbst ein Teil der Ausbeutungsmaschinerie waren, können die Reichen in einem politischen Umfeld mit einem funktionierenden Staat, wo eine Ausbeutung der Bürger schwer genug ist, zu den Stützen des Systems gehören. Generell ist ein politisches System ohne Elite schwer vorstellbar, die Frage ist vielmehr, wie sich die Elite zu der Masse der Bevölkerung verhält. Und eine fantastische Option für die regionale Elite, an der Entwicklung des (Bundes-)Staates zu partizipieren, ist die Emission von Wertpapieren durch das jeweilige Bundesland. Wenn die regionale Elite einen großen Teil der regionalen Staatsanleihen hält, dann kann auch davon ausgegangen werden, dass die Elite „ihre Vertreter“ in den meisten Parteien im regionalen Parlament haben werden. Wenn dies der Fall ist, dann wird es wahrscheinlich zu einer „unsichtbaren Koalition“ quer durch die Fraktionen kommen, die sich nachhaltig gegen einen Staatsbankrott aussprechen wird. In diesem Fall wird ein regionaler Staatsbankrott höchst unwahrscheinlich, was die Zinsen der Staatsanleihen extrem reduzieren würde. Dann hätte die Region Zugang zu großem Geld und großen Möglichkeiten. Ein handlungsfähiger Regionalstaat wäre geboren. Und die Mittelschicht hätte eine neue „Hauseigene“ Anlagemöglichkeit z.B. für die eigene Sparrente bekommen.

Natürlich verlangt fiskalischer Föderalismus, insbesondere ohne ein generelles Verbot der regionalen Staatsverschuldung, eine beträchtliche institutionelle Reife. Dies erklärt auch, warum es sehr schwierig ist, die Institutionen der Schweiz oder Norwegen auf andere Länder zu übertragen (generell sind Institutionen extrem persistent). Viele institutionelle Probleme müssen zunächst gelöst werden. Nicht nur bedarf es einer reifen Gesellschaft, deren Mitglieder in einer komplizierten durch den Markt geschaffenen, teilweise für den Außenbeobachter unsichtbaren Struktur, miteinander interagieren und deshalb persönliche und kooperative Partikularinteressen haben, die von ihren politischen Vertretern und Verbänden wahrgenommen werden. Auch bedarf es sehr komplizierter vertraglicher Basis, sowohl zwischen den Bundesstaaten als auch zwischen den einzelnen Bundesstaaten und der Zentralregierung. Diese sind notwendig, weil Fiskalföderalismus zunächst zu Problemen der allokativen Effizienz führen, Stabilisierungspolitik erschweren und die Ungleichheit zwischen Regionen fördern kann. Außerdem kann er zu externen Effekten führen, die durch komplizierte Ausgleichszahlungen internalisiert werden müssen. Diese Probleme müssen durch komplizierte Verhandlungen gelöst werden.

Die Probleme der allokativen Effizienz und die Behinderung der Stabilisierungspolitik kommen dadurch zustande, dass einzelne Teilstaaten, die im Wettbewerb zu einander stehen, entweder eigene Steuerbasen besitzen oder sich diese mit der Zentralregierung teilen müssen. Beides kann dazu führen, dass entweder der Zentralregierung die vorhandenen Steuerbasen nicht ausreichen um z.B. die antizyklische Politik oder eine Konsolidierung des Haushalts einzuleiten oder die Regierungen den Anreiz bekommen, die Steuersätze der Bemessungsgrundlagen, die am wenigsten geteilt werden am meisten zu erhöhen, was ebenfalls zu Ineffizienz führen muss. Außerdem kann es im schlimmsten Fall, zu dem so genannten State-corroding-federalism kommen, zu einem vertikalen (nicht horizontalen) Wettbewerb zwischen verschiedenen Regierungsebenen, z.B. wenn Bundesstaaten Wirtschaftssubjekten bei der Steuerflucht aus Steuern, die diese an andere Regierungsebenen zahlen sollten, Hilfe leisten. Wenn Fiskalföderalismus in der Praxis umgesetzt werden soll, müssen externe Effekte jeder Art, d.h. horizontal (zwischen den Provinzen) und vertikal (zwischen Provinzen und der Zentralregierung) möglichst reduziert werden, damit Verantwortung nicht verwischt wird und die institutionelle Kongruenz hergestellt werden kann.

Viele Staaten, unter anderem Jugoslawien und die ehemalige Supermacht Sowjetunion sind an ihrem Föderalismus gescheitert. Dies waren jedoch,

im Grunde genommen, unfreiwillige Bündnisse, und die regionalen Eliten haben bei der ersten Gelegenheit, mit einem gewissen Beifall der Bevölkerung in den Teilrepubliken, die Macht in die eigenen Hände genommen. Die Hauptlehre, die daraus gezogen werden kann, ist, dass Fiskalföderalismus auf Vorteilhaftigkeit basieren muss, sodass die öffentlichen Güter, die von der Zentralregierung bereitgestellt werden und die, die von den Bundesländern bereitgestellt werden und die Steuergelder, die für diese gezahlt werden, in einer solchen Relation stehen, die von der Mehrheit der Bevölkerung als akzeptabel gesehen und deshalb auch respektiert wird. Ein solcher Kompromiss kann nur mittels der demokratischen Entscheidungsfindung durch langjährige Verhandlungen und Kompromisse erzielt werden. Kommt es dagegen zur (gefühlten oder auch realen) Ausbeutung einer Region, wie dies z.B. in Katalonien der Fall ist, kann eine Abtrennung die Folge sein. Natürlich sind Regionen, die nicht nur geographische, sondern auch eine ethnische Identität besitzen, die ersten Kandidaten zur Abspaltung. Es wäre wohl nie zu einem Zerfall der Sowjetunion gekommen, wenn das Land anstatt der Volksrepubliken in geographische, nationalitätsunabhängige Einheiten gegliedert wäre.

