

IMPACT OF ECONOMIC INERTIA ON ECONOMICS: A METHODOLOGICAL FRAMEWORK

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Abstract: The article is devoted to the phenomenon of economic inertia. The authors of the study conducted sufficiently detailed research of economic inertia, on the basis of which the damage to the economy from various economic reforms or economic shocks can be revealed in a timely manner. Additionally, guidelines can be outlined for further economic growth and sustainable economic development. In their in-depth research on the concept of economic inertia, the authors introduced into usage and employed new concepts of certainty, uncertainty, insufficiency and the redundancy of economic inertia. The authors delineated out as many as four levels of complexity of economic inertia uncertainty. The empirical research is based on a model of the impact of subsidies on the economy. The research model demonstrates that the use of subsidies decreases the market equilibrium price. Innovative companies lose motivation to pursue sustainable economic growth and ensure competitiveness. In this case, the phenomenon of economic inertia is obvious and deprives businesses of the incentives to use innovation to ensure economic growth. Thus, subsidies as a system of stimulus and rescue in the strategic aspect of increasing competitiveness have negative effects on the country's economy.

Keywords: economic inertia, macroeconomic factors, methodology, sustainable economic growth, sustainable economic development

JEL classification: C82, O10, O11, O41

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Introduction

Studies on economic inertia are not new. In the early period of the formation of economics, the phenomenon of inertia was studied by Hegel, Descartes, Leibniz, Kant, Schopenhauer and other prominent scholars.

Recently, economic inertia has been researched in various aspects. Firend Al (2015) extends the concept of inertia in social science to nations as well as organisations. The proposed concept of economic inertia suggests that countries willingly put themselves in a position that lacks economic growth primarily because of the inability to take corrective action, mainly because of institutional and social factors. Firend Al (2015) takes Malaysian economic performance as an example of economic inertia and how a lack of the ability to move beyond the current economic position will create mid to long term economic challenges. Malaysia is stuck in the middle of a globally competitive market and unable to move beyond its current economic position and break out of its economic inertia in order to compete with rivals on the basis of innovation and high-tech manufacturing. The research by the mentioned author tries to determine whether the lack of action by the central bank and government policies can lead to a phenomenon of economic inertia. Afonasova et al. (2020) describe the problem of inertia of socio-economic systems as being at the initial stage of theoretical understanding. Their analysis shows that currently there are very few scientific and theoretical developments specifically focused on economic inertia. Afonasova et al. (2020) suggest that the creation of a measuring element, an indicator of economic inertia, appears to be essential and promising in terms of improving control over the economy during stagnation and recession periods since it is important to have quantitative estimates. This would allow economic inertia to be taken into account in the current economic policy.

Financial researchers are usually interested in the possibilities of inflation inertia research. Vetlov (2000) performed an analysis of Lithuanian inflation inertia. His calculations indicated that inflation inertia in Lithuania was clearly noticeable in the period 1993-1996. Using the Granger causality test, he found that there was an indirect link between the growth in the amount of money and inflation in Lithuania during the given period. Vetlov (2000) interprets the concept of inflation inertia as the consistency of a given process. He argues that inflation inertia is the dependence of the current level of inflation on the level of inflation in the previous period. In his research, Jung (2019) draws attention to overcoming decision inertia in financial planning tools. In the context of economic inertia, attention is also paid to the efficiency of the entire financial system and the recognition of the value of companies (Darškuvienė & Šakalytė, 2006).

The inertial mechanisms of the regional economy and their impact on economic behaviour, the essence of those processes and problems of measurement were researched by Sidnina (2003), and Afonasova (2015).

Marketing professionals examine economic inertia through the prism of inertial loyalty (Turner & Wilson, 2006; Kuršakova, 2010). Analyses of the efficiency of the use of human resources focus on labour market inertia (Boyer, 1992; Maslennikova, 2012; Matraeva et al., 2020). The influence of economic inertia processes on capital

structure and economic development has been studied (Danilenko, 2009; Mokhova & Zinecker, 2014; Danilevičienė, 2018). Zhuravsky (2019) draws attention to the inevitable changes in the methodology of economic inertia research.

