Fiscal Resilientors in the Economic Dynamics

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Abstract: The paper intends to introduce and clarify a new concept, the fiscal resilientor, defined as automatic fiscal stabilizer that presents the resilience property. In the first place, the paper clarifies the resilience and automatic fiscal stabilizer concepts. The two concepts are defined in a logical perspective, through the identification of sufficiency predicates. In addition, the following concepts are proposed that make up the conceptual family of resilience: stability, robustness, autopoiesis, inertia, homeostasis and antifragility. Next, the fiscal resilientor concept is clarified at syntactic and pragmatic level, and the criteria for designing fiscal resilientors are outlined. The last part of the paper presents the fiscal resilientor operation mechanism, as well as the aspects highlighting the relevance of the fiscal resilientor concept to the economy.

Keywords: fiscal resilientors; resilience; automatic fiscal stabilizers; discretionary fiscal policy

JEL Classification: E62; G18; H30

1. Introduction

The paper attempts to clarify the resilience and automatic fiscal stabilizer concepts. By connecting the two concepts, a new concept will be introduced, namely the *fiscal resilientor.* In order to define the above-mentioned concepts the sufficiency predicates are first established, which confer them the following status: resilience, automatic fiscal stabilizer and fiscal resilientor. The paper brings a novelty element, namely the introduction of the fiscal resilientor concept. The fiscal resilientor concept will be clarified from the semiotics perspective, at syntactic and pragmatic level.

The paper has the following structure:

- identification of the conceptual family of resilience;

- establishment of sufficiency predicates of resilience and the resilience concept definition;

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- establishment of sufficiency predicates of the automatic fiscal stabilizer and definition of this concept;

- clarification of the introduced concept – *fiscal resilientor* – at syntactic and pragmatic level;

- operation mechanism of fiscal resilientor;

- conclusions.

In this paper we shall refer to the automatic fiscal stabilizers as species of automatic stabilizers and to the fiscal resilientors, as species of resilientors.

2. The Resilience Concept

2.1. Literature Review

In this paper, in our approach to clarify the resilience concept, we consider it necessary to identify a list of concepts that will compose the conceptual family of resilience. In the first place, some references will be made to the resilience concept as it is found in the literature. Thus, the following interpretations of the concept are highlighted.

In a first interpretation, the resilience of a system is defined as: the *"bounce back"* of a system to the pre-existing state or pathway following a shock, condition or path that is assumed to be stable or in equilibrium. This definition has in view the etymology of the word, which derives from the Latin word *resilio* - to bounce back.

This definition belongs to the ecologist Holling (1973), who, in his papers, referred to the "ecological resilience", specific to the ecosystems: "the resilience is a measure of the ability of these systems to absorb changes of state variables, driving variables, and parameters, and still persist" (Holling, 1973, p. 18).

A third interpretation of resilience comes from the psychological field. The individual resilience has been defined as: "the successful adaptation to life tasks in the face of social disadvantage or highly adverse conditions" (Windle, 1999, p. 163). Other authors defined resilience as: the coping abilities of individuals to maintain or regain their mental health from personal stress, trauma or various crises to which the individual has been subjected. (Masten, 1990; Kaplan, 1996)

Nassim Nicholas Taleb, in his book "*Antifragile: Things That Gain From Disorder" (2012),* provides a complex approach to the resilience concept, by clarifying the robustness and fragility concepts, mainly through the introduction of the *antifragility* concept in the literature. The author comes with the following interpretation of the concept: *"the resilient resists shocks and stays the same, the antifragile gets better".* (Taleb, 2012, p. 3)

2.2. Conceptual Family of Resilience

The paper next presents the conceptual family of resilience, which, in our opinion, includes the following: stability, robustness, autopoiesis, inertia, homeostasis and antifragility. In our opinion these concepts are defined as follows:

- *stability* represents the ability of a system to maintain its reference parameter value within a pre-accepted numerical interval;

- *robustness* represents the ability of a system to preserve its structure following the external shocks;

- *autopoiesis* represents the capacity of the system to restore its initial conditions following the external shocks;

- *inertia* represents the ability of the system to preserve its structure, by integrating external shocks and dissipating their effect into its internal structure, accumulating change-related stress up to a certain limit;

- *homeostasis* represents the property of a system to integrate the external shocks, dissipating their effect into its internal structure, within limits that allow it to preserve its identity;

- *antifragility* represents the ability of the system to gain more advantages than disadvantages from the external shocks, having internal structures capable of obtaining these advantages. The antifragile systems are able to look for advantages brought by disturbances, not only to avoid, counteract or treat the disadvantages.

2.3. Sufficiency Predicates of Resilience

In order to define the resilience concept, we shall next identify the sufficiency predicates of this concept. Before pinpointing the sufficiency predicates of resilience, we shall make some clarifications on the predicates of sufficiency.

The sufficiency predicates are those attributes that, wholly verified by an entity, give it a certain qualification. The sufficiency predicates have the following characteristics: none is the logical outcome of another, none is contradictory to another and they are verified at the same time. In fact, these characteristics refer to the conditions of independence, consistency and completeness that the predicates of sufficiency must fulfill (Dinga, 2011).