Sobald fiskalischer Föderalismus jedoch funktioniert, schafft er ein höchst komplexes System kollektiver Interaktion, welches nicht nur die Freiheit jedes einzelnen Individuums schützt, sondern auch die Vielfalt und Kreativität fördert und die Qualität des Staates als Ganzes drastisch erhöht. Es lohnt sich also darüber nachzudenken, wie die Stärkung der regionalen Selbstbestimmung Impulse setzen kann, die das Leben der Menschen in vielen Staaten verbessern könnten.

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# ATTEMPTS TO EXPLAIN THE "ASIA'S MIRACLE" BY FACTOR THEORY. ROLE OF EDUCATIONAL EXPENSES

## ABSTRACT

*Objective:* to reveal the limits of human capital growth in developing and transitive economies.

*Method:* comparative analysis.

*Results:* hypothesis is formulated that educational expenses under the average per capita GDP lower than \$ 10 thousand cannot significantly influence the growth of educational index of the population and the growth of human capital.

*Scientific novelty:* the influence of GDP growth on investment level in science and education in developing countries is revealed; it is shown that reducing costs on education increases the Russia' lagging behind the West, and that with the per capita GDP existing in Russia and Third World countries the effect of education financing of less than 7% of GDP will be negligible.

*Practical value:* possibility to use the research results when investing capital into science and education in Russia.

**KEYWORDS:** human capital; educational expenses; education economy; economic growth.

## Introduction and results of research

Since 1990s, processes of liberalization of national markets have created conditions for deepened internationalization of world economy. These processes were accompanied at some places by rather high rate of production and consolidation of business structures. Governments of many developing countries, considering science and technics a prerequisite for economic growth and development, intended to create in their countries such economic systems in which knowledge would serve as the main factor of economic growth in future. They took certain measures in order to open their markets for foreign trade, for investment, started to develop infrastructures of science and technology sectors, expand the system of higher education, facilitate industrial research and advanced technical development of local innovation structures. Some countries of Asia achieved significant success in those efforts.

«Miracles of development» are one of the most fascinating phenomena in the framework of contemporary theories studying economic growth. However, success of some countries are still astonishing. For



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example, for the period of 1960–1990, average annual rate of production growth in Japan and South Korea made over 5% annually [1].

Objective of the present article is detecting limits of growth of human capital in developing and transitive economies demonstrated by case study. We consider that Paul Krugman has somewhat exaggerated the positive role of scientific and technical progress in the development of third world countries. We tend more to the conceptual idea of J. Stiglitz that economic growth in the third world and beyond has been triggered by widened export opportunities, which created the effect of «living at the expense of the neighbor». The study of daily life of developing societies conducted by W. Easterly in late 20th century found that for many third world countries, investment in education has zero or negative effect.

The ideas of W. Easterly, J. Stiglitz and other proponents of concepts of non-technological nature of economic systems transformation in the post-war world are very suitable for the analysis of the situation in Russia, since in our country, investment in science and education made during the whole Soviet period had not brought about the expected socially significant effect. In the situation with DPRK, we see that transfer of advanced technologies leads to negative consequences not only for an individual country, but also for the whole world.

Four main factors, in the opinion of P. Krugman, explain the amazing economic growth of South Korea [2]. First – the defining role of the government in the course of the reforms. Second – strategy of export focus of the national economy justified by the shortage of natural resources. Third – abundance of cheap

and at the same time well trained and disciplined workforce. Fourth – international climate favorable for trade. Due to the influence of these factors and changes started from 1962, South Korea has turned out of one of the poorest agricultural countries into a rapidly developing industrial economy. This leap got the name of the «economic miracle on the river Han» (the Han river flows in Seoul).

The reforms started and continued under auspices of South Korean government by means of state planning. The tasks and the course of the reforms were formulated in the first five-year plan of economic development for 1962–1966. It clearly stated the strategy of export-focused industrialization. Structural reorganization stipulated a decisive turn from agricultural economy to modern economy of processing industry and export trade. The five-year plan was focused on creating the basis of industrialization. Other plans were adopted as well, like, for example, the large-scale five-year program of tariffs reduction worked out in 1984. As a result, rate of tariff for the produced goods was reduced on average from 22,6% in 1983 to 6,2% in 1996.

Mechanization of agricultural production on the basis of industrialization, consolidation of farming enterprises significantly reduced the percentage of rural population in the country, facilitated their floating to cities. The percentage of rural dwellers in South Korea was reduced from 57% in 1962 to 11% in 1995. At the same time, manufacture of agricultural production increased. It doubled for 15 years, starting from 1962. In 1995, 4,7 mln tons of rice was produced.

When characterizing changes in the production industry and the whole economy, South Korean statistics employs the notion of «primary», «secondary», and «tertiary» sectors of economy. The primary include industries producing goods out of natural raw materials: agriculture, fishery, extraction industry. The secondary industries are all those making ready-made products (light and heavy industry, machinery manufacturing, electronics, etc.). The tertiary include all non-production sectors functioning on the basis of material production, including banking, science, education, management, culture, state service, trade, service industries, etc.

The general dynamics of the change of ratio of those industries in South Korean economy in the course of increasing processes of industrialization and modernization consisted in significant reduction of the share of the primary industries, growing role and effectiveness of processing secondary industries, and on that basis increasing number and percentage of the employed in state service, in trade, etc. Thus, the share of agriculture, fishery, and extraction industry in the

overall economic structure decreased from 34,8% in 1966 to 23,5% in 1976 and 6,6% in 1995. The percentage of the employed in those industries among all the employed decreased from 50,4% in 1970 to 34% in 1980, from 17,9% in 1990 to 12,5% in 1995.