Nevertheless, insufficient attention is paid to theoretical studies of economic inertia. It can be said that its systematic research is not even carried out. Meanwhile, sufficiently detailed research of economic inertia would make it possible to reveal the damage to the economy from various economic reforms or economic shocks in a timely manner, as well as to set guidelines for its further growth and sustainable economic development.

Theoretical Background

Inertia can be defined as the ability of a given entity not to change or to some extent change its quantitative and qualitative parameters in a downward direction if it is not affected by external factors (forces). However, in economics, the inertia of economic processes (more simply – economic inertia) has the property of changing its previous state in the direction of decreasing parameters. Therefore, economic inertia is considered as disappearing. The expression of economic inertia is represented by changes in innovation, investment efficiency, labour productivity and efficiency during economic transformations. The inertia of the whole macroeconomic system (structure) is determined by its connections with these factors ensuring the acceleration of economic growth and connections with other external economic systems and the speed of reaction to their changes. It is the speed of response that shows the economic inertia of a given economic system and its structure, both quantitatively and qualitatively.

Any economic system is programmed to improve. This is where the inevitability of economic inertia processes follows, when the old is replaced by the new, the disappearing by the emerging.

Forecasting the trends of economic processes using various methods actually means recognising the inertia of those economic processes. By analysing past events, analogies are expected in the future. Nevertheless, as additional factors affecting the economic system or changes in existing ones occur, these processes may accelerate, gain an additional boost or, conversely, slow down. At the same time, the problems of the certainty and uncertainty of economic inertia arise and are exacerbated (Navickas, 2008). For their research, the authors employ the algorithm of economic inertia certainty and uncertainty research (Figure 1). The current state of the economy is assessed using microeconomic and macroeconomic indicators and analysing their dynamics. In the case of certainty, the problem is easily solved by additional calculations of the impact of economic inertia on economic development.

Some researchers argue that uncertainty is the new rule for strategy and even provides new incentives for sustainable economic growth (Amram & Kulatilaka, 1999). In conditions of uncertainty, the solution is nothing more than the choice of an uncertain (unknown – unclear) way of achieving the company's goal (e.g. level of profitability). The implementation of that solution shall reveal its insufficiency or redundancy, both of which later allow the ineffectiveness of the solution to be

determined. Therefore, based on analysis of the dynamics of macroeconomic indicators, it is necessary to develop alternative solutions. The gap between insufficiency and redundancy should be kept to a minimum as the difference itself already indicates some inefficiency in the decisions taken and thus increases (decreases) the company's profits and costs in inverse proportion. This does not mean at all that the company should somehow identify these concepts (insufficiency and redundancy) when making decisions. Nonetheless, there should be no margin between them since this provides variation and the opportunity to pursue the desired solution.

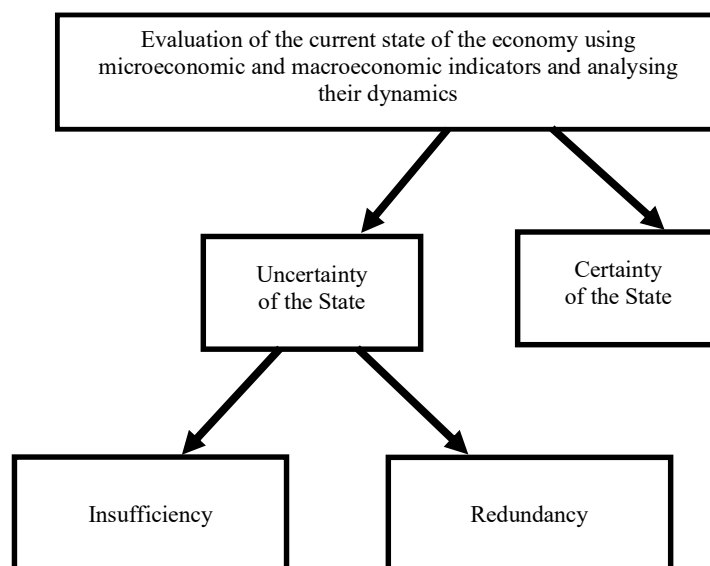


Figure 1. Algorithm of economic inertia certainty and uncertainty research

Source: Authors' own elaboration according to (Navickas & Malakauskaitė, 2009)

