

Meso-Level as the Essential Agent in the Formation of Inter-Subjective Relations in the Economy*

M Yu Kussy¹, O L Korolyov¹

¹V.I. Vernadsky Crimean Federal University, Simferopol, 295007, Russian Federation

E-mail: mikhailkussy@gmail.com

Abstract. The meso-level' meaning and place in the hierarchy of levels in the economy from the standpoint of a systematic interdisciplinary approach is shown in the paper: The meso-level exactly "smoothes out" the randomness in the situational-socio-economic processes taking place at the micro-level, where the heteromorphic and heterogeneous current agents' expectations and preferences appear one of the essential reasons of increasing of uncertainty level within the development of any process. At the macro-level, the current individual agents' expectations and preferences are offset by the current institutional system. The meso-level is exactly the place where the current dominant type of inter-subjective relations in economy is formed through the agents' complementary cooperation in meso-economic agents' community. Mesolevel should be considered as a testing ground for revision of the existing institutional system norms, where the testing of the feasibility and versatility of the newly generated institutions and the identification of the inefficient ones are taking place.

1. Introduction

Despite the fact that researchers in the micro-economics field (at least, H.A. Simon in 1978, A.K. Sen in 1998 and O.E. Williamson in 2009 were in this regard awarded the Alfred Nobel Prize) and in the macro-economics one (at least, P.A. Samuelson in 1970, S.S. Kuznets in 1971, ... W.D. Nordhaus and P.M. Rome in 2018 were in this regard awarded the Alfred Nobel Prize) have achieved the significant theoretical results, the problem' solution of the interpenetration of these two economic research areas is still keeping opened for a long period of time.

This, apparently, can be explained by the fact that there is no relevant methodological basis to resolve this problem: in [1] it was shown that the methodological techniques of the transition from the microcosm to the macrocosm (the aggregation and complementarity mechanisms) existing within the exact sciences are not viably applied to the social sciences.

So, there were already made attempts to fill the existing methodological gap in the micro/macro dichotomy (M/MD) in the economy.

The necessity to include an intermediate level into the system hierarchical structure of the economy to eliminate the existing problems of its binary is noted in a significant number of studies (see, for example, [2-10]).

So, being aware of the limitations and decelerating effects of M/MD, O. Williamson suggested to apply taxonomic boundaries and distinguish four levels of the institutional economics subject according to the criterion of changes periodicity in various forms – from super-mediated processes of social

rooting (embeddedness) to ultrafast processes of continuous allocation of resources and market pricing [11]. However, there has become more widespread its other hierarchical model distinguishing the institutional, organizational and individual levels of the economic phenomena analysis [12], which is successfully applied in equal within the different research areas, including sociology and management [13-14]. There are also being promoted the ideas of that three-level scheme' universalization within the Social Sciences, that will allow to differentiate the micro- (individuals' behavior within organizations), meso- (interaction of organizations) and macro- (evolution of institutions) levels of the society systemic and economy [15].

The research results made in the article with the help of systemic interdisciplinary approach will allow taking a different view on a problem that is put in the article title and identify some ways of solutions.

2. Semantic specification of terms used in the paper

The further presentation of the research's provisions requires the clarifications of the paper terms in order to reduce the subjective pluralism in terminology that is present in economic researches (in [16], this attribute of economic researches is characterized with sarcasm: "two economists - three points of view").

Socio-economic system (SES) is a finite set of elements (subjects and objects of the system) and their correlation, which is determined by a particular structure and can be isolated from the medium according to the systemic objective (or a number of objectives) within a certain time interval called the system life cycle, during which the system maintains the integrity of its structure and goal setting, and characterized by specific features associated with the processes of production, exchange, distribution and consumption of labor results.

There are used the following SES attributes in further research:

- the subjects of the system are economic agents, the definition of which is given below;
- the diverse relations between agents, defined in the research as "inter-subjective relations in economy" (ISRE).