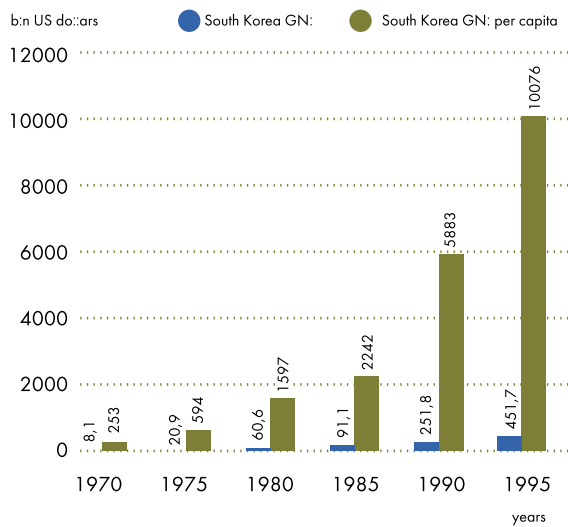
At the first stages of industrialization, the traditional for South Korea branches of light industry were modernized, especially textiles. The highest rate of development was demonstrated in heavy and chemical industry, machinery and equipment manufacturing, electronics, shipbuilding, automobile construction for home and foreign market. After 1990, South Korea rated 6th in the world in production of steel. The share of intensively developing processing industries in the economic pattern of the country increased from 20,5% in 1966 to 27,2% in 1995. The percentage of the employed in them among all the employed grew from 14,3% in 1970 to 22,5% in 1980 and 23,5% in 1995. The share of tertiary industries in the economic pattern of the country increased from 44,7% in 1966 to 66,2% in 1995. And the proportion of the employed in them among the working population grew from 35,3% in 1970 to 43,5% in 1980, from 54,5% in 1990 to 64,0% in 1995.

The increase in gross national income (GNI) of South Korea by five-year periods, in bln. US dollars, is shown in Fig. 1.

In foreign trade, the volume of South Korean export increased multifold – from 30 283 mln doll. in 1985 to 125 058 mln doll. in 1995. The first place is taken by export of machinery and transportation equipment – 11 384 mln doll. in 1985 and 65 646 mln doll. in 1995; second place, by manufactured goods, respectively 15 436 mln doll. and 40 750 mln doll.; third – chemical and similar products, respectively 936 mln doll. and 8 944 mln doll. Yet, import still exceeded export due to the shortage of natural resources. Thus, import of crude fuel, oil lubricants and associated materials made 7 363 mln doll. in 1985 and 19 103 mln doll. in 1995. And import of raw technical materials, except fuel – 3 875 mln doll. in 1985 and 11 713 mln doll. in 1995. Manufactured goods, machinery and transportation equipment, and other goods are also imported.

Foreign trade of South Korea is mostly focused at countries of Asia. In 1995, export in those countries made 61 565 mln doll., and import from them – 54 921 mln doll. Conversely, export in the Americas in 1995 reached 33 292 mln doll., and import from that region – 36 972 mln doll. With countries of Europe, import also exceeded export respectively 22 452 mln and 20 854 mln doll.

The generalized conclusion from the data of following the economic experience of 40 developing



**Fig. 1.**  
Ratio of gross national income of South Korea and gross national income of South Korea per capita

countries of Asia, Africa and Latin America is that economic development, besides the intensive employment of conventional factors of production, is accompanied by significant «transformations of order», i.e. transformations of institutional structures [1]. It is also recognized that a clear sign of economic development is fundamental change in sectoral structure of production known as «structural transformation» meaning increasing share of industrial production and corresponding decrease of the share of agriculture in full employment and GNI [3, 4].

In addition, of special interest is the dynamics of indicators characterizing development of intensive sectors. In the course of the decade (1996–2007), the rate of research and development (RD) in developed countries was lower than in developing countries. In USA, EU and Japan growth of expenses for RD fluctuated in the range of 5,4 to 5,8%, while in Singapore and Taiwan this indicator was around 9,5–10,5 and 12% in South Korea [5].

The influence of the global economic recession on innovation expenses, characterized by dramatic and sharp decline of this indicator in most countries in 2008–2009, appeared paradoxical in China where growth of expenses for RD made 28% – the highest indicator since 2000.

Relatively high rates of RD of Asian economic systems (except Japan) led to changes in the global distribution of the expected expenses for innovation. Compared to 1996, the region of North America (United States, Canada and Mexico) cut its share in

the world expenses for RD from 40 to 36% by 2009; the share of EU decreased from 31 to 24%. The share of Asia / the Pacific region increased from 24 to 35%, despite slow growth rate of Japan.

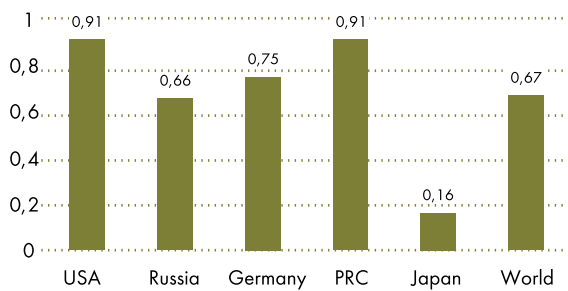
The preliminary conclusion is that do not have to possess «traditional» resources any more in order to have opportunities to incorporate into global economy. Opportunities become less «predictable» in terms of classical production functions and concepts of production structures. In this situation, economic success is more dependent on the flexible thinking of corporate managers and politicians: they have to find a suitable place and time where and when it is possible to incorporate into the dynamic system of production and selling chains.

The success secret of «Asian Tigers» is just the thing that they have managed to realize a rapid and effective switch from one development strategy to another. In response to the shift in the world demand, they were able to expand production of exported goods, basing it on knowledge and not on conventional resources.

However, it should be noted that the current state of world economy does not allow to copy the policy methods of Asian countries in most developing states due to liberalization of foreign trade under the conditions of globalization, limitations of International Monetary Fund in respect of currency policy, as well as rigid requirements of GATT – WTO. But this does not mean that Asian experience is of no use for others. The success example of Asian economies reveals the value of internal sources of growth in the purposeful, complicated and pragmatic state policy of economic development. In our opinion, in modern economic strategy of Russia, the experience of investment development of Asian countries will prove rather helpful.

