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# PROCEEDING OF THE INTERNATIONAL RESEARCH, EDUCATION & TRAINING CENTER

MULTIDISCIPLINARY JOURNAL REFEREED & REVIEWED JOURNAL









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PSYCHOLOGY, SOCIOLOGY, ANTHROPOLOGY, AND PHILOSOPHY SCIENCES **ECONOMIC, MANAGEMENT & MARKETING SCIENCES** AGRICULTURAL, ENVIRONMENTAL & NATURAL SCIENCES LEGAL, LEGISLATION AND POLITICAL SCIENCES

#### I never think of the future - it comes soon enough. Albert Einstein

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### **TABLE OF CONTENTS**

Samarin Egor, Simay Asian	
THE ANALYSIS OF PERFORMANCES OF SPORTSMEN ON THE WORLD MILITARY SAILING	
CHAMPIONSHIP	04
Nino Qoqiauri	
CONCEPTUAL BASIS OF DEVELOPMENT OF INNOVATIONS	08
Abdullayeva Samira, Tagieva Konul, Aliyeva Ulviyya	
DIE PLURALBILDUNG DER SUBSTANTIVE	18
Lamara Qoqiauri, Nino Qoqiauri	
MAIN TENDENCIES OF THE FURTHER DEVELOPMENT OF FINANCIAL MARKETS CRISIS	22
Prishchepa Tatyana, Kovach Roman	
RECOGNITION OF E-SPORTS AS «REAL» SPORT	35
Paladijtschuk Bogdan, Dakalenko Oleg	
DIE PSYCHOLOGISCHEN UND EMOTIONALEN VORBEREITUNGSBESONDERHEITEN FÜR	
UFERSPINNANGELSPORTLER ZUR WETTKAMPFSTÄTIGKEIT	37
Mahbuba Mammad Hasanova, Fagan Fizuli Aghayev	
POTENTIAL AND POSSIBILITIES OF WIDE APPLICATION OF AIRPONICS IN AZERBAIJAN	39

## THE ANALYSIS OF PERFORMANCES OF SPORTSMEN ON THE WORLD MILITARY SAILING CHAMPIONSHIP

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#### **РИДИТОННА**

В статье рассмотрены особенности организации и проведения Чемпионатов мира среди военнослужащих по парусному спорту (участники, лодки, очки), проанализированы результаты выступления украинских спортсменов.

Ключевые слова: парусный спорт, Чемпионат мира среди военнослужащих, программа, анализ, результаты.

#### Actuality

The International Military Sports Council (CISM) is one of the largest multidisciplinary organisations in the world. It organised various sporting events for the armed forces of 133 member countries. Soldiers, who may previously have met on the battle field, now meet in friendship on the sports playing field. This is in accordance with the philosophy and the ideals which were set in CISM's mission statement in 1998, signed by all the member countries.

Founded in 1948, CISM uses the playing field to unite the armed forces of nations across the globe. With the motto "Friendship through Sport," the ultimate goal of CISM is to contribute to world peace by uniting the armed forces through sport, as well as promoting solidarity among nations. CISM annually organises over twenty Military World Championships for different sports in which all member nations can take part. He organize continental and regional competitions and every four years the Military World Games and most recently Winter Games are held [2].

In Armed forces of Ukraine the Concept and the Program of preparation of sportsmen of Armed forces of Ukraine to Olympic Games, the world championships and the Europe, to the World games of military men is developed.

Results of performance and achievement of the Ukrainian military-sportsmen in the Military World Championships (MWC) and the Military World Games (MWG) are not presented enough in scientific articles [1, 3].

The detailed analysis of the reached results of the Ukrainian military sportsmen allows to reveal reserves which can be used for achievement of the maximum results in the further.

**The object of work** - carrying out of the retrospective analysis of performance Ukrainian military yachtsmen's on the the Military World Championships and the Military World Games.

**Tasks:** 1. To show features of the organization and carrying out of CISM sailing championships. 2.To analyse the results of ukrainian yachtsmen's performance at CISM sailing (2003-2016).

The results of research. In 2001 Canada hosted the first Military World Sailing Championships as Sailing became recognised as one of CISM's 26 World Sporting Disciplines. The current CISM programme includes 26 sports on world level: basketball, boxing, cross-country, cycling, equestrian, fencing, football, golf, handball, judo, marathon, modern pentathlon, orienteering, parachuting, sailing,shooting,ski, swimming, taekwondo, track & field, triathlon, volleyball, wrestling, aeronautical pentathlon, military pentathlon, naval pentathlon

Bahrain, Brazil, Denmark, France, India, Poland and Spain have since all hosted World Military Sailing Championships. Sailing was included as a sport in four of the 5 World Military Games that have scheduled by CISM. At the 1999 during the 2nd World Military Games in Croatia, sailing was not included as sport, and Denmark hosted a World Military Sailing Championship instead. [5].

There has been a World Military Sailing Championships every year since 1949 (with the exception of 15 years) making this sport one of the few sports that holds regular championships. Since 2000 there have been countries representing each of the continents at the championships and the number of countries participating has averaged at 20 per event. The least quantity of participants of competitions was marked in 2006 (15 countries) and in 2013 (14 countries). However the percentage parity of participants of a female gradually increases and makes 15-30 % now. In 2016, the largest number of participants in the competition - 198 athletes, of which 144 men and 54 women (Figure 1).



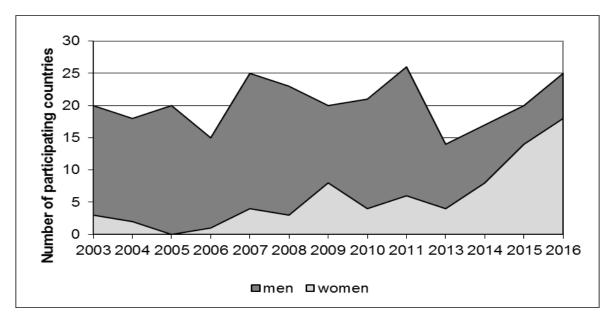


Figure 1. Gender parameters of participants of competitions on sailing

The World Military Games are organised every four years and the host nation shall determine whether sailing will be offered as one of the sports of the games.

The World Military Sailing Championships will normally be organised be organised on an annual basis. In the years that the World Military Games are scheduled the World Military Sailing Championships shall be part of the Games. Should the Games not include sailing, then every effort shall be made to schedule a World Military Sailing Championship elsewhere.

The CISM Board of Directors shall approve the calendar for the organisation of the World Military Sailing Championships during the CISM Annual General Assembly.

Boats for the competition must be a multi-crewed (two or more crew members) international or national class of dinghy/yacht. The class of boat must be made known at least one year prior to the championship.

The boat selected for the championship must be of a design and configuration in which previous experience is not a dominating factor in the overall performance. The boat will also be of a design and configuration in which extreme athleticism, individual crew weight and size are a minor factor in the overall performance. The intent is to ensure that any skilled crew can quickly learn about the boat and sail competitively. At last competitions by organizers following classes of yachts which enjoy the greatest popularity in the world have been offered: «J24», «Omega», «Dragon», «Finn», «Monark 606», «Pirate», «Snipe», «Laser» and other. So in 2011 year it was «HPE 25», in 2013 - « Yngling» in 2014 - «470», in 2015 - «Laser 2000», in 2016 - «J80». The sailing championships consist of twelve races. Five (5) races are required to constitute a regatta. Prizes receive the first three teams of Female Category and to the first three teams of Open Category. The Female Category be racing in both categories –but with different scoring [4].

Table 2

#### The results of yachtsmen's performance at CISM sailing (2014-2016)



13. BRN 14. CHI 15. IND 16 ESP 17. DEN 18.CAN 19. RSA 20. ARG

8. DEN 9. IND

#### 47th World Military Sailing Championship Qatar, Doha, 22-29 Nov 2014

MALE
1.Germany 2. Ukraine 3. Poland
4.IND 5.QAT 6.FIN 7.NOR 8.USA 9.INA 10 TUR
11.PAK 12.SRI 13.DEN 14.CAN 15.TUN

**FEMALE 1. France 2. Russia 3. Poland**4.UKR 5.GER 6.USA 7.INA

The analysis of results of performances yachtsmens in the championships show, that leaders are sportsmen of Russia, Brazil and Poland (Table 2). The worthy competitor to these commands last years became a command of Ukraine. Into structure of the Ukrainian combined team in different years entered such known yachtsmens as Olympic champion Evgen Braslavets (2003, 2009, 2011), prize-winners of Olympic games George Leonchuk (2009), Anna Kalinina (2011), Svetlana Matevusheva (2006), the world champion Timokhov Sergey (2009, 2011) [5].

In 2013 the Ukrainian sportsmen have conceded to Brazilians only one point and have taken the second place in a class of yachts "Yngling". In a command there were masters of sports Igor Tsvetkov (the participant of the championships of 2000 & 2003), Igor Severyanov and Andrey Yadrin. In competitions participated 5 female and 13 man's crews.

The 47th World Military Sailing championships was organized in Doha Sailing Club. The Boat was used in the CISM World Championships was 470 Class Boat. In 2014, Ukraine was represented by the men's crew of the yacht «470» Borys Shvets and Pavlo Matsyev who took second place. The female crew of Anna Kyselova and Anastasiya Krasko took the 4th place from seven countries.

The 2015 Military World Games, officially known as the 6th CISM Military World Games, was hosted in Mungyeong, South Korea. The Games were organized by the Ministry of National Defense Republic of Korea in accordance with CISM regulations and the rules of the International Sports Federations. The games is the largest military sports event ever held in South Korea, with approximately 8,700 athletes from 110 countries competing in 24 sports. In sailing, 72 male athletes from 20 countries and 42 female athletes from 14 countries were declared. Three regattas of Fleet Race (mixed and female) were held at Pohang Yeongildae Beach. Fleet Race mixed and Fleet Race female was race simultaneously [6].

In 2015, experienced yachtsmen Shvets Borys (from Kiev) and Matsuyev Pavlo (from Nikolaev) won gold medals in the yacht class «Laser 2000». The female crew of Gafenko Anastasiya and Krasko Anastasiya was the fifth. In 2016 on the boat «J80» sailors Borys Shvets, Pavlo Matsuyev, Igor Severyanov, Ivan Paveusyk, Valeriy Kudryashov took the 4th place [7].

During with 2003 for 2007 in a command of Ukraine on sailing recession was observed; since 2008 there was a distinct tendency to rise of sports results in the World Military Sailing Championship. It testifies to real opportunities of further positive dynamics of results Ukrainian yachtsmen (a double line) on the Military World Summer Games in Helsinki, Finland (2018) (Table 3).

Table 3
The comparative characteristic of results of performances of a combined team of Ukraine on the World Military
Sailing Championship (2000-2018)

Voor					Total Place				
Year	1	2	3	4	5	6	7	8	12
2000	1								
2003						1			
2006								1 w	
2007									<del>-1</del> ▶
2008			- 1w						
2009	1 mix		,						
2011	1 /								
2013		<b>†</b>							
2014		1 _		1w					
2015	1				1w				
2016				1					
2018		prognosis		-					

The venue 50th World Military Sailing Championship will be Helsinki, Finland. The International Military Sports Council (CISM) has entrusted the organization of the 50th World Military Sailing Championship to the Finnish Defence Forces.



The main organizer will be Finnish Navy. During this jubilee Championship also Finnish Defence Forces and Finnish Navy celebrates the 100 years anniversary. The championship will take place at Finnish Naval Academy on the outskirts of Helsinki, from 14 June to 21 June 2018. The event will be sailed in J80 class keelboats modified for Match Racing. The number of crew (including the skipper) shall be 4 or 5. All registered crew shall sail all races. The total weight of the crew, including the skipper, dressed in at least shorts and shirts shall not exceed 350 kg.

**Conclusion:** 1.Sailing is popular among military men all over the world. The program of the Championships and the Military World Games constantly changes. It is fixed the tendency to increase at competitions of quantity of women-participants.

2. Differences in the admission of sportsmen to competitions on sailing and requirements to classes of yachts are shown.

3.It is revealed, that the Ukrainian sportsmen are leaders in sailing, on a number with such countries as Brazil and Poland that have won the greatest quantity of medals of various advantage the World Military Sailing Championship.

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- 5. Skrypchenko I.T., Scherbina A.D. Performances of Ukrainian sportsmen on the World Military Sailing Championship. Наука образованию, производству, экономике: материалы XX(67) Регион. науч.-практ. конференции преподавателей, науч. сотрудников и аспирантов, Витебск, 12-13 марта 2015 г. : в 2 т. Витебск : ВГУ имени П. М. Машерова, 2015. Т. 1. С. 373-374.
- 2015 CISM Military World Games Kick Off in South Korea [Electronic resource] http://defenselodging.com/defense-news/2015-cism-military-world-games-kick-off-in-south-korea/
- 7. 49th CISM World Military Sailing Championship 2016[Electronic resource] http://pakcism.org.pk



#### CONCEPTUAL BASIS OF DEVELOPMENT OF INNOVATIONS

Nino Qoqiauri.

A doctoral student of Kutaisi University.

#### **ABSTRACT**

In the article main regulations of innovative theory are studied. It is explained its nature. The meaning of two aspects of innovation are highlighted ---- first, as results of commercialization and "development" process of results of science and technologies on received object (result, product, object); second, as on the received process of these results as necessary social (subject, object) relations for fulfilling the given process. On the basis of innovations of foreign countries' practice, the study and generalization of its main theories, it is formed main characteristics of innovationslong-term competitiveness, its determination, succession, systematization, novelty, that is the difference from the existing one, radicalism- great importance and speed, its mastering ability.

**Keywords:** innovative process, innovative strategy, innovative infrastructure, innovative model, innovative entrepreneurship, innovations, innovative politics, innovative characteristics.

#### 1. INTRODUCTION

It is the 21<sup>st</sup> century, the epoch of knowledge, development of intellectual capital and innovations. Today the main task of modern social- economic development is transfer to its innovative way, maximal usage of principally new factors of economic growth that is characteristic to post-industrial informative epoch. This task is very important for modern Georgia, where the necessity of transfer of economic development to innovative way requires activation of innovative business, first of all, economic subjects, suitable scientific-technical processing on enterprise level, effective investing politics and other conditions. It gives the possibility of reorganization of national economics on the basis of scientific production it becomes possible to overcome Georgia's big and traditionally increasing backwardness (in different spheres of economy compared to highly developed countries of the world).

