

SECTION I. ECONOMIC THEORY

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***INSTITUTIONAL FACTORS OF ECONOMIC CHANGES:
DEVELOPMENT TRAJECTORIES OF DOUGLAS NORTH'S THEORY****

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The present article considers the contribution of Douglas North to general institutional economic theory with a special emphasis on the research of institutional factors of economic changes. It has been revealed how agents' interaction models are formed and how institutions influence the agents' behavior and change their models. It is especially important, that D. North's conclusions and their development in modern economic theory result in the emergence of the so-called institutional macroeconomics and being a scientific discipline it explains economic changes on long intervals of evolution. The main emphasis in the article is put on two D. North's works: "Institutions, Institutional Changes and Economic Performance" (1990) and "Understanding the Process of Economic Change" (2005). The advantages and possible disadvantages of the new institutional approach by D. North that is devoted to a long interval of social evolution have been demonstrated. In particular the formal informal institutions relations have been discussed as well as compulsion mechanisms that according to D. North belong to special institutions that play a significant role in the description of institutional changes at long time intervals have been considered. The role of a government and government regulation mechanisms have been studied based on the compulsion mechanisms to observe the rules and norms in economy. We study the connection between transaction and transformation costs that are conventionally considered independently in the frameworks of a new modern institutionalism. The authors' attitude to technologies as special and rather stable institutions at particular time periods has been proven. This attitude is opposite to the view that institutions and technologies are interconnection factors of institutional changes according to D. North. From the authors' point of view the model approach by D. North provides restricted representation of institutional changes of complex social and economic model. Moreover, there is a redistribution of weights of change factors and D. North's theory is not able to determine the regularities in the weights change. In its turn the introduction of the trust factor by G. Akerlof and R. Shiller is not a sufficient decision as different social institutions have macroeconomic importance. These institutions predetermine economy development and trust forms that are formed between some agents. For example, technologies are such institutions and processability of economy as a system predetermines its economic dynamics and demand for the change of some institutions into the others-institutional changes regime. Thus the task under consideration is difficult and has not been solved in economics yet. The opportunity to solve the above mentioned challenges using the postulates of "institutional macroeconomics" as the scientific analysis branch has been founded.

Keywords: Douglas North's theory, institutional macroeconomics, institutions, compulsion mechanisms, agents, trust, institutional changes, transaction costs, technology.

ИНСТИТУЦИОНАЛЬНЫЕ ФАКТОРЫ ЭКОНОМИЧЕСКИХ ИЗМЕНЕНИЙ: ТРАЕКТОРИИ РАЗВИТИЯ ТЕОРИИ ДУГЛАСА НОРТА*

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Рассматривается вклад Дугласа Норта в институциональную экономическую теорию с акцентом на исследовании институциональных факторов экономических изменений. Показано, как формируются модели агентского взаимодействия, а также как институты влияют на изменение моделей поведения агентов. Отмечается, что выводы Д. Норта и их развитие в современной экономической теории приводят к возникновению так называемой институциональной макроэкономики, которая как научная дисциплина объясняет экономические изменения на длительных интервалах эволюции. Основной акцент в статье сделан на двух работах Д. Норта: «Институты, институциональные изменения и функционирование экономики» (1990) и «Понимание процесса экономических изменений» (2005). Показаны плюсы и вероятные минусы нового институционального подхода Д. Норта, обращённого к длительному интервалу социальной эволюции. В частности, рассматриваются связи формальных и неформальных институтов и отдельно – механизмов принуждения, которые Д. Норт относил к особым институтам, имеющим определяющее значение в описании институциональных изменений на продолжительных отрезках времени. На основе принципов действия механизмов принуждения к соблюдению правил и норм в экономике исследуется роль государства и инструменты государственного регулирования. Изучается связь транзакционных и трансформационных издержек, которые традиционно рассматриваются отдельно в рамках современного нового институционализма. В противовес точке зрения Д. Норта на институты и технологии как взаимосвязанные факторы институциональных изменений обосновывается авторская позиция в отношении исследования технологий как специальных и на определенном интервале времени устойчивых институтов. Подчеркивается, что, модельный подход Д. Норта в силу имманентных ограничений по рассматриваемым факторам даёт ограниченное представление об институциональных изменениях сложной социально-экономической системы. Более того, на длительном интервале происходит перераспределение весов факторов изменений – и теоретическая концепция Д. Норта не позволяет точно установить закономерности в смене таких весов. В свою очередь, введение Дж. Акерлофом и Р. Шиллером фактора доверия является недостаточным решением, поскольку макроэкономическое значение имеют иные сильные институты, предопределяющие развитие экономики, и складывающиеся формы доверия одних агентов к другим. Например, технологии выступают подобными институтами, а технологичность экономики как системы предопределяет её экономическую динамику и потребность в замене одних институтов другими – режим институциональных изменений. Таким образом, поставленная задача сложна и на сегодня не решена в экономической науке. В статье обосновывается возможность решения указанных проблем с использованием постулатов такого направления научного анализа, как «институциональная макроэкономика».

Ключевые слова: теория Дугласа Норта, институциональная макроэкономика, институты, механизмы принуждения, агенты, доверие, институциональные изменения, транзакционные издержки, технология.

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Douglas North Theory: Separate Features

Institutional theory of Douglas North presupposes estimation of regularities of institutions change on a long interval of time. Thus, it is difficult enough to apply it to the working out of current economic policy as the propositions formulated by D. North to a greater extent relate to revealing of long-term regularities of economic systems development and prerequisites of this development. Correctly stating the problem of determination of the reasons of the distinctions in the development trajectory of economic systems, neo-institutional school does not manage to suggest decision which would lead to surpassing growth of the income of the poor over the income of the rich. In other words, representatives of this school are to explain such institutional structure of the society and application of the way of its practical implementation. The changes of the basic capitalism institutions are necessary, so that the poor would become richer, and the well-being growth of the rich would essentially be braked (or fixed) and would not be of danger to the society. As we see it, such social order would be the most desirable from the point of view of long-term prospects of human society development. To generate such order, not simply new institutions and reasoned change of former institutions are necessary, but also new kinds of economic policy including controlled institutional transformations.

Institutions are created by people not only as restrictive frameworks of their behaviour, organizing mutual relations between them, but also as the tools setting the structure of incentives of human interaction in politics, social sphere, economy, and as an original product satisfying needs in conventions, rules, immanent behaviour elements, standards, plans, and etc.

Institutional changes are always an original product of human activity [1; 2]. They define how the society develops in time, symbolizing, as a matter of fact, historical changes. In our opinion, the point of view, according to which institutions can vary independently without participation of an

individual, is unreasonable. If any institution arises owing to the activity of the individual, and there is no other variant in the social world even if hypothetically to assume, that then this institution is independent, but it is impossible in general, then even in such ideal situation there is a person in the initial point. Therefore, institution characteristics are an information vector created by man and all further institutional geneses depends on the initial state of this vector. In other words, the division of changes into two types – genetic and teleological – looks as evaluative structure and not the best analytical decision because it is as difficult to divide changes into two type in general, as difficult then to unite these changes intellectually in order to have an overall picture and a system view on the problem of institutional changes.

As institutions influence the functions of economic systems, thus long distinctions in the performance of these systems are formed under the influence of certain institutions activity, so it is important to imagine precisely, what the composition of these institutions is.

According to neo-institutional ideas, which D. North holds [1; 3; 4; 5], such institutions include:

- enforcement mechanisms providing abidance by the rules (court and the system of punishment);
- formal standards (the constitution, laws, precedents and administrative acts);
- informal standards (traditions, custom, social conventions and stereotypes) [6].