An economic agent (agent, actor, subject) is an any subject of economic relations determined by the current processes of a particular SES development, which implements the specific economic functions (within the running of a particular SES, based on expectations and preferences about the future dynamics of the SES evolution, an individual set of targets towards a particular SES and current restrictions), and can affect by its actions (or inaction) on the current processes of making and implementing socio-economic decisions within a single SES.

The concept of an "agent" means not only a specific individual involved in socio-economic processes, but also a summation of subjects (from the state and intergovernmental organizations – to a group of individuals), united by a homogeneous set of expectations, preferences and economic targets that do not contradict to the individual target's sets of each agent as part of this summation. SES can also act as an agent.

The agent's expectations appears as the individual understanding of a specific agent of the analyzed SES' alternative future evolution possibilities as a result of a variety of endogenous and exogenous influences on the system (including from the side of the agent as well).

The agent's preferences are the agent's individual views on the desired direction of the future evolution of a specific SES.

In the definition of the agent the word "current" is essential, as the expectations and preferences of each agent and, therefore, his targets could be changed dynamically, that automatically modifies the vector of his effects on the processes taking place in SES (both in magnitude and in the direction of this vector), as well as on the changes in the content and in vector orientation of the SES elements communications. In addition, it is important that agents interact with each other and enter into ISRE, which are quite diverse in functional and vector orientation, and as a rule, are not simple in their content and could be changed dynamically.

The modern economy, including almost all the processes taking place in it, is the result of different directions and differences in the impact on SES of the expectations and preferences of different agents (hereinafter - heteromorphism), which have a diverse nature of origin (hereinafter – heterogeneity), and which finding their aggregated final repercussion in the ISRE between agents: the present economic preferences are historically formed in the past, but expectations of future also are an infeasible part of the economic present's formation. Detailed heteromorphism and heterogeneity of agents' expectations and preferences are investigated in [17].

ISRE, in turn, is not only a part of the institutional system constraints in the economy, it actively affects on the transformation processes of this system.

According to the author, exactly ISRE is the main driver of all (or the nearly all) processes taking place in the economy and as well as a source of situational uncertainty in such processes, since any socio-economic action is rooted in ISRE (taking into account the actual set of ISRE' objectives within the framework of the existing restrictions).

3. Some ontological and methodological aspects of the theoretical limitations of M/MD, noted in existing economic studies

One of the fundamental problems of Economic Science is to determine the nature of the relationship between macrosystems and microelements. [18]

Micro and macro in Economics (in contrast to the philosophical approach to the definition of the "dichotomy" term) not only do not exclude each other, but also can not be separated from each other, mutually affecting the processes that determine the topology of economic space-time and pass at an alternative level of the system hierarchy, as noted, for example, in [3, 9, 19].

Microeconomics deals with the study of economic agents' behavior (primarily individuals): ISRE between them are formed under the influence of distribution and exchange of goods; the price, which is formed on the basis of the criteria of supply and demand; profits and costs; other factors (with regard to the current restrictions – primarily of the resource nature). In turn, the macroeconomic analysis focuses on national and supranational SES, characterized by parameters of GDP, the balance of payments, markets of commodity, labor and money, and other aggregated indicators, and ISRE formation processes (taking into account the current limitations of institutional, technological, resource and other).

The micro-level is the functioning sphere of a distributed <in an economic space-time> set of individual firms and individuals <where a significant number of socio-economic processes are outwardly chaotic>, which is opposed by the regulating effect of the macro-level <where most of the socio-economic processes are determined by existing institutional, technological and other restrictions> [20].

This understanding of the systemic hierarchical structure of the economy, the genesis of which is usually counted from the moment of publication [21], has become firmly established in scientific use.

Let us consider some ontological and methodological aspects of the theoretical limitation of M/MD.

3.1. The researchers distinguish the two poles of economic methodology – individualism that is at the micro-level and holism being at the macro-level, the choice between which is of the artificial nature: there is no dichotomy, but there is dialectics. Despite the methodological individualism is being stayed as the microanalysis basis, and the methodological holism remains as the basis of macroanalysis [5].

By methodological individualism, we mean an approach that involves the description and clarification of socio-economic reality by reducing its complexity to the level of individual behavior analysis, as noted in [22]. The opposite of methodological individualism is methodological holism, which considers the individual as a part of the "economic agents' community" [22].