Nowadays our country owns quite a good level of scientific- technical potential but because of economic crisis, in conditions of transitional period, the country importantly fell behind compared to the world level. Accordingly, new terms and categories are required to characterize innovative development of enterprise, new vision of theoretical genesis of innovations, also, in general, elaboration of innovative sphere, innovative business, its social nature, economic indicators and more importantly, correct innovative politics methodology of strategy.

Herewith, transfer to economic methods influencing on economics effectivity conditions the necessity of formation of new mechanism of production management in whole as well as on the point of economic development. Also, social aspects of innovative business, innovative and ventura manufacturing, state regulation of innovative business, innovative infrastructure, innovative management marketing organization, estimation of innovative business effectivity, innovative strategies, funding of innovations, management of innovative projects and the necessity of studying other problematic topics were highlighted.

My aim is to say something new about scientific research, studying and analyzing even the above mentioned topics of innovations and novelties. The mentioned problems are quite actual and timely, because as mentioned at the beginning of the article, "rescuing "or "dying" of the third millennium of development of civilization depends on prognosis of correct strategy of the hardest process of innovations and politics of its effective fulfillment.

The topic given in the work becomes more difficult because it is not only hard and serious, but because of its various kinds and character. We will from the beginning- from basis. What is innovation, how its development takes place in innovative business. We will explain main characteristics of innovations, we will review main aspects of formation of innovations, we will discuss sources of novelties and will try to explain cycling nature of development of innovations.

#### 2. STUDYING LEVEL

Interest towards the theory of innovations and problems of practice is increasing greatly. A lot of articles are written and much is spoken about development of innovative economics in the countries of transitional economics. Endless speech about the fact that post- communist states should truly transfer to the innovative model of economic development can be considered as necessary beginning condition of their sovereignty. The above mentioned idea is proved by

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numerous publications about innovative economics in neighboring countries and fulfillment of the idea of creating this manual as well.

The situation of modern innovative sphere proves serious oppositions in its functioning. Quite high scientific-technical potential of the country appeared to be on the edge of breakdown threat of economic reforms. In conditions of developing marketing economics innovative entrepreneurship is not only to strengthen success of marketing reforms but also to support the country's honorable place in the world economics and herewith, deserving life for its population. To reach this aim it is necessary the country's economics to be oriented on innovative direction of development.

For realization of innovative model of the country' economic development it is necessary to realize deeply the meaning of innovative entrepreneurship. It becomes necessary to form and develop the whole system and strategic aims, to transform its intellectual structure, to change scientific and experimental – inculcational organizations, mechanisms of relations with the consumers of their production, the necessity of adaptation towards the requirements of marketing economics of scientific – technical development.

On the way of formation of innovative entrepreneurship some problems slow down its development. They are: social-psychological, economic and lawful topics. The problem of creation, formation and development of innovative entrepreneurship is that the given processes should develop in short terms while there are not many conditions for its development.

#### 3. REVIEW OF LITERATURE

The authors consider to mention that innovations, innovative business and their influential problems on economic growth are discussed in fundamental works of:

J. Schumpeter, V. Anshin, E. Bruce, Ch. Litbert, E. Mansfield, E. Rogers, B. Sakhto, P. Drewker, D Johnson, I. lakovets, O. Golichenko, A. Kravets, V.Kim, B. Gorfinkel, N. Marenkov, B. Medinsky, E. Kargadan, F. Lemerle, B. Lundval, R. Nelson, S. Popper, C. Rouse and other famous scientists. About theoretical research of innovative business in Georgia important works were published in recent years \_ Chiqava L, 2006; Qoqiauri L, Qoqiauri N., 2015; Abralava A., Gvajaia I., Qutateladze R., 2009., Jolia G., Sekhniashvili D., 2010., Chalaganidze sh., 2000., Baratashvili E., Datashvili V., Nakaidze G., Qutateladze R., 2008., Baratashvili E., Nakaidze G., 2001. We have published scientific articles [ Gvajaia L., 2003; Gvajaia L., 2001; Maisuradze T., 2014; Ghavtadze G., Girgvliani S., 2015; Qoqiauri L., 2017; Baratashvili E., Tsimintia K., Zarandia J., 2008; Margvelashvili K., 2016] Though life is going fast, there are numerous theoretical and practical problems in innovative sphere to be solved . We will present some of their resumes.

**Schumpeter J.,** 1982. Theory of Economic Development. M.: Economica. P. 131. He mentioned the word innovations for the first time. In the book "Business Circles" Published in 1939 he defined innovation as a new combination of enterprise factors. It should be mentioned that he didn't give the meaning of innovation directly, but mentions that innovation makes a combination of factors and with the help of inculcation of novelties it is possible to overcome earlier situation. Schumpeter base new science innovatics.

**Porter M. E.., Stern S. 1999.** New Challenge to America's prosperity: Findings from the innovation index. Washington. P.3/ Innovation in the work is discussed as basis of long-term competitiveness, which supports economic progress. None of advanced economics can maintain high salaries, high standards of life and settle down on the world markets with standard production and standard methods. The authors define innovation as knowledge transformation in processes, products, service and includes much more than only science and technologies.

**Lemerle P., 1994.** Innovation Theory: Sources and Perspectives of Development. Translated from French, Kiev: arenapress, p. 119. In the monograph the author discusses different aspects of innovation – on the one hand, "commercialization" and "objectivization" process of science and technologies; on the other hand, as social(subject-object) relationship created for fulfilling the given process.

**Sakhto B., 1990.** Innovations as Means of economic Development. M, Progress. P. 43-44. The author discusses innovation as social technological-economical process, which creates excellent items by practical using of ideas and inventions; innovations which are oriented on profit give additional income while appearing on markets.

**Drucker P F., 1998.** The Discipline of Innovation // Harvard business review. Vol.76.N6.p.156-165. Together with studying essence of innovations and main characteristics. He mentions that purposeful, systematic innovation should begin with analysis of sources of possibilities. They may appear to be inside as well as outside the environment.



**Qoqiauri L., Qoqiauri N, 2015**. Innovations. Tb. GTU. P. 668. In the presented work the authors have highlighted the whole specter of forms, problems and topics of innovative economics. Among them the essence and tendencies of development of innovations and innovative business, innovative process are discussed in the last millennium; cycling nature of innovative development is described in order, great attention is paid to intellectual capital, as a factor of innovative development of economics, also basic topics of intellectual innovative business of an organization; instruments of state innovative politics and its prior directions are discussed in relevant order; An important place is given to the methodology of innovative management, dynamics of development of innovative management, development of innovative management organization on macro, mezzo and microeconomic levels; a great interest is shown to strategic role of innovations, generality of goods idea, elaborating innovative projects, planning an organization and methodology, also the whole complex of difficult and important topics.

**Qoqiauri L, Qoqiauri N., Gechbaia B.2018**. Innovative Economics. Tb. publ.house "Kalmosani" p. 650. The manual "Innovative Economics" presents preparing and receiving system oriented on support and development of formation of the whole country, enterprise and companies 'innovative – technical potential. It is discussed a large specter of creation, function and development of innovation economics. In the book innovative process is shown as basis of economic development. For the first time in economic space successively is given social aspects of innovation business; great attention is paid to the necessity of creation of intellectual resources and intellectual capital of enterprises and companies. The authors highlighted innovation entrepreneurship, problems of rising innovation business, main characteristics of clusters and their place in innovation business; completely is presented theoretical-methodological basis of innovation management and marketing, main topics of their organization on macro, mezzo and microeconomic levels, other main problems of innovative economics and the ways of their solution.

#### 4. MAIN PART

#### 4.1. Theoretical Genesis of Innovations.

Creation of effective system of innovation business requires relevant theoretical basis, etymological apparatus, management methodology and adequate instrumentarium. Elaboration of forms and ways of managing innovations effectively conditions clear formulation of their aims, subject, management tasks. So, at first we decided to define basic conceptual notion and categories of the above mentioned topics. It will give us a possibility to represent the contents of innovative process completely and accurately as an object of management.

The word "innovation" first appeared in the XVI century and meant bringing in some elements of one culture into another one. The term "innovation" means "novelties" in English but is accepted differently by different authors.

Comparatively common explanation of main regulations of innovative theory in the world practice is based on new combination of conception of Schumpeter's entrepreneurship factors. In his work "Theory of Economic Development" he showed that big stimulus for enterprise business is profit and is got by presenting new items produced with minimal expenses on market. By Schumpeter's classification the term "novelty" is discussed as:

- \_Usage of new material;
- Fulfillment of reorganization of entrepreneurship and its material-technical support;
- To master new markets of materials (Schumpeter J., 1982.

But still, what is innovation?

Nowadays the notion innovation is in fashion and is widely used in governing practice. At the beginning of the XX century it was quite a vague notion and was seldom used even by theoreticians. A scientist-economist who first mentioned this notion towards an organization was an Austrian scientist J. Schumpeter. In his book "Business Circles" which was published in 1939, he first defined innovation as a new combination of entrepreneurship factors. This is something new that didn't exist before. Obviously, there is not a vivid explanation of the term: "innovation" but it is said that "innovation makes a new combination of factors" and by inculcating novelties it is possible to overcome earlier situation." {Schumpeter J. A. 1961}.

Schumpeter created a new direction in the development of economic science. He laid the foundation of a new science –innovatics. Innovatics is a science which studies theoretical and practical aspects of scientific novelties i.e. processes of novelties formation and their expansion.

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In the 1960s L Perre's definition of innovation is very important- any change of economic organism in inner structure that transfers from the first position into another, P.Witfield's definition -a development of creative idea and its transformation into integrated products, process or system; P Drucker's formulation -special instrument, means, that gives a chance to entrepreneurs to use changes to carry out a new kind of business or service; K.Night- to calculate something new in connection with a branch or its environment, a special case of an enterprise organization process and so on.

WE consider that from the discussed explanations P.Drucker's definition is the most important- Maybe it is "late" in time but expresses Schumpeter's classical definition quite completely. Herewith, it highlights entrepreneurial factor in the growth of enterprise development effectivity.

#### 4.2. Problematics of Innovation Theory Terminology.

Besides the growth of foreign researchers' great attention and the number of scientific researches towards terminological problematics of innovation theory it is not time to make conclusions about vivid advantages or priorities of any conception; also to make decisive ideas about formation of categorical apparatus in innovative sphere, because comparatively narrow group of specialists substantiate the second, quite convincing version of innovation, namely, the main category of innovation theory is discussed from the position of concrete kinds of technique, technologies, creating and inculcating other new productions. Herewith, in some cases scientific-technological and innovative aspects of entrepreneurship are identified, which is not always correct.

Definition of innovation with the given point is very common because the basis put in it-the principle of separating from scientific-technological positions of innovation- reflects their meaning and aims in social development. Also, it supports to carry out manufacturing processes on micro and macro level. In these frames it is comparatively easy and clear to search quantitative and qualitative parameters of innovations, to define economical and effective kinds of their practical usage. The main difficulty of enlarging the area of this practical inculcation is lack of common idea of their service about "innovation" and its entrepreneurship. The essence of discussion may be formed as following: Is innovation result or process?

The difficulty is the following: besides wide practical usage of activity in quite different spheres innovation plays the role of different category. So we think that before realizing comparatively common views it is necessary to state what kind of qualities are the basis of terminological system of "innovation politics" and "innovation business". Let's discuss innovations in two aspects - on the one hand, as a subject received as a result of commercialization and objectivization process of scientific and technologies result ( result, product, object); and on the other hand as a process received from the results, as social (subject-object) relationship for carrying out the given process.

According to the first position the essence "innovation" expands on a new product and service, the ways of their production, organizational, financial, scientific-technological and the novelties of other spheres; it also includes other products that support economy of expenses or such kinds of economic conditions [Lemerle P., 1994].

Followers of processional explanation discuss innovations as new inculcating way of processes of importantly modernized entrepreneurship [Harman A., 2000]. R. Johnson considers innovations as creating new in different firms' activities or perfecting old processes and products.

Herewith, in all above discussed cases innovation expresses new initiative and requires deep changes in compare with earlier directions of development.

#### 4.3. Innovations as main approaches of definition of the main category of innovative theory.

In foreign countries' practice the main approaches of the main category of innovative theory may be grouped in the following way:





Main approaches of the term "innovations" in foreign countries' researches.

Definition of "innovation"	the	term	Schumpeter	lapierre	Witfield	Drucker	knight	Demerly	Johnson	Harman	Sakhto
Any change			+	+	+		+				
result								+			
process									+	+	+
means						+					

Source: Qoqiauri L., Qoqiauri N. 2015 Innovations. P.4.

Methodological research of the problems of innovations management, elaboration of supporting topics of practical requirements in categorical apparatus of this sphere condition scientists' great interest and actuality towards them.

Most scientists interested in the mentioned problems in former post- communist countries agree on one of them. Let's discuss some of their views.

- "Innovations, as purposeful changes deliberately input in reproducing process in order to form requirements of new society or satisfy the existed one better." (L Bliakhman);
- "Any kind of different technological, organizational, economical and managerial changes input in active practice of the given enterprise". ( A. Brewton);
- "Gathering novelties on stages of technologies, technique, mastering of their creation, diffusion, management." (A. Pregogine).
- As a process "Complex process of creating, expending and using new practical means to satisfy people's requirements better" ( V.Lapine)
- "Creating process of new technological product and its extension in the whole economics, and in a long-term perspective it is principle source of welfare" (**G** .**Keeperman**).
- As a result –"A result of creativity which is directed to elaborate, create and spread a new competitive kind of production on production world market; also inculcation of new organizational forms and methods, new economic structures of economic market conditions and so on." (G. Kiperman)
- "Getting an idea, practice or product- as novelties" (N. Moiseva, I. Anyskin")

As a result of the role and meaning of innovations, in the role of effective developing factor, economists think that innovation is a complicated system with the help of which ideas and inventions will become commercial reality (goods) (**Muravyev**). The latter is close to Drucker's opinion, namely, innovation is not only the aim of development but a means as well.

Besides sharp differences of varieties, forms and contents of the term "innovations" definition, we think that there are some priors of their creation.

It is interesting to mention one moment. Our specific interpretation of innovations category gives definite advantage and additional possibilities to researchers. As it is commonly known, Latin word "innovate" (means renew, improve) is the basis of the English word "innovation".

In Georgian language the meaning of this word is "innovation", "to create new", "novelty". So, in native economic researches three definitions are used instead of one and two of them have different meanings. The mentioned situation causes divarication of the main category of innovative theory. On the other hand, the very terminological differences give possibility to regulate the existed views. And it is the way to solve methodological problems, mechanism of regulation. Novelty is the result of innovation business, "to create new" is the process of inculcating novelty in economy practice. In addition, synonyms: "technique", "new technique," "new production," "scientific production" and so on are associated with the term innovations.

