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A Few Words About the Paradigms of Economics and Entrepreneurship in the Face of the 21st Century Challenges

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Abstract:

Purpose: *The aim of this article is to answer the question, what is the evolution and contemporary significance of the paradigms of economics and entrepreneurship in the context of the 21st century challenges . The author attempts to synthesize orthodox and heterodox perspectives, analysing their adaptation potential to the new realities and indicating the directions of further research into a model of economy based on values, innovation and responsibility. The article is an invitation to a discussion on what kind of economy and what kind of entrepreneurship we need to meet the challenges that are becoming more and more global, systemic and existential.*
Design/Methodology/Approach: *The main method of research is a critical analysis of the literature which concerns mainstream (orthodox) and heterodox economics approaches to scientific research as the foundations for economic policy in the context of different economic, social, climate turbulences in the 21st Century.*
Findings: *The analysis allows to understand relations between the theories of economics and the 21st century reality, in particular, to formulate a range of useful conclusions for a further development of economics as a science. On the threshold of the third decade of the 21st century, economics and entrepreneurship are faced with the need for a fundamental reflection on their identity, social function and scope of responsibility. Challenges such as the climate crisis, deepening inequalities, the digital revolution, ageing populations or geopolitical instability often make the current paradigms of analysis and action insufficient.*
Practical Implications: *The discussion and analysis concern different approaches to the paradigms and methodology of economic phenomena, and economic research is important in laying foundations for economic policy in the times of different turbulences in the 21st century*
Originality/Value: *The discussion and the critical analysis of the different methodological approaches especially concerning attempts at formulating new paradigms in economics is the value added of this article.*

Keywords: *Economics, economic sciences, methodology of economics, finance and management, scientific goals, orthodoxy and heterodoxy in economics, paradigms.*

JEL codes: *A1, B0, B4, N0.*

Paper type: *Research article.*

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1. Introduction

The 21st century brings extremely complex and dynamic challenges which not only call into question the existing mechanisms of the economy, but also prompt reflection on the theoretical foundations on which modern economics is based.

Financial crises, climate change, digital transformation, growing social inequalities and the erosion of trust in public and market institutions are causing economists, policymakers and entrepreneurs to increasingly look for new interpretative frameworks capable of capturing the complexity and unpredictability of the modern world (Stiglitz, 2010; Raworth, 2017).

The economic paradigms shaping the thinking about the economy – from neoclassical to institutional or ecological – are not only a set of analytical tools, but also an expression of fundamental philosophical assumptions concerning the nature of man, the logic of the functioning of socio-economic systems and the role of market and the state.

At the same time, the growing pressure for more sustainable development forces a redefinition of entrepreneurship, which is transforming from a strictly profitable activity into a carrier of social innovation and systemic transformation (Porter and Kramer, 2011; Yunus, 2010).

The aim of this article is to present the evolution and contemporary significance of the paradigms of economics and entrepreneurship in the context of the challenges of the 21st century. The author attempts to synthesize orthodox and heterodox perspectives, analysing their adaptive potential to new realities and indicating some directions of further research into a model of the economy based on values, innovation and responsibility.

The article is an invitation to discuss what kind of economy and entrepreneurship we need to meet the challenges that are becoming increasingly global, systemic and existential.

2. What is a Scientific Paradigm?

Scientific paradigm, according to Kuhn (1962), is a set of concepts and theories forming the foundations of a given science (basic worldview, features of a good theory, theoretical framework for analyzing problems, techniques and tools for empirical testing of predictions and hypotheses).

The theories and concepts that make up a paradigm are rather not questioned, at least until the paradigm is cognitively creative, i.e., can be used to create detailed theories consistent with the experimental (historical) data that a given science deals with. The

most general paradigm is that of the scientific method – the criterion for recognizing an activity as scientific.

The paradigm differs from the so-called dogma in several basic features. It is not given once and for all, but is adopted by a consensus of a majority of researchers, which does not mean that scientists vote to accept or reject the paradigm; what matters is the compatibility of the paradigm with the current knowledge and the fulfillment of many conditions (in terms of, for example, existing evidence). The paradigm can periodically undergo fundamental changes, leading to profound changes in science called the scientific revolution

The paradigm undermines the sense of "absolute rightness" (the very concept of "absolute rightness" is not scientific).

