

FINANSE W NOWOCZESNEJ GOSPODARCE

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Wprowadzenie

We współczesnej gospodarce dominującymi zjawiskami są globalizacja i internacjonalizacja rynków i instytucji gry rynkowej. Zjawiskom tym towarzyszy pogłębiająca się konsolidacja przepływów kapitałowych i zwiększająca się dynamika obrotu finansowego. Makroskala obserwowanych zjawisk ma bezpośredni wpływ na zachowania pojedynczych inwestorów, przedsiębiorstw i konsumentów. Z jednej strony, mają oni do czynienia z niespotykanym dotąd bogactwem ewentualnych źródeł finansowania, ale z drugiej, ograniczani są przez rosnące ryzyko współzależności gospodarczej. Stajemy się zatem świadkami coraz większego znaczenia finansów w rozwoju gospodarczym społeczeństw.

W chwili obecnej wpływ ten jest szczególnie widoczny w obliczu pogłębiającego się kryzysu na rynkach finansowych. W publicznie toczonej dyskusji nad dalszymi kierunkami zarządzania finansami globalnymi i lokalnymi, oprócz finansistów, naukowców i inwestorów, uczestniczą głowy państw, rządów i banków centralnych czołowych gospodarek na świecie. Skala zapadających decyzji liczona w astronomicznych wręcz kwotach bilionów dolarów i euro wskazuje na wagę zjawisk finansowych we współczesnej gospodarce, a szybkość ich podejmowania i wdrażania obrazuje ogólne zaniepokojenie przyszłymi efektami turbulencji na rynkach finansowych.

Przeciwdziałanie negatywnym zmianom zachodzącym we współczesnych finansach nie byłoby możliwe bez rozpoznania ich przyczyn, a także kreowania nowoczesnych narzędzi kształtowania polityki finansowej w skali makro i mikro. Dyskrecjonalny i analityczny opis rzeczywistości sprzyja również rozwijaniu zjawisk i procesów pozytywnych i może mieć wpływ na dobrostan naszego i przyszłych pokoleń.

Książka, którą oddajemy do rąk Czytelników stanowi pierwszą odsłonę wkładu pracowników i współpracowników Wyższej Szkoły Bankowej w Gdańsku w poszukiwania nowoczesnych rozwiązań metodycznych i rozwojowych współczesnych finansów. Jest ona podzielona na dwie części. Pierwsza część dotyczy funkcjonowania rynków finansowych, druga porusza problematykę narzędzi i metod stosowanych w nowoczesnym zarządzaniu finansami.

Część pierwszą rozpoczyna rozdział poświęcony metodom syntetycznej oceny jakości rozwoju współczesnych gospodarek i sprawności instytucji je regulujących. W ramach tychże instytucji jedną z najważniejszych są banki centralne. Drugi roz-

dział omawia politykę monetarną Europejskiego Banku Centralnego oraz jej wpływ na stabilność finansową strefy euro w obliczu kłopotów na rynkach finansowych. Polityka ta, poprzez wzmacnianie lub osłabianie waluty dotyka również krajów spoza strefy euro. W trzecim rozdziale dokonano weryfikacji stacjonarności realnego kursu wymiany walut siedmiu wybranych krajów wobec euro i dolara.

Nawet w najbardziej rozwiniętych ekonomicznie i społecznie gospodarkach, poważnym zagrożeniem stabilności jest rozprzestrzeniające się ubóstwo. Kolejny rozdział pierwszej części książki prezentuje narzędzia polityki kredytowej banków oraz innych instytucji finansowych wspierające ograniczanie biedy oraz przeciwdziałające wykluczeniu społecznemu. W tym kontekście, ciekawym jest przykład internetowych zakładów bukmacherskich, których niedookreślona konstrukcja prawna oraz problemy z umiejscowieniem mogą prowadzić do rozszerzenia się szarej strefy. Traktuje o tym piąty rozdział pierwszej części książki.