Practice shows that "innovation" and "to create new" are synonyms and in different situations are used to mean relevant processes and events. Herewith, a different idea is put in the notion "novelty". A lot of authors still use the synonyms of the given term - "to create new" and "novelty" while defining innovation as a result of creative process. Representatives



of the first direction of scientific idea don't share such opinion (they understand innovation as any change). On the contrary, they consider "innovation" and "to create new" as synonyms and novelty- the result of these two. The latter position is rational as it specifies main categories of innovation theory.

Thus, let's sum up the above mentioned discussion. **Novelty is concrete result of inculcating new scientific idea.** It has a model form of technique, a kind of constructional material for producing some production and so on. So, it is different from the existed one and conditions growth of producing effectivity. Novelty can be presented as scientific, technical or other forms of documentation. Precisely, it is information that describes technological, informational, managerial or other processes and events of non-material character.

Novelty and creation of new is the result of innovation business which improves industrial basis and accordingly, supports the growth of social development level.

Thus, in local and foreign economic literature we come across different explanations of the notions "novelty", to create new" and "innovation".

Novelty of consumer character is an important mark of innovation, create new. Innovations are formed while using the results of scientific-researching and experimental-constructive works that is directed to perfect industrial process, economic, lawful and social relations in science, culture, education and other spheres of social activity, "creating new" is goods which can't be used without suitable knowledge, professional preparation and specialists being informed. The specific mark of these goods is ability of unlimited growth of income (multiplication). In this case creating new turns out to be as intellectual goods, invention, information, know-how and so on, which can be protected lawfully and be sold as many times as a consumer can be found.

Analyzing scientist-economists' different opinions of definitions about notions, innovation, creating new and novelties, we can make the following conclusion:

- 1) Innovation is "science –technique- industry", the last creative result of a stage, which is objectivized in a created product and it has the highest consumer features in the given period of time;
- 2) Novelty (novation) it is technological and organizational- managerial decision of tasks without time.

So, innovation should have social and practical recognition, i.e. it should be used in any sphere of human activity to get commercial profit.

One of the important conditions of carrying out innovations in events chain "science-technique- production" is investment of its every circle, i.e. carrying out operations related to monetary funds, carrying out investment projects that will support to get material profit by an enterprise (organization) during definite period of time. In commercial practice it is common to differ the following types of such investments:

- \_Investments in physical actives;
- -- Investments in financial actives;
- ---Investments in non-material (invisible) actives. That is, as we call it, intellectual values. {Qoqiauri L., 2009}.

Industrial buildings and constructions are meant in physical actives, also any kinds of machines and equipment, technologies.

Financial(monetary) actives- is a right to get monetary sources from a physical and juridical people, e.g. deposits in a bank, bonds, shares, and so on.

Non- material (invisible)or intellectual actives mean values got by enterprises and organizations as a result of carrying out programs of re-preparing staff and qualification growth, technical decisions, creating and elaborating goods marks, industrial sources, buying in licenses.

Investments in securities are called portfolio investments and investments in physical actives are often called investments in real actives. So, investments are one of the most necessary conditions of maintaining innovative enterprise vitality.

#### 4.4 Main Characteristics of Innovations

Innovations are not spontaneous and elemental changes because innovations have the same character and always mean to get definite results. They should be oriented on definite, clear and accurate aim and should be carried out successively and systematically.

In other words, innovations are purposeful and planned transformations. They are always presented as a kind of some project and appear in large, extended form.



If we generalize these characteristics of innovations, we get its clear explanation. Innovation is purposeful and planned transformations, which quite quickly condition to create such configurations (included elements) that did not exist in its activity before. There are three main characteristics of innovation:

- Directions (purposefulness, consequentiality and systematic nature).
- Novelty (difference from early existed).
- Radicalism (great importance and speed.

Nowadays a lot of people agree on the opinion that industrial subjects who subordinate their business on successful orientation. Simply, they are made to carry out innovations constantly. Herewith, in Drucker's opinion, "purposeful, systematical innovation should start with analysis of new possibilities" (Drucker, P. F., 1998). They may appear to be inner and outer environment. If inner possibilities mean unexpected events, unsuitability, technological requirements, technical or basic changes, outer possibilities are created by social and intellectual environment, changes in thinking and new knowledge. But with formed limits innovation sources are very developed, also the question about what their nature is and how they form new possibilities of organizations is vague.

Searchers face various questions: what is the basis of innovations? How were they originated? How is the idea of novelty born which an enterprise should inculcate?

#### 4.5. Originality of Innovations.

We can separate three main forms of innovations originality:

- 1. Technological- when novelty is experimental-constructive, engineering, social-organizational or direct result of other kinds of processes;
- Functional- directly oriented on those wishes who want to become consumers of novelties (clients, partners, firm staff, etc)
- 3. Combined-which means creation of novelties with close collaboration with its potential consumers and the latter ones not only appreciate novelty but in fact participate in creating new ideas.

Technological originality of novelties means that it is formed on the basis of knowledge and operations, which have ability to solve any industrial, organizational or technical problem. In other words, some technological possibility is obvious and it will be found out later in what direction it can be used. Herewith, it is natural that practically, potential consumer's idea s, opinions and preference will not be taken into consideration. It is not always profitable fir an organization, but instead, when such novelty "finds" a real consumer, an organization has already found large market that enables to be firmly ahead of its competitors.

A clear example is creation of integral schemes. They have not been created on the basis of market requirements. Creators of complicated electronic systems faced a task: to connect effectively working equipment to transistors but iy meant reduction of working quality of a system and reliability because of multiplicity of wirings when the use of silicon (cremnium) was offered not only for transistors but for other components of electric system. It removed the topic about connecting transistors from agenda and electronic schemes turned out to be unified (integral), in spite of separating from market realia, these schemes were immediately used in the spheres that were far from the first used spheres and conditions to create numerous new branches.

And still, that has pure technological originality, cannot be understood by a customer or neglect it. It was not known in advance how it would suit a customer's requirement,

Differently from technological, functional novelty is formed in close interrelationship with those ones who are interested to use it. It comes from concrete requirements and appears to be a possibility to satisfy this requirement. In most cases the stimulus of creating such novelty is to solve specific problem that later spreads over new spheres of activity in general and standard way.

Functional approach is common for most successful firms but some of them including entrepreneurs of technically complicated workplace, don't do anything until they find a client who is ready to co-operate with the latter one in the sphere of carrying out experimental works. For example, American instrument- making corporation "Alen Bredly" experiments its produced robotechnique not itself but in enterprises of those companies which are going to use it. Herewith, feedback support will be reached before its serial production. Sometimes it happens so that novelty is worked by influence of one of the leading client.



But in spite of eminent practical nature and comparatively fewer expenses, functional novelties are not of universal character. Pure functional attitudes towards innovations separates an enterprise from advanced edges of technological progress and when it reaches short-term effectivity in its business, it loses competitiveness in long-term perspective and limits possibilities of solving created problems (technical arsenal).

In the last decade of the last century 60 % were expunged from the list of 500 best firms of the journal "Fortune". It is somehow similar to extinct process of dinosaurs. The strongest leading companies unnaturally quickly gave in their positions in competitive battle and these positions were held by so-called "predators" who appeared in the world from nearly "nowhere".

#### What really happened?

Nothing special. Old leaders were mainly oriented on competitiveness. They had great power and influence but reacted more upon other sellers' actions than played their own part. Their vision stopped at horizon, they couldn't see anything beyond it, but good knowledge of existed markets can't make compensation of vague vision about creating novelties but in dynamic, turbulent universe prediction of new possibility is more important than using the existed one. So, former leaders could not resist future exam. While fighting with competitors they forgot those clients who did not want to get pleasure from quality service of old production and searched new ones. "Circle" competitiveness (in unchangeable delivery conditions) tied them to "imitative" market where sellers resemble with each other, "copy" goods and only those who have ability to refuse "circle" competitiveness can advance and leave competitors behind business.

As W. Kim and R. Mauborgne fairly noted \_ "In the universe where industrial conditions don't define corporative welfare any more, as companies can overcome these conditions by using systematic usage of innovations, a firm doesn't have to fight for its own share for specific requirement – it can create new requirement" [Kim W.c., Mauborgne R., 1999]. For such innovative enterprise it is easily possible to be in the head of rating. It refers even to those firms which fought for survival in the past and had nearly no chance to succeed. That's why pure functional novelties are maybe more viable in compare with technological ones especially in such epoch in which in economic subject's life changes happen in colossal speed and reaction on them is impossible without orientation on knowledge and engineering treatment.

It is not surprising that combined approach towards innovations are becoming more extended. It means that technological idea of novelty which we find perspective doesn't subordinate to treatment at once, but it first opposes to potential beneficiaries' demands, in other words, until it turns into concrete model of novelty to inform target audience or some part of it and join in finding main parameters of the model.

There I no problem if novelty will be created together with active consumers in process. In this case in working environment those indicators will be formed which novelty should answer.

However, some difficulty appears in this situation. The mentioned consumers' advantages may not fully match the demands of the remaining part of target "audience", but if their interaction conditions are not unique, novelty may still spread over the whole target audience, over the whole segment of consumers by specific modification of indications.

But what if there are not such partners together with whom novelty is created? How can we construct a model based on perspective technological idea? Especially when possible consumers cannot always realize in advance what novelties can bring to them. Novelty creating idea is not always direct answer to a consumer's demand.

In order to model this novelty it is necessary to construct the line (chain, and sometimes quite long) which connects it to a consumer' demand. Herewith, a consumer doesn't often have the beginning requirement which is connected to the first idea of creating novelty. It becomes necessary to reveal hidden demands or if necessary, to challenge them artificially, i.e. we should make potential consumers have a willing on a new product with us. While establishing feedback with them technologically or materially, it may happen to define meanings of main parameters of novelty model and then to work out technological idea so that the received result to be put in the frames of these meanings.

#### 4.6. Sources of Novelties.

No matter what the originality of novelties is –technological, fundamental or combined- They should be taken from somewhere; obviously, main supporters of new ideas are subdivisions of private scientific-research and experimental-constructive works existed in an enterprise. Firstly, only large enterprises have these subdivisions. Smaller enterprises can't spend important sources on independent researches and treatment, and second, even strong and rich firms have to limit their scientific researches with themes, creative staff and working resources, but their interest about innovations go beyond the frames of the given theme. So, naturally it becomes necessary to search additional sources of novelties which will be able to compensate limit and fault of inner searching programs.



Although in the modern world new and perspective information is not accessible for everyone. In most cases it is aimed not for free circulation but is discussed as the biggest advantage of success in the battle with competitors and in order to use it, it is necessary to strengthen your own rights by means of organizational and financial events.

Comparatively easier and cheaper way to access novelties is to place orders on them in offices or high schools. For example, even in the 70-80s of the last century solid and long-term agreement of research and treatment were made with sponsors in return for receiving practically oriented theoretical results. For example, a ten –year long agreement between chemistry firm "Monsanto" and Harvard medical school considered subsidy of 23 million dollars and later, between Massachusetts Technological Institute and corporation "Eksons" considered 8 million dollars funding in the same term.

Besides, special organizations have been set up since 80s of the last century which aim to unit willing of other business organizations to support active research programs. For example, under the aegis of American semi-conductor industrial association, a cooperation was set up which chose for its business place such companies as "Sygnetics", "Fairchild", "Motorola," etc. and supported works related to integral schemes.

The mentioned organization carried out not only choice and funding of perspective searching projects but also it spread the "received" scientific-technical information among sponsor corporations.

Creating joint centers is a higher stage of scientific organizations integration with innovative organizations which are purposeful to solve industrially oriented fundamental researches (tasks).

Such centers get great support from the government. Herewith not only big but also middle and small businesses join them in searching innovations and in this way they keep up with scientific-technical progress. It gives financial stability to joint centers and gives them a chance to enlarge their sizes.

Massachusetts Technological institute with participation of USA national scientific fund set up Polymer searches center, which studies opposite features of polyester hit. After five years subsidies from business organization reached 500 000 dollars per year. After this it was possible to reject financial support from scientific national fund. Searches received from interested corporations were quite enough to carry out arranged works.

Sometimes initiation comes from the very scientific department. In Stanford University integral systems center was funded independently the function of which was creation of "vertical Structures" – beginning from components up to equipment. Immediately 17 corporations were ready to fund it. They gave 250 000 dollars to the center fund during the first three years and at the same time funded Pentagon searching projects of applied character by 8 million dollars.

But the most interesting fat is that business organizations were interested not only in applied searches and experimental-constructive works but also fundamental knowledge and activity take part in searching ways and means of their commercialization. Usually scientific departments with the help of different scientific research fund create special corporations which are determined to put commercial potential of their discoveries in leading spheres (e.g. in biotechnologies, microeconomics). Then those big companies join the corporation which are interested in future results (namely by purchasing shares). In this way they support to develop theoretical researches and in this way contribute in practical usage of fundamental researches.

#### 4.7. Conclusion.

We know from the world experience that in the twentieth century only those countries reached high results whose governments carried out purposeful long-term innovation politics. National economics experience rising and falling periods. But the last growth during decades may be the result of investments in scientific0technical knowledge. In those countries where only rhetorical speeches were made about progress, backwardness was growing (many countries of Africa) among them. Because of high rate of development 21 st century will be comparatively stricter to retarded countries than in the 20th century. Everyone will have less time to correct mistakes.

Complex analysis of elaborating and realization mechanisms of state innovation politics shows that among the elements of this mechanism on state level main attention is paid to three elements- management, financial support and innovative law, organizational element is considered to be comparatively minor.

Nowadays when Georgian economics is in such difficult situation, it's very important to advance and develop innovation sphere. This potential really exists in Georgia and developed countries already use it well and quite active "minds transfer" to foreign countries are taking place.



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#### DIE PLURALBILDUNG DER SUBSTANTIVE

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#### **ABSRTAKTE**

Die meisten deutschen Substantive erhalten im Plural ein grammatisches Merkmal der Mehrzahl – das Pluralsuffix, welches in allen Kasusformen des Substantivs auftritt. Einige Substantive haben eine doppelte Pluralform (ohne Bedeutungsunterschied). Einige Substantive haben eine doppelte Pluralform (ohne Bedeutungsunterschied) . Das sind: der Fleck – die Flecke, die Stiefel – die Stiefel.

