

# The Influence of Economic Agents Expectations on the Formation and Transformation Mechanisms of Economy Institutional Systems Within the Paradigm of a Three-Level Hierarchy (Macro-Meso-Micro)

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**Abstract** — The paper is devoted to the determination of the epistemological paradigm of the analysis of institutional systems in the economy at the level of the micro-meso-macro hierarchy. The necessity of including the mesolevel in the hierarchy of the economic system is substantiated since the mesolevel has unique characteristics and reflects the characteristics of intersubjective relations. In the framework of the paradigm under consideration, the features of the formation and transformation of the expectations and preferences of economic agents are considered. A system of scientific hypotheses is proposed that define the paradigm of studying economic hierarchies from the perspective of intersubjective relations.

**Keywords** — *expectations and biases; economic agents; institutionalism; economic system hierarchy.*

## I. INTRODUCTION

Recent decades have been characterized by increased attention of the scientific community to the problems of institutionalism in the economy at an interdisciplinary level (see, for example, [1-4]).

However, the existing methodological approaches are not yet able to adequately answer a significant number of questions regarding the mutual influence of the current institutional system and social processes taking place in the economy, as well as the mechanisms of such mutual influence.

## II. SOME DEFINITIONS AND ASSUMPTIONS

The aim of the study is to identify the influence of the expectations and preferences of economic agents on the essential mechanisms of formation and transformation of the current institutional system in the economy within the logically and methodologically consistent hierarchical model for structuring the economic space" [10].

The methodological need to include an intermediate level in the system hierarchical structure of the economy in order to resolve the existing epistemological and methodological problems of binary micro-macro dichotomy has been noted in a significant number of studies (see, for example, [10-12]).

framework of the three-level hierarchy paradigm (macro-meso-micro).

To achieve the goal, a systematic interdisciplinary approach is used. The need to use an interdisciplinary approach in economic research is noted, for example, in [5-7]. True, the answers to the questions: how to apply an interdisciplinary approach in economic research, and the achievements of what scientific disciplines should be taken into account in such studies - these researchers do not offer.

Among the modern tools in the economy, we should single out a behavioral economy that is becoming increasingly popular in the study of economic phenomena and processes. This is because this approach allows us to look at the object of study from a position different from the positions of the economic-theoretical mainstream of the mid-20th century and clarify some aspects of economic reality that were not available for relevant understanding from the perspective of the economic-theoretical mainstream of the mid-20th century. Questions regarding the explanatory potential of behavioral economics using a psychological approach are discussed in detail in [8].

The methodological importance of taking social psychology into account in economic research is reflected in D. Davidson's principle of supervenience, according to it "it is impossible to match all physical <non-subjective> characteristics of two events (objects, states) ... with differences in their psychological characteristics" [9].

The problems of taxonomy and stratification in the economy are still not unambiguously resolved, that "determines the need to rethink the current evolutionary trends of the globalizing economic system in order to develop a new,

Despite the existing ambiguity of approaches to the semantic filling of the category "mesoscale in the economy" - the inclusion of a mesoscale in the binary system hierarchy in the economy, and studies at the interdisciplinary level of social attributes of the resulting hierarchy allow us to take a fresh look at the mechanisms for resolving some epistemological problems of modern economic science.

In order to simplify the achievement of the research goal and reduce the level of subjectivity (the influence of subjectivity on theoretical constructions in the economy is noted, including in [13]), we introduce some definitions and hypotheses.

A social rule is a mandatory mechanism that prescribes “in a situation X, do Y ... this includes both norms of behavior and social conventions, as well as legal and formal rules” [14].

Institute is a social rule that has a certain relevant set of attributes. A clearer concretization of the category “institute”, the ambiguity of the interpretation of that is noted, for example, in [3] remains outside the scope of the article.

The current institutional system in the economy (ISE) is the current set of existing institutions (albeit not always fixed in the norms of the current legislation) used (even if situationally) in the socially significant practice of intersubject relations in the economy (ISRE; in view of the situation, as well as heteromorphism and heterogeneity - the problem of the definition of the ISRE is not unambiguously resolved).

Institute Life Cycle (ILC) - the time interval during one the institute is relevant for use in the practice of ISRE.