Methodological individualism is criticized by researchers not only for the low level of formalization but also for the presence of various behavioral anomalies, the impact of which on the individual's actions is considered in [23].

Holism also has methodological flaws, considered in [24].

3.2. The processes of ISRE formation at the micro-level inherent in the individual contextuality [25], narrativity [26] and often, uniqueness.

At the micro-level, heteromorphism and heterogeneity of the agents' current expectations and preferences are among the significant reasons to increase the uncertainty level in the development of any economic process [17], accompanied by a volatile [27] formation of ISRE.

According to the author's point of view, the micro-level should be considered as a testing ground for revision of the existing institutions' relevance and generation of the new ones determining the mechanisms of ISRE formation, in a view of the agent's individualism inherent, operating at this level of the system hierarchy: it is here that one can meet a wide range of deviance and opportunism in ISRE in its pure form with regard to the actual institutional system [28], as well as the norms' narrative interpretations of the existing institutions [25]. That is why the micro-level is a processes' "trouble-maker"(including the institutional ones) running at the macro-level, where these processes are aggregated and largely determined by the existing institutional, technological, resource and other constraints.

In [29] there are named the following reasons of institutions non-fulfillment at the micro-level of system economic hierarchy:

- inability to obtain benefits from the fulfillment <by specific agents involved in ISRE>;
- inability to meet institute <in virtue of the individual and other peculiarities of the ISRE formation>;
- the weakness of the coercive force for execution;
- absence or reduction of the adaptational lag <it is necessary for agents to understand the mechanisms of execution and adaptation to the institution> for the economic agents with a natural reaction to non-fulfillment;
- agents' opportunism.

At the macro-level, the value of current agents' individual expectations and preferences is strictly limited and, in practice, is leveled by the existing institutional system: here the spectrum of deviance and opportunism in the ISRE with regard to the actual institutional system is practically reduced to zero.

3.3. The classical idea of the "invisible hand" has never been considered by classics as a stable model of micro-macro, as noted in [30]: the only textbook [31], mentioning the problem of this idea aggregation, calls this problem as "composition error". In General, it may be interpreted as contradicting to the neoclassical invisible hand interpretation and as a sign that decisions able to be correct and "optimal" from an isolated individualistic point of view may occur to be collectively, and often individually, "wrong" or defective [4].

Thus, any structural emergence implies "an entity with properties that cannot be inferred from prior knowledge of elements" [32]. "Butterfly effects", conditional "bifurcations" and "self-organization", the latter of which is an example of equilibrium in a set of equilibria (or attractors), are often discussed in cases of "emergence" complex modeling. If the "set" exists besides the summation of individual agents' "rational" solutions, a simple "micro-basis" is not possible [4].

These facts prove the inconsistency of some provisions of the economic theory within the M/MD.

3.4. Due to their heuristic potential, these taxonomic aspects highlight the significant methodological problems in the field of two-level structuring of economic space, which is noted in [5]:

1) The problem of the taxonomic "gap" between the subject and the method of Economic Science: the rise of the levels number allows to detail the structure of the analyzed subject, but does not fundamentally change the opposition of its study methods. As a result, the value of multilevel structures is relative, and their importance is mainly local.

2) The sameness' problem of the level (rank) and the economic phenomena scale: if the phenomenon rank reflects the degree of its functional and structural complexity and its positioning in the hierarchy, the scale characterizes the phenomenon dimensionality. The quite often scale and rank coincidence gives rise to the illusion of their identity. Therefore, the expansion of the economic space' taxonomy level is hampered by the difficulty in the precise definition of analysis units at each level.

3) The sameness' problem of subjects and business locations: micro -, meso- and macro-economics, as well as the international and world economy, study the economy subjects (individuals, firms, business groups, networks, industries, etc.), and the territorial entities (clusters, regions, countries, international associations) as well, in other words the jurisdiction – business location places. As a result, the outcomes of two fundamentally different processes – sectoral and territorial division and labor cooperation (and economic activity in general) – the distinction of which should be the basis of the taxonomy of phylogenetic levels of economic space are arbitrarily mixed.