Schlüsselwörter: Kasuse, Pluralbildung, Fremdwörter, typisch, Schwache Deklination, Wandspiegel, Starke Deklination.

#### **ABSTRACT**

Most German nouns in the plural receive a grammatical feature of the plural - the plural suffix, which occurs in all case forms of the noun. Some nouns have a double plural form (without meaning). Some nouns have a double plural form (without meaning). These are: the stain - the stains, the boots - the boots.

Key words: Kasuse, Plural Formation, Foreign Words, Typical, Weak Declination, Wall Mirror, Strong Declination.

#### **РЕЗЮМЕ**

Большинство немецких (существительных) множественных грамматических признаков множественного числа суффикса множественного числа, которое встречается во всех случаях. Некоторые существительные имеют двойную множественную форму (без значения). Некоторые существительные имеют двойную множественную форму (без значения). Это: пятно - пятна, сапоги - сапоги.

Ключевые слова: Касусе, множественная формация, иностранные слова, типичное, слабое склонение, зеркало на стенах. сильное склонение

#### Deklination

Dadurch unterscheidet sich ein Pluralsuffix von einer Kasusendung, denn letztere wechselt von Kasus zu Kasus oder bleiben auch ganz aus Vgl:

#### Singular

Gen: Dat:	der Tag- des Tag -es dem Tag- (e) den Tag -	das Land des Land – es dem Land – (e) das Land -	die Hand der Hand der Hand die Hand
	ŭ		

#### Plural

Nom: die Tag –e	die Länd –er	die Händ -e
Gen: die Tag- e	die Länd- er	die Händ –e
Dat: die Tag-e – n	die Länd-er-n	die Händ- e-n
Akk: die Tag – e	die Länd- er	die Händ-e

Im Deutschen gibt es vier Arten der Pluralbildung:

- 1. Mit dem Suffix -e (mit bzw. ohne Umlaut);
- 2. Mit dem Suffix -e (ohne Umlaut);
- Mit dem Suffix -er ( mit Umlaut);
- Ohne Pluralsuffix (mit bzw . ohne Umlaut)

Das Suffix - e (mit bzw. ohne Umlaut) ist für die Maskulina Typisch: der Stuhl - die Stühle, der Stock - die Stöcke, der Schrank - die Schränke, der Tag - die Tage, der Abend - die Abende, der Hund - die Hunde, der Monat - die Monate u.a.m.



Das Suffix - e (ohne Umlaut) erhalten folgende Fremdwörter und internationale Wörter männlichen Geschlechts: a) Wörter mit der betonten Endsilbe -ier: Pionier, Passagier, Offizier; - eur: Ingenieur, Frisuer, Kommissar; -är; Admiral, General, (auch Leutnants), Spion, Charakter, Katalog, Monolog, Dialog, Epilog, Apparat, Moment, Dialekt, Vokal.

Das Suffix -e (mit Umlaut) erhalten folgende Fremdwörter männlichen Geschlechts: der Marschall - die Marschälle, der Palast - die Paläste, der Kanal - die Kanäle; der Paß - die Pässe, der Ton - die Töne, der Chor - die Chöre.

Das Suffix - e (ohne Umlaut) erhalten viele Neutra (meist einsilbige): das Ding - die Dinge, auch das Heft - die Hefte, das Jahr - die Jahre, das Schiff - die Schiffe. U.a.; aber: das Fluß- die Flöße.

**M** e r k e: die Neutra auf –nis verdoppeln das  $\underline{s}$  im Plural: das Gefängnis – die Gefängnisse, das Ereignis – die Ereignisse.

Das Suffix - e (ohne Umlaut) erhalten die meisten Fremdwörter und internationalen Wörter sächlichen Geschlechts: das Dokument - die Dokumente, das Diktat - die Diktate, das Diplom - die Diplome, das Institut- die Institute.

Das Suffix –e (mit Umlaut) erhalten folgende einsilbige Feminina: die Bank – die Bänke, die Frucht – die Früchte, die Kluft – die Klüft, die Lust – die Lüst, die Stadt – die Städte.

Das Suffix - e (ohne Umlaut) erhalten die Feminina auf - nis, auch sie verdoppeln das <u>s</u> im Plural: die Kenntnis – die Kenntnisse, die Besorgnis – die Besorgnisse.

Das Suffix –(e)n ist für die Feminina typisch: die Zeitung – die Zeitungen, die Tafel – die Tafeln, die Schwester – die Schwestern, die Uhr – die Uhren.

M e r k e 1 . Das Suffix – n erhalten die Feminina auf –e, -er, -el.

Die Feminina auf –in verdoppeln das  $\underline{n}$  im Plural: die Lehrerin – die Lehrerinnen.

Das Suffix – en erhalten alle Fremdwörter und internationalen Wörter weiblichen Geschlechts: die Universität- die Universitäten, die Nation- die Nationen, die Linie- die Linien u.a.m.

Das Suffix – (e)n erhalten auch:

- 1.alle Maskulina der Schwache Deklination (auch die Fremdwörter und internationalen Wörter); der Hase- die Hasen, der Held die Helden, der Herr die Herren, der Pilot die Piloten.
- 2.folgende Maskulina: der Dorn die Dornen, der Lonbeer die Lonbeeren, der Mast die Masten, der See die Seen u.a.m.
- 3.folgende Maskulina mit der Genitivendung (e)ns im Singular: der Buchstabe die Buchstaben, der Funke die Funken, der Name die Namen.
- 4.folgende Fremdwörter der starken Deklination : der Nerv die Nerven, der Doktor die Doktoren, der Traktor die Traktoren

Das Suffix –(e) n erhalten folgende Neutra: das Auge – die Augen, das Bett – die Betten, das Verb – die Verben.

Das Suffix –er (mit Umlaut) ist für die Neutra tzupisch: das Buch – die Bücher, das Ei – die Eier, das Tal - die Taner u.a.m. Auch zwei Fremdwörter sächlichen Geschlechts erhalten das Suffix – er: das Regiment – die Regimenter, das Hospital – die Hospitäler.

Das Suffix – er (mit Umlaut) erhalten folgende Maskulina: der Mann- die Männer, Das Gott – die Götter, Der Wald - die Wälder.

Kein Pluralsuffix (mit bzw. ohne Umlaut) haben die Maskulina auf er, el-en: der Vater- die Väter, der Apfel – die Äpfel, der Garten – die Gärten.

Weder Suffix noch Umlaut haben im Plural die Neutra auf -er, -el, -chen, -lein und auf -e mit dem Präfix -ge-: das Messer - die Messer, das Mittel - die Mittel, das Zeichen - die Zeichen.

Kein Suffix (aber den Umlaut) erhalten zwei Feminina: die Mutter- die Mütter, die Tochter – die Töchter.

#### Besondere Pluralformen.

Manche Substantive erhalten im Plural das Suffix - s . das sind:

1.mehrere Fremdwörter männlichen und sächlichen Geschlechts (meist französischen Ursprungs): der Chef – die Chefs, der Park – die Parks, der Tank – die Tanks, das A uto – die Autos, das Hotel – die Hotels, das Komitee – die Komitees.

2. manche Buchstabwörter sowie manche substantivierten Wörter und Buchstaben: die Flaks, die Abers, die Achs, die Warums, die Bs.

Hier im Stall stehen noch unsere beiden schweren M Gs.

"Ja, warum nicht?" sagt Wernicke. " Das frage ich mich auch oft. Warum operiert man Kranke, von denen man weiß, daß die Operation doch nicht helfen wird? Wollen wir eine Liste der Warums aufstellen?…"



Und er blieb bei einem Wandspiegel stehen, der sich, dem Druck auf eine Feder gehorchend, beiseite schob und überraschend den Blick auf eine enge Wendeltreppe mit fein duchbrochenem Geländer freigab... Es gab Aha`s und Oho`s.

3. Eingennamen besonders Personennamen, wenn die Familie gemeint ist: "Buddenbrooks" von Thomas Mann;

Linsers und Kegels sind siet zehn Jahren Nachbarn Wand an Wand.

Die Marnets verkauften gewöhnlich unregelmäßig auf einem Straßenmarkt in Höchts.

Es gibt ja wohl unter diesem Dach noch ein paar Hermanns mehr.

Solche geplagten Liesels, an alle Unbill gewöhnt, haben meistens Mut.

4.Wörter niederdeutscher Herkunft (auch die hochdeutsche Pluralform auf –e ist gleichberechtigt): das Wrack – die Wracks, das Dock-die Docks, der Knick – die Knicks.

5.einige Personenbezeichnungen, auch in der Verkleinerungsform (nur im umgangssprachlichen Gebrauch): der Junge – die Jungens, das Mädel- die Mädels, das Fräulein – die Fräuleins, der Vati – die Vatis.

Vom Rathausmarkt herauf zieht ein Trupp Jungens und Mädels des Jugendbundes...

Nein, sein Geschmack waren solche hundsmageren, hocharistokratischen Fräuleins nicht ...

"Die Bungels hören alles!"

#### Deklination der Fremdwörter

Manche Fremdwörter und internationale Wörter sächlichen Geschlechts auf –a, -um bzw. –ium verlieren im Plural. Das –a bzw. –um und bekommen das Suffix -en: das Drama- die Dramen, das Thema – die Themen, das Datum- die Daten, das Auditorium – die Auditorien u.a.

Folgende Fremdwörter und internationale Wörter sächlichen Geschlechts erhalten das Pluralsuffix - ein: das Adverb – die Adverbien, das Adverbial(e) – die Adverbialien, das Kapital – die Kapitalien, das Materialien.

Die mit - mann zusammengesetzten Substantive bekommen im Plural - leute bzw. – männer. Berufsbezeichnungen bilden den Plural meist auf - leute: der Bergmann- die Bergleute, der Seemann – die Seeleute, der Kaufmann – die Kaufleute; der Landsmann – die Landsleute, der Fachmann – die Fachleute.

Manche Substantieve bilden ihren Plural mit Umschreibung durch andere stammverwandte Wörter: der Betrug – die Betrügereien, der Rat – die Ratschläge, der Streit – die Streitigkeiten, der Schmuck – die Schmucksachen, der Stock – die Stockwerke, das Lob – die Lobsprücke, das Versprechen – die Versprechungen.

Merke die Pluralformen folgender Fremdwörter: der Typen – die Typen, der Kasus – die Kasus, der Kursus – die Kurse, der Modus – die Modi.

Männliche und sächliche Maß und Mengenbezeichnungen, in Verbindung mit Zahlenangaben gebraucht, stehen im Singular: zwei Glas Wasser, vier Sack Mehl, fünf Grad Wärme, drei Paar Schuhe, Zwei Stück Brot.

Das Maskulinum "der Mann" kennt neben der Pluralform "Männer" noch die alte suffixlose Form "Mann", sie wird nach Zahlenangaben gebraucht.

Die Pluralformen der gleichlautenden Substantive und die doppelten Plu

ralformen. Es gibt im Deutschen gleichlautende Substantive ein und desselben Geschlechts, die verschiedene Bedeutung und entsprechend verschiedene Pluralformen haben. Das sind:

Singular	Plural
Das Band	die Bänder
Das Bank	die Bänke
Die Ding	die Dinge
Das Gesicht	die Gesichter
Der Mann	die Männer
Der Rat	die Räte

Einige Substantive haben eine doppelte Pluralform (ohne Bedeutungsunterschied) . Das sind: der Fleck – die Flecke, die Stiefel – die Stiefel.



#### Pluralbildung der Substantive

Grammatisches Geschlecht Pluralsuffix	Maskulina	Feminina	Neutra
-е	mit oder ohne Umlaut typisch	1.mit Umlaut: einsilbige Substantive: Axt, Bank, Faust, Frucht, Gans, Hand, Kraft, Kuh, Kunst, Laus, Magd, Macht, Maus, Nacht, Naht, Nuß, Schnur, Stadt, Wand, Wurst u.a. 2.ohne Umlaut: die Substantive auf -nis	Ohne Umlaut: viele Substantive: Jahr, Beispiel, Gedicht, Haar, Schiff, Roß, Schaf, Stück, Tier, Werk, Institut, Dokument, u.a.; die Substantive auf -nis
-(e)n ohne Umlaut	1.alle Substantive der schwachen Deklination 2.Substantive mit der Genitivendung –(e)ns im Sing. 3.Substantive auf –or. 4.Dorn, Lorbeer, Mast, Nachbar, Schmerz, See, Staat, Stachel, Strahl, Vetter, Muskel, Nerv, Pantoffel.	typisch	Auge, Bett, Erde, Hemd, Ohr, Herz, Insekt, Interesse, Verb, Juwel, Statut

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## MAIN TENDENCIES OF THE FURTHER DEVELOPMENT OF FINANCIAL MARKETS CRISIS

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#### **ABSTRACT**

In the article we tried to study new innovative tendencies in the process of financial markets research. In this way we somehow continued our scientific research in the sphere of financial and investments markets. The article highlights reforms in financial system and foreconditions of financial economics creation. In addition, we couldn't neglect financial crisis of 2008 and its further research of the reasons and analysis of sharp increase in currency market importance of funding markets dynamic. The article analysis main forces of financial markets, i. e. liquidity, financial risks, fund indicators and others, together with tendencies of financial markets development.

The article explains defining factors of goods market dynamics in a different way, namely, it has studied increasing role of banks and financial mediators in currency market, the influence of changes of their structure on activization of financial investors' activity, on increase of their influential spheres, on increase of correlation between the dynamics of raw materials on the world financial markets and the dollar dynamic.

As American dollar, Japanese Yen and Swiss frank mainly played the role of "Protective" activities during the financial crisis, the work uses the facts of American reserve fund, European central bank and financial mediators' (non – bank organizations) factual materials.

**Keywords:** Financial Market, Financial Crisis, Liquidity, Funding Market, Gold currency Reserves, Private Investors, State Bonds, International Currency Fund, Capital Exportation, Corelation.

#### 1. INTRODUCTION

During the last decades financial markets undertook a lot of changes. Scientific – technological innovative processes, banking and globalization of trading spheres conditioned reduction of state organs influence on economic processes. Activization of competitiveness financial markets with the world links.

Alternation of financial markets architecture made a market more difficult; despite a range of important positive changes leading financial institutes came across new difficulties in many countries. At one of conferences Alan Greenspen, a former manager of the USA federal reserve system, stated that "modern financial markets hit national economics from a new and unexpected side very quickly, even immediately." In his opinion central banks of al countries should elaborate new ways and methods of manoeuvre of financial risks and liquidity valuation of the world financial system.