A good paradigm has several characteristics: logical and conceptual coherence, simplicity and inclusion of only those concepts and theories that are really necessary for a given science, giving the opportunity to create detailed theories consistent with known facts.

Kuhn (1962) gives the following characteristics of a good theory: logical coherence, fertility, accuracy of forecasts, breadth of view, and simplicity. The accumulation of unresolved issues leads to a paradigm shift.

2.1 Paradigms of Economics: Between Orthodoxy and Heterodoxy

Economics as a social science is based on specific theoretical and methodological assumptions that form a framework for the analysis of economic phenomena – i.e. paradigms. The most established and dominant paradigm in economics since the second half of the twentieth century remains the orthodox current, founded on the concept of homo oeconomicus, the neoclassical theory of market equilibrium, rationality of subjects, and allocation efficiency.

However, in the face of the 21st century challenges, this model is increasingly questioned as too simplistic, abstract and detached from the realities of the global economy.

Orthodox economics includes the following directions and schools: classical political economy (including A. Smith, D. Ricardo, T.R. Malthus, J.S. Mill), the neoclassical school of economics (L. Walras, V. Pareto, A. Marshall, C. Menger, F. von Wieser, among others), Keynesianism (inter alia, J.M. Keynes).

Also the new Keynesian school (G. Mankiw), neoclassical synthesis (including P. Samuelson), monetarism (e.g., M. Friedman), the new classical school (R. Lucas, R. Barro, T. Sargent, among others), supply-side economics (A. Laffer), the school of real business cycle (F.E. Kydland, E.C. Prescot), new institutional economics (R.

Coase, D. North, O. Williamson, inter alia), new growth economics (for instance, P. Romer, R. Lukas junior). Behavioral economics (including H. Simon, D. Kahneman, R. Thaler), the new Austrian school (featuring L. Von Mises, F. von Hayek), and post-Keynesianism (J. Robinson, N. Kaldor, H. Minsky), situate themselves on the borders of orthodoxy and heterodoxy.

Heterodox economics includes: doughnut economics (K. Raworth), ecological economics (e.g., H. Daly), feminist economics (N. Folbre), and evolutionary economics (inter alia, R. Nelson, S. Winter).

2.2 The Orthodox Paradigm – Features and Limitations

The orthodox economics, which includes the neoclassical, monetarist, new classical and new Keynesian schools, is based on several key assumptions: the rational action of individuals (homo oeconomicus), complete information, constant preferences and the propensity of markets to achieve equilibrium (Mankiw, 2020). The mathematical models and analytical tools of this tradition allow for precise hypotheses, but often ignore the institutional, psychological and environmental determinants of economic processes.

Criticism of the orthodox paradigm intensified after the financial crisis of 2007–2009, when it turned out that the dominant economic models were unable to predict or explain the scale and mechanisms of destabilization (Krugman, 2009; Stiglitz, 2010). Excessive formalism, ignoring the role of the financial sector and insufficient consideration of information asymmetry, uncertainty and instability were pointed out.

Nevertheless, the paradigms of the orthodox currents of economics based on the concept of homo oeconomicus are still relevant. Currently, these trends take into account the limitations of the concept of homo oeconomicus and the rationality of the behaviour of consumers, enterprises, investors, taking into account the latest achievements of behavioural economics, which show the existence of a significant margin of irrational behaviour (see: Simon, 1957; Thaler, 2015). The following questions can also be formulated about homo oeconomicus and the paradigms of orthodox economics based on this concept:

- Are maximizing actions an innate human instinct?
- Are they dictated by the survival instinct?
- Is it therefore natural to strive and maximize profit – i.e. in the short term, the rate of return on capital and, in the long term, the multiplicattino of the owner's wealth (the company value/ może goodwill)?
- Thus, is it also natural to maximize utility within your income and given prices?

Are methodologically rational actions dominant, while irrational ones are more or less marginal? Is the concept of homo economicus justified as the basis of many paradigms in economics? I will not give, may suggest answers, , let's research and discuss.

