

ECONOMIC ISSUES, PROBLEMS AND PERSPECTIVES

THE ECONOMY AS A COMPLEX SYSTEM OF ECONOMIC ACTIONS

In Search of a New Paradigm



PAATA LEIASHVILY

NOVA

Economic Issues, Problems and Perspectives



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Paata Leiashvily

The Economy as a Complex System of Economic Actions

In Search of a New Paradigm



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To the heroic Ukrainian people

Contents

Foreword ix
	<i>Shota Veshapidze</i>
Preface xiii
Acknowledgments xix
Introduction xxi
Chapter 1	Purposeful Activity 1
	1.1. Goal 1
	1.2. Means 3
	1.3. Result 4
	1.4. Value 7
	a) Fractality of Action 7
	b) Value as a Phenomenon of Consciousness 8
	c) “Calculation” of Values 12
Chapter 2	Subsistence Economy 17
	2.1. Production and Consumption 17
	2.2. Production Sector and Consumption Sector 19
	a) Primary Resources and Final Products 19
	b) Sectors of the Economy 21
	2.3. Economic Value 22
	a) Needs 22
	b) Utilities and Costs 23
	c) Economic Values and Valuations 25
	2.4. Optimality 30
	2.5. Total Value 33
Chapter 3	Market Economy 37
	3.1. System of Economic Actions 37
	3.2. Branch Structure 40
	3.3. Relative Price System 47

3.4. Money	52
3.5. Birth of Macro-Order from Micro-Chaos	58
3.6. Market Value	61
3.7. Law of Value.....	67
3.8. Profit and Savings	71
a) Difference between Income and Expenditure	71
b) Statement of the Problem	73
c) Surplus Products and Saved Resources.....	75
3.9. Capital and Current Goods	78
a) Conditionality of Classification.....	78
b) Final and Intermediate Capital Goods.....	80
c) Investment in Human Capital	84
3.10. Optimality and Its Criteria	85
3.11. Total Cost	89
3.12. Self-Regulation of Value Flows	95
3.13. General Equilibrium Model.....	99
a) "Symmetric Model"	99
b) Fluctuations in Economic Activity.....	105
c) Nonlinear Properties of the "Symmetric Model"	108
3.14. Business Cycles.....	114
a) Causes of Occurrence	114
b) Self-Regulation of Economic Activity.....	118
c) "Natural Selection" in Economy.....	123
Chapter 4 Monopolized Economy	127
4.1. Monopolization.....	127
4.2. Financialization.....	132
4.3. Banking System.....	138
Conclusion	145
Appendix: Economy in Terms of Sociocybernetics	157
1. Formation of Social Systems	157
2. Social Action.....	158
3. Autopoiesis	163
4. Neural Network of Economic Actions.....	165
5. Operational Closure and Causal Openness	168
6. Self-Reference.....	171
References	177
Index	181
About the Author	189

Foreword

I have known Professor Paata Leishvili for a long time through our work together. We were colleagues at the Faculty of Economics of the Ivane Javakhishvili Tbilisi State University for many years. He was a lecturer at the Department of Theoretical Economics, and I was a lecturer at the Department of History of Economic Thought. Before that, he worked for a long time at the Institute of Economics of the Georgian Academy of Sciences and after that - at the Budget Office of the Georgian Parliament. In a word, he is a professional scientist with extensive experience in scientific, practical and pedagogical activities.

Always welcoming and friendly in life, he is an irreconcilable rebel in science. On the eve of the collapse of the «Soviet Empire», as soon as censorship was relaxed, he harshly criticized the labor theory of value and Marxist fundamentalism in general. (I remember he was often quoting K. Marx, who said, «Thank God I'm not a Marxist. ») In the early post-Soviet years, he actively fought to spread neoclassical ideas. But as his knowledge deepened, he became convinced that the economic mainstream was as dogmatized as Marxism. And he rebelled again against this new version of dogmatism. From a proponent of neoclassical theory, he became a critic of it. Like all free-thinking scientists, he has an actual «allergy» to dogmatism and authoritarian thinking.

When I started reading this book, I already knew many of his publications and, of course, expected new creative ideas. But this book exceeded my expectations. After reading the book, I could not hide my admiration and expressed it to the author. He replied that his merits should not be exaggerated. He believes that the very format of interdisciplinary research has enormous potential for solving scientific problems.

Many readers will receive abundant «food for thought» from this book. But I doubt every reader who picks up this book will finish it. Reading this book requires intensive work of thought and discipline of thinking. Easy

readers may need more patience. But I deeply believe those who read it will not regret the lost time.