The necessity of financial markets existence, modern tendencies of their development, quality of global financial crisis influence on financial markets, also financial institutes and instruments, price – creating mechanism and kinds of operations on investments market and in general, research problems of fulfilling mechanisms of investments in marketing economics, securities market, its fundamental, technical and graphical analysis is my long scientific research object.

At present, in this article I tried to present new innovative processes in financial markets. Namely we paid attention to creation of financial economics and changes of financial mediators' role; In this way we have created basis for financial system reformation.

#### 2. Review of the Literature.

As we mentioned in the introduction, scientific study of financial and investing markets is a long – period research subject and actual problem.

- 1. In the research of modern tendencies of financial markets development we based on scientist economists **I. Brighem and M. Erhardt's** well known work "Financial Management" **(2005).** (tenth edition); we mainly used materials of financial sphere markets, organizations and parentage ranges. (p. 226 276).
- 2. In general, a classical work of financial and securities markets functioning is **U. Sharp., G. Alexnader and J. V. Baileys's** investments **(2000)**. It gives periodically created and constantly developing markets. Together with markets classification and development it completely gives the USA's main fund markets. (p. 45 94).
- 3. Qoqiauri L. Financial Market. Fundamental and Technical Analysis of Security Market (2013). The article present the influence of global financial crisis on financial markets along with statement of necessity of financial markets existence; It highlights investments market, as a creator of financial market its main point, functioning, study of



structure, its functioning mechanisms, characteristics of main financial instruments. It shows broaden problems of securities market creation, functioning, analysis, management and development.

The work highlights discussing points of market's fundamental, technical, graphical analysis and main regulations of technical analysis of securities accepted in the world market practice.

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#### 3. Mane Part

#### 3.1. Main Tendencies of the Further Development of Financial Markets Crisis.

During recent years following the Crisis of financial market in 2008, sufficient materials appeared for the analysis of the processes, which gave rise to the crisis and opinion on how the architecture of global financial market was changed. Moreover, financial market, different from the real economy was significantly recovered and they feel themselves quite well. Exchange indexes of many countries mostly played the deduction, which they suffered in summer and autumn of 2008. Of course, this situation differs for different countries and indexes, however, in general, financial market is characterised with optimistic expectations. However, strong increase of the market was mostly based on the real figures, certifying sustainable rise of global economy, and by expecting new wave of quantitative mitigation from the side of Federal Reserve System (FRS), allowing global exchange markets to receive "drug" in the form of following portion of liquidity. Decision of FRS in November 2009 on procurement of long-term treasury bonds for 600 billion, appeared to a signal of the rally for global exchange and commodity markets.

What motivates financial markets during last years? As multiple researchers state - it is liquidity and only liquidity. It prevents the markets to crash upon issuance of negative macroeconomic data - the markets are redeemed. And on the contrary, in case of occurrence of additional positive news with the "field of economic fights", it is liquidity that motivates markets for new heights.

It is interesting that some researchers reject influence of liquidity of the financial markets. In the recent researches R. Darius and S. Radde [Darius, Radde, 2010] try to evaluate how really the liquidity manages financial and commodity markets. Hence, they give rise to unexpected result regarding the fact that during last decade, global liquidity influenced not only the commodity and financial risks (according to the authors, this influence is insignificant), but, in the first place, on the US Real Estate market. The authors relate significant growth of prices on US market of real estate with the increase of global liquidity. It shall be noted that the authors consider global liquidity. They allocate offering money in the countries of G7 and growth of the volumes of gold and foreign currency reserves to the latter.

How can we determine dynamics of the factors affecting liquidity? One of such factors includes increasing FRS tariffs. Between the dynamics of FRS assets and that of S&P index reflecting 90% of capitalization of US exchange market, dependence is clearly observed. These ties are clearly observed on the Figure 1, taken from the website of investment company FINAM.

This is characteristic that, during relatively reduction of assets FRS at the US exchange market, lop-sidedness was created. The Bulls are unable to raise markets and the Bears have no grounds for depression of markets down existence of liquidity is supports purchasers.

Current growth of assets of FRS is of unprecedented nature, as in absolute, so - relative scales. This rise has several peculiarities. In the first place, it is related with the absolute size of assets. On maximum, these assets reached almost 2.6 billion US Dollars. On the other hand, relative share of assets of FRS in relation with GDP of USA reached maximum values with recession of 1930-s in US economy. In the third place, structure of the assets is strongly changed. If before the Crisis assets basically were represented with the treasury bonds, today, larger share in the assets today is represented rby the bonds of federal agencies, even commercial bills, which speaks of the absolute deterioation of the quality of FRS assets.

23

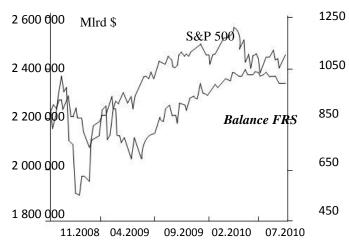


Figure 1. Index S&P and Balance of FRS Billion Dollars - S&P 500 - Balance FRS

The second tour of quantitative mitigation commenced in autumn of 2010 foresaw procurement of long-term treasury bonds, in other words, raising quality of portfolio of Federal Reserve System. In the first tour of qualitative mitigation, orientation of FRS on procurement of securities of federal agencies was directed towards balancing of profitableness per each sectors of the market of credit liabilities of USA and activation of mortgage market. These activities were focused on decreasing of profitableness on bills, related with hypothecation, in order to mitigate funding opportunities for banks, issuing mortgage credits. This, in its turn, gave rise to the decreasing of rates on mortgage credits for households.

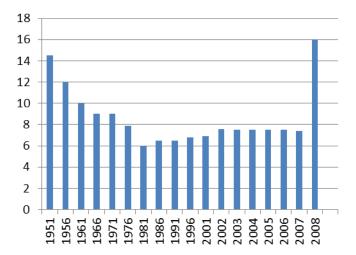


Figure 2. Correlation of total assets of FRS against GDP. %. (Source: Stella, 2009).

Currently, activities of US regulator oriented towards changing the yield of return downward, on "dumping" additional amount of liquidity and "pushing out" investors in into the risky assets.

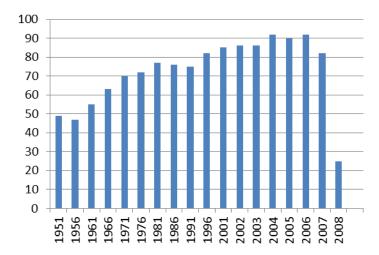


Figure 3. Share of treasury bonds and the bonds of federal agencies in total assets of FRS, %.(Source: Stella, 2009).

Moreover, it is evident that orientation exclusively on the liquidity of the sources from curing financial crisis is characterized with negative outcomes. Example of Japanese mystery, which turned into the lost decade, speak of the danger of long-term recession, getting of US economy into the "liquidity trap", which will give rise to the period of recession at the financial markets. Another threat is related with the increasing of the sizes of state debt, increasing face value of the market of state bonds, which will give rise to the fluctuations at the markets. This is spoken by the situation at the market of state debt of peripheral European states. Of course, the situation at US market is strongly different from Japanese one, by the fact that US market is more flexible, and market structures occupy larger share on it. This allows it rely on more rapid curing of the economy, though dangers are clear. Moreover, sooner or later, increasing liquidity shall give rise to the inflation growth. And though this does not take place in US economy (where, on the contrary, deflation moods prevail), in different countries (for example, in China), threat of growth of inflation proves to be theoretical. This makes Central Bank of Chine to take real steps on restraining credit activities of the banks.

#### 3.2. Ostrich Effect: Dollar and Crisis.

During the period after the Crisis of 2008, the value of currency market has strongly been increased for the dynamics of exchange markets. This is the dynamics of currency rates, that became determinant for the dynamics of increasing exchange indicators. Under the conditions of the crisis, the role of "protecting" assets was played by three currencies – US Dollar, Japanese Yen and CHF Franc. Each of them have own background.

Investors' interest in US Dollar was caused by several factors. In the first place, US Dollar remains to be reserve currency. Notwithstanding entire critics of FRS policy from the side of multiple market participants, monetary regulators of multiple countries, in case of occurrence of crisis phenomenon at the market, the investors acquire US Dollars. As earlier, US Dollar remains to be main reserve currency (about 60%) and basic currency at FOREX market (according to the Bank of International Settlements, 84.9% of entire turnover of the market fall within US Dollar with the volume of 4 billion US Dollars on daily basis, and 39.1% - on Euro). For example, at the end of 1980s, share of gold in Forex reserves fell to the marking below 50%, and the role of US Dollar was claimed by other currencies (namely Japanese Yen). What is the share of Yen today? It is insignificant. During last period, recovery of US Dollar, as reserve currency, took place at the global market. And though during passed years share of US Dollar was decreased in total volume of Forex reserves, it still remains to be the currency No. 1 in the total structure of Forex reserves of the world.

Herewith, it shall be understood that the volumes of these reserves significantly increasing during last years (according to the first half of 2010, they reached the marking of 8 billion US Dollars) (Figure 4.), make it impossible to perform their rapid restructuring in favour of another currency, moreover when there is no currency being able to claim the role of global reserve currency in the world.

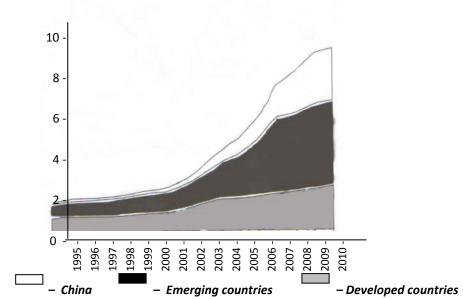


Figure 4. Volume of FOREX reserves, Billion US DollarsChina – Emerging countries – Developed countries (Source: The Economist. 2010. November 4).

Herewith, relation of the dynamics of exchange rate of US Dollar against inflow of sources at the market of US treasury bonds has been strengthened. R McCauley and P. McGuire [McCauley, McGuire, 2009]counted that maximum volume of acquisition of US treasury bonds from the side of non-residents, fell within the 3<sup>rd</sup> and the 4<sup>th</sup>quarters of 2008 (Table 1). Out of 363 billion US Dollars, falling within US equity market, 323 billion fell within the market of treasury bonds. Herewith, discounted bonds were subject to maximum demand. Demand on coupon bonds was much lower. It is no coincidence that during crisis period at the market of state bonds of USA anomaly occurred, which was related with the negative yield at the market of discount treasury bonds of USA. Negative balance on the acquisition was maintained at the market of the agencies' bonds, corporate bonds and shares. At the same time, during this period significant deduction of official shares of USA took please abroad. This gave rise to the additional demands for US Dollars from the side of investors, seeking "safe" haven.

Net Sale and Purchase of Treasury Bonds, Billion US Dollars

Table 1

Type of securities	Before crisis					
	2005 – 2 <sup>nd</sup> quarter of 2007	3 <sup>rd</sup> quarter of 2007 – 2 <sup>nd</sup> quarter of 2008	3 <sup>rd</sup> quarter of 2008 – 4 <sup>th</sup> quarter of 2008	1 <sup>st</sup> quarter of 2009 – 2 <sup>nd</sup> quarter of 2009		
Private investors	368.8	-36.0	358.4	-244.6		
Acquisition by foreigners	765.0	189.9	60.0	12.7		
Treasury securities	-19.7	73.2	323.1	62.0		
Coupon	-22.9	-10.3	49.9	73.5		
Discount	2.1	83.5	273.0	-11.8		

Securities of	20.9	-107.4	-183.0	-98.8
agencies				
	572.8	82.5	-78.5	-34.3
Corporate bonds	404.0			
Observes	191.0	141.6	-1.6	83.6
Shares				
Acquisition by US	-396.1	-225.9	298.4	-257.2
investors				
	-247.7	-113.3	200.7	-179.1
of foreign bonds	-148.5	-112.6	97.7	-78.1
of foreign shares				
Official foreign	494.7	614.3	199.1	391.8
assets in USA	10.1.0	4=0.4	400.0	
Traccury banda	194.2	172.1	103.9	275.9
Treasury bonds	-27.2	66.4	486.9	207.7
Treasury bills		•••	100.0	
Official US shares	5.0	-62.1	-1046.7	875.9
abroad		<u></u>		

(Source: Qoqiauri L. (2013).

Still, other markets of state bonds are unable to play the alternative role. However, markets of state bonds in Europe and Japan are comparable to US market per book value. Moreover, from pure quantitative point of view, Japanese and European markets stand before US market of state bonds (Figure 5).

Herewith, these markets are not comparable per liquidity. For example, at the main bond market of Europe – the market of German state bonds - monthly volume of trades amounted 500 billion Euros, while the volume in the USA in the amount of 500 billion US Dollars represent the average annual value. Before crisis, the markets of Europe and Japan gave way to the US state bonds. Moreover, this is characteristic for Japanese market, where rate of return per 30-year bonds did not overcome 2% (compared with 5% on US treasury bonds). This gave rise to the fact that there almost were no foreign investors at the Japanese market of state bonds. If at the developed markets share of foreign investors are within 30-70%, at the Japanese market, this share during last year did not exceed 5%. Due to this, we do not need to speak about Japanese alternative. Besides this, taking into account high relations of the sized of state debt in relation with GDP, the Japanese regulator is not interested in rising volatility at the internal market. Inflow of foreign investors may give rise to the increasing rate of return at this market, which is related with the serious problems of debt service.

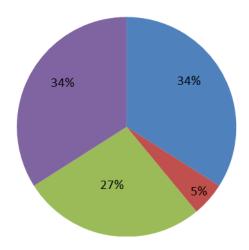


Figure 5. Markets of state bonds (% in book value against total price of four largest equity market) Japan 34% - EU zone 34% - The United Kingdom 5% - USA 27%. (Source: data of central European bank).

As for the European bond market, though it is comparative to US market per its book value, though events of 2010-2011 showed that this market is extremely segmented. Great amount of state bonds of European zone are treated on it, however these are the bonds with different credit history, different investment rating and different liquidity (Figure 6).

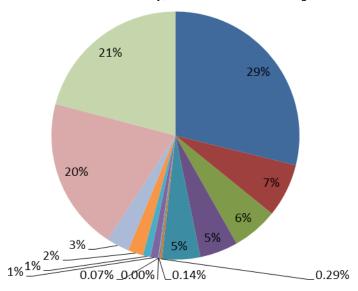


Figure 6. Market of state bonds of European zone per book value (in %, against total value) per the issuerstates.