The main element of the economy is economic agent (EA). This approach is consistent with views on the role of EA, as defined in [15, 16]. EA not only actively affects socio-economic processes, but also is a direct participant in these processes. An economic agent is an entity that performs one or more socio-economic functions within the framework of the ISE. The latter definition does not pretend to be complete; more detailed problems of categorization of this term are considered in [15, 17].

The system of individual paradigms (SIP) of EA is a subjective set of individually categorized objects, subjects, processes and cause-effect relationships between them, that, on the basis of personal experience of EA, acquires the character of subjective “knowledge” (including acquired socially significant experience and knowledge that fit into EA personal paradigm system).

Using SIP, EA subjectively situationally interprets objects, subjects, and processes of the external world, as noted in [18]. SIP actively affects the processes of formation and consolidation (at the level of individual norm-rules) in EA habits, inclinations, stereotypes of actions and thinking mechanisms, etc.

The SIP approach for understanding the epistemology of EA decision-making processes is consistent with the concept of the “Verstehen” phenomenon, discussed in detail in [13], according to which “social sciences should be based on first-person knowledge, accessible to every human being, and not on third-party knowledge obtained by measuring experimental results.” It is the presence of “Verstehen” that distinguishes social sciences from the natural sciences, in which the observer, as a rule, is not a participant in the processes” ([13]; in English, the term “Verstehen” can be replaced by the construction “it is clear to me that ...”).

The behavior of EA in relation to the current state of a particular economic process is determined by its current

expectations (that, among other things, is noted in [16, 18]): individual understanding by a particular EA of alternative possibilities for the future evolution of the analyzed economic process as a result of various endogenous and exogenous effects on it; including from EA. Each EA has its current preferences: individual views on the desired direction - from the position of EA - the future evolution of a particular economic process.

The modern economy, including almost all the processes taking place in it, is the result of multidirectional and varying in strength influences on decision-making processes (hereinafter referred to as heteromorphism) of the expectations and preferences of various EA having a diverse nature of origin (hereinafter referred to as heterogeneity), that have found their aggregate final reflection in ISRE between EA. Heterogeneity and heteromorphism in EA are discussed, for example, in [16].

Actual expectations and preferences of EA form the goals and motives of the latter to join the ISRE to achieve the goals of each EA. Moreover, EA motives are often, among other things, the drivers (incentives, drivers) for the development (within the framework of the ISRE) of new technologies and other innovations (within the framework of the restrictions formed by AIS, as well as existing technological and resource limitations). In this sense, MSREs can be more dynamically formed and transformed than AIS, which has some inertia (for the inertia of institutions in the economy, see, for example, [19]).

A sustainable economic community (SEC) is a set of EA that has the features noted in [20]: regular interaction; group self-identification; identification of the community by external - in relation to the community - agents; common goals of interaction; the community is a single subject of action.

SEC exists inside technological structures and create part of the social product. The empirical significance of resistivity in the formation of the MES and the evolution of the economy is reflected, for example, in [21, 22].

Due to the limited volume of publication of the research results, we will not try to fully define such difficult categories as levels of the economic hierarchy in the article, that has already been the subject of various studies (see, for example, [10, 11], and have shown significant difficulties in solving this problem.

### III. RESULTS AND DISCUSSION

#### A. *Habitus conception*

P. Bourdieu developed the concept of habitus, according to that the concepts of “subject”, “agent”, and “actor” should be divided in society [23]: “The agent in a certain sense acts at the “microlevel” itself, in contrast to the subject ... <at the mesoscale>, that only updates the rules of the “institutes””. P. Bourdieu introduces the term “agent” instead of an actor (that is commonly used in sociology) to emphasize the individual’s ability to act freely. “Actor” implies, on the contrary, the presence of determinism defined by AIS, to that the agent is subordinate, functioning in society at a macro level.

The agent’s action (according to the concept of P. Bourdieu) “is actually a product of “unconscious strategies “based on SIP” that it implements. Action strategies are formed from the bases (dispositions) acquired by the agent, taking into account the specifics of his subjective paradigm system <SIP Agent>, allowing or preventing the use of newly received information “in the process of making socio-economic decisions and determining the mechanisms for such use. The totality of such dispositions is habitus (SIP agent).

For clarity, the most significant characteristics of the “economic agent” category at different levels of the systemic hierarchy in the economy are presented in Table I.