Powszechnie uznaje się, że USA stanowią w dniu dzisiejszym najsilniejszą gospodarkę świata. Szósty rozdział poświęcono ocenie stanu amerykańskich rynków finansowych tuż przed wybuchem kryzysu finansowego. Część pierwszą zamyka natomiast gałęziowa oraz geograficzna analiza bezpośrednich inwestycji zagranicznych w Wielkiej Brytanii w obliczu pogłębiającego się kryzysu na rynkach.

Drugą część książki otwierają trzy rozdziały, które zawierają trzy różne podejścia do zarządzania portfelem inwestycyjnym. Pierwsze z nich opiera się na koncepcji wykorzystania w decyzjach finansowych technik i metod logiki zbiorów rozmytych. Kolejne stanowi symulację działań inwestora wykorzystującego programowanie kwadratowe w praktyce inwestowania na giełdzie papierów wartościowych na przykładzie WGPW. Trzecie z tych podejść dotyczy emocjonalnej strony zachowań inwestora oraz ich wpływu na dywersyfikację portfela inwestycyjnego.

Oprócz prywatnych podmiotów gospodarujących, uczestnikami nowoczesnych rynków finansowych są również instytucje publiczne. W szczególności dotyczy to transformujących się gospodarek Europy Środkowo-Wschodniej. Czwarty rozdział drugiej części książki, porusza tematykę kreowania przez sektor publiczny w Polsce różnorodnych instrumentów finansowych, których emisja miała lub ma rozwiązywać problemy społeczno-ekonomiczne kraju. W tym zakresie państwo oddziałuje na gospodarkę również poprzez podatki. Kolejny rozdział prezentuje definicyjne dylematy pojęcia działalności gospodarczej oraz ich wpływ na stosowanie prawa podatkowego w Polsce.

Konsekwencje oddziaływania niejednorodnego systemu podatkowego najsilniej odczuwane są w sektorze małych przedsiębiorstw. Podatki stanowią dla nich dominujący obszar zarządzania finansami, w szczególności w krótkiej perspektywie

czasowej. Ostatni rozdział omawia warianty krótkoterminowej polityki finansowej małej firmy oraz wykorzystanie w podejmowanych decyzjach nowoczesnych narzędzi zarządzania gotówką.

Należy podkreślić, że zaprezentowane w książce tematy wynikają z aktualnie prowadzonych badań naukowych oraz zainteresowań i przemyśleń Autorów. Składając Autorom oraz Recenzentom wyrazy uznania i podziękowania za wniesiony wkład pracy w niniejsze opracowanie, wszystkim drogim Czytelnikom życzymy interesującej i użytecznej lektury.

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CZĘŚĆ I

FUNKCJONOWANIE RYNKÓW FINANSOWYCH W POLSCE I NA ŚWIECIE

Institution Efficiency and Quality of Economic Development

Vladimir Chaplygin, Oleg Sukharevs***

An important issue in the modern economic knowledge is „evaluation” of institutions, i. e. assessment of their efficiency. Economic systems and institutions tend to change or lose their qualitative characteristics with time. Why does this happen and, more important, what can be done to trace deterioration in system/institution quality (efficiency)? This issue acquires special importance in the time of controlled institutional modifications, reorganisation of Russian economy, when new rules affecting agent behaviour and dictating his choice of resources, products and technologies, come into play in the economic process. In the long run, it is the rules of behaviour and technological routines that influence competitiveness and economic development on the whole. It is important to understand that rivalry extends not only to products, technologies, information, companies and countries, but to individual institutions as well, i. e. the rules responsible for efficient – or inefficient – organization of economic life. Old and new (offered to society by certain political forces) institutions are also in competition with one another. These processes directly affect the economic development trends, but the relationship has been poorly studied in modern literature and there is a limited number of methodologies which can be used to evaluate the quality (efficiency) of particular institutions or assess effectiveness of institution replacement. The North-Thomas¹ approach to determination of cross-sector behaviour of an economic system is based on the proportion of transaction and transformation expenses. However, this approach addresses neither assessment of the institutional structure nor the quality of institutions and loss of qualitative (efficiency) properties – the things that are discussed in this paper.

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The author has tried to demonstrate application of the use value technique for evaluation of the quality (efficiency) of newly adopted institutions. Surely, this is an analytical approach based on expert assessment, which is, however, both its merit and shortcoming, especially considering that there are no precise models in this field; moreover, they can hardly exist at all.