However, the main difficulty in understanding the book's content is not so much the complexity of the ideas themselves as the conceptual environment in which the analysis of economic phenomena takes place, starting from the very first page. As if the author implies a qualified reader who, at least superficially, is familiar with Chaos theory, second-order cybernetics, constructivism, structural-functional analysis, and, most importantly, has elementary skills in dialectical thinking. But, as a rule, many economists are unfamiliar with all these theories and don't have such skills. All this is not taught in economic faculties. (After reading this book, the need to expand economic education programs is particularly acute.)

This book presents a whole «kaleidoscope» of new ideas, each of which derives from - the previous. And so, step by step, going through the wilds of dialectical reasoning, you eventually find that before your eyes, a unified system of categories is born that adequately explains the real processes.

From the beginning, the reader may feel uncomfortable with the fact that the whole concept is based on a seemingly strange idea. Namely, the basis of the economic system is not an economic subject, not an abstract «Homo economicus», with unrealistic super-rational calculations of marginal utility and costs. Economic action as a form of social action is taken as the primary element of the system. At the same time, action is understood not simply as an empirical act, but as a teleological act, as the unity of purpose, means and result. (The author is obviously influenced by the theories of «social action» by T. Parsons and M. Weber, as well as the famous treatise by L. Mises «Human activity».) The economy is presented as a non-linear system of economic actions. Such an approach opens enormous possibilities for applying modern achievements of complex systems theory, social cybernetics and epistemology. Thus, Prof. P. Leishvily proposes a new direction of economic research, a new research program, promising valuable scientific results.

The author was able to come up with innovative ideas on several key issues in economic theory. Although he uses streamlined formulations to characterize his results - «new interpretation», «new approach», «new understanding», etc., in fact, he puts forward and substantively argues new theories, such as the theory of value, pricing, general equilibrium, etc. And they are all derived from the development of one initial concept - «economic action» as a kind of «embryo», from which develops the whole system of categories. In addition, the book proposes a «Symmetric model» - a model of

economic equilibrium. It is based on the general ideas of L. Walras. Still, it is more realistic because the role of the "mystical auctioneer" in it is played by feedback that exists in real markets between prices and quantities of various goods. That is, the author makes a significant contribution to a number of key problems of economic theory based on a common methodological approach.

The dialectical method revealed completely unexpected relationships between economic concepts. For example, the existence of a deep interdependence between profits and savings has never occurred to economists; or understanding that the economic costs are nothing but the economic utilities themselves, which turn into costs after they have satisfied needs. Who would have thought that Marx's analysis of profits within a surplus approach, the subjectivism of the Austrian school, Walras' idea of general equilibrium, and Keynes's macroeconomic approach could be so organically synthesized into a single theoretical system that without any of them, the system would collapse? In other words, eclecticism or the compilation of irreconcilable ideas has yet to be in sight. There are talking about a unified system of concepts, which as from «embryo», is derived from the primary elementary concept - «economic action». Moreover, due to the high density of meanings per unit of text, all this extensive subject matter is presented not on thousands of pages of a vast tome, as one might expect, but in an ordinary medium-sized book.

All of the above is more than enough for one author to recognize the scientific value of his monograph. All this sounds very ambitious, but if you call a spade a spade, that's exactly what it is. The author himself openly declares his scientific ambitions, as can be seen from the book's subtitle - «In search of a new paradigm». Of course, not everyone accepts the author's position - both because it is too unusual and radical and because it is not easy to give up one's own convictions formed over the years. But it is impossible not to agree that the author's position is deeply thought out and thoroughly argued and, in any case, has every right to exist, especially considering how much the neoclassical paradigm has been devalued and what a deep crisis economic science is in today.

In conclusion, I strongly recommend both researchers and undergraduates of economic profile to read this book. And I sincerely congratulate the author on publishing this excellent book, which will not leave anyone who reads it indifferent.

Professor Shota Veshapidze

Tbilisi, April 16, 2023

Preface

Attempts to provide an unbiased scientific explanation of the processes occurring in the modern economy do not fit the neoclassical paradigm. This paradigm demonstrates an apparent inability to cope with the problems it faces. The economic mainstream was developed by different scientists over different periods of time. And although this was a necessary stage in the development of economic theory, it has long exhausted the scientific potential for its further advances, and at present, it has brought the theory to a deadlock. One of the main reasons for the crisis of economic science is the inadequacy of its research methods. These methods need radical rethinking.