The problem is why people act rationally or not in a situation? This is a fundamental question. Maybe we should ask sociobiology, sociology, anthropology. What are the primitive human instincts?

It is difficult to answer this. It can be explained by taking into account sociobiological or economic achievements, for instance, of by E.O. Wilson (1975), G. Becker (1976), and others. We would like to know if a human being has the instinct of maximising its advantages? Is egoism natural for animals and the zoopoliticon, that is, the human being?

After all, science is also about asking questions.

3. Alternative Approaches: Heterodoxy and its Diversity

In response to the mainstream's imperfections, a number of heterodox approaches are developing that reject or modify the fundamental assumptions of orthodox economics.

Although the heterodox current is not homogeneous or integrated in the methodological sense, it is united by a critical approach to the assumptions of the dominant theories and a desire to better map the complexity of socio-economic reality. Unfortunately, in some heterodox conceptions of economics, its purpose as a science that studies economic reality is lost and replaced by the creation of sometimes utopian and postulative concepts that are certainly not theories.

It is worth quoting at this point a very good broad definition of economics by K. Kuciński (2010): *"The driving force of human action is the desire to preserve one's species and oneself. This forces you to earn a living and take care of others. preventively. This thriftiness breeds greed and fear. The point is to have more and not to lose it by accident. These two thoughts organize our thinking about the economy and management. They also permeate the way of practicing economics understood as the science of the economic society and the managing man, about the acquisition of livelihoods, about how to gain them effectively, how to earn from it, or in any case not lose, about the related mechanisms, interdependencies, regularities and laws".*

A significant example of the postulative concepts rather than theories is the so-called doughnut economics of K. Raworth (2017). The fundamental question that determines whether science should be positive or normative is: What is the purpose of science, what do we study? In the case of economics, we study socio-economic processes. Economics is a positive science.

We study economic phenomena and processes, the economic behaviour of human beings, human communities and societies. Of course, we can and maybe should formulate recommendations for managers, economic policy etc. based on the theory and empirical results of research.

However, the first goal of every science is epistemological (cognition for cognition's sake). If we were to consider a certain activity consisting in formulating what should be in isolation from what is an empirical fact as science, then science, the scientific method, would end, and ideology and politics would begin.

Unfortunately, there are many such cases in the other heterodox trends. K. Raworth (2017) writes a lot and critically about the mainstream economics. Its thesis implicitly boils down to the fact that from the times of A. Smith through J.S. Mill, to the times of P. Samuelson and today, the whole economy has been based on the concept of homo economicus.

She emphasizes that the important problem is that we educate the next generations of economists by instilling in them the principles of mainstream economics (orthodox economics) and its paradigms and theories. As a result, we create specialists and consumers who act in a maximizing way. Her analysis and arguments show that if the main market paradigms were changed to those proposed by her, the world would be more beautiful.

But is Raworth's theory a science or just some postulates of "what should be"? K. Raworth treats the market economy voluntarily, as something that is not studied, but something that man has created and can change at will. This is a road to nowhere.

4. The Search for a New Synthesis

Table 1 below presents the differences in the paradigms of mainstream and heterodox economics.

Table 1. *A comparison of the paradigms of orthodoxy and heterodoxy*

Field	Mainstream economics	Heterodox economics
Human model	Homo oeconomicus – rational, maximizing unit	A socially embedded individual, operating in conditions of uncertainty and emotions
Assumptions	Universal economic laws, equilibrium models	Historical and institutional context, process, dynamics
Economic obbjective	Economic growth (GDP), efficiency	Well-being, sustainability, social justice
Relationship with nature	Nature as a resource, an external element	Economy as an ecosystem/ subsystem, planetary constraints
Methods	Mathematical models, formalization, optimization	Pluralism of methods – qualitative, quantitative, interdisciplinary
The role of the	Limited to market failure	Active transformative agent, innovator,

state	correction	creator of public value
Economic crises	Balance disorders, external "shocks"	The effect of internal contradictions of the system
Theory of Value	Subjective theory of value	Social, ecological, or power-based

Source: *The author's own compilation.*

After studying the table above, we can formulate the question: Can we reconcile some elements of the paradigms?