Organizations are usually considered separately as special institutional complexes or systems, but which also structure the relations between people, regularizing exchanges [7; 8].

If we analyze the costs of the change of historical frameworks of agents' performance, these costs appear not only due to institutions in North's understanding, but also because of the organizations which develop because of these limits.

Organization always represents a group of people which are united by the aspiration to achieve some goal. The characteristics of an organization are some set of functions, efforts application area, performance costs, the period

of time before deciding changes, stability to again introduced standards and to the changes of external and internal environment. And these parameters are enough to set or to describe and explain institution or organization dysfunction [9; 10; 11]. It is quite possible to recognize the specified parameters at least necessary and for separate systems or institutions they are sufficient for studying and description. Radical difference between organization and institution is that besides institutional conditions of its formation and performance there are people in the organization, which can have different individual purposes, but they are simultaneously united by the overall aim of the organization.

Institutions have an influence on what organizations arise and as they develop, thus organizations influence the process of institutional changes [12]. For example, efficiency of the housing market is stipulated by what the transactional costs of rendering realtor services, notarial assignment of the ownership, search of favorable credit, mortgage registration, and etc. are. Correlation of transactional and transformational costs of certain system and market depends on the state of the named institutions [13]. Hence, current institutional state defines the prospects of development of economic structure. Thus, interaction of the organization factor of the system and product or service fabrication method is carried out by means of institutions. In this case organization of the housing and the mortgage market (mortgage crediting) and ownership registrations co-operate with applied construction technology, on which the level of comfortableness of the created housing resources depends.

It is possible to single out two basic forms of interaction of transactional and transformational costs representing the general potential of costs of the considered economic system or, in other words, the forms of interaction of technologies and institutions.

1) After their introduction new technologies provide reduction of transactional costs. The employee with very high qualification gets certain force, power in relation to the enterprise, because he receives strategic possibility to threaten the enterprise to

stop production, and in short term the firm cannot get interspecific resource [14; 15], moreover for smaller cost. Hence, the proprietor can raise employees' wages, including top management. Therefore, it is more profitable for the firms to have highly technological production with less qualified workforce, as for the account of new technologies it is possible to lower the general costs as these technologies use relatively less qualified labor, which cannot threaten to stop production or threaten with back-stage sabotage.

2) Institutional changes result in the growth of transactional costs which compensates economy on transformational costs. For example, oil position fixing in a separate production unit raises transactional costs. At the same time due to more effective oil extraction it reduces transformational costs even in greater degrees, than increase of transactional costs.

In D. North's theoretical approach the subject of changes is a businessman, reacting to the stimulus of institutional system. It draws him together with Schumpeter and partly with Kirzner. The source of changes is the developing prices proportions –relative prices or preferences. The efficiency of changes is provided with the rules and restrictions. Such approach corresponds to the frameworks of new trend of economic science which is called cliometrics which deals with historical description of economic changes by means of the analysis of long-term performance of the basic public institutions. And it is the basic service of D. North.

Now it is possible to single out the following basic moments creating “evaluative outline” of the given theoretical trend of institutional analysis:

- limited rationality as the basic principle of the analysis;
- limited resources is the main condition of economic systems development at any interval of time;
- institutions classification with singling out of formal and informal rules and explanation of economic development and changes by means of search of dynamic proportions between two groups of institutions;

– availability of the following types of institutional changes: a) path dependence – dependency on the past, b) path independence – independence of the past, c) path determinacy – partial dependence on the past and the present [6; 16].

D. North's theory would have only descriptive value from the view point of methodological productivity if only concepts of transactional and transformational costs had not been included into its structure. It is impossible to estimate, explain, describe and predict long-term possibilities of economic systems without the analysis method of these costs. Use of quantitative method of transaction and transformation estimation in economic system transforms the system of ideas and researches of D. North and his followers into scientific theory, as qualitative evaluation is combined with quantitative measurements, and interpretation of historical events and the facts, having economic consequences, becomes convincing.

Let's specify some important theses underlining, on the one hand, the originality of the analytical scheme applied by D. North, and, on the other hand, its immanent (objective) boundedness:

– the generator of economy development and, consequently, long-term institutional changes is proportions of the price and consumer preferences;

– special statistics characterizing the development of some economic systems of western civilization and covering the period of about two centuries beginning approximately since 1750 acts as an empirical base;

– the analysis of evolution of the ownership institution in the USA since the moment of the state's formation till today is presented as the main illustration of institutional changes. The features of this evolution proves, that functions efficiency of separate institutions is defined by the basic ordinance – legal acts of constitutional meaning which interiorize the ownership institution and make it legitimate in the sphere of economic relations;

– the basic subject of institutional changes is a businessman leading the economic system out of equilibrium state. The

businessman establishes the prices, and the prices origin is considered to be an important factor defining the character and the quality of institutional changes [6].

Thus, North's theoretical system allows artificially approaching to understanding of long-term changes in economy through fundamental properties of social and economic institutions. This approach obviously combines the methods of economic analysis within the framework of main stream (assumptions about resources constraint, rationality, businessman, competition, etc.) and traditions of classical American institutionalism.

At the same time, availability of powerful estimation criteria built into the specified analytical construction generates a number of serious problems which the given theory cannot solve:

– differentiation of institutional and general costs [17; 18];

– defining of initial point of institutional changes and ambiguity of the views on the state and its role in these changes;

– culture, ideology, citizens' values structure define the character and direction of changes, but they are subject to changes themselves in small degree, though it is not so on long-term intervals under conditions of information economy. Therefore the role of the state cannot be reduced to simplification of economic changes at a long-term stage, but to formation of steady and useful stimulus, motives, cultural values, preferences and ideologies.

It is important to notice, that D. North did not manage to connect possible ways of formation of the listed structures with transactional and transformational costs. It is trivial to oppose explanation of costs increase on long term interval (the development purpose is expansions) to the problem of general minimization of costs per unit of output on a short interval (the purpose of economy). Obvious explanations are available indication of complexity growth of economic systems as a consequence of their technological and organizational development.

Unfortunately, within the limits of the considered theory it was not possible to answer

the question: why does one nation live more richly and the others live poorer? The answer is reduced not only to resource distinctions, but the reason is also in different efficiency of natural resources use, and that these countries and the peoples have various historic-economic development trajectories. The matter is reduced not only to institutions, but also to technologies, knowledge, and dependence mode in the development. In other words, history is really of high value. Therefore, for modern economic researches the given thesis of D. North is, without any doubts, extremely useful.

To differentiate institutional doctrines and to demonstrate the divergences in estimations made by institutionalisms concerning interpretation of the current events connected with institutions changes, let's remind T. Veblen's views who considered, that social sciences are to study relations, in particular, social-psychological mechanisms defining agents' economic behaviour:

- motives of demonstrative consumption, prestige;
- envious comparison;
- imitation instinct;
- the law of social status.

Social institutions play the central role in realization of these qualities as a usual way of reaction to stimulus, as structure of industrial or economic mechanism and as the accepted system of public life. For example, the manner and psychology of rich men differs greatly from behaviour model of an average individual. So, they reveal the following typical signs:

- of an idle class – a set of institutions of predatoriness and parasitism;
- ostentatious consumption – acquisition of expensive goods and rivalry;
- “competitive aspect of consumption” creates appreciable element of prestigious dearness.

That is why it is impossible to give average estimations and conclusions about the results of individual behaviour as separate groups of agents – and they are not small – behave absolutely differently, demonstrating criteria and behaviour motives absolutely different from other agents. As it is known, these motives define economic decisions,

allocation and its efficiency. In this connection, it is required to look at the economy as the system of heterogeneous agents.