Modern science has accumulated enough knowledge to come closer to understand how the market economy functions. But this knowledge is so dispersed across disciplines and scientific fields that it is difficult to see the links between them. Many philosophical and sociological doctrines and research programs, both long-standing and relatively recently appeared, contain interesting ideas and methodological approaches that are ignored by the mainstream but have the great scientific potential to lead economic science out of the deep crisis in which it finds itself. These include the ideas of Hegel, I. Prigogine, H. Haken, T. Parsons, N. Luhmann, H. Maturana, F. Varela, H. Foerster and others. A systemic vision of reality unites all these scientists. But since these ideas are scattered in the doctrines of various thinkers who have different, sometimes mutually exclusive worldviews, and are not linked to each other, they often remain outside the attention of economists. A methodological approach based on the synthesis of these ideas makes it possible to interpret economic reality in a new way.

Moreover, in the context of such a methodological approach, many well-known economic ideas, both recognized by neoclassicists and rejected by them, also gain new meaning. There are interesting logical touchpoints between these ideas which offer new perspectives on the operation and development of the market economy. In this regard, we can mention the ideas of K. Marx, L. Walras, L. Mises, F. Hayek, J. Keynes, P. Sraffa, P.

Sweezy and others. Their views inspired this study. The ideas of these scientists, removed from the contexts of those sometimes-incompatible doctrines to which they belong, and placed in the correct relationships, explicitly or implicitly underlie the proposed concept. The result was not a compilation of old ideas, but an authentic concept.

At the same time, we are not referring to those provisions of these doctrines that are not used as construction material for the proposed concept. We do not believe that all the ideas of these scientists are acceptable for economic science. We simply do not address these questions, as the purpose of the proposed study is not an interpretation or critical analysis of these theories. We mention these ideas only insofar as they are dictated by the need for an adequate understanding of our proposed concept.

As is known, in the works of the classics, special attention was paid to the theory of value, which shows the exceptional importance of this problem. Many questions remain unanswered to this day. But the problem of value has turned out to be so complex that modern economic theory practically ignores it, shifting the whole focus to the problem of price.¹ Initially, my scientific interests were concentrated on the problem of value. It has always seemed to me the central problem of economic theory, which could provide the key to understanding other important problems. Several of my articles and special monograph chapters are devoted to this problem, in which value is presented as a unity of utility and costs.² The study of the problem of value gradually led me to form a unified vision of economic processes, which is radically different from neoclassical dogmas.

¹ "...the problem of value is not held in much esteem in contemporary economic thought. ... most economists today do not even see the need for a "theory" of value, as distinct from a theory of price, and would in fact be hard pressed to explain the difference between the two. ... the neglect of value does not remove the issue from economics but only leads to its covert appearance in harmful form; ... the questions raised by value are not antiquarian but perennial (and, I should add, not elementary but elemental); and that varying approaches to value, far from being mere pedagogical devices for periodizing the history of economic thought— classical political economy with its "labor theory" of value, postclassical with its "utility theory"—powerfully influence the constitution of economic thought itself by identifying different elements within the social process as strategic for our understanding of it." (Heilbroner, 1988, 104-105.)

² See Leiashvily P. "Towards the teleological understanding of economic value"//*International Journal of Social Economics*. Volume 23, Number 9, 1996. (p. 4 - 14); Leiashvily P. 2012. *Economic Activity: Teleological Analysis*. New York. Nova Science Publishers Inc.; Leiashvily, P. 2017. "The Relativity Theory of General Economic Equilibrium"//*American Journal of Economics*, 7(5): 216-229; Leiashvily P. "Macroeconomic Order from Microeconomic Chaos". *American Research Journal of Humanities and Social Sciences*, Vol 7, no. 1, 2021, pp. 1-15.

As a result of the dialectical analysis of economic categories, the market economy is presented as a complex, nonlinear, living, organizationally closed and causally open system of economic actions. Complex nonlinear cognitive systems have unique properties, in the study of which synergetics, constructivism, second-order cybernetics, and network theory have achieved great success. This circumstance provides an opportunity to refer to the achievements of these scientific disciplines in the format of an interdisciplinary study of economic processes. As a result of such an analysis of a decentralized economic system, a fundamentally new interpretation of economic categories and the interrelations between them, a new understanding of economic equilibrium and the mechanism of self-regulation of a market economy have been obtained.

In a market economy, subjects produce products for each other and exchange them. The satisfaction of one's needs is mediated by the satisfaction of the needs of others. As a result, the actors are bound to each other by their actions and form a single system in which everything that is produced is consumed and everything that is consumed is produced. In such circumstances, the results of economic actions become the prerequisites for actions themselves. Each economic action gives rise to other economic actions, making the economic system an organizationally closed, self-reproducing system. The economic system is presented as an autopoietic system that generates the elements of which it consists.