Nowadays, there is a growing need to bring orthodoxy and heterodoxy closer together through a paradigmatic dialogue. An increasing number of researchers are postulating an eclectic approach, combining methodological rigor with empirical realism and openness to other disciplines (Colander *et al.,* 2004). A good example is research into the so-called complexity economics, which refers to computer science, physics and the theory of adaptive systems, trying to model economies as dynamic, non-linear systems.

4.1 Economics in Conditions of Complexity and Uncertainty

The modern economy operates in an unpredictable, dynamic and deeply complex environment. The assumption prevailing in the neoclassical economics about the possibility of predicting market behaviour based on stable mathematical models seems insufficient to describe a reality in which random factors, network effects and structural jumps are increasingly important. Complexity and uncertainty are no longer treated as exceptions – they are becoming the rule of operation of economic systems.

4.2 Epistemological Uncertainty: From Keynes to Knight

John Maynard Keynes (1936) distinguished between "risk", which can be quantified, and "fundamental uncertainty", which cannot be grasped in terms of probability. Similarly, Frank Knight (1921) drew attention to the difference between situations of measurable risk and real uncertainty, which prevents rational decisions in the classical sense.

Contemporary research on uncertainty indicates that ignoring its effects leads to a systematic overestimation of the stability of economic models and an underestimation of the risk of crises.

In the real world, uncertainty applies not only to future prices and incomes, but also to institutions, technology, social preferences or regulations. Unpredictability understood in this way forces new approaches to economic decision-making, in which adaptability, heuristics and experiential learning dominate.

5. Economy as a Complex System

Modern complexity economics postulates the abandonment of the image of the economy as a machine striving for equilibrium and the adoption of the perspective of an adaptive system, in which interactions between entities lead to emergent, unpredictable macroeconomic phenomena (Arthur, 1999). Instead of a representative agent, a collection of heterogeneous actors whose behaviour changes over time under the influence of information, trends and strategies of other market participants is studied.

In this perspective, the economy is more like an ecosystem than a mechanism: it is vulnerable to phase transitions, externalities and systemic disruptions such as pandemics, energy crises or technological shocks. Complexity economics draws inspiration from statistical physics, biology and computer science, introducing concepts such as adaptive multi-agent systems (MAS), self-organization and interaction networks.

5.1 Bounded Rationality and Heuristics

The concept of bounded rationality, proposed by Herbert Simon (1957), assumes that individuals are unable to process complete information or optimize their decisions – instead, they are guided by simplified rules (heuristics) adapted to the context.

Behavioral economics is an extension of this idea, which empirically examines systematic deviations from rationality, such as loss aversion, the anchor effect, or overconfidence (Tversky and Kahneman, 1974; Thaler, 2015).

Under the conditions of uncertainty and complexity, heuristics are not cognitive biases, but effective adaptive tools. Economists such as Gigerenzer (2007) point out that "reasonable simplifications" allow people to make good enough decisions without the need for full optimization.

6. A New Look at Entrepreneurship

Entrepreneurship, which has been associated with innovation, initiative and risk-taking for centuries, is gaining new meanings and functions in the 21st century. In the face of social, ecological and technological challenges, there is a growing demand for entrepreneurship that not only creates profit, but also creates social value and responds to the needs of sustainable development.

The traditional definition of an entrepreneur as a person who takes advantage of market opportunities gives way to a more comprehensive image of a leader of change, operating in an environment of uncertainty, conflicts of interest and the need to adapt.

6.1 From Schumpeter to Social and Sustainable Entrepreneurship

Joseph Schumpeter (1934) defined an entrepreneur as an innovator who introduces "creative destruction" into existing economic structures. This classic image of entrepreneurship as a driving force for technological progress and economic growth dominated economic thinking in the twentieth century. However, in the 21st century, the concept of innovation is no longer limited to technological innovations – it also includes social, organizational and ecological innovations.

In the last two decades, the concepts of social and sustainable entrepreneurship have been gaining increasing attention. The first one focuses on creating social value by solving social problems using market mechanisms (Yunus, 2010). The second combines economic goals with concern for the environment and the well-being of future generations, fitting into the framework of sustainable development (Cohen and Winn, 2007).