In the case of resilience, we consider the following sufficiency predicates:

- robustness;

- "accumulability".

We shall next clarify the two sufficiency predicates that were identified.

Robustness represents the ability of a system to preserve its structure following the external shocks. "Accumulability" represents the ability of a system to accumulate the change-related stress caused by external shocks up to a certain acceptability limit.

The predicates mentioned above fulfill the conditions of independence, consistency and completeness. Thus, we can define resilience as*: the ability of a system to preserve its structure following the external shocks through the accumulation of the change-related stress produced by the external shocks up to a certain acceptability limit.*

3. The Fiscal Resilientor

3.1. Sufficiency Predicates of the Automatic Fiscal Stabilizer

We shall follow the same logic for defining the concept of automatic fiscal stabilizer, namely the punctual identification of sufficiency predicates of this concept. We shall use the following notation, AFS, to refer to the automatic fiscal stabilizer.

Thus, we consider the following sufficiency predicates of an AFS:[1]

- it is normatively generated, being a construct of institutional type;

- its operation is automatic (non-discretionary);

- it is a construct of structural type, having a permanent character and discontinuous action;

- it has an anti-cyclic effect, acts in the opposite direction of the variation of variable it controls;

- it is a macro-economic construct, its action targets the dynamics of macro-economic variables, the finality of an AFS is to reduce the macro-economic output volatility;
- it is context dependent, the design of the institutional path is achieved by the explicit indirect public policy;
- AFS action is over-proportional in relation to the variation of controlled variable, otherwise the dynamics of the process would not be influenced.

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[1] The author Dinga, E. provides an approach to the automatic fiscal stabilizers from the perspective of sufficiency predicates in the book "Economic sustainability through adjustment policies in the globalization context" (Dinga, 2011).

These predicates fulfill, two by two, the independence, consistency and completeness conditions specific to the sufficiency predicates. Thus, we can set forth the following definition of the automatic fiscal stabilizer.

Now we can define an AFS as: *an institutional instrument, normatively generated, with automatic triggering mode, having a structural character and anti-cyclic action, aiming at reducing the macro-economic output volatility.*

3.2. Clarification of the Fiscal Resilientor Concept - at Syntactic and Pragmatic Level

This part of the paper introduces the fiscal resilientor concept. The fiscal resilientor is that institutional instrument called automatic fiscal stabilizer presenting the resilience property. As we have mentioned in a previous paragraph, the clarification of this concept will be made at syntactic and pragmatic level.

We shall next use the notation FR to refer to the fiscal resilientor.

We define the fiscal resilientors syntax as a logical concatenation of fiscal resilientors. The syntax is that part of semiotics that connects the signs.

We shall exemplify a logical concatenation of two fiscal resilientors, FR1 and FR2. We shall have the following situations:

- FR1→ FR2 (implication) – FR2 is triggered by the FR1 action; FR2 will produce the final effect;

- FR1 and FR2 (conjunction) – the simultaneous action of the two resilientors will be necessary to produce the final effect;

- FR1 and FR2 (disjunction) – FR1 action or FR2 action will be necessary to produce the final effect;

- FR1↔ FR2 (equivalence) – the action of the two fiscal resilientors on the final effect is similar.

At the same time, we consider that for the clarification of the fiscal resilientors syntax, it is useful to analyze their typology. Thus, we shall mention the classification criteria and the classes of fiscal resilientors related to these criteria.

Criterion 1 – way of action:

  ➢ Non-mediated FR: their action is directly exercised on the target variable;

  ➢ Mediated FR: their action is exercised on an intermediate variable, which in its turn will update the target variable.

Criterion 2 – final target (macro-economic variable upon which FR will act):

  ➢ FR that targets the aggregate demand components;

> ➢ FR that targets the aggregate supply components.

Criterion 3 – FR impact transmission channel (fiscal policy instrument used by FR to transmit its action to the target variable):

> ➢ progressive taxation of personal income – FR affects the disposable income;
>
> ➢ progressive taxation of corporate profit;
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> ➢ unemployment benefit – FR affects government spending;
>
> ➢ para-fiscal levy – FR affects the disposable income by levying social contributions of any kind;
>
> ➢ social assistance – FR that affects government spending through different types of transfers: social aid, minimum guaranteed income, social subsidies.

Pragmatics is that part of semiotics that links the sign to the sign user. In our case, the sign is represented by the fiscal resilientor. As regards the sign user, this will have in view:

- producers of sign: normative authority. In the case of the fiscal system, the normative authority is represented by the Ministry of Public Finance (MPF), which designs the fiscal policy;

- consumer of sign; in our case, the consumer of the fiscal resilientor is represented by the National Agency for Fiscal Administration (NAFA).

The normative authority will design a FR through a (discretionary) explicit indirect public policy. After meeting the pre-established conditions, FR will trigger an action on the controlled macroeconomic variable (macro-economic output).