On the background of all these data, the reasons behind the economic recession in USSR / Russia in late 20th – early 21st centuries are not clear enough. Despite their economic growth, the republics of the former USSR demonstrate a degenerative system of innovation economy and have practically no structures of knowledge economy, even as different from Singapore and Malaysia. We doubt, too, that high expenses for research and technological development in a number of countries of Asia are the source of economic growth there. Our doubts are based on statistical observation of the development of a number of economies, including Russian.

As shown in innovation economy study conducted by D.D.Timchishin in 2010, the correlational dependence between growth of investment in research efforts and increase in gross domestic product (GDP) in some countries is merely insignificant (Fig. 2).



**Fig. 2.**  
Correlational dependence between growth of GDP and expenses for research in GDP for five countries [6]

Low dependence between research and growth of GDP in Japan is an illustrative case indicating that investment in science and education is not of positive effect everywhere and at all times. A few years earlier, M. Gurgand detected small correlation dependence between time spent on education and growth of GDP in developed countries (coefficient was 0,03) [7].

Last decade, an opinion was stated that education can produce effect only if knowledge is provided under the conditions of the corresponding institutional environment [8]. Around the same time, Russian researchers G.G. Popov and T.V. Leus attempted to show dependence of economic growth and its quality on economic structure and level of development of civil society on the basis of mere empirical comparison [9]. Observations of these researchers found in most cases a strong influence of the raw-material orientation of the national economy on the level of development of democracy and institutes of civil society. It is interesting to compare the level of volume of investment in science and education in those states with the countries having no problems with democracy. Also of interest here is to have a look at the growth rate of GDP per capita.

Among the countries surviving through the acute «raw materials curse», according to G.G. Popov and T.V. Leus [9], are Saudi Arabia, Brunei, Iran, Libya, Algeria, Malaysia, Egypt. At the time of their article, revolutions in Libya and Egypt had not yet taken place. These «disadvantaged» countries, in the opinion of Popov and Leus, were contrasted by Thailand, Lebanon and Turkey as states with relatively successful development of institutes of civil society. We will compare investment in science and education for countries with different level of development of institutes of civil society.

Since statistical analysis of third world countries is difficult and rather disputable, we will take indicators of early 2000s, as general tendencies can hardly change even within one generation (see Table 1).

From the data in the table below, it is not obvious that the level of education of the population depends on the level of development of institutes of civil society and on specialization of economy. We can say that we detect a weak connection between the level of education, percentage of people having higher education, and GDP per capita in different countries. Most probably, marginal return on investment in education in third world countries and in non-European societies on the whole has boundaries of 30–40% coverage of population aged younger than 19.

The problem of low return on investment in education for non-European societies is evidently, for the most part in the level of their GDP on the whole. Malaysia spends 5,1% of its GDP on education, while Sweden – 6,7% (data as of early 2000s<sup>1</sup>), yet the latter has GDP per capita almost three times as much, that is why the effectiveness of educational expenses is higher.

As it is seen from the data in table 1, education index of population fluctuates insignificantly depending on the educational coverage of children and teenagers. This means that the sensitivity threshold for economy of a developing country to education funding reaches 40% of educational coverage of school-agers. Roughly speaking, when four out of ten children and teenagers study at school, if we add another one to them, we do not get the expected effect of GDP growth. Apparently, this conclusion is valid only in case if the state spends 4–6% of GDP for education.

In Russia, educational expenses in 2007 made 3,6% of GDP, in 1999 – 4,1%, when GDP per capita made about 10 th. US doll. in 2005. For 2013, educational expenses of the consolidated budget of Russian Federation are allotted in the amount of 4,5% with further lowering to 3,9% in 2014 [11]. This means that economic growth was not and is not able to facilitate development of human capital in Russia. Private capital and citizens of Russian Federation spend money for education in small proportions, and it is inexpensive on average around the country if we take into account tuition for extramural and evening higher education.

## Conclusions

In this way, the policy of educational expenses containment conducted since early 1990s only stretched and continues to stretch the lag of Russia behind the West, decreasing together with that marginal return on investment in education. If we imagine that more than half of children and teenagers

<sup>1</sup> Russian education in the context of international indicators: comparative report. – M.: Ministry of Education of Russian Federation, 2002

**Table 1.**

Basic indicators of development of education in selected countries (as of year 2000)\*

Indicator	Sweden	Turkey	Hungary	Egypt	Malaysia	Thailand	Indonesia
Educational coverage of population, % (aged 15–19)	86,4	28,4	81,1	31,4	46,5	60,2	38,5
Educational coverage of population, % (aged 20–29)	33,4	5,2	18,7	less than 5%	6	less than 5%	3
Education index	98	81	96	No data	No data	86	83
Percentage of people with higher education aged 24–55, %	21	10	17	No data	10	No data	2,1
GDP per capita, US dollars (as of year 2005)	31420	8420	16940	5904	9120	8380	3230

\*Source: compiled based on [10].

in Russia did not study, the effect would be the same as if they studied. This rule, valid for all non-European or non-Western societies (remember the famous rule of the Soviet school that a quarter or even a third of students most of the time merely «wear out the seat of their trousers»). The way out of this situation is in increasing educational expenses at least to the level of 7% of GDP.

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# CONSUMER MARKET FOR GOODS AND SERVICES AS A MIRROR OF SOCIAL AND ECONOMIC TRANSFORMATION: FROM A CENTRALIZED ECONOMY TO THE ACCESSION OF RUSSIA TO THE WORLD TRADE ORGANIZATION

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Reforming and development of the sphere of the consumer market for goods and services is one of the most important areas of socio-economic transformation in Russia, which began in the early 90-ies of the last century.