According to the creating shared value approach proposed by Porter and Kramer (2011), companies should strive to develop products and business models that simultaneously bring profits and solve social problems. This type of thinking is increasingly inscribed in companies' strategies and public policies supporting innovation.

6.2 Entrepreneurship in the Digital Age

The digital transformation is revolutionizing the way companies operate, the structure of markets and the very nature of entrepreneurship. Digitalization enables a rapid scaling of business models, creating two-way platforms (e.g. Uber, Airbnb), using data to personalize services, and automating decision-making processes by means of artificial intelligence. With this arise new forms of risk, digital monopolies and questions about the ethical dimension of innovation.

21st century entrepreneurs operate in a VUCA (volatile, uncertain, complex, ambiguous) environment, which requires the ability to learn quickly, experiment iteratively, and be flexible organizationally. The profile of the entrepreneur itself is also changing: instead of a lone "business hero", we are increasingly talking about interdisciplinary teams, cooperation networks and models of co-creation of values.

6.3 Entrepreneurship as a Tool for Systemic Transformation

Contemporary entrepreneurship is not limited to individual action within given institutions – it is becoming a force capable of transforming entire socio-economic systems. Social and ecological entrepreneurs influence changes in industry standards, shape new models of consumption and production, initiate legislative changes and educate the public (Geels, 2002; Westley *et al.,* 2011).

From this point of view, entrepreneurship becomes an element **of** systemic innovation, which assumes a change in the rules of the game, not just adaptation to existing conditions. However, this requires not only individual initiative, but also institutional support, an appropriate regulatory framework and a developed innovation ecosystem.

7. Synthesis and directions of future research

The previous parts of the article have shown the tension between orthodoxy and heterodoxy in economics, the growing importance of systemic and behavioural approaches, as well as the transformation of the role of entrepreneurship in the 21st century. The changes taking place are not only an evolution of concepts, but are indicative of a deeper paradigm shift that requires an integrated and interdisciplinary research approach.

7.1 The Need to Integrate Approaches

Uncertainty, complexity, and social pressure make the current polarization between orthodox and heterodox paradigms unproductive. Instead of competing models, complementarity is needed: the orthodoxy can provide precise analytical tools, while the heterodoxy brings contextuality, empiricism, and social sensitivity (Colander *et al.,* 2004).

A new direction of research may be the development of transdisciplinary economics, which combines economics with sociology, psychology, ecology, systems sciences and technology. Such an approach not only better reflects the realities of the modern world, but also enables the design of more effective and ethical public policies.

7.2 New Models of the Economy

The growing interest in alternative management models indicates a change in the way we think about growth, prosperity and efficiency. Among the most important concepts are:

- A well-being economy that puts quality of life, mental health and social relationships at the centre, rather than just GDP growth (Stiglitz, Sen and Fitoussi, 2009).
- Circular economy, assuming a closed loop of resources, minimizing waste and reusing products (Ellen MacArthur Foundation, 2015).
- A regenerative economy, seeking to restore natural and social systems, not just protect them (Raworth, 2017).

All these approaches require a new understanding of value, efficiency and entrepreneurship – as forces that act not only "within the market" but also "for the benefit of the system".

7.3 The Role of Economic Education and Ethics

The transformation of the paradigms of economics and entrepreneurship must also include the area of education. Current economics curricula often present neoclassical models too one-sidedly, marginalizing the diversity of schools of thought and economic realities. Initiatives such as Rethinking Economics and Pluralism in Economics promote methodological pluralism and intellectual openness in the education of economists.

No less important is the issue of ethics in economics and business. In the face of challenges such as the climate crisis, inequalities or the automation of the labour market, economic decisions cannot be seen as neutral. It becomes necessary to restore the ethical dimension of management – taking into account responsibility towards society, the environment and future generations (Sen, 1987; Nussbaum, 2011).

8. Is it Possible to Reconcile the Mainstream Economics Paradigms with Concepts that Emphasize Sustainability?

In the contemporary heterodox currents of economics, the word ‘sustainable’ is inflected every which way as, among other instances, sustainable development, sustainable finance, social sustainability, ecological sustainability, etc. Let's finally try to address the issue of sustainability from the point of view of mainstream economics. This is an attempt at reconciling the postulates of heterodoxy with paradigms based on the concept of homo oeconomicus and the essence of market economy based on the market mechanism.[2]

G.S. Becker, an American Nobel Prize winner, in his book *"The Economic Approach to Human Behavior"* (1976), made some basic assumptions regarding the analysis of the market economy and human behaviour in this economy. These assumptions are based on the concept of homo oeconomicus, introduced into political economy (later economics) by J.S. Mill (1967).