4) The problem of terminology unification: evolutionary economists do not usually follow the conventions of the neoclassical terminology and in the framework of micro-economic analysis consider the firms, households or behavioral routines, whereas the macro-economic analysis turns to the division of labor and knowledge distribution or to the dynamic relationship between the aggregated sets.

It leads to the necessity of including an intermediate (meso) level to the two-level hierarchy in the economy, which is designed to fill the methodological gaps in the existing theoretical constructions.

3.5. In clauses 3.1-3.4 (albeit implicitly), there is assumed the static nature of methodological approaches using M/MD: the real economy changes dynamically, that reduces again the level of relevance of the M/MD aspects described in this paragraph.

4. A brief overview of some existing approaches toward determining the meso-level role in the economy

Meso-level allocation in economic analysis is one of the most interesting and relevant trends. More and more heterodox economists' studies are being dedicated to its research. That was shown by the Russian and foreign journals bibliometric data analysis made in [33-34]: over the past ten years, the number of investigations dedicated to meso-level studies in the economy, is growing in a faster pace (comparing to the total publications' number).

The ambiguity of the economic terms content, noted by many authors (see, for example, [25-26]), takes place in the concept of "meso-level" interpretation.

The examples of different approaches to the content of the "meso-level in the economy» concept:

4.1) in [6] a meso-level is considered as being able to exist for a "big business" only (an approach is exclusively for the representatives of this business type);

4.2) in [8] a meso-level is used for accounting the differentiated representative behavior in the industry (the sectoral approach);

4.3) in [10] the meso-level is used for the complex interactive oligopolistic competition, and for the cooperative networks of industrial coordination forms, that is a new trend in the development of modern market economy, where the oligopolistic competition and network forms of industrial coordination play an increasingly important role, which understanding requires a transition from micro- to meso-paradigma in economic research (an intermediate approach compared with the previous two);

4.4) in [35] the concept of "meso" defines the level of analysis between the country' economy as a whole and the level of individuals, companies, and households: the allocation of meso-level is necessary in order to understand the mechanisms of the impact of macro-economic decisions onto the mechanisms of agents interaction at the micro-level. According to the concept presented in [35], the strategy at the meso-level refers to the depth of the macro-strategy impact, determining, for example, which property and gender groups and industries are to bear the brunt of the ongoing macro-level reforms;

4.5) as it was written by a recognized classic of socio-economics and communitarianism Amitai Etzioni, the neoclassical economic theory is characterized by the position of methodological individualism, while the meso-level analysis promotes the study of the process of intersubjectivity, that includes the intersection of personal decisions of individual agents and the power structures decisions [36]. The understanding that agents being not an invariable constant of social and economic realities, "cogs in the system", but, on the contrary, form a creative force affecting the formation of structures and institutions [37], expands the boundaries of socio-economic research, bringing researchers' ideas on economic agents beyond the neoclassical paradigm, where their actions are determined by a priori

provisions of maximizing utility. In this case, the field of probable social action of economic agents is determined by the meso-level limits;

4.6) the study [3] should be considered as an important step towards a more detailed, though to be more qualitative, description and understanding of the institution meso-character, which is not able to appear if it is not carried away or "transferred" by a group of agents: it affirms the necessity to allocate the meso-level, which is considered to be a certain ontological category, the space of formation, adoption and dissemination of social norms and institutions, the latter of which are considered as a meso-level phenomenon – the economic development is the result of the meso-rules emergence, adaptation, diffusion and institutionalization within the micro- and macro-levels;

4.7) the meso-level role in complex systems is reflected at studies of the evolutionary and institutional economists (including the heterodox direction) in the form of meso-economic approach – being as a crucial one, or even a self-sufficient, for the analysis of the modern economy in comparison with the traditional binary approach focused on micro- and macro-levels [19, 38]. Recognizing the absence of a direct causal relationship between the micro and macro-levels in a complex system, mentioned economists call for revealing the meso-level structures and emphasize them as not reduced to a certain median plane of vertical relations present above the micro- and below the macro-level in their neoclassical interpretation [7, 9];

4.8) in [19] the meso-level is a space where the agents' co-evolution at the micro-level leads to the formation of joint game rules (institutions), that allows agents to minimize the consequences of their unpredictable (emergent) behavior, and for a system – to acquire a state of macro-stability;

4.9) in [39] any intermediate level between the two basic ones is considered to be a meso-economic, that allows differentiating at least four of their types – mega/macro, macro/micro, micro/mini, mini/nano.