TABLE I. CHARACTERISTICS OF THE ECONOMIC AGENT CATEGORY AT DIFFERENT LEVELS OF SYSTEM TRIERARCHY IN THE ECONOMY

Microlevel	Mezolevel	Macrolevel
An individual agent with a wide range of individual socio-psychological characteristics and characteristics and a large number of degrees of social freedom, which is determined, to a large extent, by SIP EA. Therefore, the level of uncertainty and associated risk in the MSEI at this level is high	An agent-agent, who already acts not only as an individual, but also as a member of a UES, which inevitably leads to a decrease in his number of degrees of social freedom, that is determined, to a large extent, by SIP SEC. The level of uncertainty and the associated risk in the MSEI at this level is medium and is limited, including by the SIP UES	The agent-subject (here already EA as a typical social unit of the hierarchy level - not an individual, but a SEC), the number of degrees of social freedom of that is determined, to a large extent, by AIS. The level of uncertainty and associated risk in the MSEI at this level is low and limited, including AIS

Notes to table I: In the framework of the study, differentiation of EA by its affiliation with a particular organizational form, industry, etc., is not considered. For more details on the mechanisms affecting the number of degrees of social freedom, see, for example, [17].

As for the economic freedom of EA, it (in the most general case) is determined by the current restrictions of an institutional, technological and resource nature. At the same time, with an increase in the level of trierarchy from the micro level to the macro level, institutional restrictions reduce economic freedom due to the integration of EA into the MES at the mesoscale and into society, in the broadest sense of the word, at the macro level (see table 1). And in [17] it is stated that any integration of EA leads to a reduction in the number of degrees of freedom. Technological and resource constraints with an increase in the level of trireme from the micro level to the macro level increase the number of degrees of economic freedom of EA. This is, again, due to its integration into EA associations (see table 1) and the growth due to this integration, its resource and technological capabilities.

**B. Institutional heterogeneity**

As M. Yu. Barbashin noted, “institutional homogeneity reduces the natural tendency of individuals to opportunism by a rational expectation of return on long-term“ investments

”<in SEC>. But, as soon as the institutional space ceases to be homogeneous, the implicit contractual obligations of community members to preserve the institutions of culture, language, socialization, etc., are virtually destroyed. “Clogging” the monolithic institutional space with other patterns of behavior complicates the identification choice and forces social actors to select institutional practices” [24].

At the micro level, as an EA, as a rule, an individual or a representative (manager) of a small or medium-sized business acts. Here, the heteromorphism and heterogeneity of current expectations and preferences of EA is one of the significant reasons for the increase in the level of uncertainty and the associated risk in the development of any economic process [25], accompanied by situational formation of MSEE, which reduces the role of institutional homogeneity.

The mesoscale allows - due to the dominance of trierarchy of electrical resistivity at this level as a typical unit of the socio-economic space - to aggregate and actualize the totality of heteromorphic and heterogeneous current expectations and preferences of EA, formed, including at the micro level, increasing the role of institutional homogeneity.

It is the mesoscale that “smooths out” the randomness of situational socio-economic processes taking place at the micro level, reducing the level of uncertainty in the ISRE. At the mesoscale, the spectrum of deviance and opportunism in the MSEE in relation to the current institutional system is significantly limited by the processes of institutional cooperation of EA in the SEC.

At the macro level, the value of current individual EA expectations and preferences is severely limited and the AIS is practically leveled: here the spectrum of EA deviance and opportunism in ISRE with respect to AIS is practically reduced to zero. But it is precisely at the macro level that norms that were previously considered deviant and that have been tested for relevance and social significance at the mesoscale are fixed and fixed in institutions. The mechanisms for implementing norms that were previously considered deviant in AIS are described in [24].

For clarity, the most significant characteristics of the category “heteromorphism and heterogeneity of current expectations and preferences of economic agents” at different levels of the systemic hierarchy in the economy are presented in Table II.