Earlier, A. Smith (2020) had written about a man who is selfish, who is an economic being. But this is the history of economic thought, familiar to all economists What is important is that G. Becker (1976) extended the basic assumption of homo oeconomicus to some completely different areas of human life than the economy and economic activity. He analysed commodity markets (such as cars, food) and their prices, but also shadow markets and shadow prices (such as the market for political ideas).

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[2]*See also more about this topic: A. Hyz, S.I. Bukowski. `Sustainable Development, entrepreneurship, and business ethics: A Triad of the Future, in: M. Baudry, S.I. Bukowski, M.B. Lament (eds.) (2024). Financial Stability, Economic Growth and Sustainable Development. Routledge, London.*

He introduced the economic approach and the economic methods of analysis to the field of research appropriate to psychology, political science, sociology, anthropology, etc.. His methodological and analytical approach refers to Bentham's utilitarianism, as well as to the sociobiology of E.O. Wilson (1976), to the hypothesis that genetic instincts drive our behaviours, among other things, perhaps maximizing behaviours.

In the homo oeconomicus model, it is assumed that all human behavior is maximizing (profits or utility), man is rational in his actions and decisions, there are variable short-term preferences and relatively stable, long-term preferences.

In practice, the goal of entrepreneurs (owners, managers) and companies is to maximize the rate of return in the short term and maximize the value of an enterprise (maximizing the assets of the enterprise owner/owners) in the long term.

Of course, the assumption that people act rationally is very debatable. L. von Mises (1949) wrote that human action is necessarily rational. We have many research results, especially in behavioural economics, that indicate that a total rationality in consumer action does not exist but, in the case of a manager, the margin of irrational decisions is narrow. We have different approaches to rationality. We usually think of methodological relative rationality.

This means that the decision-maker makes a decision based on the available information. But if this information is false, the decisions will also be false. Policymakers have implemented all the available methods of selecting and processing information, though. Their action is rational. In the modern world, the amount of data/information that is available for full rationality is so large that decision-makers using advanced technological methods (such as large database analysis) can make a full use of it in their decision-making process.

In general, however, in modelling economic processes, we can assume that the actions and decisions of decision-makers tend to be rational. We don't have any other modelling methods at present. The model based on homo oeconomicus and the rationality of human action is very useful for building econometric models for analysing the reality of economic processes and interdependencies.

If we agree that homo oeconomicus is still an instrumental reflection of human behaviour, especially of entrepreneurs (owners, managers, investors), we can further analyse other important problems. These concern the relationship between the goals of companies and the assumptions and goals of sustainable development.

The basic mechanism of regulation in the economy is the market mechanism. It is based on demand, supply and price, a mechanism of competition, a regulation of links between markets (financial, consumer goods market, capital goods market,

labour market) and adjustment processes. It has microeconomic and macroeconomic dimensions, as well as international, global dimensions.

This market mechanism makes the baker produce bread. Why does he produce bread? Because he would like to make money on it. But the market mechanism makes bread go to the people who need bread and have money to buy it. *"We do not expect our dinner from the kindness of a butcher, brewer or baker, but from their care for their own interests. We turn not to their humanity but to their self-love, and we never talk to them about our own needs, but about their benefits."* (A. Smith 2020).

All economic units should operate according to the market mechanism - enterprises, companies and financial institutions, the central bank, government agencies. One of the government's regulatory principles is to create (social, industrial, ecological, etc.) policies in such a way that they do not interfere with the natural market mechanism. What does it mean? It's complicated. The government can introduce regulation, which should include the necessary minimum from the point of view of our individualism and individual freedom, though. What does it mean?

This means a minimal intervention in the functioning of companies and households, especially individuals as free human beings. The government is a deal. We agree to have a state and a government because we don't like to shoot at each other. What is law?