There are other approaches to the content of the "meso-level in the economy" concept (see, for example, [40-41]).

Despite the existing ambiguity of approaches to the semantic content of the "meso-level in the economy" term, the ontological and methodological significance of the use of that concept within the economic processes analysis is quite big, that is discussed in the paper below.

5. Meso-level as a phenomenon, allowing to reduce the methodological gap in M/MD in some areas

Despite the existing ambiguity of approaches to the semantic content of the "meso-level in economics" term – it is difficult to overestimate the ontological and methodological significance of using this concept in the analysis of economic processes.

Let's define the meso-level as one in a system hierarchy place where are concentrated the structures and mechanisms determining the agents' behavior rules of the systemic micro-level at the macro-level and setting the necessary reproduction proportions ensuring the development of the economy.

5.1. In [42] the meso-level is allocated as being necessary for the description <and understanding> of the subordination nature of levels' development "from the microscopic world to macroscopic one". The methodological sense of meso-level allocation reveals as being exactly the level where the structures' formation as the main system characteristic is taking place. And that is why, as it was noted by H. Haken in [42], in many cases, there is enough to analyze the system at the meso-level only, as the structures formed at this level already contain the necessary information about the system evolution and its self-organization.

5.2. At a meso-level, there takes place a colossal informational compression (characteristics' selection from numerous micro-level details): there is selected and preserved the only one information that is really crucial for the formation of socioeconomic structures, as noted in [2]. That is exactly at the meso-level the influence effects of the order parameters the macro-level operates with are being realized [2].

5.3. Methodologically, the meso-level allows to aggregate and update a set of heteromorphic and heterogeneous current agents' expectations and preferences, formed, in particular, at the micro-level.

It is the meso-level that “smoothes out” the randomness in the situational-socio-economic processes taking place at the micro-level, reducing the level of uncertainty in ISRE. At the meso-level, the spectrum of deviance and opportunism in ISRE in relation to the current institutional system is substantially limited by the agents’ processes of cooperation into a meso-economic community: it is exactly the meso-level where is formed the actual dominant ISRE type.

Meso-level should be considered as a testing ground for revision of the existing institutional system norms, where the testing of the feasibility and versatility of the newly generated institutions and the identification of the inefficient ones are taking place (with regard the current agents’ expectations and preferences and actual transaction cost’ oppression).

One of the this trend’ manifestations is the wide spreading of extended sustainable forms of economic entity communities at the meso-level within the framework of a holistic collaboration of agents acting at the meso-level into the meso-economic agents’ community (MEAC). In literature, MEAC have various names: “holons” [43], “swarms” [44], “macrogenerations” or populations of economic subsystems [45], “subnets” [46] and others.

Let’s agree to understand the MEAC as a set of agents with the following characteristics [47]: regular interaction; group self-identification; identification of the community by agents which external to the community; the common purpose of interaction; the community is a unified subject of the action.

MEAC exists within the technological ways of life and creates a part of the social product.

The empirical value of MEAC in the formation of ISRE and the evolution of the economy is reflected, for example, in [45, 48].

ISRE at a meso-level is characterized by the electoral collectivity (defined by the particularity of formation and development of the specific MEAC) and the tendency to compromise in a framework of cooperation, collaboration, complementarity and communicative coordination of agents in the MEAC.