TABLE II. CHARACTERISTIC OF THE CATEGORY “HETEROMORPHISM AND HETEROGENEITY OF CURRENT EXPECTATIONS AND PREFERENCES OF ECONOMIC AGENTS” AT DIFFERENT LEVELS OF SYSTEM TRIERARCHY IN THE ECONOMY

Microlevel	Mezolevel	Macrolevel
Represented by a wide range of EA expectations and preferences	Limited: here the current expectations and preferences of EA are aggregated and updated within the framework of the SEC, where possible conflicts related to the heteromorphism and heterogeneity of expectations and preferences of EA are smoothed out	The meaning of the current individual expectations and preferences of EA is consciously limited by them (EA) and practically leveled out under the deterministic effects of AIS

**C. Individual situationality**

The formation processes of the MCE type at the micro level are characterized by individual situationality [26], narrativity [27] and, often, uniqueness. This leads to a high level of uncertainty in the MSEE, that is reduced by the introduction of the category “trust” in the MSEE (for more details on this category, see, for example, [28]).

The mesoscale should be considered a testing ground for revising AIS standards in the practice of MESE, where the appropriateness and social significance of the newly generated ones are tested and the ineffective institutions are identified (taking into account the current expectations and preferences of the agents).

For clarity, the most significant characteristics of the category “intersubjective relations in the economy” at different levels of the systemic hierarchy are presented in Table III.

**TABLE III. CHARACTERISTICS OF THE CATEGORY “INTERSUBJECT RELATIONS IN THE ECONOMY” AT DIFFERENT LEVELS OF SYSTEM TRIERARCHY**

<b>Mircolevel</b>	<b>Mezolevel</b>	<b>Macrolevel</b>
The characteristic type of ISRE here is formed taking into account individual situationality and, often, the uniqueness of the processes of such formation, which leads to a high level of differentiation and an increase in the level of uncertainty in MSOE. The latter can be reduced by situationally cooperative and joint implementation of the category of “trust” in the MSOE. At the same time, trust at the micro level is based only on situationally subjective expectations and preferences of EA in the framework of SIP EA participating in the MSOE. It is characterized by a high level of deviance and opportunism in the MSOE in relation to the AIS	Here, the magnitude of deviance and opportunism in the MSEE in relation to the AIS is limited by the processes of institutional cooperation of EA in the SEC. Here, the ISRE is characterized by selective, conscious collectivity (determined by the specifics of the solidarity formation and evolution of a specific resistivity test) and a tendency to compromise in the framework of collaboration and communicative coordination of agents in the resistivity control system, which significantly limits the uncertainty in the TEC compared to the micro level. Trust at the mesoscale is determined by the mechanisms of formation and functioning of the electrical resistivity, taking into account the SIW of the electrical resistivity	The organization form here is the convention (mainly between the SEC), where each member of the convention not only knows about the rules of conduct, but also knows that others have the same knowledge about the rules. Such conventions are mainly based on AIS standards. At the same time, the level of uncertainty in the ISRE is reduced due to not only the integration of EA into the resistivity, but also is largely limited by the AIS, contributing to the evolution of the processes of joint self-organization and unification of the ISRE at the macro level, that at the same time increases the level of conservatism in the MSOE at the macro level in counterbalance to the deviance and opportunism inherent in the microlevel. At the macro level, the mechanisms of trust between EA in the MSOE are replaced by conventional institutional mechanisms of level

**Notes to table III:**

In the framework of the study, the differentiation of the ISRE by industry (or other functional) attribute, by their belonging to small, medium-sized large businesses, is not considered.

It is assumed that the relationship of trust in the context of the hierarchy is asymmetric. The principle of determining the level of the hierarchy is who determines trust. So the relationship of trust of the individual will be determined at the micro level, both to other individuals and to groups (communities) and society (societies) as a whole. Group trust (SEC) is formed at the mesoscale and is determined by the generalized goal or idea of forming the group itself, on the one hand, and by an external representation of the level of competence.

The main form of organizing the ISRE at the macro level is “convention ... this is basically a term for perceiving some of the group’s players about how others should play” [29]. Such conventions are based mainly on AIS standards.

**D. Micro-Meso-Macro Hierarchy**

It should be noted that at all levels of the hierarchy in the formation of the ISRE, to one degree or another, institutions are represented from all three levels. In the framework of the current study, we will consider for each level of hierarchy only institutions reflecting the typical features of the formation and functioning of the MES at this level.