Germany 21% - Italy 29% - France 20% - Spain 7% - Austria 3% - Belgium 6% - Portugal 2% - Finland 1% - the Netherlands 5% - Ireland 1% - Greece 5% - Malta 0.07% - Luxemburg 0.002% - Slovenia 0.14% - Cyprus 0.29% (Source: Data of European Central Bank).

Events of 2011, showed the thread of segmentation of bond market. Herewith, domains on the bonds of separate states in regards with the German state bonds (representing orienteer for the yield in European zone) reached critical values. In 2010 and 2011, the market of state bonds of "peripheral" Europe is fluctuating. The problems are occurred in Greece, Portugal, Ireland, and in autumn of 2011, Spain, Italy and France fell under suspicion. Herewith, the issue of probability of bankruptcy per such bonds and the entity to be responsible (the state itself, European Union (though extremely abstractly) or Germany, as the strongest country – the locomotive of European integration) is arisen. Notwithstanding the fact that special anti-crisis fund has been established and that European states actively perform negotiations about the mechanism of overcoming such situations, all these do not rise attractiveness of European bond market for long-term investors at all. Until today, European financial market remains segmented. Still European zone does not issue European state bonds, thus restricting the opportunity for using this market as "reliability anchor" during financial fluctuations.

Moreover, at the same time, under the conditions of low interest rates and high level of liquidity at the European market, great volume of short-term portfolio investments are made from the side of foreign investors. This is proved by the statistics of European Central Bank as well. At the beginning of autumn of 2010, European equity market fell within 1 billion US Dollars. This is speculated capital. Until Europe in general and European zone (particularly) fails to create adopted rules of issuance, turnover and possible (or impossible) default at the bond market of the states of European zone, European market can compete to the market of US state bonds.

The bond markets of international financial institutes are unable to compete with the US market of treasury bonds as well. It does not exist. Separate small issues of securities do not change general image. Markets of securities of international financial institutes (IMF, and World Bank) have not been created. Attempt for creation of alternative currency in the form of Special Drawing Rights (SDR) did not foresee borrowings of issuance of securities, nominated in this currency. Besides this, issuance of the bonds by the international financial institutes, legislative moments occur. As in case of issuance of "unified" European bonds gives rise to the emerging questions, who will be the issuer, who will be responsible for the liabilities per these securities and how (which assets) they are guaranteed.

It shall be noted that direction of the flows per equity accounts, as before, so after the crisis, is not changed. This is proven by the statistics of International Monetary Fund. The countries with the net surplus of trade balance and emerging countries remain to be the largest exporters of equity. Particularly, Russia is at the 5<sup>th</sup> place of the listing. Conversely, the largest importer of capital worldwide is USA (Figure 7). The main inflow of foreign capital falls within this country. Of course, it shall be noted that these data often depend on the largest transactions at the market of merger and acquisition, which may essentially change the situation with the cross-border overflow of capital. However, in general balance between the exporters and importers are still maintained.

Besides this, significantly increased correlation of the dynamics of monetary and exchange markets during the Crisis period, may be explained with the fact that before autumn of 2008, significant part of the sources for procurement of foreign assets fell within US market of institutional investors. According to FRS, US investors invested about 5 billion US Dollars (according to the accumulated result) into the market of foreign shares as of September 2008. Closing positions by US investors at the global market gave rise to the sharp fall of quotation at the exchange and commodity market and gave rise to the quotation of US Dollar, as it foresaw repatriation of profit, which automatically gave rise to the escape to US Dollar.

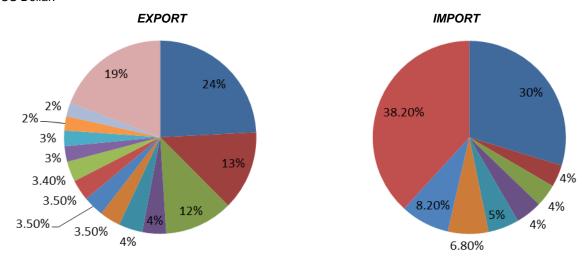


Figure 7. Capital shate in countries export and import (Source: Data of European Central Bank).

Dependence of market and the operations carry trade, anticipating borrowing in low-return currencies and investments in high-return currencies (for example, in Japanese Yen) has been significantly increased and they were placed in the high-profitable currencies (US Dollar, Pound Sterling, New Zealand Dollar). Herewith, during recent period, Japanese industries started active participation in the operations carry trade at the Japanese market. They invested their savings (these are the most (these are the highest savings of industries in the world - 14 billion US Dollars) into foreign currencies, guaranteeing them at the market of derivatives from sharp increase of Yen, against other currencies. Under the conditions of the crisis, closing of positions of carry trade took place. This inevitably strengthened the demand from the side of the participants of global market on US Dollar and gave rise to its rise.

It is interesting fact that before falling of global financial markets, repatriation of return had commenced at the Japanese market, which was related with the commenced process of decreasing interest rates, making operations carry trade ineffective. In its turn, this gave rise to the strengthening Yen against other currencies and initiated fall of Japanese exchange market. By the way, correlation between dynamics of the correlation between US Dollar/Yen and the dynamics of exchange market are identified clearer at the Japanese exchange market, then at other exchange markets. This is greatly related with the fact that significant part of issuers are presented by the exporters, and their financial position is significantly depends on the competitive ability of national currency. In the event of significant deterioration of strengthening of their financial position, giving rise to the sharp deduction of Japanese exchange market. However, Japanese exchange market started deduction much earlier. Commenced repatriation of the return made investments in Japanese shares uninterested.

Herewith, under the conditions of sharp deduction of interest rates turn of cash flows took place - many foreign financial investors, attracted by low interest rates in USA, actively started operations at US market and investing at the developed and emerging markets. Many experts even speak about new phenomenon at the market carry trade, when

29

US Dollar became main source of funding. One of the reasons for rapid recovery of global exchange markets became "Escaping from US Dollar", which replaced "Escape from Risk", characterising crisis times.

Sharply increased demand on US Dollar during crisis may be related with the closing of credit positions. Significant part of non-American banks before crisis, made borrowings in US Dollar. Started fall of national currency, and decreasing leverage, gave rise to the reverse reaction of the markets – the banks were to close actively their currency positions.

Presented analysis show that, due to several reasons, currently US Dollar keeps playing the role of the most reliable asset, the investors are hiding behind in case of danger. Surprisingly, this take place even in the case, when danger comes from US economy. In this case, actions of the investors look like ostrich, hiding head under the sand when frightened. Such conduct may hardly be named rational, though it has one logic explanation. Until finding alternative to US market of treasury bonds per liquidity, reliability and availability at the global equity market, the situation déjá-vu will take place every time, as soon as the global financial system faces following crisis.

## 3.3. Commodity Market: What Determines the Dynamics – Fundamental Factors or Demand from the Side of Financial Investors?

Another peculiarity includes strongly increased role of non-banking organization at the currency market, which may include pension, investment, hedge-funds, sovereign funds and other institutional investors. Demand from the side of these institutes is often of conjunctive nature and is related with the general situation at the market.

Calculations, performed by T. Adrian and Kh. Shin [Adrian, Shin, 2008] (Figure 8), evidence the fact that the share of financial (nonbanking) intermediaries in relation with the banking assets, have been significantly increased during last 30 years.

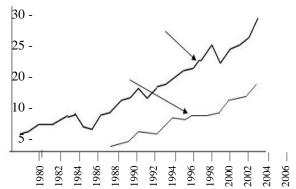


Figure 8. Share of financial assets of financial intermediaries (nonbanking organizations) in regards with the bank assets, %. Brokers and dealers at the security market – Hedge-funds

However, authors of the article did not take into account the assets of the largest institutional investors at US market. Before crisis, in 2008, the assets of pension funds amounted 16 billion US Dollars, assets of investment funds - 12 billion US Dollars, while bank assets in the USA amounted "totally" 11 billion US Dollars.

Changing the structure of financial intermediaries gave rise to the increase of demand from the side of financial investors at the market during last decade, which was expressed in increasing the share of speculators and reducing the share of hedgers at the emerging market. It is noteworthy that even in USA opinions appear regarding the necessity for reducing influence of financial investors on the dynamics of commodity futures, restricting opportunities for carrying out operations by them. Leaving evaluation of purposefulness of such restrictions aside (and we consider them senseless and harmful, affecting comparativeness of pricing at the market), occurrence of such opinions itself speaks of the changing of the structure of investors. However, in any case, we may conclude that influence of financial factors on the determination of the price of commodity assets became essentially higher.

Several recent surveys reject significant influence of financial investors on the pricing of commodity assets. For example, survey of H. Scott and D. Sanders [Scott, Sanders, 2010], dedicated to the evaluation of the influence of the role of index funds in pricing of futures at the agricultural goods, did not confirm existence of ties between the dynamics of agricultural futures and inflows (outflows) of resources from the side of indexed funds in these dividends.

Moreover, it shall be recognised that only the action of fundamental factors, it is difficult to explain growth of commodity assets. At the global financial market, correlation between the dynamics of commodity assets and the dynamics of the exchange rate of US Dollar is strengthened.

30



Moreover, it has to recognize that only action of fundamental factors, it is very difficult to explain growth of commodity assets. At the global financial market, correlation between the dynamics of commodity assets and the dynamics of exchange rate of US Dollar is being increased. In many ways, the dynamics of commodity market depends on the dynamics of currency before the Crisis in 2004-2008. A balloon started blowing at the commodity market. Specialists from International Settlement Bank [Moanski, Health, 2007], they speak about increasing correlation at the market of commodity assets. Therewith, it can be seen in the Figure 9, presented in their work, that commodity assets increased by minimum 2 times from 1998 till 2007.

Growth of commodity assets had fundamental reasons. For example, growth of prices at four metals and energy carriers was explained with the high rates of growth of global economy and especially growth of demand from the side of emerging markets. It was emphasized that this growth was related with the fact that capital intensity and energy intensity of the emerging economies (especially of Chinese one) is a bit higher, than in developed countries.

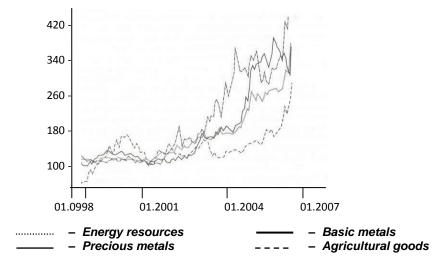
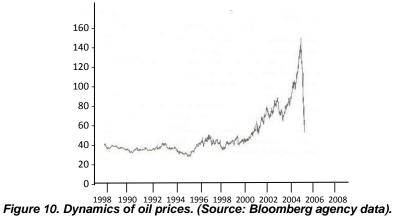


Figure 9. Growth of commodity assets from 1998 through 2007.

Demand on agricultural products is related with the fact that in the emerging countries share of middle class has significantly been increased, which represents demand on more qualitative and calorized meal. During recent years, growth of this demand was not accompanied with the increase of respective offer. Moreover, in many developed countries, absolute reduction of areas for agricultural cultures took place. In case of increasing demand on agricultural products should give rise to the sharp rise of demand on products, which took place immediately before the crisis.

However, besides fundamental preconditions in the growth of demand at the commodity assets, significant share falls within the financial constituent. In this regard, the oil market is the most remarkable. No fundamental factor can explain rise of futures on oil from 80 to 147 and further fall to 30 (Figure 10).



It is evident that speculative balloon was formed at the market at the background of decupling expectation, at the background of forecasted deviation in the industrial dynamics of developed and emerging markets. This made investors search for secure assets, which is considered to be commodity market. Herewith, market of oil futures in view of liquidity attracted investors more than other commodity assets. In the beginning of 2008, many hedge-funds used arbitration schemes, using short trades for the shares of financial sector and purchasing securities of oil companies. This strategy was based on the assumption on potential growth of prices on energy carriers and decreasing financial market under the conditions of mortgage crisis.

Under the conditions of the crisis and sharp fall of all markets, oil appeared similar to other assets. Schedule of oil proves this (see the Figure 10).

Herewith, commodity assets were being increased and fell in the opposing direction compared with the dynamics of US Dollar. Impairment of US Dollar pushed commodity assets forward. Under the conditions of the crisis, falling interest of investors in risky assets and escaping in the quality gave rise to the growth of US Dollar exchange rate. Strengthening exchange rate of US Dollar and "Escaping to Quality" gave rise to sharp fall of price on all commodities and exchange assets. Herewith, restoration of financial markets in the beginning of 2009, in particular way is explained with the recovery of the investors' interests in commodity market at the background of impairment of US Dollar (Figure 11). Further expectation of mitigation of quantitative figure foresaw strengthening of information moods and growth of demand among investors in assets, being capable to protect from inflation. These traditionally include commodity assets.

S.G. Cecchetti and R. Moessner carry out researches on the subject of how the acceleration of the price growth at the commodity assets (energy carriers, metals and food products) influenced on the growth of prices in the most of the countries [Cecchetti, Moessner, 2008]. As a result, the authors make conclusions that no sustainable dependence (at least, for 10-year period) is being observed. In other words, significant increasing in prices on commodity assets during last 10 years did not bring rise to the significant acceleration of inflation in the developed and emerging countries (including insignificant exceptions). The indicators of the inflation was mostly influenced by the "product" inflation; however, this influence was not insignificant. Moreover for the most investors the commodity assets under the conditions of expected growth of inflation and low interest rates (this latter is much more important) are considered as asset, with the capacity of making much higher profit than traditional instruments (mostly at the bond market). This determines the interest of financial investors in investment into the commodity markets. As we have already mentioned, this interest is cycled and is related with the dynamics of the exchange rate of US Dollar. Changing the trend at the market USD-EUR is considered to be the signal for acquisition or resetting commodity assets.

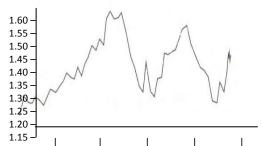


Figure 11. USD against EUR 6 Source 7 Data from the website www.yahoo.com).

Additional factor of strengthening influence over the exchange market of other segments of financial market, was change in the profitability base of banking sector. During Great Modernization, the structure of banking returns has significantly been changed. If in the 1980-s, for the most of the banks, basis for the item of incomes was commercial crediting, today significant share falls within the different crediting and noninterest incomes (including the operations at the exchange market). For the banks, mostly in the countries with the market model, the share of incomes from the operations at the exchange market, not related with the crediting of corporate sector, has been significantly increased. This strengthened the threat for stability of financial markets in general and the banking market gave rise to the strengthening of correlation of all segments of financial market.