Despite the fact that under the centrally planned economy the consumer market for goods and services industry was a branch of commodity-money circulation regulated by the government, in fact it was characterized by lack of balance. Growth in production of consumer goods lagged behind the growth of cash income; a process of the growth of unsatisfied demand of the population was going on as well as the shortage of goods, queues, and speculation. This is evidenced by the ratio between the major economic indicators of the consumer market for the last pre-reform year. (Table 1).

The data show that the amount of money income exceeds the production of consumer goods and retail turnover.

Existing economic conditions hindered the development of market relations. This was due to the mono-subjective system of the economy, based on the use of the unified state property; excessive regulation of production and economic processes at the macro level, the restriction of economic freedoms management; orientation of the material and financial support of all economic structures to the centralized methods.

Over the past two decades, Russia has gone

## ABSTRACT

After having eliminated the disadvantages of centrally planned economy, the reforms being held in Russia have generated negative phenomena and factors that led to the backlog of Russia's economy from its pre-reform counterpart in several ways: by source and economic growth, labor productivity, wage levels, purchasing power and income differentiation, efficiency and quality of public administration, scope of criminalization and corruption in the economy. The relevance of these issues is enhanced due to Russia's WTO accession.

**KEYWORDS:** consumer market for goods and services, centralized economy, socio-economic transformation, economic and financial crisis.

**KEYWORDS:** human capital; educational expenses; education economy; economic growth.

through two stages of its development. In the first phase (in 1990s) the country was overcoming a large-scale macroeconomic crisis and creating economic and political institutions, without which modern society cannot function: private property, monetary system, fiscal system of federalism. In the second phase (2000–2003) the process of market economic institutions began: transformation of natural monopolies, development of legislation on insolvency (bankruptcy), tax and land laws, drafting a Federal Law "On goods and services of general economic interest and price formation on them" began and other laws. [2, pages 14–16].

Due to the fact that the consumer market for goods and services fulfils the function of meeting the solvent demand, coordination of interests of all participants in the economic process, including the state, the economic reforms in Russia and privatization of economic entities in trade and services began.



**Table 1.**

Basic economic indicators of the consumer market for goods and services in 1990 [1, page 11, 13, 23, 136]

Index	2011	2012	2013	2014	2015	2020
Added value, in trillion rubles	8,4	9,3	10,3	11,4	12,6	19,6
Sector's contribution to GDP,%	20,3%	20,4%	20,5%	20,4%	20,2%	19,3%
Total turnover, in trillion rubles	56,1	62,1	68,9	76,2	84,2	132,7
Retail sales, in trillion rubles	18,1	20,2	22,7	25,3	28,1	45,7
Volume index of retail trade turnover,% by 2009	111%	116%	124%	132%	140%	191%
The retail trade turnover per capita, in thousand rubles	127	142	159	176	196	314
Wholesale trade, in trillion rubles	38,0	41,9	46,2	50,9	56,1	86,9
Employment, in million people	12,9	12,9	12,9	12,9	12,8	13,5
Wages, in rubles a month	17,8	19,6	21,7	24,2	27,6	47,7
Tax payments, in billion rubles	831	940	1 066	1 204	1 358	2 349
Investments in fixed assets, in billion rubles	408	481	570	672	800	1 360
Performance of retail in thousand rubles per an employee	1 829	2 073	2 349	2 667	3 081	5 206
The size of modern food retail space, in million square meters	12,0	13,5	15,3	17,3	19,9	40,8
Provision with modern food retail space for 1000 people, in square meters	84	95	107	121	139	281
The share of modern retail formats,%	35%	39%	44%	48%	55%	70%
Networks share in retail,%	27%	31%	35%	40%	45%	65%
The share of small enterprises of the total number of trading enterprises,%	52%	48%	44%	40%	35%	22%
The share of retail trade turnover for a small business,%	65%	61%	56%	52%	45%	30%

**Table 2.**

Indicators of retail trade of the Republic of Tatarstan in 2005-2012 years

Indicator	2005	2006	2007	2008	2009	2010	2011	2012
Retail trade turnover, in billion rubles	161,4	213,9	275,1	369,3	393,9	454,4	534,9	650,7
Growth rate (in percentage to the previous year in comparable prices)	123,4	125,3	120,9	119,9	97,9	108,9	109,1	116,4
Retail trade turnover per capita, in thousand rubles	42,88	56,7	73,43	98,07	104,4	120	140,9	170,6

In accordance with the adoption on November 25, 1991 the Decree of the President of the Russian Federation "On the commercialization of trading enterprises in the Russian Soviet Federative Socialist Republic" trading companies and service industries

and catering were provided with full legal and economic independence by separating them from the government organizations on the right of legal entities; bidding, Departments of Workers' Supply (ORS), trusts and syndicates were abolished.

Thus, conditions for the formation of market relations based on the priority of the interests of businesses and their freedom of entrepreneurial activity were created.

Within a short period of time the centralized and regulated system of distribution of goods was replaced by free purchase and sale system. However, instead of diverse forms of ownership, the leading position in the consumer market for goods and services was taken by the private sector. In 2005, the share of private sector in the Republic of Tatarstan had 98.2% of retail sales; in 2010–99.6% [3, page 385].

In recent years a steady growth in the volume of goods and services as a whole and per capita in Russia and in the Republic of Tatarstan has emerged. However, due to the deep stratification of the population by income level the indicator of the "turnover of goods and services per capita" does not reflect the real socio-economic phenomena and processes.

Modern consumer market of the country and its regions differs relative saturation of goods and services. Thus, the consumer market of the Republic of Tatarstan is as follows (Table 2) [3, page 385].

Until 2007, the country has seen steady growth in retail turnover. But the global financial and economic crisis has made adjustments, and, since 2007, domestic trade turnover growth has slowed, and in 2009 altogether showed negative results.

Only since 2008 has began the declining of share of food products and increase of the share of non-food products in the commodity structure of retail trade. This process is a confirmation of the gradual improvement of living standards and the formation of market trends, products and services for countries with developed market economies (Table 3) [3, page 385].