NAFA has a passive relation with regard to FR, it is an observer relation, is does not have the ability to intervene on the fiscal resilientor. If NAFA finds anomalies in the tax payers' fiscal behaviour, it communicates these anomalies to the Ministry of Public Finance. MPF can take the following steps:

- introducing a new FR to correct the fiscal behaviour anomalies;

- removing a particular FR that has determined these fiscal behaviour anomalies;

- modifying the FR that has determined the fiscal behaviour anomalies.

4. Operation Mechanism of the Fiscal Resilientor

Before describing the FR operation mechanism, we consider it necessary to make some clarifications regarding to the design of fiscal resilientors by the normative authority, MPF. In order to design a FR, MPF has in view the following aspects:

- the role that RF has to play;
- the institutional conditions that enable FR implementation and operation in the established period;
- the rules for monitoring and adjusting the FR operation**.**

The purpose for which a FR is designed is to reduce the volatility of macro-economic output. Thus, a FR must be able to reverse the economic processes it controls. The key criterion in designing a FR is the identification of an inverse process to the controlled process. Therefore, for a FR to function, it is necessary to construct at institutional level pairs of processes that act in the opposite direction to each other. These pairs of processes are next referred to as *the current process and reverse process.* The reverse process will control the current process, automatically, avoiding too great variation of the controlled process.

After the completion of FR design stage and establishment of FR role, the institutional conditions in which it will effectively function will be next established. Thus, the most important institutional condition for FR operation is to provide an institutional grid. This institutional grid represents, in fact, an institutional framework that contains thresholds. The institutional grid will allow automatic triggering of FR, following verification of pre-conceived conditions introduced in the causal functioning mechanism of FR. FR monitoring rules refer to FR testing and maintenance. When designing the FR, the procedures for monitoring the setting into operation of FR and also the effects of FR must be also designed. By monitoring the FR operation, the weaknesses and strengths of its operation will be identified, thus providing the feedback needed for FR stability and effectiveness. The fiscal resilientor operation mechanism refers to transmitting the stabilization impulse of a FR over the target variable, taking into consideration the pre-established conditions that allow automatic FR triggering. As FR is an institutional construct of structural type, it is sensitive to the structure modifications that have been produced at the level of controlled macro-economic variable. Thus, we need to make sure that the controlled macro-economic variable produces, with its variations, structural changes. When a predetermined threshold of this variation is exceeded, the fiscal resilientor is spontaneously activated and produces the programmed change through the corresponding transmission mechanism. Therefore, the institutional conditions are very important in FR design. The existence of an institutional framework of controlled economic variable variation, which should contain thresholds, i.e. an institutional grid, is essential in FR operation.

5. Conclusions

The paper represents a theoretical basis for clarifying the resilience and automatic fiscal stabilizer concepts. At the same time, by introducing the resilientor concept, it brings its contribution to the theoretical research in this field. In this paper, the new concept that has been introduced, i.e. resilientor, is clarified at syntactic and pragmatic level.

We can highlight the following aspects:

- resilience means the ability of a system to preserve its structure from external shocks, through the accumulation of change-related stress produced by external shocks up to a certain acceptability limit;
- the automatic fiscal stabilizer is an institutional instrument, of normative nature, with structural character, with macro-economic scope, with anti-cyclic action and implicit (automatic) triggering, aiming at reducing the volatility of macro-economic output (GDP);
- the fiscal resilientor represents that institutional instrument called automatic stabilizer that presents the resilience property.

6. References

Baunsgaard, T. & Symansky, S.A. (2009). Automatic Fiscal Stabilizers: How Can They Be Enhanced Without Increasing the Size of Government?. *International Monetary Fund. Fiscal Affairs Department*. Retrieved from http://blog-pfm.imf.org/files/spn09231.pdf.

Dinga, E. (2011). *Economic sustainability through adjustment policies in the globalization context*. Bucharest: Romanian Academy Publishing House.

Holling, C.S. (1973). Resilience and Stability of Ecological Systems. *Annual Review of Ecology and Systematics*, vol. 4, pp. 1-23.

Kaplan, C.P. & Turner, S. & Norman, E. et al (1996). Promoting resilience strategies: a modified consultation model. *Soc Work Educ.*, 18(3), pp. 158–168.

Masten, A.S.; Best, K.M. & Garmezy, N. (1990). Resilience and development: Contributions from the study of children who overcome adversity. *Development and Psychopathology,* volume 2, issue 4, pp. 425-444.

Pike, A. & Dawley, S. & Tomaney, J. (2010). Resilience, adaptation and adaptability. *Cambridge Journal of Regions, Economy and Society.*

Taleb, N.N. (2012). *Antifragile: Things That Gain From Disorder.* United States: Random House Publishing.

Windle, M. (1999). Critical conceptual; and measurement issues in the study of resilience. In: Glantz MDEJ, Jeanette L, editors. *Resilience and development, positive life adaptations*. New York: Springer Science & Business Media; pp. 161–176.