In the recent report of the Bank of International Settlements regarding conditions at the exchange market [Triennial Central Bank..., 2010], published in September, 2010, they speak about the sharp increase in the amount of operations at the exchange market from the side of financial organizations, not representing bank-dealer. According to the classification of the Bank of International Settlements, they include small and middle commercial banks, central banks and other financial intermediaries (investment and pension fund, hedge-funds etc.). This trend is prevailing at the global exchange market during last decade. New players are appearing on it – i.e. hedge-funds, actively participating in the



extension of the scales of financial globalization, or sovereign funds, representing emerging markets, though, there are the funds from the developed markets (for example, Norwegian Pension Fund) and seeking instruments for investment of sources under the conditions of non-development of local financial risks.

#### 3.4. People Die for the Metal, or Why the Cost of Gold Is Being Increased.

Reasons for increasing demand on gold may be explained absolutely differently. For long period of time, gold leg behind other assets in dynamics (mostly financial). Decreasing the share of gold in FOREX/gold holdings from 60 to 9%, from 1980 through 2005 was decreasing demand on gold as investment resource. This gave rise to the fact that during 20 years at the gold market lop-sidedness was observed. However, since 2002, strong Bull trend was being observed at the market. At the same time, increase in gold may be explained with several factors.

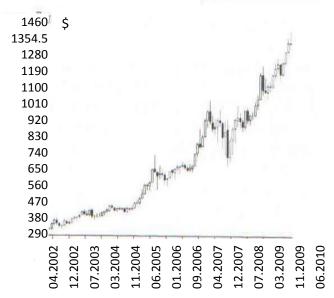


Figure 12. Price chart on gold, US Dollar. (Source: Website of the Company FINAM).

First one is related with the impairment of US Dollar during the period from 2002 through 2008 (US Dollar against Euro fell from 0.8 to 1.6). In this regards, gold played the role of any commodity asset, protecting from inflation. Under such conditions, growth of price on gold was insignificantly different from the growth of other commodity assets. This is the reason for essential fell of price on gold from the beginning of the crisis. It fell in price by more than 30% during half a year.

However, further the growth was recovered at the gold market. Interest of the investors in gold is related with the fact that the investors lost faith in paper money. Growth of state debt, increasing budgetary deficit, possible strengthening of inflation expectations give rise to the demand for alternative instruments. Under the conditions of uncertainty of conjuncture at the global exchange spaces, gold is one of the most principle candidates for such asset. This is another reason for increasing trend.

In the third place, characteristic for all commodity spaces, increasing demand on gold was initiated by low interests rates and high liquidity. Sharp falls in prices on gold in 2004 and 2006, were related with the increasing of interest rates, which speaks of the fact that the price of gold, as no other commodity, strong dependence on the conduct of financial investors at the market is seen. In 2008-2010, share of such financial investors in forming price on gold was increased.

Herewith, as it can be seen in the survey of Sh. Roache and M. Rossi [Roache, Rossi, 2009], gold is much different of other commodities by its dynamics, which does not only has sustainable negative correlation with the dynamic of US Dollar, but also is many ways, trend on the gold market is determined with the data of American microeconomic statistics. In case of worsening the situation in US economy, the market interprets these data as the signal for decreasing the exchange rate of US Dollar against other currencies and provoking searching of reliable investments.

At the same time, returning to the golden standard or other versions of building global financial systems around the gold. This is related with the low reserves of this metal, which may not be able to provide continuous functioning of financial and commodity markets, low level in FOREX gold reserves, with the changed structure of financial market.

#### 4. Conclusions

Based on the previously mentioned, we may have general conclusions. During crisis, strengthening of correlation between different financial and commodity markets was increased. James Montier (GMO) noted in his survey that correlation between returns of hedge-funds of different styles investing into the different financial and commodity instruments in 2003-2009, was strengthened from 0.3 to 0.9. Still, the dynamics of the segments of financial market is significantly determined by the situation on the exchange market; herewith, main issue for the dynamics of risky and reliably assets still is the appreciation of US Dollar or depreciation of US Dollar, synonym to which is "Escape from risk" or by increasing "risk appetite". This may be explained by the maintenance of mono-central architecture of global financial system, where there is the shortage in reliable high-liquid instruments. This latest allows maintenance of the function King of the Mountain to the function of treasury bonds of US market, under the conditions of origination tensions at the global financial market and the asset of last investment. During last period, architecture of global financial system has not been significantly changed: misbalances remained, which gave rise to the crisis of 2008 and which may become the source of new fluctuations at the financial markets.

We may paraphrase Hegel regarding the fact that financial markets do not make any challenges from the previous crisis. Moreover, increase in correlation between different segments of financial and commodity markets create potential threat for more global crisis, national and international regulators shall be ready for. Architecture of global financial market still suffers of misbalance. Notwithstanding large sizes of financial markets, there still is the shortage in investment instruments. Strengthening of correlation between different markets, gives rise to the question on reasonableness of diversification. The question on what will take pace earlier – will the architecture of financial market be changed or will new global financial crisis be commenced.

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#### RECOGNITION OF E-SPORTS AS «REAL» SPORT

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#### ABSTRACT.

The results of the research will help to determine what is the difference between sport, mind sport, physical sport, and e-sports. Based on the data it has been established that in the near future e-sport will be added to the recognized list of sports and there is a precedent for such a development. We come to the conclusion that video games with a strong competitive element fit best as an e-sport. Fans of the games and teams will watch hours of competition, either through streaming services like Twitch or attend live events. Despite being popular, FPS and MOBA e-sports are some of the most difficult to watch, as first- person perspectives make for difficult spectating and a vast array of characters in MOBA games mean you have got a lot to learn.

**Keywords:** sport, mind sport, physical sport, e-sports.

Most of us could describe a sport if asked. It might involve physical exertion of some kind – running, jumping, swimming – an element of competition, and a certain amount of blood, sweat and tears. But is the game of bridge a sport? Or chess? The term "mind sports" was coined for bridge and chess, as well as for Go, checkers and Chinese Chess by the World Mind Sports Federation.

But what about video games? Do League of Legends players have a claim to be sportsmen and women? To date there have been eight e-sports world championships, organized by the International e-Sports Federation, which enormously expanded video game competition from informal competitions in the neighbor's den to international arenas, with local, TV and internet audiences claimed to be in the hundreds of millions. Contemporary society has obviously broadened the meaning of sport far beyond what IOC founder Baron de Coubertin could have imagined. We therefore need to be fair in our definition(s) of sport, rather than becoming provincial in disregarding any competition devoid of copious sweating and bleeding. But before we consider the future of sporting competition, we need to establish some precise definitions. We begin by asking: What is a sport, anyway? Some suggested definitions:

Sport: A sport is a competition with a set of rules for determining the winner, requiring physical prowess and skill.

Mind Sport: A mind sport is a competition with a set of rules for determining the winner, requiring intellectual prowess and skill. A surrogate could move a playing piece or cards under direct control of the competitor.

Physical Sport: A physical sport is a competition with a set of rules for determining the winner, requiring physical prowess and skill to move the physical competitor and/or a physical object as required by the rules.

e-Sport: An e-sport is a competition with a set of rules for determining the winner, requiring physical prowess and skill to move a virtual person and/or a virtual object as required by the rules.

Thanks to Wikipedia, e-sports are included as one sport via the International e-Sports Federation (IeSF). According to the IeSF website, the following is the number of times each of 10 video games was used during the six IeSF world championships:

- Starcraft II
- Hearthstone
- League of Legends
- Tekken Tag Tournament 2
- FIFA Online 2
- AVA
- Warcraft 3



- Counter Strike: GO
- DOTA 2
- Ultra Street Fighter 4

Fans flood arenas wearing their team jerseys. They rush to events in search of players' autographs. But these «athletes» they're flocking to see, who spend hours in scrimmages honing their skills, are not football or basketball players  $\square$  they're gamers.

Competitive video game playing, more commonly known as e-sports, drew 258 million unique viewers globally last year, according to research firm Super Data. For perspective, the National Football League said 204 million unique viewers tuned into the 2016 NFL regular season in the U.S., based on Nielsen data.

For e-sports athletes, as for any competitor, it's about being the best of the best. Of course, the financial incentives are getting bigger, too. The International, a tournament featuring the game Dota 2, boasts one of the biggest prize pools at \$24 million, with the winning team splitting more than \$10 million. Last year's League of Legends World Championship had a nearly \$5 million pool. This doesn't factor in endorsements or potential sponsorships, which are expected to grow over the next several years.

Because of the money involved, more game publishers have entered the market, such as Activision, Electronic Arts with its sports titles Madden NFL and FIFA, and Turner Broadcasting, which launched ELeague nearly two years ago along with WME | IMG.

Arguably the biggest is respectability. Some people don't see athletes. They see people playing a video game. For example, on January 9, former sportscaster Keith Olbermann criticized the sports website The Players' Tribune for "publishing pieces by snotty rando kids playing children's games" after the site ran a feature on e-sports star Yiliang "Doublelift" Peng. Olbermann took some heat on Twitter for that one.

Meanwhile, debate still lingers over whether professional gamers should be considered athletes.

Duchesne said pro gamers have an advantage over traditional athletes because they seem to interact more regularly with fans through streaming or social media. «There's a level of closeness with e-sports players that I don't believe is as possible with professional traditional athletes» he said.

Another challenge: creating a broadcast experience so viewers can easily follow along, similar to when poker added glass to the tables so viewers could see what cards players held. «That's makes it interesting and exciting because we have kind of an inside view and we know what's going on» said Wedbush analyst Michael Pachter in an interview in 2016.

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18

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## DIE PSYCHOLOGISCHEN UND EMOTIONALEN VORBEREITUNGSBESONDERHEITEN FÜR UFERSPINNANGELSPORTLER ZUR WETTKAMPFSTÄTIGKEIT

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### *RNJATOHHA*

В данной статье рассматриваются значимые стороны серьёзного и многогранного вопроса о психологических и эмоциональных особенностях подготовки береговых спортсменов-спиннингистов к соревновательной деятельности. Весомое место занимает вопрос о самооценке спортсмена- спиннингиста для достижения поставленной им результативной цели.

Ключевые слова: психология, эмоции, спортивный спиннинг, самооценка, результат.

Das Aufführungsproblem. Der Uferspinnangelsport hat eine große und lange Geschichte, die in 50-en, 60-en Jahren des vorigen Jahrhunderts begonnen worden war. Heutzutage hat sich die vorliegende Sportart -Spinnangelsport - in die zielgerichtete und wichtige sportliche Industrie entwickelt, die nicht nur technische, theoretische Neurungen und Errungenschaften sondern auch wichtige Perspektiven und wissenschaftliche Komponente einschließt. Fast alle Neuheiten und wissenschaftliche Informationen werden in solchen wissenschaftlich-populären Zeitschriften wie "Sportfischfang", "Blinker", "Anglersport", "Fisch&Fang", "Angler der Ukraine", "Anglerwelt" und anderen dargestellt. Ukrainischer Uferspinnangelsport hat seine eigene Profis und Meister wie J. Petrasch, D. Korzenkow, A. Lisitsa, J. Tupitsyn, O. Wyrezub, O. Mjasnikow, V. Kobeljuch, P. Mitjuritsch, K. Tschaban und andere. Die Sportuferspinnangel ist sehr interessante und intellektuelle Sportart insbesondere, die Gespinnangelsportler zwingt, die schnellen Beschlüsse zu übernehmen, die Strategie und Taktik zu ändern, die häufigen Ausreisen auf die Wasserbehälter zu machen, die bestimmten Fertigkeiten zu erwerben und die Methodiken der schnellen Raubfischsuche auszuarbeiten; darin ist das Zweck der wertvollen Fähigkeit, die, hauptsächlich, die psychologisch- emotionale Sphäre des Sportlers berührt. Doch, es bringt die Müdigkeit auch wegen häufigen Umstellungen und Proben im Fangsektor für die abgeführte Zeit, meistens, zur physischen Müdigkeit an, dann geht es, hauptsächlich, um eine psychische und emotionale Müdigkeit, die sowohl in der Trainingsperiode als auch in der Wettkampfperiode entstehet. Die tief berührte emotionale Sphäre des Spinnangelsportlers darf mit der negativen emotionalen Übersättigung in nötiger Minute nicht zurechtkommen, dass es letzten Endes zum langfristigen Regress anführen kann.

Die Analyse der letzten Forschungen und Publikationen. Die Forschungen, die von sportlichen Psychologen geleitet sind (Siehe.: V. N. Smolentsewa [9], A. V. Rodionow [8], V. R. Malkin [4], G. D. Babuschkin [5], A. Z. Puni [7], E. N. Gogunow [1] etc.) geben zu verstehen, dass eine Besonderheitenreihe der psychologischen Zustände des Sportlers und seine sportlichen Emotionen ihren Einfluss auf die Qualität der sportlichen Handlungen im allgemeinen, auf den Lauf und Erfolg der sportlichen Wettbewerbe öffnen, ihre Abhängigkeit von den objektiven oder äußeren Bedingungen der Wettkampfatmosphäre aufklären, was auch die Abhängigkeit der psychologischemotionalen Erlebnisse von den individuellen Persönlichkeitsbesonderheiten der weiteifernden Sportler, für unseren Fall, der Spinnangelsportler, zu zeigen hilft. Vor allem müsste der Spinnangelsportler die inneren individuellen Forderungen kennen, die das Ergebnis oder das Ergebnis der vorliegenden Tätigkeit (das Auffangen des Testfisches!) befriedigen soll; d. h. die Stufen der Begreiflichkeit der inneren Forderungen. Hierher muss man auch die Selbsteinschätzung des Sportlers beitragen. Das innere "Abwiegen" der psychologischen und emotionalen Zustände des Spinnangelsportlers wird die Grundlage für die Besonderheitenreiheentstehung der inneren Unterstützung und die Vorbereitung auf die Wettkampfstätigkeit schaffen.

Das Ziel des Artikels schließt sich darin, auf einigen bedeutenden Seiten der ernsten und vielseitigen Frage über die psychologischen und emotionalen Besonderheiten der Uferspinnangelsportler zur Wettkampfstätigkeit ausführlich stehenzubleiben.