The microlevel should be considered as a testing ground for testing a wide range of institutional innovations (including deviant, opportunistic, and even destructive ideas of an institutional nature for the formation of a new or transformation of an existing institution. Typical reasons for non-fulfillment of institutions at the microlevel of the systemic economic hierarchy were considered by S. S. Sukharev in [30]). At the same time, mutual control of compliance with the norms of such institutions and institutional innovations, as a rule, rests with the parties to the transaction.

Here, the possibility of institutional innovations within the framework of a particular transaction becomes especially relevant if the subject of the transaction is a certain innovation, the implementation and joint operation mechanisms of that do not yet have institutional fixation. Therefore, the level of uncertainty and the risk associated with it in the ISRE in this case is extremely large (see the discussion of the likely consequences of introducing blockchain technologies into widespread practice in [30]). At the same time, the main focus (or motive) of the need to form new and transform existing AIS institutions is to reduce the level of current situational uncertainty in the MSEE.

According to the author’s point of view, the microlevel should be considered a testing ground for revising the relevance of existing institutions and generating new ones that determine the mechanisms of the formation of the MES, due to the individualism inherent in agents that operate at this level of the system hierarchy. There are various manifestations of deviance and opportunism in the ISRE in relation to the AIS [31], narrative interpretations of the norms of existing

institutions [32]. That is why the microlevel is a “troublemaker” of processes (primarily institutional ones) that take place at the macro level, where these processes are aggregated in nature and quite rigidly determined by existing institutional, technological, resource and other constraints.

As noted in [24], the evolutionary transformation of institutions at the mesoscale is associated with a simplification of their norms. In this sense, the conventionalization of EA in the MES at the mesoscale promotes the implementation of such social norms that reduce the level of social uncertainty in the ISRE. In addition, conventionalization reduces transaction costs due to the presence in EA of the processes of EA collaboration.

By reducing the level of social uncertainty in the MESE, the conventional “institutional rules provide us with information about the expected actions of others, and in this regard limit our choices. ... <Institutions are> the ability to find a reliable way to influence the expectations of others ... and force others to act contrary to their unlimited preferences” [33].

For clarity, the most significant characteristics of the “institute” category at different levels of the system hierarchy are presented in Table IV.

TABLE IV. CHARACTERISTICS OF THE INSTITUTE CATEGORY AT DIFFERENT LEVELS OF SYSTEM TRIERARCHY

Microlevel	Mezolevel	Macrolevel
<p>Micro-institutes have the character of individual agreements within the framework of a specific EA transaction (here, institutions are, as a rule, single standards, generally not recognized by society as socially significant), aimed at reducing the level of uncertainty in the ISRE. The period of the life cycle of a micro-institute is usually determined by the validity period of a particular transaction. Transaction costs can be reduced by introducing the category of “trust” into the ISE</p>	<p>Meso-institutes have the character of conventions within the framework of EA cooperation in the SEC (socially significant rules aimed at reducing the level of uncertainty in the ITU within the SEC). Transaction costs, paid, as a rule, by EA in the SEC to the bucket are minimal. At the same time, monitoring and control of observance of norms of meso-institutes is organized within the framework of SEC. The length of the life cycle of the meso-institutes in time is commensurate with the period of relevance of the electrical resistivity, which introduced this institution into the practice of MES</p>	<p>Here, the vast majority of institutional norms are already recognized as relevant and socially significant, tested in the practice of ISRE at the mesoscale. The mechanisms for monitoring agents' compliance with the institute's standards are defined here, as a rule, at the public-state level (including at the level of self-regulatory organizations for professional activities). At the same time, transaction costs, as a rule, increase substantially: the size of transaction costs in monetary terms at this level, as a rule, is fixed in regulatory documents</p>

Notes to table IV:

For more details on transaction costs, see, for example, [34].

According to Hugo Pagano: “the emergence of new institutions resembles the emergence of new biological species: it requires a combination of a large number of evolutionary changes and resources <at various levels of the hierarchy> ... institutions are transformed, modified, edited, translated and connected to other norms and rules by their carriers who try to diagnose, interpret and propose various solutions to existing problems, creating new meaning and new significant patterns of social behavior in various screens nations” [35].

*E. Scientific hypotheses*

Scientific hypothesis 1. Any institution evolves, transforming over time.