M. Friedman quotes a metaphorical statement by an American judge. *"The law is there to keep my fist from meeting your chin"* (Friedman 1982). M. Friedman (1982) says that *"there is no such thing as a free lunch."* This phrase also means that resources are limited, that in order to have more of one thing, you have to accept less of another, that there are no gains without pain. This is a fundamental metaphorical sentence that means that a market economy has profits and costs. I think that this sentence encapsulates the essence of capitalism.

Minimal government intervention does not mean that we as people can do everything we want. This means that the government influences our behaviour and introduces a general framework for it. This framework and order must ensure that, among other things, we do not destroy ourselves one another? We have described the essence of the market mechanism in the language of literature above. The role of the government cannot be denied, however.

This role is great, yet it is important to answer the question: how much government intervention and how much market mechanism? What should be the scope of government regulation and intervention in economic and human life that do not destroy the effectiveness of economic activity based on the natural market mechanism and human freedom? On the one hand, we have natural human behaviour and the desire for human freedom and individualism, on the other hand,

we have the problem of the interests of society and, on a global scale, of all humanity in the context of the ecological crisis and global warming. We believe that dos and don'ts are not an effective way to stop the crisis, as human history has shown. What are other solutions? We believe that the road is very long and is based on changes in human awareness and behavior.

Denying the paradigm of homo oeconomicus and replacing it with the paradigm of moderation economics imposed by a part of the political world seems illusory. We have argued above that the homo oeconomicus paradigm reflects our human instincts and individualism.

One of the effects of our individual behaviour on a micro and macro scale is the market mechanism. We can only modify the effects of our behaviour by modifying our behaviour. This requires new challenges and responsibilities, as each of us is responsible for ourselves, others and the planet.

Governments should play a key role in this matter. Of course, regulations on business and human behaviour in this area are necessary (for example, climate regulation) on an international scale. But they should be reasonable and should act as a market mechanism (with its use), without restricting human freedom and human rights.

Therefore, we believe that there is no contradiction between the nature of the market mechanism and sustainability. The natural market mechanism forces certain behaviors of economic units, which we described above. The trick is to use the market mechanism on a national and international scale to shape the new behaviour of companies and consumers, in accordance with the principles of sustainable development.

In this context, ESG will be a good method of stimulating sustainability, provided however people are aware of the need and principles of sustainable development and put pressure on companies to comply with these rules. It is very important to comply with the principles of sustainable development based on the regulatory framework created by the government using a natural market mechanism (Hyz and Bukowski, 2024).

9. Conclusion

On the threshold of the third decade of the 21st century, economics and entrepreneurship are faced with the need for a fundamental reflection on their identity, social function and scope of responsibility. Challenges such as the climate crisis, deepening inequalities, the digital revolution, ageing populations or geopolitical instability often make the current paradigms of analysis and action insufficient.

The article shows that, in both economics and entrepreneurship, there is a shift from models based on simplified rationality, balance and profit maximization towards more complex, contextual and social, environmental and systemic approaches. This does not mean rejecting the achievements of orthodoxy, but critically revising and supplementing them with what has so far been considered peripheral – and which in fact can be a foundation for new solutions.

In particular, the following is emphasized:

- The need to integrate different schools of thought in economics (paradigmatic pluralism),
- The importance of entrepreneurship as a tool for social and environmental transformation,
- The need to develop an economy based on well-being, regeneration and responsibility,
- The role of education and ethics as conditions for long-term systemic change.

Economics is no longer just a science of scarcity and choice, and entrepreneurship merely a mechanism for taking advantage of opportunities. Both are becoming tools for shaping the future by shaping thinking about an economy that will be not only more efficient, but also fairer and more sustainable. We must remember, though, that the limitation of the concept of homo oeconomicus does not make it obsolete if one takes into account human nature.

This concept is still relevant, as are the bases for the paradigms of mainstream economics. They cannot be replaced with postulative concepts developed by some heterodox currents. As scientists, we must conduct research and discover but do not formulate utopias or postulates for changing the world. K. Marx and his successors would have liked to do just that, which ended in tragedy. The task of science is not only to face emerging problems and change the world, but above all to provide knowledge to those who are called to do so by society in free democratic elections.

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