The main reasons for the reduction of the rate of growth in retail turnover are the decline in industrial production, the reduction of investments in the economy, unemployment growth, decline of incomes of population and business activity of retail units. However, the main factors limiting business activity of trade organizations in the conditions of crisis have become the lack of solvent demand, lack of own funds and a high percentage of commercial loans.

Table 3 and Figure 1 show the commodity structure of retail trade turnover in recent years.

From the above data it is clear that the development of the consumer market for goods and services in the Republic of Tatarstan has been formed and the positive trends continue to strengthen. At first, the density of food products has increased in retail trade turnover. Commodity structure of retail trade turnover shows that in 2009 the proportion of non-food products decreased quite significantly. This reflects the level of consumer expectations, which was due to lower

incomes. However, since 2010 the share of non-food products returned to pre-crisis level and stabilized.

Secondly, the number of residents who prefer to shop at retail markets increased. Pre-crisis tendency was the rapid decrease in the proportion of sales of goods on food, merchandise and mixed markets: while in 2000 the figure was 38.1 per cent, over the last 10 years it has decreased by more than 4 times. However, since 2007 there has been a stabilization of market shares in the turnover, and even a slight increase in this indicator. (See Figure 2)

Dynamics of retail indicators suggests that, despite the decline in the volume of trade, the retail sector is fairly stable. The Republic of Tatarstan did not stop the introduction of new retail spaces, i.e., economic agents had a better ability to adapt and higher financial capabilities to help overcome the crisis. (see Figure 3)

Today in the Republic of Tatarstan there are about 16,000 retailers and 70 retail markets. Retail establishments of the republic have more than 11 percent of the employed population of Tatarstan, which are about 200 thousand people. In general, the provision of the Republic of Tatarstan with public area shopping facilities per thousand people reached 99, 8%.

In terms of turnover of retail trade and catering Tatarstan is among the top ten Russian regions.

In the structure of money income of the population of the Republic of Tatarstan high share of income allocated to the purchase of goods and services remains. (See Figure 4).

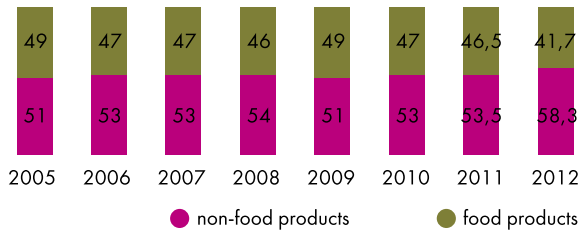
Analysis of the statistical data shows that the market for goods and services in the Republic of Tatarstan shows the following positive trends: in the structure of retail trade turnover the share of non-food products exceeds the share of food products, which indicates an increase in demand of the population, there has been a surplus of income over expenditure of the population. The positive dynamics of development of the consumer market of the Republic of Tatarstan is a confirmation of the recognition of the objective laws of the market.

However, the positive trend of development of the consumer market for goods and services is accompanied by a number of negative effects: excessive increase in the proportion of import in the structure of commodity resources exacerbated the problem of quality and food safety compliance; the volume of unorganized food sales, merchandise and mixed markets has increased. Negative trends in the consumer market of the post-reform Russia is a significant increase in the sale of alcoholic beverages, beer and tobacco products, as well as the decline in the share of public catering in

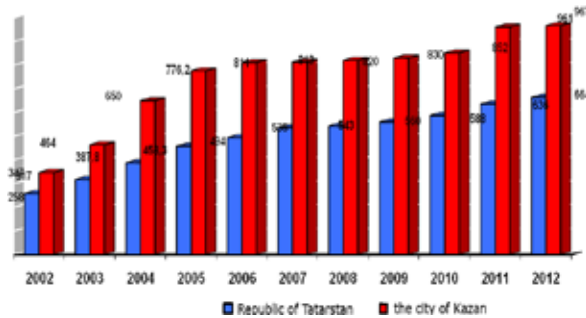
**Table 3**

Commodity structure of retail trade turnover (in%)

	1995	2000	2005	2006	2007	2008	2009	2010
All products including:	100	100	100	100	100	100	100	100
food and nonfood ones	54 46	56 44	49 51	47 53	47 53	46 54	49 51	47 53



**Fig. 1.** Marketable structure of retail trade turnover (in%)

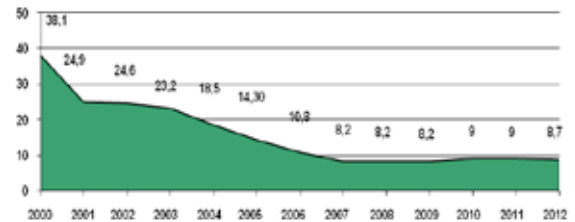


**Fig. 3.** Provision of retail space for 1000 residents in square meters

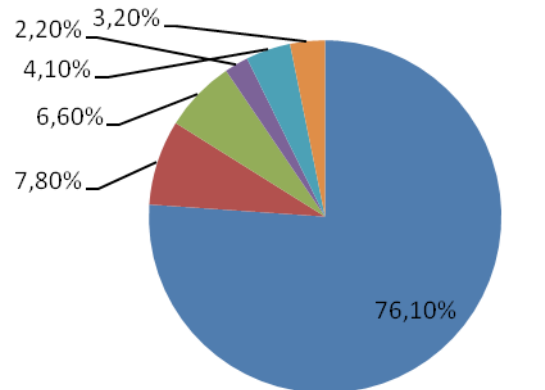
total retail turnover.

Thus, the being introduced reforms, on having eliminated the disadvantages of a centrally planned economy, have generated negative effects and constraints in the form of exorbitant taxes, granting freedom of trade and speculative business; expansion of criminal activity (racketeering, extortion, illegal production and economic transactions of state and commercial structures).