Studying the evolution problems of such system represented by different agents will not give less valuable scientific results. Thus, diversification of evaluation leads to a variety of analytical ways of presentation of social and economic evolution. If the analytical design is based on taxonomic methods in greater degree, than on the methods of precision measurement or models assuming mathematical result, it a priori includes estimation institution in the beginning of research. It is not completely obvious what state it is in and how it will affect the general result of the reasoning. It is also not clear how it is possible to use the reasoning during the conducted analysis to increase the efficiency of economic system performance and to increase the productivity of economic policy.

Eventually institutions change and it is the essence of institutional changes. To establish the laws of such changes means to investigate, what quality of economic system we will have by certain time. Those who will live till this time are understood under “we”, as they, in idea, should take advantage of those rules (institutions) which are created before them. Certainly, it is possible to assume, that people work exclusively for the future, that is, for their children. But then such absolutely altruistic model will be great simplification, the same as the model of a selfish agent as a calculator of pleasures. Before studying the laws of institutional changes, it is necessary to understand the factors defining the influence of institutions on the economy, to be more exact, on economic events and behaviour of economic players. According to D. North, such factors include the following: costs of measurement of goods and services characteristics, participations of the agents in exchanges – transactional costs, the volume of the market and the exchange type – personified or non-personified, regulation and compulsion, ideology and people's world-view.

Firstly, transactional costs define the efficiency of institutional changes [19]. If they are high, it is necessary to note that the rights are not unspecified, but that the rights are

inefficient. In other words, it is necessary to postulate institutional inefficiency.

Secondly, personified exchange generates nepotism system, when exchanges are based on ties of relationship, friendship and personal attitude. That is why business contacts become inconvenient or inefficient, that is absolutely uncharacteristic for non-personified exchanges, when individuals are inclined to get profit from the transactions.

Thirdly, the quality of institutional changes is considerably defined by how the system of regulation and compulsion, that is, corresponding government structures, mass communications and judicial system investigating the arising conflicts which appear due to low efficiency of legal norms, or absence of their clear specification.

Fourthly, the ideology does not only defines, but also sets the direction of change of certain institutions, as it forms a subjective model of agents' behaviour, defining both political, and their individual choice. It is this factor that allows modifying neoclassic' treatment concerning rational behaviour of economic agents and the choice they carry out maximizing welfare. The ideology is not something abstract; it is a whole system of independent, but interconnected and somehow co-operating institutions. The development of each of them is subordinated to its own logic and has its own trajectory. First of all, the ideology is formed by cultural norms and social-psychological phenomena. These institutions create the mood of individuals and managing subjects regarding the reaction to changes, that is, in essence they create conditions for their adaptation and reception of the specified changes [6; 16].

Apparently, it is supposed, that there is practically no agent in information economy who would know exactly what decision or set of decisions is necessary to apply in this or that situation owing to the large-scale information distortions and uncertainty of economic decisions (it is an obvious deviation from neoclassics). As far as institutions is concerned, there is a requirement for them to decrease costs for specification of ownership institution, workings out of laws, choice procedures, that

will allow making decisions decentralized and to raise efficiency of competitive markets.

Thus, the given position assumes the estimation, that decentralized decisions and markets are necessary. They should be more competitive and this competitiveness would provide them the required or necessary efficiency. The public majority would agree with this. However, competition in economy is organized by institutions and regulation, therefore, its organization demands certain expenses which cannot be considered small. Besides, competition results not only in some new possibilities and appearance of innovators. It is not always so, as it also results in closing and it can create conditions for predominance of conservative model of economic behaviour (far from being innovative) owing to the institutional effects, that will lead the economic system to the state of limited dynamics. In modern economy there is a whole set of effective decisions which are not decentralized, but on the contrary, they are a purposeful result of government activity as a way of regulation of monopolistic and oligopolistic competition.

Institutional changes depend on how stable institutional characteristics of the society are, that acts as a source of these changes, how strong they are and how they are oriented. To establish the content of these components theoretically is extremely important, however, there is an inaccuracy of the model here, especially if the researcher chooses only one factor and puts it in the conformity with the introduced feature. For example, if he considers, that a source of changes is individuals' preference, the force is exclusively businessman, and the direction is defined by the proportion of relative prices. Institutional changes, as a rule, change the economic system in the unique way. It is reflected in the change of potential productivity of the society, change of storage of knowledge and organizational changes.

Ideas on Economic Changes: Following D. North

Eventually society and economy change. But what parameters identify these changes? The first parameter is population size. It is demographic

changes, expressed in population size increase in the world economic system, even at reduction of certain nations and nationalities that are the initial condition of all further changes. If there are more agents and more various blessings, goods and services are necessary, labor productivity should be higher. That stimulates science and techniques development providing perfection and creation of new technologies and institutions. In this connection complexity of economic system also increases in the long-term period. Along with the demographic processes, agents' consciousness and intelligence, their ability to intellectual activity and creation of new combinations are the second important factor of economic changes. Even in spite of the fact that an individual does not possess absolute rationality, because he cannot calculate, and that is why, he is not a "pleasure calculator". He cannot precisely analyze all available alternatives (last circumstance leads to difficulties of choice). Nevertheless, his mental activity can create and creates the mode of constant improvements. In the past, when demographic changes were not so notable, population increase was low and there were large discoveries in the field of fundamental sciences which laid down the foundations of modern science (physics, chemistry, mathematics, and etc.). During the period when the rate of demographic changes essentially increased, "fundamental character" of the discoveries in the field of science and technics decreased. Combinatory principle or the principle of synthesizing of ideas and approaches began to prevail in the development of scientific and technical sphere. In other words, cardinal new knowledge seldom arises, and development of scientific and technical sphere is carried out by means of expansion of available possibilities and getting of additional decisions in known trends. For example, genetics can help in the struggle against malignant tumor, provide life prolongation, and isotopes physics has already brought its contribution to the solution of the problem. However, it does not at all exclude the possibility of appearing of fundamental knowledge for the account of long concentration of efforts in the known and

already discovered trends (genetics, biochemistry and nanotechnologies), realizations of the interdisciplinary approach and new technical decisions.

Till this moment a biological source of economic changes –individual – has been discussed as a matter of fact. As demography, intellect and behaviour psychology are functions of individual, if it is possible to say so. But creating "artificial world", that is, technics, technologies, organizations, political system and institutions (formal and informal rules can arise independently in the form of stereotypes, customs, traditions and unpublished standards), there is a powerful factor providing additional dynamics to economic changes. It is reduced to independent functioning of structures, organizations and institutions. This "artificial world" can increase diversity and eat up agents' time. It raises the requirements to information processing and getting knowledge [20]. In such world agent's adequate fast reaction is required. The adequate reaction is a condition of effective adaptation. Quick reaction capacity does not mean that the agent is well adapted. Correctness of the reaction is more important, and it becomes the function of the volume of the received knowledge and abilities to process information. Adaptation becomes psychological model of modern economic development and is the content of economic changes.

The major parameter of changes estimation in the economy is time. If one interval of time is chosen for estimation of changes, there will be one result. If the time interval is increased or reduced, the estimation of changes will change, as the scale and content will also change. On different intervals of historical time there were different forms of economy organization, the ways of life and its quality were different, therefore, introducing unified parameters of changes estimation, it is difficult enough to compare economic changes at slaveholding or feudalism and, for example, in modern mixed economy with computers, space communication and atomic engineering.