Die Hauptmaterialsdarlegung. Nach den Worten des anerkannten Koryphäen der Sportpsychologie E. N. Iljin: "...die Tätigkeit der Sportler trägt den Wettbewerbscharakter und ist, nach ihrem Wesen, auf die Errungenschaft des maximalen Ergebnisses unabhängig gerichtet" [3]. Solch eine überzeugte Meinung des ernsthaften Gelehrten gibt den Anlass, daran zu denken, dass die psychischen Erlebnisse des Spinnangelsportlers außerordentlich kompliziert, eigenartig, vielfältig sind, denn die extremen Uferspinnangelwettbewerbe fordern von ihnen die maximale Anstrengung in den, am meisten, ungünstigen Bedingungen. Auf den Wettbewerben im Uferspinnangelsport

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entsteht das Verletzungsrisiko (z. B. das Fallen ins Wasser von einem steilen oder glitschigen Ufer, die Körperverletzungen an den scharfen Köderhaken u. a. m.). Und wir sind geneigt zu glauben, dass gerade deshalb "gilt die Hauptaufgabe der speziellen psychologischen und emotionalen Sportlervorbereitung zum konkreten Wettbewerb als die Zustandesschaffung seiner psychischen Bereitschaft zum Wettbewerbsauftreten" [2].

Wenn man sich von der Systembereitschaft des Sportlers zu den Wettbewerben (nach A. Z. Puni) abstoßen lässt, so hebt man für den Spinnangelsportler nur einige Schlüsselpunkte heraus:

- Die nüchterne Überzeugung in seiner Kräfte (ist auf der Bestimmung des Verhältnisses seiner Möglichkeiten und der Gegnerkräfte unter Berücksichtigung der Bedingungen der bevorstehenden Wettbewerbe gegründet).
- Das Streben bis zum Ende fürs Wettbewerbsziel bis zum Ende zu kämpfen (wird in der Zielstrebigkeit des Sportlers geäußert, in seiner Bereitschaft bis zum letzten Wettbewerbskampfaugenblick für die Zielerrungenschaften führen zu müssen).

Die sportlichen Postulate, die vom autoritativen Wissenschaftler A. Z. Puni ausgesprochen wurden, verdienen nicht nur die unverwandte Aufmerksamkeit und Einschätzung sondern auch leisten die Hilfe, um eine Besonderheitsreihe für die Spinnanglersportler konkret zeigen zu können, und zwar: die Datenerfassung über die angebotenen Bedingungen der bevorstehenden Wettbewerbe auf den Wasserbehältern: die Selbstregelung der ungünstigen inneren Zustände (z. B. die Angst vor dem unpräzisen Einwurf in den nötigen Punkt der Fangzone); die Erhaltung und die Wiederherstellung des neuro-psychischen Potentials; die Erhaltung und Aktualisierung der geformten Motive für den Wettbewerb.

Der Prozess der psychologischen Versorgung der sportlichen Tätigkeit kann wie die Steuerung der Vorbereitungs- und Wettkampfstätigkeit vorgestellt werden. Eine Hauptbesonderheit der psychologischen und emotionalen Vorbereitung zur Wettkampstätigkeit vom Spinnangelfischer sind die spezialisierten Trainings mit vielschichtigem Zubehör (z. B. mit Angelrutentypen aller Spannungsformen -

"Slow", "Moderate", "Fast", "Extra Fast"), während die Belastung auf den Schultergürtel beim Einwurfprobieren auf die Weite stufenweise-systematisch sein wird. Bei den Durcheinwürfen in die Fangzone auf Wasserbehältersektoren kommt "das psychologische Spinnangelwurfeinschießen" für die Köderpunktabgabe und die Leitung des Köders durch die Wasserdicke vor. Man darf aber über psychische und psychologische Überlastungen nicht vergessen lassen, die, eigentlich, sowohl den Willen des Spinnangelsportlers trainieren als auch wichtige Bedeutung für das Ergebnis haben! Nach der Meinung des bekannten Wissenschaftlers auf dem Gebiet des Sportpsychologie I. P. Wolkow: "...die Fähigkeit des Sportlers, die willenstarken Bedingungen im Zustand des zunehmenden Ermüdungsgefühls unter den Wettbewerbsauftreten zu zeigen und zu entwickeln ist eine Kennziffer seiner willensstarken Charakterqualitäten" [6]. Diese Behauptung des Gelehrten- Psychologen sei bedingungslos und unerschütterlich. Der psychologische und emotionale Hintergrund des Spinnangelsportlers soll immer die Emotionen, die den Erfolg begünstigen, solche wie die sportliche Begeisterung, die sportlichen Prinzipien und die sportliche Bosheit, das Gefühl des sportlichen Stolzes, der Ehre, der Überzeugung, die sportliche Konkurrenz, die sportliche Anregung haben.

Die Schlussfolgerungen. Wir kommen letztlich zur folgenden Schlussfolgerung, dass die sportliche Anregung, in solcher spezifischen Sportart wie die Uferspinnangel, vom Fischer-Sportler wie der Hyperaktivitätszustand, wie das eigentümliche Gefühl des Kampfes für die Errungenschaft des gestellten Zieles erlebt wird; das ist eine hauptpsychologische und emotionale Besonderheit der Uferspinnangelsportlervorbereitung zur Wettkampfstätigkeit.

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38

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# POTENTIAL AND POSSIBILITIES OF WIDE APPLICATION OF AIRPONICS IN AZERBAIJAN

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#### **ABSTRACT**

The article provides information about the possibilities and advantages of using aeroponic systems in the conditions of Azerbaijan Republic. Considering the ever-increasing role and potential for the development of agricultural production, it is proposed to put into operation with the use of new technologies in particular, the aerial method of growing plants, in a modern farms and also as a result of the extensive use of new technologies to conduct additional research in this area with an aim of deeper and detailed study of this activity. Detailed information is given on the advantages of the proposed method and its capabilities.

Keywords: aeroponics, method, pressure, air, water, nutrient environment.

### INTRODUCTION

The process of growing agricultural plants in greenhouses and the application of new technologies is developing at a high rate all over the world. For a reason, from year to year more and more private farms and companies are switching to advanced technologies and aeroponics, as one of the promising areas, is gaining more and more attention. It should be noted that the growing role of agricultural products in the export of Azerbaijan is a good incentive for producers. Tomato exports in 2017 increased by 60% compared with 2016. According to the Center for Analysis of Economic Reforms, in January 2018, income from tomato exports alone amounted to \$ 152 million.

Aeroponica is the process of growing plants in an atmosphere of air or fog without using soil. Aeroponic culture differs from traditional hydroponics, aquaponic and in-vitro (plant tissue culture). In contrast to hydroponics, which use liquid nutrient solution as a growing medium and essential minerals to support plant growth; or aquaponics, which uses water and fish waste, aeroponics is conducted without a growing environment. Since water is used in aeroponics to transfer nutrients, it is sometimes considered a type of hydroponics. Aeroponika is one of the technologies, designed to accelerate the cultivation of plants and increase yields, while simplifying human life. Aeroponics allow growing vegetables and herbs all year round without using chemical fertilizers or other growth promoters harmful to the human body. Aeroponica is a product of the theory, which assumes that oxygen is the most necessary factor for the rapid development and growth of any plants. In this regard, in plants built on the principle of "aeroponics", plants are grown by the method of active oxygen saturation of the roots.

Soon after its development, aeroponics assumed the role of a valuable research tool. Aeroponica offers researchers a non-invasive way of exploring the roots during the development process. This new technology allows researchers to increase the number and wider range of experimental parameters for use in their work.

The ability to accurately control the moisture levels of the root zone and the amount of water supplied makes aeroponics ideal for studying water stress. Aeroponika is a means for creating consistent, minimally waterproof plants for use in drought or flood experiments.

Aeroponics is an ideal tool for studying the morphology of roots. The lack of aggregates offers researchers easy access to an entire, intact root structure without damage that may be caused by removing roots from soils or aggregates.

### Research methods

The basic principle of aeroponics is the cultivation of plants suspended in a closed or semi-closed medium by spraying the dangling roots of a plant and the lower stem with a spray of nutrient-rich aqueous solution. The roots of the plant are separated by the supporting structure of the plant. Often foam with closed cells is compressed around the lower stem and inserted into the hole in the aeroponic chamber, which reduces labor costs; for large plants, the grid is used to suspend the weight of vegetation and fruit.

Ideally, the environment does not contain pests and diseases, so plants can grow healthier and faster than plants grown in the environment. However, since most aeroponic environments are not completely closed outside, pests and

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diseases can still cause a threat. Controlled environments helps to develop plant health, growth, flowering and fruiting for all types of plants and varieties. Because of the sensitivity of root systems, aeroponics is often combined with conventional hydroponics, which is used as an emergency "rescuer" - backup power and water supply - if the aeroponic apparatus does not work.

Aerodynamics of high pressure is defined as the supply of nutrients to the roots through 20-50 micrometers of mist heads using high pressure. Air cultures optimize air access for successful plant growth. Materials and devices that retain and support aeropone plants should be free from disease or pathogens. The distinction of true aeroponic culture and apparatus is that it provides minimal plant support. Long-term aeroponic cultivation requires that root systems are free from restrictions associated with stem and root systems. Physical contact is minimized so that it does not interfere with natural growth and root expansion or access to clean water, air exchange, and carefree conditions.

Aeroponika can limit the transmission of the disease, as the contact of plants with plants is reduced pulse can be sterile. In the case of soil, aggregate or other environments, the disease can spread throughout the all growing beds, infecting many plants. In most greenhouses, these solid media require sterilization after each harvest, and in many cases they are simply discarded and replaced with fresh, sterile media.

Aeroponic equipment includes the use of sprayers, mists or other devices to create a thin mist, a solution for delivering nutrients to the roots of plants. Aeroponical systems are usually closed systems that provide macro and micro environments suitable for maintaining a reliable, constant air culture. Numerous inventions have been developed to facilitate aeroponic spraying and misting. The key to root development in an aeroponic environment is the size of a drop of water. In commercial applications, a 360 ° spraying sprayers are used to cover large areas of roots using air injection misting.

The world practiced the use of different types of aeroponic systems.

#### Low pressure units

In most low-pressure aeroponic greenhouses, plant roots are suspended above the reservoir of the nutrient solution or inside the channel connected to the reservoir. The low pressure pump feeds the nutrient solution through jets or ultrasonic transducers, which then drip or drain back into the tank. As plants grow to maturity in these units, they tend to suffer from dry parts of the root systems, which prevent adequate absorption of nutrients.

#### **High Pressure Devices**

Airborne high pressure methods, where mist is generated by a high pressure pump, are commonly used to grow high value crops and plant samples that can offset the high installation costs associated with this method.

### **Commercial Systems**

Commercial aeroponical systems include high pressure hardware and biological systems. The matrix of biological systems includes improvements to extend the life of plants and the maturation of crops. Biological subsystems and hardware components include wastewater monitoring systems, disease prevention, pathogen resistance properties, accurate timing and pressure in nutrient solutions, heating and cooling sensors, thermal solution management, efficient photon flux light grids, spectral filters, fail-safe sensors and protection, reduction of operational and labor-intensive functions, as well as ergonomics and durability.

Commercial aeroponic systems, such as high-pressure devices, are used to grow high-value crops, where numerous cultural rotations are achieved on an ongoing commercial basis.

Extended commercial systems include data collection, monitoring, analytical feedback and Internet connections to various subsystems.

### Potential and opportunities for use

Plants grown using aeroponics spend 99.98% of their time on air and 0.02% in direct contact with a hydroacoustic nutrient solution. Time spent without water allows the roots to capture oxygen more efficiently. In addition, hydroacoustic mist also contributes significantly to the effective oxygenation of the roots. For example, an NFT has a nutrient throughput of 1 liter per minute compared with a 1.5 million milliliter per minute aeroponics. Reduced nutrient throughput reduces the amount of nutrients needed for plant development.

40

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Another advantage of reduced throughput, which is of great importance for use in outer space, is a reduction in the amount of water used. This reduction in water throughput corresponds to a reduced volume of buffer, which greatly facilitates the weight needed to support plant growth. In addition, the volume of eluent from plants is also reduced by aeroponics, reducing the amount of water that needs to be treated before reuse.

The relatively low volumes of the solution used in aeroponics, combined with the minimum time during which the roots are exposed to fog, minimize the contact between the root and the spread of pathogens between plants.

#### Higher control over plant environment

Aeroponica allows more control over the environment around the root zone, since unlike other plant growth systems, plant roots are not always surrounded by some environment (for example, with hydroponics, where roots are constantly immersed in water).

#### Improved nutrition

Many different nutrient solutions can be introduced into the root zone using aeroponics without the need to flush out any solution or matrix in which the roots were previously immersed. This increased level of control would be useful in studying the effect of a diverse range of nutrient applications on the roots of a plant of interest. Similarly, aeroponics provides a wider range of growth conditions than other nutrient delivery systems. For example, the spacing and duration of spraying of nutrients can be very precisely tuned to the needs of particular plant species. Aerial tissue can be subjected to a completely different environment than the roots.

### More convenient design

The design of the aeroponic system makes it easy to work with plants. This is due to the separation of plants from each other and the fact that the plants are suspended in air and the roots are not captured in any matrix. Therefore, the collection of individual plants is quite simple. Similarly, the removal of any plant that may be infected with a pathogen is easily accomplished without the risk of uprooting or infecting nearby plants.

### **Cost Effective**

Aeroponic systems are more economical than other systems. Due to the reduced volume of solution throughput (discussed above), less water and fewer nutrients are required in comparison with other nutrient delivery systems. It also eliminates the need for substrates, as well as the need for many moving parts.

### Use of seed stocks

By using aeroponics, the harmful effects of seeds stock that are infected with pathogens can be minimized. As discussed above, this is due to the separation of plants and the lack of a common growth matrix. In addition, thanks to a closed and controlled environment, aeroponics can be an ideal growth system in which stocks of seeds that do not contain pathogens are grown. Placing a growth chamber in addition to isolating plants from each other, helps both to prevent initial contamination from pathogens introduced from the external environment and to minimize the spread from one plant to another of any pathogens that may exist.

### CONCLUSION

Taking into account the increasing role of protected soil as one of the elements of an alternative source of income for Azerbaijan agriculture, based on the above advantages and opportunities, we believe that the start of the use of aeroponic systems with the aim of improving the quality of products produced is appropriate. With that in mind, an integrated approach is needed to bring to the attention of entrepreneurs the opportunities and benefits of this method of growing crops in our Republic. It should be noted that the widespread use of aeroponic systems will create good opportunities for carrying out large-scale scientific research in this area and will provide a basis for building a good basis for a deeper study of this agricultural sector.

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48

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**50** 

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**52** 

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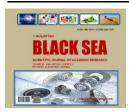
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