The problem of institutional efficiency is discussed here as a problem of system quality, and institution is treated as a product created because it is needed.

1.1. Economic growth and development of institutions

In Western economies, national wealth consists of the natural resources, physical and human capital², in the proportion 20%, 16% and 64%³ respectively. Russian economy features an exactly opposite proportion, having predominant capital of natural resources (60%). Because of this, the problem of implementing a long-term „structural maneuver” should be formulated proceeding from the need in the controlled modification of the basic macroeconomic proportions. An economic growth cannot resolve the problem on its own, being the result of a positive trend in the existing institutional structure. It seems worthwhile to mention similar cases: in the last 25 years, the organized outlawry has been gaining in size and power in the world economy, and as we know from biology, tumors growing in a human body, are lethal. An economic growth may rest upon a high accident rate, due to the lower reliability of various subsystems, greater inequality and poorer social setting. Nevertheless, even today, the growth rate of the national product and the estimated level of unemployment serve as a measure of effectiveness of the state policy and of social achievements, though the so-called „non-economic” targets, indicative of the social life of citizens in any country, ought to have been used as such measures since the time of G.C. Galbraith’s criticism of the „cult of the gross domestic product”⁴.

Amarty Sen⁵ made an original remark concerning assessment of the results of the economic growth and institution development. Destitute countries with per capita income lower than that in the more affluent economies, have nevertheless a greater social wealth owing to a more uniform distribution of incomes. A more uniform income distribution may be attained, in particular, through a sound system of social welfare and insurance. As a result, a poorer country with a small per capita income may have greater life expectancy and higher literacy rate. Needless to say, a crucial condition for such behavior is availability of a proper

institutional structure of the economy and efficient economic policy implemented in the country.

„The national economic growth can be defined as continued consolidation of the faculty to satisfy the increasingly diverse demands of population for the products of economic activity. This growing faculty is based on the development of engineering and technologies, and on appropriate changes in the institutional structure and ideology. All three components of the definition are essential. The continuously growing supply of goods is the result of the economic growth, which is dependent on the former”⁶.

In the 20th century, the economic growth, as a phenomenon, was characterized by the following immanent features: a) a high growth rate of per capita production, efficiency, restructuring of economy, changes in society and ideology; b) qualitative characteristics – an expansion trend due to transfer of technologies across the borders, and limitations when as a result of such growth, 3/4 of the population of Earth still find themselves below the minimum life standards afforded by modern technologies.

A very important characteristic of the economic growth in the 20th century is the „Kuznetz effect” depicted by a curve with the same name⁷. According to this effect, in the initial point of the economic growth under investigation, the income and wealth are distributed in such a way that the economic growth is accompanied by deepening inequality. Then, as time passes, inequality eases a little, plateauing on a certain level. A lot of evidence has validated this effect for various economic systems⁸. However, an obvious exception to this are the countries of the South-East Asia, where impressive economic growth goes hand in hand with diminishing social stratification. In fact, Russia in 1991-2004 is another exception to the rule. In the first nine years, the GDP was going downhill under the accompaniment of mounting inequality which, however, diminished a little during the period of the economic growth of 2000-2004. The „Kuznetz effect” rationale is simple enough: existing institutions of wealth accumulation and distribution are such that they stimulate capital concentration in the hands of the most affluent people who, in turn, provide for appropriate rate of the economic growth by investing in the economy. Exceptions from the „Kuznetz effect” can be explained in the following way: deepening inequality is accounted for by *continued* economic growth afforded by relevant technological and demographic changes, rather than by the economic growth itself or by capital distribution institutions. Thus, Jen Tinbergen believes differential for skill⁹ to be the main trigger of inequality and of its expansion with economic growth. The governmental policy of income redistribution and of social protection is also of

considerable importance. Thus, many institutions are responsible for Kuznetz curve configuration, and the condition of these institutions influences the net effect. In other words, growth may take place against diminishing inequality, and inequality may deepen as a result of recession in a debt-based economy which features predominant redistribution of existing goods rather than creation of new goods and capital buildup for the benefit of the general public.