The growth of labor productivity was accompanied by social struggle for reduction of the working day. As a result, the 8-hours working days with two days off a week was

established (this institution keeps its relative stability almost hundred years). It was struggle for time – the most valuable resource symbolizing the wealth of the people. The more the level of the average income per capita is, the more free time from work the agent requires to use this increasing income and the more the need for leisure. Simultaneously, income increase can take place at labor productivity growth, or at large expenditures of time for labor. If productivity does not essentially change, the second factor becomes the leading one. Computers, communication media and automated systems have increased productivity even more and have raised the reliability of the control systems, but it has not reduced the working hours yet. There are a lot of reasons for this, but, in my opinion, one of the main reasons is that time is redistributed, that is, it is necessary to spend a considerable part of time for training, retraining, information processing and selection of relevant information. More time should be spent for agents training with information accumulation. The expenses for processing of the available information are higher at the same busy time at work. This means, that less time remains for leisure and even less time for getting additional knowledge or for knowledge increment. It is necessary to have high intellect and less dysfunctional systems of economy and management to carry out knowledge increment for a short period of time.

Time becomes the main resource in competition. It defines the life of institutions and agents. We will pay attention on how the heads of corporations and top management of any organization in the private or public sector limit the reception hours for the workers. They have the plan of operation which is scheduled on time with the designation of functions carried out. The higher the position of the agent in the hierarchy is, the more deficiency of time he has. For example, the president of the country cannot receive each citizen even if he would wish. The same concerns the head of large or not so large corporation. Such meeting can be only selective. Thus the higher position in the hierarchy means larger income for the agent, than in the case when he occupies the

lowest positions of administrative hierarchy. Thereby modern society has rather expensive management. The carriers of “executive knowledge” occupying the lowest positions in the hierarchy have lower income. Even electronic communications cannot overcome high variety of economic system, though it can increase the number of contacts of the manager and the subordinated agents. In other words, if to define social and economic evolution as a variety expansion and creation of new functions, it means, that development is characterized by two effects – “time exhaustion” and time “redistribution”. Thus, the problem of replacement, displacement of one product, services, functions, the ways of life, its qualitative parameters (content) by the others permanently arises in the course of evolution of economic system and is solved. Under conditions of development, when information is simultaneously a separate good, a factor of production and, to a great degree, a determining vector of economic system movement, maximization problem of firms’ and corporations’ profit, discussed in the form of the main thesis of the majority of neoclassical models describing the behaviour of economic agents, demands revision and other formulation. In particular, the organizations and agents have the aim of not only maximization of profit, but minimization of execution time of the most valuable functions. According to the satisfaction hypothesis of Herbert A. Simon, the firm does not maximize profit, but carries out the actions bringing acceptable satisfaction. But, what “acceptable satisfaction” means, it is an indistinct enough thesis what to consider acceptable. It seems to us, that satisfaction hypothesis is not opposed to the problems of profit maximization, but is a certain expression of minimax problem or the problem of minimization of execution time of the most valuable and useful functions (business) connected with creation of blessings – products, services, institutions, decision-making, and etc. It is very difficult to distinguish availability of this problem, because the firms and agents solve it implicitly. Certainly, not all of them solve it equally effectively. By the way, time is the parameter which each person as a biological

system is sensitive to. It is connected with day regimen, sleep, and psychological relaxation-overload during the day, life span and ageing. A person clearly understands what period of time he stays in awake (active) state in economic sense on the average, and what his life span is. Many public institutions rendering services to the agents designate at once the period when this service will be rendered. Educational system, archival document retrieval and public health services can serve the examples. The performance period of production is first of all underlined as the most important parameter, and only then the price of production or wage at employment are discussed. At “time exhaustion” the agent should choose a priority and consider what function he will carry out, what problem he will solve and what business he will deal with. Longer affairs can be postponed, and the ones which are possible to fulfill quickly are carried out first of all, because the agent will feel greater satisfaction that he has done many small affairs up to the end, than that he has done one big business which is not still finished, and its performance has not allowed him making other affairs. Hence, in the firm, household or state there is not simply a portfolio of assets which are invested, but a portfolio of functions, kinds of activity together with the assets serving them, distributed according to the time of execution (realization) which is in essence invested.

Economic changes are expressed in the change of system characteristics of agents, institutions, organizations and structures. Parameters of technological development and labor productivity vary. New kinds of activity, economy sectors, the way of life arise. There appear new forms of communication and information processing. Changes accompany evolution of economic systems, being its integral characteristic. Their important property is accumulation of relevant information, knowledge and increase of economy manufacturability in different directions. Thus, economic changes can become and they have recently become the task of management. If in a community, or in a feudal estate and in an early bourgeois way of life the representatives of the top political force did not think about the

necessity of certain rate of economic growth, elimination of unemployment and solution of the inequality problems, then nowadays stored knowledge and the level of complexity of the economy presuppose management of economic changes.

In his work “Understanding the Process of Economic Change” [16] D. North defined the concept of “economic changes” most generally: they consist in the “change of material and physical well-being of people which is understood not only as the change of the level of national and personal income, that is, the change of physical measure of well-being, but also the change of the prominent aspects of well-being expressed in non-market economic activity which cannot be measured exactly” [16, p. 98]. The periods of recession and economic growth refer to this definition. Moreover, management of economic changes is also implicit here, though special reservation is required and it does not directly correspond to the given definition. At the same time, there is an idea in the book about the strong influence of culture and agents’ consciousness on economic changes. Discussion of poverty reasons of one countries and successful development of others is made especially in institutional aspect. Thus different factor basis – initial conditions of development – is not obviously considered. In other words, one nation is not poor because informal restrictions and culture are the obstacles to rapid growth – development of ownership and players behaviour maximizing profit – but because the reserves of natural riches and initial educational level are low and there is backwardness in historical development. Knowledge was not stored and was not applied in the country with poor resources. As a result, more developed system, with better institutions organization and resource possibilities subordinates less developed system, forming dependent development and corresponding character of economic changes. The basis of all changes is technics and technologies development, creation of new means of production focused on wastelessness of production and its manless character (in an ideal). Take notice, that in the USA the south of the country was always

agricultural, and the north was industrial, so the climatic factor provided specialization in the country. It also provided similar specialization of the world economic system. Thereby, climatologic resource factor defined institutionalization and specialization of specific areas. Certainly, the occurring processes were much more difficult. For example, urbanization, capital concentration, demographic changes, education and public health services gave a considerable stimulus to the territories development.

Institutions and Agents Interaction

All agents are subject to economic changes and are the initial point of these changes (both positive, and negative feedback mechanisms operate here). But agents experience changes only on the sector of their life cycle. When the analysis of economic changes is carried out on very large intervals of time, as D. North, in particular, does, it is necessary to understand, that some generations of agents were replaced during this period. Thus separate generations could not notice, what was happening on the sector of their life cycle, having prepared the future changes. The agents who lived before 1980 will never learn what a mobile phone, personal computer, the Internet and tomography are. But it is they who have prepared the basis for creation of these devices and systems. Institutions eventually change under control. Three components are of importance in the analysis of institutional changes: content and quality, speed and frequency and adaptive possibilities of agents and institutions (adaptive efficiency).

The content and quality of institutions is the information about their purpose, functions structure, application areas, and costs of performance compulsion. Speed and frequency characterize how often and quickly the change of the content and quality of institutions happens, quality being characterized by the degree of their dysfunction. Under dysfunction we understand qualitative frustration of functions, or their non-performance for some reason or other, leading to functioning different from potentially possible or desirable (needful) functioning of the institution/system. Adaptable

possibility is defined by the degree of susceptibility of specific institutions, efficiency and reaction of agents to innovations and introduced institutions. Technological innovations can form additional institutional conditions, reproducing institutional infrastructure. But introduction of new institutions can also be considered innovation.