Research on the concept of economic inertia uncertainty has made it possible to distinguish as many as four levels of uncertainty complexity. At the first level, one useful forecast for the future can be created. This means a complex analysis of microeconomic and macroeconomic indicators. The second level of analysis suggests that one of two scenarios is possible in the future. However, it is not possible to determine in advance which of them will be realized. In this case, a strategy should be developed to use both possible scenarios. Because there are few scenarios at this level of uncertainty, the strategy is determined analytically. At the third level, continuous uncertainty prevails. Although there are only a few measures of uncertainty, the analysis cannot narrow the choice of alternatives to a limited number of scenarios. At the fourth level, there is some obscurity – a set of measures of constant uncertainty. The levels of uncertainty determine the type of analysis required for every situation. At the first level, traditional models are suitable. The second level requires planning of different scenarios, quantitative game theory, and evaluation models.

At the third and fourth levels, qualitative game theory, demand analysis, supply analysis, deployment models, etc. must be applied.

Many contemporary business situations are characterized by second and third levels of uncertainty. Using the algorithm of economic inertia certainty and uncertainty research (Figure 1), it is possible to analyse human relations in companies affected by the global economic crisis, as well as in companies affected by the current global pandemic.

Research and Discussion

Each country adopts laws regulating economic activities, as well as is responsible for the correct organization and regulation of the circulation of money, in addition to meeting the collective needs of society. At the same time, though, it must mitigate or eliminate the consequences of negative economic processes for society. Changes in the functioning of a given economic system are determined by specific political decisions at the level of national parliaments or governments. The effect of the latter on economic inertia has been studied very little. Let us take a look at subsidies and grants for business. One could consider that by subsidizing businesses, the state saves them from bankruptcy, ensures job preservation and so on. Nevertheless, the model of the impact of subsidies on the economy (Figure 2) and its analysis show contradictory findings.

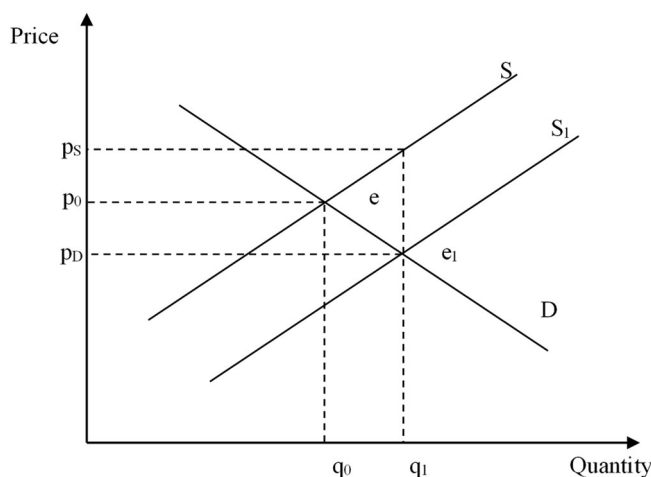


Figure 2. Model of impact of subsidies on the economy

Source: Authors' own elaboration

In the model: S, S_1 – supply curves; D – demand curve; p_0, p_D – equilibrium prices; q_0, q_1 – equilibrium quantities; e, e_1 – market equilibrium; $\Delta p = p_S - p_D$.

By subsidizing producers, the state pays part of the price of the goods (Δp). Now, the part of the producer price paid by the state is determined by the supply curve.