Scientific hypothesis 2. The dynamics of the evolution of any institution that affects intersubjective relations in the SES is limited in time by a period that we call the life cycle of the institute. Thus, the structure of the current institutional system, including all institutions operating at a fixed point in time, changes over time.

It should be noted that in the literature there are various approaches to the definition of the term "institutional system" (see, for example, [36]).

Scientific hypothesis 3. The impact of any institution affecting the processes taking place in intersubjective relations in the SES varies in time both in strength and in the vector orientation of such an effect.

Scientific hypothesis 4. Some institutions that are part of the current institutional system do not have an ongoing impact on the ISSE.

Scientific hypothesis 5. The dynamics of the evolution of various institutions that affect intersubjective relations in the SES may differ both in the length of the life cycle and in the timing of its beginning and end.

Scientific hypothesis 6. Institutions formed at various levels of the hierarchy (micro-institutes, meso-institutes, macro-institutes) influence the ISRE.

At the same time, micro-institutes determine the rules for the formation of ISMEs and mechanisms for monitoring the implementation of these rules within individual transactions and contracts. Meso-institutes determine the rules for the formation of the ISRE and mechanisms for monitoring the implementation of these rules within the framework of the SEC. Macro-institutes determine the rules for the formation of ISMEs and mechanisms for monitoring the implementation of these rules in the most general cases (national legislation, international standards, etc.)

Economic relations always have the carriers that they define that create, realize, support and regulate them: hence the subjectivity in the construction and transformation of economic relations - the idea is not clear. What comes first: EO or media? On the one hand, EOs have carriers defined by

them) EO) - i.e. act as a cause, on the other hand, carriers create EO, i.e. are the cause. Probably, all the same, people are primary. Although, this contradiction can be removed by assuming that people come in different "varieties": "creating rules" and "adopting rules." Then the variety "not accepting the rules" arises immediately.

Like every social relation, an economic relation involves not only the subject - the one who belongs, but also the object - the one to whom the subject belongs, in interaction with whom he realizes his attitude. Since the object of an economic relationship is a person, and not an object, it exists as a relationship between the subject and the object, in that their intentions and means of developing the relationship may or may not coincide. The nature of the interaction between the subject and the object determines the social form of economic relations: cooperation, exchange of services, goods, mutual assistance, competition, operation, compromise, partnership, etc.

At the time of the evolution of SES  $t_0$ , the system is affected by micro-institute 2, meso-institute 4 and 5, and macro-institute 6. The period of influence of micro-institute 3 has not yet arrived, and the period of influence of micro-institute 1 has already ended.

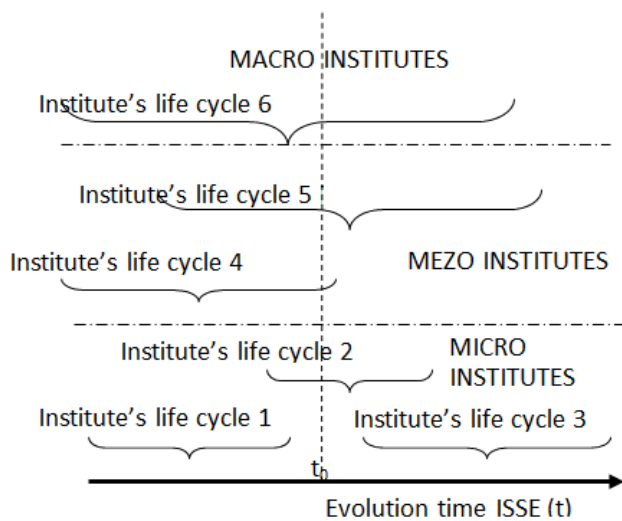


Fig. 1. Schematic representation of the periods of the impact of institutions on SES

Scientific hypothesis 7. Institutions formed at various levels of the hierarchy (micro-institutes, meso-institutes, macro-institutes) have a mutual influence on each other.

Scientific hypothesis 8. Intersubjective relations in the SES and the current institutional system mutually influence each other. This mutual influence varies in time both in strength and in the vector orientation of such an effect.

Scientific hypothesis 9. The current institutional system should include mechanisms for monitoring and controlling the performance of existing institutions.

IV. CONCLUSION

Some provisions of the proposed work are controversial and suggest further research.

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