Separate institutions cannot influence the behaviour of economic agent or macroeconomic parameters, such as demand, supply, consumption, savings, investments, employment, inflation and etc. In this case, we call such institutions neutral. The property neutrality is manifested in one case, but in the other case this institution cannot be neutral. So, the traffic rules influence inflation and other macro parameters in no way, but they influence the individual's behaviour. Moreover, the control over their execution demands special – organization of inspection of road traffic (police). It presupposes the budget expenses, but the rules influence these expenses in no way. But tax treatment and tax code directly define the value of budgetary incomes and expenses, influence consumption, savings and investment activity. Certainly, they also form the model of individual behavior, because they create the mode of confiscation from the earned income, influencing economic motives, stimulus and guidelines (attitudes). Hence, one institution are neutral to the influence on cash flow and income distribution, others influence them directly redistributing the created income between the components of its use.

Agents create all formal institutions, because they are included in the concept of legislation. Informal institutions are usually established without direct participation of the agents, they are unintentionally formed as interiorization of certain notions and ideal structures which are transformed into traditions and customs. The agent can refuse to follow these informal installations, or to accept the restrictions imposed by them, but it is impossible to change them independently until there is a mass refusal in the scale of the whole society. Then there would be no one who remembers and follows this informal standard, and it will cease to operate, or will be replaced

by the modified standard which can lead to opposite actions or results. To evade from performance of the formal standard is more difficult, as the compulsion mechanism is absent at informal standard. In case of informal standard the mechanism of compulsion will often be shame from non-compliance of the rule, but such standard as well as such compulsion mechanism are not obligatory and cannot be executed without special consequences or harm for the agent.

The agents form the laws, but this activity is not and should not be unconditioned and stochastic. In this connection we can speak, that the political system is a firm producing public blessings – institutions. The latter becomes the products of this production. Extending this logic, it is possible to speak about defects (“harmful laws”), inefficient legislation (standards), and the ways of management of such production and about its algorithm. It is obviously important to specify in general, that systemacy in legislation demands the other scheme or reasoning logic, than the one which has to be observed today. In our opinion, this algorithm should be as follows: 1) estimation and analysis of existing laws, regulations and standards of the given area and the spheres interfaced to it in order to reveal the necessity of new laws or perfection of the existing ones; 2) revealing of problem areas of legislation, defining of the purposes and problems solved within the framework of laws projecting, formation of unified terminological, evaluative and legal basis for the whole block of laws; 3) statutory wording with their simultaneous introduction in the legal field of economic relations, with studying of the feedback and bringing the new legislation to agents’ notice, then system correction if efficient parts of the laws, separate articles, chapters and, clauses are revealed, 4) the law should provide a minimum of additional legal acts and have direct action without double interpretation. It should include all available terminology on the problem, estimation criteria of law observance and criteria for those kinds of activity which this law regulates in the legal space. It is a minimally necessary set of conditions.

The nature of informal rules is that the similar algorithm cannot be applied to them, as they do not refer to the produced blessing, though they also act as public blessing, but they are created collectively, by a large number of agents. Though it is possible to give the example of informal rules of some one tribe, but again these rules result from evolution of the tribe life and refer to all people. Certainly, the appearance of fare dodger is always possible, but the rule operates as far as it is shared by a considerable part of the representatives of considered public system.

The problem of rules efficiency is far from being simple and, in our opinion, D. North does not make ultimate decisions on this problem, though he moves in correct direction. Really, how should the efficiency of informal or formal rules (restrictions) is estimated? Should the efficiency of institutions according to their division into formal and informal rules be divided? Can efficiency be measured by how well they structure interaction between the agents, that is, by the value of transactional costs? But the rules can economize transactional costs or they cannot, increasing transactions and the volume of transactional costs¹, and sharply increasing overall process costs. The content and quality of institutions speed and frequency of changes will define the value of transactional costs. If adaptive properties of the agent are high, for example, thanks to sociability, then the adaptive costs will also be lower. This regularity will work with lower transactional costs too. Take notice, that here economic science approaches the sphere of psychology as agent’s sociability and adaptation is psychological reactions and behaviour models. These are the properties of the individual defined both by socialization and by other conditions. If to refer to the well-known work of J.M. Keynes’ “General Theory of Employment, Interest and Money”, much attention is paid in his work to psychological component of

¹ This result can be received due to the interaction of various rules, that is, influences of the rules on each other. Thus, specific institution, destined to lower transactional costs and introduced into the legal space with this purpose, in practice will result in their growth, because its interaction with other rules has not been predicted and considered at the stage of institution design.

macroeconomic agents' behavior and their reactions. This is reflected in the concept of "motive of liquidity preference", "wealth motive", and etc. How and due to what do motives change? If to consider them invariable, then any model, whatever dynamic it is, will be static relative to the agent as his invariance is supposed, to be more precise, the invariance of his psychological properties and behaviour model. But all reactions vary and the agent, understanding and studying the information on his own behaviour can use it for unpredictable correction of his behaviour. In our opinion, the use of teleological approach, clear purposes and interests easily classified and revealed will help to solve the specified problem. To achieve these purposes it is also necessary to create institutions possessing functions and utility, which are in turn exposed to mutations, demonstrating this or that degree of stability or instability and efficiency/inefficiency.

D. North, in particular, writes, that "institutions efficiency is defined by combination of formal and informal institutions and their possibilities of compulsion". It is noticed elsewhere, that "a key to efficiency increase is a certain combination of formal rules and informal restrictions" [16, p. 98, 185].

Firstly, proceeding from the presented material, it turns out, that institutions efficiency is defined by combination of institutions (tautology), but the combination of formal and informal institutions is obvious not on each pairs, if it exists on certain examples of such institutions. If to proceed from the fact, that the problem of institutional neutrality exists, it can be applied to institutions combination as well. Besides, the combination in each case cannot be completely comparable. What does a combination mean? Analytically it is possible to disclose a combination of two, three or at least several institutions, but no more, because further combinatory problem becomes so complicated, that the solution becomes difficult, as well as the exact efficiency estimation. Then, combination efficiency should be discussed, but not the efficiency of a separate institution, and they are absolutely different things. Certainly, possibility of compulsion demands a certain quantitative and qualitative estimation and

availability of the given parameter automatically makes the efficiency indicator compound.

Secondly, the efficiency of formal and informal institution is all the same different efficiencies as both the content, and the reasons of appearance of such institutions are different, and institutions' life cycles do not coincide. Certainly, it is possible to estimate the efficiency of these and those institutions on the degree of their influence on the net total revenue of the agent, on the costs and benefits and the difference between them. But then it is necessary to reveal the degree of influence of each institution separately, because this influence will be different because of institutional neutralities. In other words, each institution will have only a certain share of influence, to be more exact, it will influence only on some part of agent's income or costs. Even accounting of transactional costs will not be enough in this part, as they are only a part of the total costs and it is wrong to connect institutions and their influences only with a part of costs as if they do not influence all the rest. Thus, even the use of transactional costs estimation can be only a truncated approach to the measurement of institutions efficiency, to say nothing about institutional changes. Changes efficiency is even a more difficult concept. It seems to us, that different kinds of efficiency should be considered and each of them should be measured separately.