At present, in the beginning of the 21st century, several other trends may be pointed out in the economic growth. They have only just emerged in the last two decades of the 20th century, and continue to amplify. These are the trends that are shaping up vector direction in the growth of world and Russian economy.

Firstly, rapidly developing electronic culture caters to the high rate of the economic growth¹⁰, abolishes national and cultural differences, alters the individual and collective motivation of agents with the appearance of a programmable mob dispersed over information space. For example, in the United States, an information-based economy allowed raising the annual growth rate of efficiency by the mid '90s from 1.5 to 3%, and of GDP – from 2.5 to 4%.

Secondly, the growth of information sector in the economy levels the earlier difference in human intelligence. Today, the discrepancy between the difference in intelligence (no more than 1.5 to 2 times) and difference in income (10 to 15 times) is a driving force of the social conflicts during economic development.

Thirdly, humans tend to feel helpless about the rapid changes sweeping the world. This feeling affects understanding of and adaptation to new institutions. As a consequence, human behaviour becomes more pragmatic. The ethical aspect loses its standing while the wish to follow cultural standards assuring better conditions of life grows stronger. Hunting for satisfaction of their demands, humans come to a prisoner's dilemma. Furthermore, failing to place their own losses in a proper perspective, they cannot take the situation for what it is. This raises the possibility of a destructive effect of human behaviour on economy, which, in its turn, calls for further restraints – social, cultural and educational, for stricter control over public order and tougher social protection system.

Fourthly, the rate of the economic growth and the values of indicators describing the level of wealth, do not spell institution maturity and do not allow answering the question of why different economic systems develop to different trends.

Interesting conclusions were made by S.K. Datta and J.B. Nugent who had reviewed the statistical data of 52 countries in the period of 1960-1980. The data show that with a 1% increase in the portion of lawyers in manpower, the economic growth slackens by 4.76 to 3.68%¹¹.

Thus, legal regulation of agent activities, which has a direct bearing on institution modifications, can worsen the economic prospects of a country and quality of economic development. This issue is very much on the agenda in the USA today, where, for instance, direct contact between patient and doctor is hindered by the presence of a mediator, i. e. lawyer¹². Because of this, institutions – both old and newly adopted – can either improve or degenerate the social welfare. Such instability and unpredictability is intrinsic to the process of institution transplantation from one social environment into another.

There are several fundamental approaches seeking to explain the problem of economic development. These approaches can be classed based on the main lines of the economic science: Keynesian (R. Nurkse, R. Prebisch), neoclassic (W. Lewis, R. Solow, R. Lukas), neoinstitution (D. North), old institution (G. Murdal, T. Schultez, S. Kuznetz), and wealth economy (A. Sen).

The economic development models of Keynesian type¹³ („vicious circle of poverty”, „jump”, „two deficit model” theories) solve the key problem – how to overcome the economic backwardness of a country using mobilization strategy which boils down essentially to replacement of external financing sources by domestic, import substitution, concentration of internal investments to ensure a high („breakthrough”) rate of growth.

The neoclassic approach¹⁴ regards economic development as a process of getting over backwardness caused by economic dualism and disproportions in the cross-sector economic links. The models were improved by incorporating a number of factors, such as „technology”, „human capital”, „reasonable expectations”, by allowance for the contribution of education, medicine and ecology in economic development and overcoming the backwardness.

Actually, both of the above approaches deal with the macroeconomic problems of development only, and suggest credit-monetary or fiscal measures for the macroeconomic policy meant to boost investments, stimulate internal demand, resolve technical and economic problems, carry out structural modifications affecting the national economy on the whole. However, as distinct from Keynesian approach, neoclassic models look at the problem in structural representation, introducing a two- or three-sector model of the economy, and pursue the objective of modernization, of channeling resources from one sector to another. Modern neoclassic models of development take into account technology, human capital and associated institutions, but include these factors as illustrations in the modified process functions used in R. Solow model¹⁵. It should be pointed out that application of Keynesian models has lead to a growing foreign debt and aggravated the deficit problem, while the neoclassic recommendations resulted in growing

inflation and social tension. This happened because the models of these two types did not fully allow for the quality of institutions and the trends in their operation.