Thus, $p_S = S(q)$ – paid by the state. As a result, the selling price (p_D) offered by producers for the same quantity (q) will be lower. Therefore:

$$p_D = (1 - \Delta p) \times p_S \quad (1)$$

A new supply curve is created:

$$S_I(q) = (1 - \Delta p) \times S(q) \quad (2)$$

Geometrically, this means that the initial supply curve S shifts down to the right and occupies position S_I . The supply increases. The new market equilibrium (e_I) is characterized by a higher demand and supply and a lower selling price ($p_D < p_0$). Thus, at the equilibrium price, the p_D subsidy per unit of production is equal to:

$$p_S - p_D = \Delta p \times p_S \quad (3)$$

Then the income of the population (including subsidies) is equal to $p_S \times q_I$. The total amount of subsidies is:

$$p_S \times q_I - p_D \times q_I = (p_S - p_D) \times q_I = \Delta p \times p_S \times q_I \quad (4)$$

Who benefits from subsidies in this case - producers, consumers or neither of them in terms of the efficient functioning of the economy? If demand has more elasticity than supply, then comparing the previous equilibrium price p_0 with the new price p_D shows that the consumer pays less. However, *the model of the impact of subsidies on the economy* presented earlier (Figure 2) demonstrates that the producer wins significantly more than the consumer. If supply has more elasticity than demand, the effect of subsidies on lowering the price of goods to the consumer is greater. If the elasticity of demand to prices (E_D) and the elasticity of supply to prices (E_S) are known, it is possible to calculate the relative decline in the market price:

$$(p_0 - p_D) / p_0 = \Delta p \times (E_S / E_D) / (1 - \Delta p) + (E_S / E_D) \quad (5)$$

The relative increase in producers' income (including subsidies) can also be calculated:

$$(q_I - q_0) / q_0 = (\Delta p \times E_S \times E_D) / (1 - \Delta p) \times E_D + E_S \quad (6)$$

Thus, analysis of *the model of the impact of subsidies on the economy* (Figure 2) indicates that the use of subsidies reduces the market equilibrium price. Consequently, innovative, viable companies lose motivation to pursue sustainable economic growth and ensure competitiveness. Subsidies as a system of stimulus and rescue in the strategic aspect of increasing competitiveness have negative effects on the country's economy. In this case, the phenomenon of economic inertia is obvious and deprives businesses of the incentives to use innovation to ensure economic growth.

Conclusions

Sufficiently detailed research on economic inertia has made it possible to clarify the concept of economic inertia in the modern economy, to reveal the damage caused by various economic reforms or economic shocks, as well as to draw guidelines for

further economic growth and sustainable economic development. In their in-depth research on the concept of economic inertia, the authors introduced into usage and employed new concepts of certainty, uncertainty, insufficiency and the redundancy of economic inertia. The authors delineated out as many as four levels of complexity of economic inertia uncertainty. To carry out research on the concept of economic inertia, the authors of the article developed an algorithm of economic inertia certainty and uncertainty research. Using this algorithm, it is possible to analyse human relations in companies affected by the global economic crisis, as well as in companies affected by the current global pandemic.

The basis of the empirical research is the model of the impact of subsidies on the economy developed by the authors of the article. The analysis of the model indicates that the use of subsidies reduces the market equilibrium price and innovative, viable companies lose motivation to pursue sustainable economic growth and ensure competitiveness. In this case, the phenomenon of economic inertia is obvious and deprives businesses of incentives to use innovation to ensure economic growth. Thus, subsidies as a system of stimulus and rescue in the strategic aspect of increasing competitiveness have negative effects on the country's economy.

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WPŁYW INERCJI EKONOMICZNEJ NA GOSPODARKĘ: RAMY METODOLOGICZNE

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Słowa kluczowe: inercja ekonomiczna, czynniki makroekonomiczne, metodologia, zrównoważony wzrost gospodarczy, zrównoważony rozwój gospodarczy

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