Thirdly, in our opinion, it is valuable to define and measure institution efficiency on its dysfunction [10; 21] which is set by the following parameters: the purpose of existence, application area, functional filling (variety), operation costs (take notice – not only transactional), time before change or correction, and introduction (appearance) of replacing, supplementing institutions, the degree of rejection of introduced standards and rules (from agents and institutions) and mutations stability (genetic aspect of changes). It is possible to measure dysfunctional state in different ways. One of them is the estimation of non-probability of dysfunction deepening according to the theory of in techniques – failure non-occurrence. It goes without saying

that economic dysfunction with reference to the agent is a psychological concept. To be more precise, it is connected, with a certain psychological state of the agent arising either because of dysfunction deepening, or directly before the growth of dysfunctional state.

It is possible to apply this approach to measuring and defining institution efficiency to formal institutions as they are created by the political system for definite purposes, they carry out planned functions and their functioning and creation are connected with the costs. Besides, it is possible to specify the time of change-correction for them, when amendments to the law are made, or the law is replaced. Thus, formal institutions are considered as public blessings. Force of their influence on economy can be more than informal standards, but in separate public systems the opposite phenomenon can be observed, when the force of informal standards influence economic decisions and management surpasses the formal standards or the latter is projected and introduced into public system under the "control" of informal regulations. Informal standards provide functioning of shadow economy, corruption and organized crime. Specific informal norms operate in the criminal world, completely defining the behaviour model, for example, at serving criminal's sentence.

What is the negative deviation in the psychological model of the agent's behaviour? It is a dysfunction, too. If psychology and medicine present the agent's normal psychological behaviour and reactions and in practice the deviation from this description is observed or adaptive change of the behaviour model which narrows useful functions or does not allow executing earlier executed functions, there is a dysfunction. Such state as dysfunction can arise at reduction of credit, that is, at difficulties in cash security of the activity of an agent, a firm, or an institution, and at qualitative infringements. Institutional efficiency is just reproduced during the interaction of institutions and agents and is defined by the depth and scale of arising dysfunctions. Thus inefficient formal institutions continue functioning showing steady inefficient state which can be liquidated

at correction (updating) of the institution, its replacement, or additional influence assuming monetization of its functioning.

Negative selection of institutions and behaviour models takes an important place in the modern economy and scientific analysis. Why are inefficient conditions fixed for a long time? There are a lot of the reasons here; all of them are connected with appearance of inefficiency and institutions dysfunctions. Actually such selection is connected with the fact that there have been no ideas about efficiency and criteria of decision-making till now, or as a result of economic and institutional changes the motives and stimulus provide benefits from fixing of less effective institution, less effective behaviour model which does not seem inefficient to the agents. The reason can also be inadequate cash security of institution or system functioning. Possibilities of functional performance are sharply reduced, expenses grow, the institution cannot disappear, simply its functions are modified and it becomes inefficient. However, the rules of corruption behaviour which are officially recognized as an evil of modern society, on the contrary, are effective enough that confirms the vitality of the given phenomenon, though presence of the phenomenon is recognized as inefficient form. If the governments spends money on counteraction of corruption behaviour models, and the phenomenon is not only reduced, but even expands, that is fixed by some reporting on different countries of the world, these rules and this phenomenon have steady form. Actually, the given rules are quite effective for the participants of the given models. They are inefficient for official authorities and society as they actually substitute them. And this substitution occurs for two reasons. Firstly, the efficiency of official institutions decreases, their dysfunction increases and does not allow them functioning in the previous mode. Secondly, culturological phenomena, system's inertia, competition between institutions, stimulus, motives and the laws of bureaucracy functioning take part in fixing of such inefficient states. In particular, in bureaucratic hierarchy the appearance of the rule, when the bureaucrat of the top echelon purposefully

selects his deputy and future applicant for his post with obviously worse qualities – professional and personal – chooses a servant-executor who could not eclipse the abilities of the boss. Such agent is convenient as he allows operating according to the rules which the hierarchy dictates, that is, the reporting rules, but not solving the problems in essence. The expenses connected with wrong reporting to higher level can be more, than the expenses for the problem solution. That is, it is more important to report correctly, than to solve the problem. Bureaucrats' actions follow the logic of decrease of these costs. That means, it is necessary to prepare the reporting correctly and thus it is unimportant, whether the problem is solved. The danger to lose the post and earnings, because more capable assistant could suggest the solution and occupy his post, result in prolongations of the system of negative selection on all hierarchical power chains from bottom to top level. If such hierarchy institution gets greater power, election institutions solve nothing, and are adjusted to it. As a result, with each step of selection the management quality will be reduced, because of decrease of qualitative characteristics and the agents' abilities occupying hierarchical structural units of management. If in some unit there will be very skilled, knowing agent, with excellent personal and professional qualities (honesty, openness, decency, transparency in work) in a random way, all other hierarchical steps will reject the given agent. In this case a variant is possible even concerning the change of such hierarchy, liquidation of the post and staff list only in order to liquidate the qualities inappropriate for other participants of the hierarchies. On the one hand, they could borrow these qualities and change their own characteristics; on the other hand, the agents standing higher in the hierarchy create the mode of constant risk of change. As a result – fear to change something, to say nothing about the necessity of making an effort for this purpose. The costs of one's own change are higher, than the costs of removal of such "catching" competitor. Therefore, the situation develops towards the least resistance. The agent with objectively best characteristics will be rejected.

Such selection and such institutionalization of not best qualities of the hierarchical structure lead to the general system decrease in quality, poor control and dysfunctionality growth.

Informal standards can be initially inefficient. Their appearance is strongly defined by stereotypes, agents' ideal structures, their psychological preferences and orientations. Informal standards provide economic attitudes, but it is possible to define and estimate their efficiency, or inefficiency on the same parameters, as the formal standards. Another matter that negative selection can be more striking.

Interaction of agents cannot but influence institutions as the agents' efficiency somehow influence institutions' efficiency and simultaneously depend on this efficiency. Inefficient institution can be created immediately at the designing of formal standards. Efficiency or inefficiency of agents is manifested in the decisions made by them, which are, in any case, reduced to the choice from available alternatives, for example, to save some part of the received income or to direct it for consumption. The motive of saving and the motive of consumption in neoclassical economy were always presented as contradictory motives, though in essence, it is a psychological problem of income distribution in the directions of use. Such outstanding macroeconomists, as G. Akerlof and R. Shiller, up to now explain crisis manifestations and possibilities of macroeconomics development in these or those countries by low or high rate of savings [22]. Certainly, in youth the agents save in order to spend savings in the old age. Therefore the saving motive in the process of movement within the limits of agent's life cycle decreases and the consumption motive increases. However, accumulated income is stored in corresponding financial institutions – insurance, pension funds, medical funds and banks (deposits) on functioning of which the living comfort of these levels of population depends in the future. Thus, savings are actually as a kind of income placed in economy for the purposes which are not connected with the purchase of consumer blessings, that is, they are reduced to investment and financing of activity of those

agents who accept this part of income and dispose it. Efficiency of the named institutions, hence, efficiency of the whole economic system, defines how savings will be used. Of course, in this connection, the rate of savings is an important, but not a sufficient indicator for the explanation of development success. In that case it is pertinent to assume, that withdrawal of a considerable part of income for savings in modern economy can provoke bubbles at operating financial institutions and reduce the possibilities of development in the future if these savings are subordinated to the purposes of functioning of pyramidal financial system/structure in greater degree. In connection with everything presented above, special attention should be paid to the so-called institutional macroeconomics, especially in the aspect of the developed debates concerning the changes which are ripe in macroeconomic analysis.