The economy is an organizationally or operationally closed system. This implies that the functions performed by the various actions are interrelated and form a closed system in which the performance of each function is, in one way or another, conditioned by performing all other functions. More specifically, the circular organization of functions performed by various economic actions gives rise to such a sequence of actions, which determines the reproduction of the very circular organization of functions, i.e., the operational closure. This operational closure of the system cannot be unlocked anywhere without destroying the system itself.

As a result of this approach, it becomes clear that the self-organization of a market economy is carried out with the help of recursive processes (commodities are produced by commodities, prices are formed based on prices, actions give rise to actions, satisfaction of needs gives rise to new needs, etc.). Recursive processes in the economic system, as well as in other complex nonlinear systems, give rise to "eigen-values", or, in the language of mathematicians, "fixed points". Equilibrium prices of goods are such "fixed points" to which, because of recursive processes, actual market prices

of goods tend, and thus ensure the system itself strives for general economic equilibrium.

Since the market economy is both an organizationally closed and a causally open system, it simultaneously strives for equilibrium within the system (between intra-system processes) and disequilibrium with the external environment. Equilibrium and stability within the system are necessary to maintain the integrity of the system, and disequilibrium and instability in relation to the external environment are a necessary conditions for the development of the system. Therefore, the economic system has the ability of homeostasis and, at the same time, can develop, change its state and structure, respond to external environmental influences and adapt to it.

In the evolution process of a market economy, competition gives rise to monopolies. Over time, the economic power of private monopolies increases, making it necessary to increase the government's regulatory role. Market self-regulation is increasingly being replaced by government regulation. The history of the market economy shows that the share of the competitive sector in it is decreasing, while the share of the regulated sector is increasing. In the monopolized sector, as a private regulated segment of the economy, the distribution of society's income is carried out in favor of a group of private monopolists. And in the public sector, there is a process of reverse redistribution of income for the benefit of society. A monopolized sector increases economic inequality in society. But as long as the government is under the influence of large monopolies, it cannot neutralize the monopolistic distribution of national income. The consequence of this is a tendency to reduce the purchasing power of society relative to its production capabilities and a lag of demand behind supply. Demand has to be artificially supported by economic policies that create credit expansion. The economy faces systemic problems and, over time, replacing market self-regulation with government regulation based on economic models and digital technologies is inevitable.

The neoclassical paradigm is currently discredited, while the new one does not yet exist. A kind of vacuum of fundamental ideas, shared by the vast majority of economists, has emerged in economics, based on which the normal development of this science could continue. This creates huge problems both in economics and in economic education and policy. But simultaneously, the created situation frees scientific thinking from neoclassical dogmas, and provides motivation and an intellectual atmosphere for enhancing scientific creativity and searching for non-standard approaches to solving scientific problems.

If we don't understand how the competitive economy works, we can't understand how the modern monopolized economy works. We cannot understand how the economy should be regulated if we do not understand the self-regulation of the decentralized economy. If we don't understand the functioning of the subsistence economy at the subjective level, we cannot understand the market economy. We cannot cognize what value and market prices are if we first do not cognize subjective values and valuations, etc. This study presents my vision of these problems.

In conclusion, the proposed study focuses not so much on criticism of the existing paradigm but on searching for alternative approaches to interpreting economic reality.

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Introduction

“We cannot solve our problems with the same thinking
we used when we created them.”

A. Einstein

“The difficulty lies, not in the new ideas,
but in escaping from the old ones...”

J. M. Keynes

1. The search for truth at the intersection of different sciences is particularly effective in the current fragmentation of scientific knowledge. Interdisciplinary research is carried out in orthodox economics. However, the achievements of related disciplines attract the attention of mainstream representatives only when they do not contradict neoclassical dogmas. The impression remains that they conduct such research not so much to cognize economic reality as to “scientifically” justify their dogmas. But the unwillingness of the orthodoxies to critically rethink obviously outdated ideas leads to self-isolation from modern science. “But no branch of human inquiry has cut itself off from the whole – and from the other social sciences – more than economics. ... Today’s professional economists, by contrast, have studied almost nothing but economics. They don’t even read the classics of their own discipline. Philosophy, which could teach them about the limits of the economical method, is a closed book. Mathematics, demanding and seductive, has monopolized their mental horizons. The economists are the *idiots savants* of our time.” (Skidelsky, 2016.) Such an arrogant and disrespectful attitude towards other sciences has led the neoclassical theory to a dead end for many decades of its existence. Neoclassicists are not ready to gain unexpected new knowledge or revise the basic ideas of their theory. But without taking into account the latest achievements of modern science, economic theory cannot overcome the