D. North and R. Thomas¹⁶ offer some theoretical explanation of the economic growth in transformation conditions from the viewpoint of neoinstitution approach. They name technology and property law institutions as principal growth contributors. Efficient organization of economy entails such operation of all institutional structures that supports the property law and gives incentives for implementation of individual preferences, which reduces the gap between the public and individual interests.

The conclusions made by the two authors in respect of the efficiency of the institutional structure and incentives, can explain the starting point of the economic growth trend only. They help correctly determine vector direction of the trend, but not the growth itself, which is affected by many different factors demonstrating different behaviour in different historical periods.

It is important to mention that no individual institution, on its own, can be fully responsible for economic growth characteristics, since on the one hand, it is interconnected with and depends on many other institutions, and on the other hand, it alters with time, and the changes are reflected in growth characteristics. The economic growth is identified proceeding from variation of certain parameters, therefore, it is necessary to determine effect of the change of particular institution on variation of the above parameters, before being able to claim that this institution affects the growth.

As follows from the existing theoretical knowledge, the investment process curtails during recession because the initial expectations concerning successful implementation of particular projects do not come true. It is considered that new ideas, technological and scientific knowledge, and inventions accumulate in the bottom point of the descending branch of the economic cycle, hence setting the stage for a new rise. However, the example of Russian economy puts this viewpoint in doubt since the crisis that broke out had a purely institutional (transformation) nature, rather than cyclic.

Firstly, with a crisis, the economic activity dwindles away, unemployment increases, capacities go idle and demands to satisfy the essential needs become stronger.

Secondly, the efficiency of the economy in general and of institutions responsible for the innovation flow in particular, decreases.

Because of this, the flow of innovations subsides to naught, in the depression phase anyway. There are claims that it is difficult to explain the surge without

admitting accumulation of innovations in the depression phase, and that it is impossible to explain the descending branch of the economic cycle without admitting concentration of innovations in the upper point of the rise phase. In the '90s, Russian economy demonstrated a downward trend, and this was accompanied by curtailment of innovations, of scientific schools and of intellectual activities, and by decrease of investments – without any accumulation of innovations.

The notion of „accumulation of innovations” is interesting because of the following. As recession gathers momentum and unprofitable companies grow in number, the portion of innovations per unit production increases because the output goes down. This is how it happens in a classical case of a deepening depression. However, in modern conditions, stagnation acquires the form of a slowdown in the rate of the economic growth. And the number of innovations does not increase; in fact, it may go down a little.

In crisis conditions, there is a drastic decrease in the demand for knowledge and skills, because the market value of the high-technology domains of the economy, characterized by a long-time payback and heavy participation of state (in the form of funding of R&D work and fundamental research, including defense area), drops at once.

Next, there arise institutional conditions which at a certain stage of the upward trend of the cycle (recovery) encourage implementation of those innovations that were not put into life in the recession period and that make use of the new ideas that had appeared before and during depression.

This stage of economy evolution symbolizes economic recovery, when economy regains its previous level of development. In this stage, it is important to provide the required level of investments, hence supporting the critical mass of innovations to overcome the investment barrier¹⁷. During the crisis, the first to be implemented will be those innovative projects which feature the greatest payback.

In an economic system, in a certain period of time, the gross product may be greater or smaller than the level expected by the government and general public. This occurs as a consequence of diminishing or growing dysfunction of institutions responsible for the operation of the vital spheres of the economic system.

Primarily, economic changes are characterized by the introduction of new rules and standards, issued formally as legal acts and laws. These rules encourage the economic agents to work out new models of behavior typical for a certain historical period, when a policy of economic modifications, implying a change in the basic social institutions and relations, is implemented intelligently. The economic system is not in time to enter an equilibrium regime as old institutions are replaced with