The share of imported goods in the structure of retail trade commodity resources has sharply increased. (It rose from 14 % in 1991. to 55% in 2004, but in 2010 this figure fell to 44%). Sources filling the market with goods are domestic industrial and agricultural production, as well as import goods. The status of these sources determines the completeness and nature

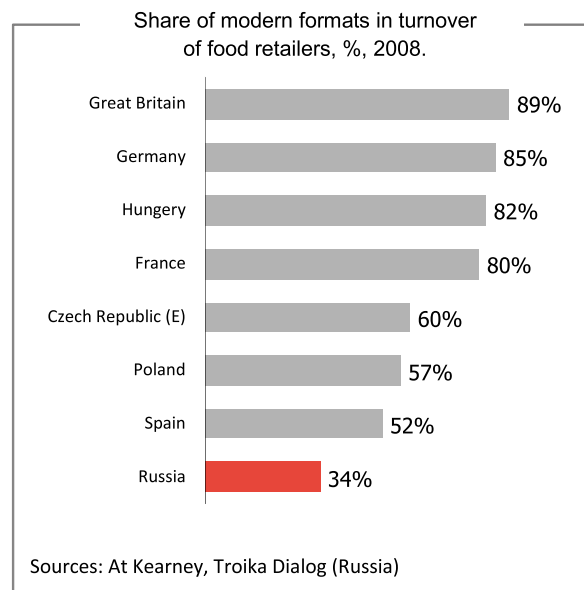
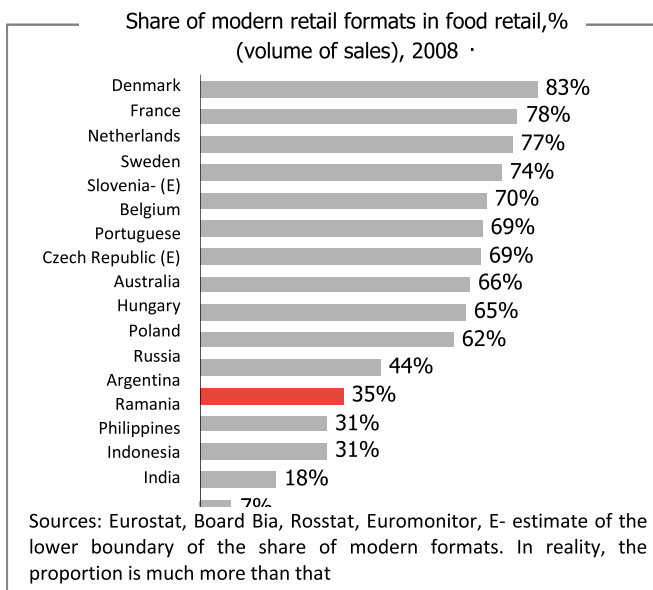


**Fig. 2.** Share of the markets in the retail trade turnover in the Republic of Tatarstan in 2000–2012, (in%)



- purchase of goods and services
- compulsory and various fees payments
- savings in deposits and securities
- purchase of currency
- purchase of real estate
- excess of cash income over expenditure

**Fig. 4.** The structure of money income use by the population of the Republic of Tatarstan in 2010



**Fig. 4.**  
The share of modern retail formats of turnover

Index	Russia	European Community	Gap, times
provision of modern retail space, m <sup>2</sup> /thousand people	73	More than 500	More than 7 times
share of modern formats	35	More than 70%	More than 2 times
Share of 5 largest companies (level of consolidation)	11%	More than 60%	6 and more times
Share of remote sales	1.8%	More than 5%	3 and more times

**Fig. 5.**  
Key figures of trade in Russia and other countries

of the proposal. If domestic production does not fully satisfy the demand due to insufficient development or decline, it leads to a shortage of goods or increases the share of imported goods. For the current state of the consumer market the decline of domestic production and increase of the share of imported goods in the structure of the product range is typical.

Extrusion of domestic goods from the domestic goods market by the imported goods is caused by two main reasons. First - it is a relatively low level of competitiveness of Russian goods on the following parameters: quality, packaging, advertising support. Secondly, a great influence has the attractiveness of imports as a source of high-quality goods that remained from the times of socialism and systematic supply of imported goods in the USSR.

However, to date, according to the Office of the Federal Service for Supervision of Consumer Rights Protection and Human Welfare in the Republic of Tatarstan the share of defects in the imported goods ranges between 30 to 80%. Until today, the next trend in export-import relations still exists: Russia exports its best products, and in return gets imported products of dubious quality.

Russia's economy concedes to its pre-reform analogue on a number of directions: by source and economic growth, labor productivity, wage levels, purchasing power and income differentiation, efficiency and quality of public administration, scope of criminalization and corruption in the economy. Liberal reforms have caused the most severe consequences in the social sphere, creating a two-layer economy, which

projects real life two dissimilar socio-economic image of Russia.

According to the deputy head of the Accounts Chamber of the Russian Federation V.P. Goregliad about 0.2% of Russia's population own 70 % of the national wealth; [6] According to the Federal State Statistics Service 12.8 % of the population are in extreme poverty with incomes below 3,500 rubles a month; 15.2% exist in poverty with incomes of up to 7,000 rubles; 20.2% fend in poverty with incomes of up to 15,000 rubles; 23.4% live above the poverty with a monthly income of up to 25,000 rubles; 10.7% live with average incomes and their incomes make up to the amount of 35,000 rubles. 11.8 % of the population receives over 35,000 rubles; 4.1 % of the population is considered wealthy; they receive up to 75,000 rubles. And only 2.5 % of the population has an income above 75,000 rubles. [5, page 9, 13]. Thus, 71.6 % of the population with varying success balances on the poverty line.

Therefore, currently Russia faces the goal of sustainable economic growth. Pushed to the forefront is the problem of flexibility and adaptability of the economic system, forming ability of economic agents, quickly and adequately responding to the changes occurring in the modern economy [7].