Institutional Macroeconomics: How Important the Irrational Principle Is

After the world financial crisis of 2007–2009 the discussion resumed about modern neoclassical macroeconomics which could neither foresee the crisis nor warn about its occurrence, suggesting some damping procedures, nor to give intelligible explanations and recipes of its overcoming² after the crisis had occurred. A posteriori the “alternative” economists like G. Akerlof and R. Schiller³ began to build new macroeconomics, the models of which, in their opinion, should consider trust, the effect of panic or schooling habit of the agents in the market, and etc. Epidemics of optimism or pessimism in the modern markets arising due to the change of trust and dissemination of ideas of the agents reproduce the crisis mechanism.

Blunt enough criticism of “monetary illusion” and the meaning of inflationary expectations in decision-making of economic

agents were reduced to conclusion that the assumption of neoclassical economists about the people, who in their actions make adjustment for inflation, is unlikely. The case of labor contracts conclusion is used as an indicative example, when the agent does not include indexation of the wage in the contract according to the inflation rate. Thus, the agent acts according to the unpublished rule of “monetary illusion”, orienting on the nominal values and assessment and forgetting that only real indicators are of importance. In this case the wage should correspond to the change of real purchasing power.

The problem is that the agent cannot include indexation in the labor contract, and the employer does not wish to do it for the known reason. As a result the wage lags behind inflation. But it does not at all mean that in the process of the development of inflationary processes in the economy the agents do not expand the requirement to increase the wage. If the wage was automatically indexed, and institutions encouraged such indexation, inflation, for certain, would be higher, all the same providing a certain lag in the prices and wage dynamics. It is clear, that the wage in the form of labor costs is a part of the price of any product or service. Therefore, there is a correlation between the dynamics of prices and wage. It is another matter, what this correlation is on short and long intervals of time. It seems to us important to specify that macroeconomic theory, which proceeds from similar interrelation, will never be correct as it does not consider the other factors of inflation, and the motives of getting the wage. The matter is that the agents often proceed from the standard of living when they agree to work by the contract, but not from the assumption what the inflation will be. Thus, roughly estimating the wage they agree with a certain standard of consumption and life, that is, such estimation considers inflationary changes, but does it indirectly.

Thus, the agents somehow take inflationary expectations into account. But this action is camouflaged; it is not so obvious and, certainly, can be inexact and erroneous. For example, they can be overestimated or underestimated. The more unexpectedly the

² P. Krugman and J. Stiglitz started such discussion in a series of publications and G. Akerlof and R. Schiller in the book [22].

³ Though R. Schiller was one of the few economists who warned that there can be a crisis and they even said that it was inevitable.

prices change and the higher the speed of such changes or the speed of institutional changes, the more evidently the agents will consider inflation in labor contracts and other actions.

As certain pro-Keynesian economists see it the recommendations concerning the way out of the crisis should be reduced to the monetary and credit and budgetary policy which would provide full employment of the population and at deviation from this parameter it would restore the economy to the specified value. If there is a crisis in the country which affects financial system and the level of trust decreases, how is it possible to solve the given problem? Most likely, it is necessary either to increase the government expenditures, or to reduce taxes, or to do both. However, if to reduce taxes, the probability of non-reductions of budgetary incomes all the same remains very small in crisis. In this connection, it is possible to assert, that it is difficult enough to achieve both purposes simultaneously. We mean both to reduce taxes and to increase the government expenditures. Nevertheless, G. Akerlof and R. Schiller [22] defend the idea of “intense crediting”, that is such credit augmentation that it provides the effect of full employment. They introduce trust multiplier with this purpose in mind by analogy with Kan-Keynes. In general, the so-called “irrational” macroeconomics which they wish to formulate, constructed on the principles different from neoclassical, assumes active use of the concepts “trust” and “irrational principle”. This means a serious problem – to create financial mathematics, the theory of macroeconomic finance considering irrationality and institutional restriction in agents’ reactions.

The theory of the multiplier explained both the economy growth, and depression. Multipliers of investments, consumption, government expenditures, and etc. were developed. These indicators show how income changes at their change by a unit. The same also refers to trust. Growth or reduction of the level of trust by a certain unit value can lead to the change of income level. However, I would like to notice, that such logic is not quite adequate. Firstly, it assumes measuring of trust by exact enough methods and, moreover, measuring of

trust scale in macroeconomic sense. However such problem is not simple to be solved technically at macroeconomic level even for separate markets. Secondly, if there is, allegedly, the multiplier of trust, there should exist the multiplier of irrationality, or rationality as two behaviour models of the agents. Besides, the level of optimism and pessimism surely depends on the state of health of the agents. Hence, it is possible to introduce the function of the agent’s health reserve and to speak about the multiplier of this function. And it will be more probable as the sick person is inclined to less level of trust. But, say, fatally sick, on the contrary, realizing his state trusts any remedy if only there is one. In this case, to what degree will it be necessary to operationalize macroeconomic? It is an important question from the sphere of methodology and it requires solution or reasoned answer. It has not been done yet by macroeconomists of neoclassical school and their opponents.

The current level of trust will probably define the future Gross Domestic Product with some lag of time. And what does the level of trust depend on? Say, if the population of the country grows old or becomes younger, will this level raise or go down? Other things being equal, youth is characterized by optimism and greater level of trust, and senility is certainly characterized by less level of trust. Though the models, when the trust level does not depend on optimism, are possible. Then it will turn out, that the aging nations are less trustful, than the young ones. However, the given thesis is, all the same, not proved empirically if to follow sociological surveys and known indexes of trust which are estimated by the given method. In particular, the index of consumer preferences, which with a known assumption can conditionally be considered as a certain index of trust, is estimated in such a way.

It should be noted, that neoclassical macroeconomics makes the theory of natural level a corner-stone. The reasoning of macroeconomists who include the problem of trust and information asymmetry in the analysis at decision-making are based on this theory, though with some reservations. Moreover, it is asserted, that the theory of natural level has

become the basis of macroeconomic policy. And this theory assumes absence of “monetary illusion” that makes the central idea of all macroeconomic science. But the critics of neoclassical macroeconomics do not also deviate from this idea, in particular, G. Akerlof and R. Schiller [22]. Certainly, subordination of macroeconomic toolkit to full employment, when the relationship of labor markets and institutions, regulating these markets and the given toolkit, is weak, does not look adequate even if to include trust and multiplier of trust in this analysis. Certainly, measures in the form of discount window expansion, direct investments in banks for saturation of the economy with the liquidity, and besides relaxation of restrictions in state financing of the enterprises aimed at the demand revival are not perfect. Moreover, there are questions on how necessary and sufficient they are. We think, that crisis expansion becomes possible not for certain objective reasons, but due to the work organization of financial and economic institutions which, not changing in essence, in some time co-operate with each other so, that they provoke a crisis situation which is deepening. The effectiveness of macroeconomic measures of the government will be defined by the stage of crisis at which these measures are applied, that is, dependence on the depth and dynamics of already started crisis becomes obvious. We think this dependence will also define the scale of the measures, and the number of tools. The known principle “purposes-tools” of J. Tinbergen asserts that the number of tools of the economic policy should be equaled to the number of purposes. Otherwise, the purposes will not be achieved. Institutional organization of the economy and the effects following from the psychology of the agents’ behaviour, their irrational principles are not considered. In other words, having less tools it is possible to realize some parallel purposes, as if not connected directly with the tools. And it is possible not to reach the purposes at the equality of the purposes and tools due to the swallowing effect of transactional costs or X-inefficiency of economic or operating system. Thereby, the principle postulates ideal (minimum), or even desirable correlation following, by the way,