the new. Therefore, theoretically, it is important to understand the causes (i. e. why and how the process of changes goes on) rather than the properties of an equilibrium system or the mechanisms of transition from one state to another. It should be taken into account that institutional changes are driven not only by technology, but by the political system as well, and the properties of the latter predetermine efficiency of economic system operation after the basic institutions are set in place. Thus, two types of evolutionary changes can be distinguished: a) genetic, responsible for spontaneous mutation of institutions and appearance of the new knowledge and technologies, and b) teleologic, i. e. the changes implemented in compliance with the declared public objectives using the political and legal system and economic policy measures. Changes of the first type are incremental. The second-type changes should be incremental as well, or else, there will be a conflict between the two types because of the different rate of changes and appearance of numerous deviation forms of economic behavior. Non-payments, growing economic offences and shadow economy, increasing social stratification can be classed as second-type changes. It is difficult enough to draw a clear line between the economic changes of the above two types since economic policy dictates change parameters in both cases.

Economic agents operate following individual rules of behavior, rules of interface with each other, rules of going on the market and leaving the business, which are implemented through the bankruptcy laws and regulations concerning counter-action to the buildup of monopolistic forces. Hence, on the one hand, an economic changes policy can provide a framework for efficient interaction of economic agents, or can make this interaction very expensive and hence inexpedient. On the other hand, this policy calls for certain harmonization with the standard recipes of the macroeconomic policy, used to maintain the state balances and resolve the problems of growth, unemployment and inflation, which have already become classical goals of a near-term policy. The policy of institutional changes lays down an institutional basis for modern economy, and hence can slow or boost the economy in the long term.

Economic changes rest upon economic and psychological reactions of agents, users of goods, social functions and institutions. For instance, Russian users crave for the Western standards of consumption and – more broadly – for the Western social life standards (quality of life). Incidentally, such psychological motives forming a certain model of agent behavior, based on a monetary decision making criterion, create difficulties for the economic growth of the countries striving to break the vicious circle of poverty. Generally, there are two options: either to influence the model of economic behavior of individuals and subdue their desire to

rapidly reach high living standards, or formulate public goals of the development and movement towards new social standards, and offer to the economy a way of reaching these objectives. Needless to say, the path to such objectives cannot be unsystematic, because to acquire high standards of consumption, it is necessary to produce goods and provide services of adequate quality and in adequate amount. This needs investments – I_p into product sector and I_u into service sector which should also embrace new institutions needed by the economy. Social standard can be measured against the use value which could be measured through indicator of investments necessary to attain a unit use value. If economy cannot secure investments necessary to reach the unit use value comparable to that in the West, it is necessary to identify the causes of such situation and plan new institutions which will change the situation, and implement a programme of structural modifications, taking the system, step-by-step, to the new social standards considered to be acceptable and essential.

Adepts of the old institutional school understand economic development (differentiating between development and growth) as an increment in meeting the basic needs of all members of society with a narrowing gap between the richest and the poorest¹⁸. Institution development is regarded not only as raising the growth rate of economy but also as increasing investments into the human capital, with diminishing poverty. As distinct from the neoinstitution theory, here the institutions are regarded as rules of behavior, organizational structures, property laws, contracts (including labour laws), forms of human capital and materiel infrastructure¹⁹.

In the development theory approach suggested by A. Sen, development is understood as a process of expanding the real rights and freedoms enjoyed by the humans. Freedom and basic human rights are intrinsic to development²⁰. The strong point of this approach is that it allows a broader perspective of development as compared to the approach in which development is understood as a growth of GDP or employment, income, consumption, etc. The difference between growth and development from the viewpoint of operation of institutions, was pointed out for the first time by Gunnar Myrdal. Truly, human rights and freedoms influence quality of long-term economic development, however, it appears that being a prerequisite or condition for development, they represent but one group of institutions, while effect of other meaningful institutions – development factors – acquires a lower priority. This appears to be a weakness of A. Sen's doctrine. The freedoms and basic human rights may be assured, but in a different way in each particular case, therefore, the quality of these institutions will be very different, if national economic systems are compared.

To our belief, institution development comprises three components: development of institutions, controlled institution modification, and development of human capital. Furthermore, these three components, demonstrating synergic relationship, should pursue the objective of providing demanded variety of social functions in the economy and providing agent access to them, irrespective of personal income of the latter.