Especially it should be noted that during the reform the role of the consumer market in the economy of the country has increased. According to the Russian system of national accounts, the share of trade and catering industry in sectoral structure in gross value added at current prices rose from 6% in 1990 to 20.6% in 2005 and to 12.9% in 2010. In addition, during the reforms the number of employees in the consumer goods market increased from 7.8% in 1990 to 17.2% in 2004 and to 66.6% in 2010. In relation to the total average number of employees in the national economy.

All the above indicates that the relevance of this problem is amplified due to Russia's WTO accession. The Ministry of Commerce and Industry (Ministry of Industry) of Russia has developed and approved a sustainable regulatory and legal regulation in the sphere of trade in the Russian Federation for 2011–2015 years, and until 2020 on March 31, 2011 (№ 422).

According to this strategy, the retail in its development goes through several stages, each of which has its own characteristics and success factors, characterized by different growth rates, the nature and degree of competition, the quality and range of services provided. For example, the share of modern retail formats in total retail turnover varies widely from country to country. In most developed countries it exceeds 70%.

Modern format of a store is a supermarket, offering a wide assortment of goods and with a space

of more than 400 square meters, having one or more stalls of fresh products and offering additional services to customers in its territory (ATM, parking, café, toilets, pharmacy items for printing photos etc.). In world practice the following includes the modern formats: hypermarkets, supermarkets, convenience stores, "Cash & Carry", discounters.

According to the analysis of trade development in the Russian Federation and foreign countries we can identify the main indicators characterizing Russian retailers lag from developed countries.

- The criteria for effectiveness of the distribution system include:
- Number of modern retail space formats per 1,000 people It is this criterion that shows the geographical coverage of the distribution system for producers and physical availability of goods to consumers.
- The share of modern formats in turnover of the industry  
Modern formats, compared to traditional, differ by more efficient sales (turnover per m<sup>2</sup>), by lower unit costs, lower prices, higher quality of service and quality control of products. Therefore, this criterion describes the efficiency of the distribution system for manufacturers, affordability, quality of goods and services for consumers.
- The degree of consolidation of the industry (the share of the top 5 companies)

Consolidation allows you to implement critically important for the industry effects of scale in procurement, logistics, and mobilization of financial resources.

Only large companies are able to make large-scale investments in innovative technologies and methods of work, i.e., reduce costs and improve the efficiency of the commodity system.

Large companies have the opportunity to influence the supplier to lower prices, improve product quality, increase efficiency of business processes, which will increase the competitiveness of the economy as a whole, i.e., will be an important condition for implementing innovative development of the economy.

This criterion describes the efficiency of the distribution system for manufacturers, affordability, quality of goods and services for consumers, increases the competitiveness of the economy as a whole.

The main objectives of long-term strategy of development of domestic trade are:

- Improvement of regulation of the trade sector
- The development of trade infrastructure
- Promotion of the development of trade in small and remote communities

**Table 4.**  
Target Indicators of Strategy

Index	2008	2015	2020
Provision with modern format areas	73	120 - 150	200 – 300
The share of modern formats in turnover,%	35%	45% - 60%	60% - 80%
The TOP5 share in turnover (degree of consolidation),%	11%	25% - 30%	35% - 50%
Distance trade share,%	2%	3% - 4%	4% - 6%
Turnover of small businesses, trade, in trillion rubles	7,2	9-12	10-13
The level of competition in trade	Low (In most local markets there is a single major player)	Average (In most cities with a population over 500,000, 3 or more larger players are present *, there is competition for smaller settlements)	High (Almost in all towns with a population of >100 000 people 2 or more big players are present and there is competition for smaller settlements)

**Table 5**  
Forecast of implementation of the Strategy for innovative development of the economy at current prices

Index	2011	2012	2013	2014	2015	2020
Added value, in trillion rubles	8,4	9,3	10,3	11,4	12,6	19,6
Sector's contribution to GDP,%	20,3%	20,4%	20,5%	20,4%	20,2%	19,3%
Total turnover, in trillion rubles	56,1	62,1	68,9	76,2	84,2	132,7
Retail sales, in trillion rubles	18,1	20,2	22,7	25,3	28,1	45,7
Volume index of retail trade turnover,% by 2009	111%	116%	124%	132%	140%	191%
The retail trade turnover per capita, in thousand rubles	127	142	159	176	196	314
Wholesale trade, in trillion rubles	38,0	41,9	46,2	50,9	56,1	86,9
Employment, in million people	12,9	12,9	12,9	12,9	12,8	13,5
Wages, in rubles a month	17,8	19,6	21,7	24,2	27,6	47,7
Tax payments, in billion rubles	831	940	1 066	1 204	1 358	2 349
Investments in fixed assets, in billion rubles	408	481	570	672	800	1 360
Performance of retail in thousand rubles per an employee	1 829	2 073	2 349	2 667	3 081	5 206
The size of modern food retail space, in million square meters	12,0	13,5	15,3	17,3	19,9	40,8
Provision with modern food retail space for 1000 people, in square meters	84	95	107	121	139	281
The share of modern retail formats,%	35%	39%	44%	48%	55%	70%
Networks share in retail,%	27%	31%	35%	40%	45%	65%
The share of small enterprises of the total number of trading enterprises,%	52%	48%	44%	40%	35%	22%
The share of retail trade turnover for a small business,%	65%	61%	56%	52%	45%	30%

- Reduction of staffing deficit in trade, improvement of staff
- Provision of conditions for the development of competition
- Support in the development of small and medium businesses
- Encouraging the development of distance selling
- Improvement of traditional retail formats

Addressing these challenges will produce the following target indicators (see Table 4 and 5).

Share of the trade network, in general, in its turnover will reach 35–45% in 2015 and 55–65% by 2020 compared to 20% in 2008. Increase of the share of trade network, of modern trade formats in retail turnover will implement a multiplier effect on tax deductions, comprising a substantial increase transparency in the sector. In the aggregate, the Russian economy expects a significant growth of tax payments. Thus, the total contribution of internal trade in the outer gross domestic product by 2015 will be about 21% and 19% by 2020.

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