from corresponding mathematical ideas. Its institutional expansion demands specification, conditions of application of the principle and those institutional structures which in each case can provide the result at disparity of the number of purposes and the number of economic policy tools. Of course, in this connection, the named measures of stimulation of aggregate demand can make positive impact on employment and production. At the same time they can be insufficient for overcoming of the crisis according to the state of financial and economic institutions. In other words, if to continue our logic of reasoning, it is necessary to note the presence of medical analogy when disease symptoms are relieved, but the nature of this disease is not absolutely established and the treatment mode is not chosen. It is interesting to notice, that the reasons of crisis which is not just the same as the previous one, are defined quite adequately to what was observed. The reasons of the crisis of 2007–2009 were not low demand and even not high prices for energy, though they all accompanied the crisis. They were, most likely, shortage of credits, or, to be more precise, liquidity collapse and credit deficit. Actually, there was a certain set of specified reasons the list of which can be expanded. The necessity of struggle against credit deficiency is ostensibly the result of them and is the way to reach full employment at macroeconomic level. The given logic seems to us “linear” and self-evident. And the suggested measures are insufficient to provide operated way out of the crisis and to prevent its repeated occurrence.

Certainly, the suggestion to limit speculation on derivatives and other securities and to regulate the process of securitization was right. For this purpose management instrumentalization of financial system on the whole and its updating are necessary. General overestimated and unjustified optimism which speculation generates, and the difference between short-term and long-term credits (when money is borrowed for short term, and are given to the agents for longer period) provided low efficiency of basic financial banking institutions. As a result there was liquidity collapse for the whole economic system. It is

difficult to lower taxes and simultaneously to increase expenses by simple reduction of taxes and growth of budgetary expenses (these two measures are opposite in realization), and by interest decrease though the specified measures will not be useless. It is difficult to solve quickly the problem of change of the agents' psychology, which was generated under the influence of operating institutions. It is necessary to remove them from the possibilities, which, in essence, have destroyed macroeconomic stability, causing the crisis. It is the problem at the level of institutional planning and projecting. It seems difficult enough, because expenses are necessary to reorient agents. Such costs are not usually considered by the economists. The use of the term "trust" here requires clarification as the agents cannot deduce their money resources even if they do not trust financial institutions and if alternative possibilities are not attractive to them.

It should be specially noted, that planning of macroeconomic policy on the basis of the hypothesis of natural level with the linkage of credit to the necessity of provision full employment seems to us not quite correct and is an out-of-date method of macroeconomic policy. And introduction of the multiplier of trust does not mean a new macroeconomic theory as G. Akerlof and R. Schiller think [22]. The reasons here are the following.

Firstly, inflation cannot be determined by one factor and be strictly connected only with it in the short-term or long-term period. The factor of unemployment is meant – the higher unemployment, the lower inflation. At low unemployment inflation becomes high enough. Besides, it is difficult enough to confirm mutual determination, proceeding from Phillips curve, because unemployment phenomenon depends on the state of labor markets and structural changes in the economy (intersector dynamics). In other words, such correlation is a model, and the years of stagnation visually demonstrated the deviation from this model, when inflation and unemployment were high.

Secondly, besides the unemployed, who have original motivation and very hard restrictions on personal income and the level of

consumption, there are agents in the economy with absolutely different behaviour model. They have work, but demonstrate different activity, that is, they are innovators and conservatives (simulators are a version of conservatives). It is them, who define the process of prices dynamics, that is, inflation, co-operating and testing various transition states. If it is not so, it turns out, that the smallest group of agents is more strongly connected with inflation in its aggregate reaction. However, the unemployed do not influence in any way the pricing process and even demand of these agents' group is rather insignificant to provide demand inflation. Then why macroeconomists, who are making a start from the hypothesis of natural level, consider interrelation of unemployment and inflation to be of great importance. The matter is that the hypothesis of natural level establishes the value of employment in the economy which is accepted as reasonable and even necessary value.

The assessment of the scope of the unemployment phenomenon strongly depends on the definition of this phenomenon and the method of registration, to be more precise, the rules according to which unemployment is registered. The agents, operating according to these rules and finding the ways of deviation from them or using these rules for getting of additional benefits, can be motivated by social protection level and the range of governmental social programs, which influence decisions concerning the change of job and acquisition of unemployed status. The hypothesis of natural level does not see the institutional effects of economic system functioning at all.

When the level of trust of the agents is low, it is difficult enough to expect massive distribution in the economy of innovations. One and the same agent can be an innovator, a conservative, and a simulator depending on the institutional conditions, monetary and credit provision of his activity and governmental measures. Permanent switching of the strategies is observed depending on these or those conditions. The trust is formed during laborious efforts and is connected with the consistent actions which are actually confirmed, which bring satisfaction and are connected with the

expected result. If one is expected, but the other is being performed, the trust is lost as quickly, as it disappears at massive opportunism. It can damp the risk of income loss as a result of competition. That is why the factor of trust is important enough in the formation of agents' economic motivation.

Presence of innovators, conservatives and simulators in the economy and their activity in these or those periods can strongly influence the prices dynamics. This influence can be expressed, in particular, in the growth of the number of innovators. And innovations will be accompanied by the increasing prices dynamics and unemployment increase. The measures undertaken by the government in this case will lead to curtailment of the specified tendency proceeding from the logic of the "hypothesis of natural level". Domination of conservatives and simulators can support the prices growth rate at some stable level. However, the reduction of "innovators" group will cause unemployment increase. As we see, the correlation between the contribution of various agents' groups to inflation and economic development actually defines and explains the deviation from the model of Phillips curve when both high inflation and high unemployment or non-increasing inflation at raising unemployment can exist. The analysis should be undoubtedly multifactorial and consider many aspects of the named macroeconomic phenomena. Only in this case it will be plausible.

Thirdly, the employers, being a special type of economic agents and carrying out the policy of wage and employment at microlevel, have learnt to calculate labor expenses so that they can reduce actual wage, keeping the profit rate that is important for proprietors. For this purpose, the employee is awarded with fixed salary, and the whole system of extra charges and bonuses is introduced which are as if

connected with the results of work and frequently with profit. At crisis in the economy, or crisis period of a certain firm, the employer simply extracts these bonuses which, as a rule, are not regulated by the labor legislation. Each firm or organization can have its own system. Hereupon, actually paid wage of the worker is reduced, and it is practically impossible to protest such measures or it is very difficult to do (transactional costs are high). Thereby, it seems that there is the ratchet effect, that is, the prices for various factors of production are rigid to fall (they are inflexible to decrease) and there are obvious possibilities of wage reduction (the labor price) according to the factor "labor". It is one of the factors of savings reduction during the crisis periods. And savings are also reduced due to financial destabilization, devaluation, liquidity reduction of the bank system, and etc.

Hence, the employee, signing the labor contract assuming fixed salary and the system of extra charges, does not include the expected inflation, and he signs the consent to the possibility of deflation of his labor cost *de facto* and *de jure*.

Summing up, it is necessary to notice, that the new behavioral macroeconomic theory can arise not for the account of including certain psychological effects and updated parameters (like, the multiplier of trust) in the old and already inadequate analytical structures, but for the account of fundamental study of microeconomic basis of macroeconomics with the clear picture of change of behaviour models of agents' groups, institutions and the tools of economic policies aimed at achievements of steady non-equilibrium states and expected changes of microeconomic agents' behaviour (irrational principle). The general analytical scheme, which D. North followed, is of importance for solution of the specified problems.

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