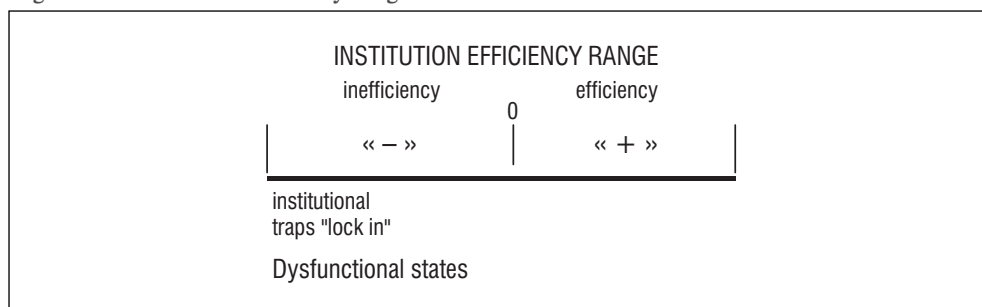
Thus, development of social institutions is a core of a long-term economic growth and the essence of economic development in a broad sense. It is of crucial importance to take into account the situation when institutions lose their quality, intentionally or not. In the long run, this accounts for the economic backwardness of many nations, while the growth rate has little, if any, to do with this. Therefore, it seems that the institution development and development in general should imply reduction of the number and extent of the dysfunctional states of social institutions.

Proceeding from the definition widely used in institution analysis, it may be concluded that there exist stable inefficient standards – institutions – borne by a „lock-in” effect.

It can be seen in the Figure that the „lock-in” effect appears in the negative part of the institution efficiency range, while according to our understanding, dysfunction covers both the negative (inefficient) and positive (low efficient) branches of efficiency, i. e. characterizes institutional quality.

The concept of „economic dysfunction” of institutions offers a systematic approach to the problem of institution behavior, appearance and stable existence of rules (institutions) with different efficiency. Its main advantage is that it allows looking at the causes of institution inefficiency, defining inefficiency itself as a loss of qualitative characteristics of existing standard, and as a cut in the monetary flow supporting operation of particular institutions. This approach seems to hold promise as regards quantitative representation of the dysfunction, resolving the problem of sizing dysfunction, and evaluation of efficiency (inefficiency) of existing institutions.

Figure 1.1. Institution efficiency range



1.2. Relationship of old and new institutions: Quality assessment

It is known that Douglas North²¹ singled out the following mandatory conditions the understanding of which provides an insight into the mechanism of the institution changes taking place in an economic system: stability of institution characteristics, the source, extent and direction of changes. However, to our belief, while regarding the price-to-technology ratio trend and property law institution to be generator of changes, North ignores the fact that in the subsequent historical period of economy development, there is an institution which has the same formal attributes but is absolutely different as to its quality characteristics. Technological changes and changes in the property law entail quality changes, while prices act as an institution, however specific, reflecting the value of goods, i.e. act as a kind of evaluation institution.

The problem of treating institutions as a certain formation created by a coalition of primary economic agents for the purpose of production and utilization of goods by members of the coalition, was considered in terms of the Arrow-Debre economy, considering the stages of creation and operation of institutions in market environment. Organization, as a juridical body, also acts as an institution. However, institutional equilibrium is added to this model as a case of a general economic equilibrium. Institutions are presented as an outcome of decisions made by voting and as a product of relationship between demand and supply. However, the process of collective goods production follows a somewhat different logic, dissimilar to that of the Arrow-Debre equilibrium model in which market forces of self-organization provide for the laws of interaction between prices and quantities.

Below is demonstrated an expert assessment technique which affords analytical description of the laws of competition and of development of two randomly chosen institutions – an old and a new one, adopted for the economic system in the course of planning, to get a good result.

Definition. The use value (UV) is an indicator which allows generalized assessment of institution quality and user preferences

$$\text{Use Value} = \sum_{j=1}^J w_j \sum_{i=1}^I w_i^j \eta_i^j,$$

where w_j , w_i^j are weights of group and individual indicators of institution quality (goods), respectively; η_i^j is the extent to which individual indicators meet the properties preferred by the user.

This variable is described by the ratio between individual indicators (actual for this institution and preferred by the user), depending on the results of comparing