5.4. The French sociologist P. Bourdieu has developed the concept of habitus, according to which the concepts of “subject”, “agent”, “actor” in society are to be divided [49]. The agent in a certain sense acts by itself <micro-level>, unlike the subject in structuralism <macro-level>, which only actualizes the rules <institutions>. Bourdieu introduces the term “agent” instead of “actor” (which is commonly used in sociology) to emphasize an individual’s ability to act freely. “Actor” implies, on the contrary, the presence of determinism, the agent is subordinated to, being functioned in the society <meso-level>. The agent's action (according to P. Bourdieu's concept) is actually a product of the “unconscious strategies” which he realizes. Action strategies are formed on the bases (dispositions) learned by the agent, with the account of the peculiarity of its subjective paradigm’ system, that allows or prevents using newly received information in the process of making socio-economic decisions and determining the mechanisms of such using. At the heart of the agent's actions is a set of dispositions making up the habitus <subjective system of agent’s paradigms>.

As we can see from the above, according to the concept of P. Bourdieu, the “economic agent” term (EA) has a different sense at different levels of the system hierarchy: at the micro-level EA is considered as an agent-individual (with the full range of individual socio-psychological characteristics and features); at the meso-level EA is considered as an agent-actor (EA here acts not only as an individual but also as a member of the MEAC, that inevitably leads to a decrease in a number of its social freedom degrees, that is largely determined by the system of paradigms MEAC); at the macro-level, EA is considered as an agent-subject (here EA appears as a social unit of the hierarchy level, not as an individual, but as MEAC, the number of social freedom degrees of which is determined, to a large extent, by an actual institutional system).

5.5. MEAC and the structure of micro-interaction stimuli between its members are combined to form the “meso” essence of the institute: meso is not just a given entity or a simple aggregate for a plain institute existence, but the condition and the result of the process of institutional emergence and is determined by that very process [4].

Co-evolution of the institute and the process of forming its “supporting” group usually occurs at the meso-level, that is, in groups of medium size, the specific size of which can be <situationally> deter-

mined only in specific models or numerical modeling, depending mainly on the given structure of incentives and the assumed importance of the common future [4].

Forwarding this idea, in [29] it was noted the synergetic interaction of ISRE and institutions: institutionalism shifts the focus from the individual to institutions, considering the latest as an analysis unit, as some meaningful "aggregates". However, these "aggregates" are of the interest as they form a social "friction" (in interactions), and therefore bear losses and gain the profit, determine the organization, allocation, and adaptation in the economy.

In this case, the macro-level of the economic system hierarchy is the place where appears the normative consolidation of new institutions that were tested on the meso-level: here dominates the declarative unification and collectivity in the ISRE, based on the norms of the existing institutional system. At the same time, the transaction costs at the meso-level are significantly lower due to the presence in the processes of incorporation and interiorization of the so-called "soft power", i.e. a motive created and introduced together with the institute to enforce the rule: MEAC is often applied to its members whose behavior deviates from the community norms, which sanctions, degree could be different [50].

5.6. It is noted in [3] that many evolutionary economists mistakenly focus on "selection" as on a purely microeconomic history and that economic coordination and changes are to be reviewed from a meso-perspective: the meso-level appears to be more of an independent, "given" and "explaining" factor in itself rather than an explicable variable; it is being more as a cause than an effect.

The explanation and evolutionary interpretation of the socio-economic itself presupposes the general meso-economics as the aggregate level, structure, and concept of the economic aggregate. Its applications in the economic fields of culture, trust, production, innovation, information (in the "new" economy), spatial organization and networks are discussed in [4].

6. Final provision

Ontologically, the meso-level is necessary as exactly its presence allows to fill the gap in the cause-and-effect relationships between the phenomena taking place in the economy evolution at different levels of the system hierarchy, that is confirmed in numerous studies: here M/MD, dominant in economics, has a little capacity.

Meso-level could be considered as an important area of collective choice [51] that expanding the prospects of its comprehensive interdisciplinary studies.

That is exactly the presence of the meso-level in the existing ISRE hierarchy allows the latter to evolve under the influence of current agents' expectations and preferences within the framework of the current (but transforming) system of institutional constraints.

This approach, in particular, creates the preconditions for methodological certainty in understanding the mechanisms of the institutional system transformation.

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