

Aspects of the Emergence and Evolution of the Macroeconomic Shocks within the Current International Context

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Abstract

The theoretical aspect of the economic asymmetric shock refers to opposite simultaneous effects on the different systems due to the same action.

For the objective of the present paper, the problem of the asymmetric shocks refers to different types of effects on macroeconomic systems due to the same action caused by an economic external factor.

The appearance and evolution of the asymmetric shocks for an economic union, where the members are pushed to follow a very strict economic way, for attaining the integration process objectives, pushes the members to choose between the economic way of national macroeconomic policies in order to continue the integration process and the economic way of asking for some exceptions from the common rules in order to enforce the administrative efforts for the national economic interests towards an economic replay to the macroeconomic external shocks.

Key words: *macroeconomic, shocks, asymmetric, integration, national*

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Current Theoretical Aspects Regarding Asymmetric Shocks

For the purpose of this analysis we will consider the model of the European economic integration within the current international circumstances.

Historically, the European Economic and Monetary Union has been designed, theoretically, on the basis of negotiations between the founding member states, results which have been assimilated subsequently by the other states which accessed the European Union at a later moment. The main deficiency of this approach was that the project of the European Union has been thought on the background of a macroeconomic conjuncture characterised by normality, without taking into consideration the possible degradation of the international economic environment to such an extent that it may influence the EU economy and even cause major risks to the process of European integration. This statement is supported by some institutional, legislative and methodological problems of EU organisation; the most important one, in the acceptance of this paper, is that under the conditions of an international economic situation such as the present one, an economic union (much more so, a monetary union) consisting of member

states which are so different in terms of economic development, has a lower capacity of reaction to external economic shocks than a national macroeconomic system or than an economic union established on the principle of economic homogeneity. This is due to the different reactions of the composing macroeconomic systems and to the appearance and evolution of an external economic stimulus: the asymmetric shocks rippling throughout the Union.

Although it is outside the scope of this paper, the proper solutions for the establishment of an interstate economic union are thought to be the following:

- limiting the process of integration to the accomplishment of a common market;
- initiating a complex process of integration of the member states on the basis of the principle of economic homogeneity.

Reverting to the subject of this paper, the emergence and evolution of the asymmetric shocks within an economic union whose member states are compelled to a strict economic evolution aiming to accomplish the requirements of the process of integration, binds the member states to choose between keeping focusing the national macroeconomic policies towards continuing the process of integration or asking derogations from the union in order to focus the national macroeconomic policies towards enhancing the capacity to respond to economic shocks. In other words, such international economic situation characterised by adverse economic phenomena may hinder a process of economic integration which has been designed with insufficient consistency.

In conclusion, the asymmetric shocks caused by the action of an external economic stimulus on a system of two or more macroeconomic entities existing in interdependence or, at least, in interrelation, induce risks of depreciative systemic relation between those particular entities if the interdependence or interrelation eludes the principle of economic homogeneity.

Comparative Analysis of the Optimality of the Area of Macroeconomic Equilibrium – the Regional Case vs. the National Case

The issue of the optimality of the area of macroeconomic equilibrium refers to the optimal dimension of the macroeconomic area so that the state of macroeconomic balance can be preserved both under normal economic conditions and when macroeconomic risks appear.

This comparative analysis takes into account two situations of the macroeconomic area: the case of a macroeconomic area consisting of national macroeconomic entities and the case of a national macroeconomic area. In both situations, the administrative capacity of the macroeconomic administrative factor must be in strict correlation with the capacity of the real economy to evolve as administered economic system. This means that the complexity of the economic relations of the market must have a direct legislative, institutional, methodological and procedural correspondent at the level of the macroeconomic administrative capacity. Our analysis considers that this problem is solved, i.e. there is a perfect correspondence between the managerial capacities of the administrative system of the macroeconomic policies and the complexity and capacity for evolution of the administered system of the real economy.

With this convention, our analysis will make a comparison between the regional macroeconomic area and the national macroeconomic area.

Under normal economic conditions, the process of integration will continue, using resources provided by the economic growth. The strategic objective is that of macroeconomic sustainability which, in the case of the regional macroeconomic area presumes ensuring, with priority, a minimal basis of macroeconomic homogeneity. Once this priority, which is also one of the objectives of achieving the regional integration, is accomplished, the conditions for a

proper regional economic evolution are met, and this calls for a proper management of setting up and distributing the resources.

From this point on, two regional processes take place:

- accumulation of the surplus of resources for additional activities;
- improvement of the regional macroeconomic homogeneity.

Regarding this second process, there is a threshold-level of homogeneity beyond which the process of homogenization is no longer possible, or it may even induce major risks within the system; in other words, for each group of two national entities within the regional system there

is a threshold-level of homogeneity and theoretically, we have, n threshold-levels of homogeneity,

where:

n = number of national entities composing the regional system;

$k = 2$.

Practically, we may use just one value of the threshold-level of homogeneity calculated as:

$$N = \text{Naverage} \quad (1)$$

This value does not have a meaning of quantification, rather a practical significance: it is an average threshold-level beyond which it is no longer recommended to continue the process of homogenization; otherwise, tensions might arise within the system. This limitation, for practical reasons, of the process of homogenisation, raises serious problems both in terms of setting up and distributing the economic resources and in terms of the extreme economic situations that may arise and generate risks and shocks – these problems induce, in turn, risks and shocks all around the system.

In order to limit the appearance and development of such problems, the regional system must adopt a set of limitations of the process of economic regionalization, which is why the present study considers that the common market formula is the optimal form of the process of economic regionalization. The set of delimitations necessary to be adopted by the process of economic integration at the level of the regional system is, actually, opposite to the objectives associated to the accomplishment of the process of regional integration, but nevertheless necessary because of objective reasons for macroeconomic risks administration.

Theoretically, the development of an integrated regional macroeconomic system is possible only by the establishment of a system of homogenous national macroeconomic entities. Practically, however, there is no perfect homogeneity, which means that any process of regional integration must be accompanied by a set of limitations so that the requirements of the risk administration objective are accomplished. The complexity and intensity of these limitations increase with the heterogeneity of the system and with the scope of the objectives of the process of integration. At the level of the national macroeconomic system such limitations generate constraints which produce effects opposite to the normal trends of the economic development, which are contrary to the general objective of economic sustainability.

In conclusion, the problem of the regional integration must be understood as being directly related to a concrete interest of each national entity part of the system, while the extent of integration must be set according to the homogeneity characteristics of the system; thus no limitations would have to be adopted, which would harm both the system undergoing integration, and the composing national entities.

The importance of approaching this problem in this analysis is directly linked to the idea of asymmetric shocks which will only intensify the organisational defects of an integrating

macroeconomic system, with direct and immediate effects both on the system and on the composing entities.

The production of asymmetric shocks is directly related to a system, real or imaginary, with two entities.

In the case of the imaginary system, the effects of the asymmetric shocks are perceived at the level of the relations between the two entities.

In the case of the real system, the effects of the asymmetric shocks affect both the relations between the two entities and the general relations within the system; thus, effects are also sent towards other entities which were initially not involved in the relation determined by the appearance and evolution of the shock. The production of asymmetric shocks in the case of two entities, composing or not a real system, is directly linked to the level of homogeneity between the two entities. In terms of the theoretical category, the homogeneity of two entities, useful for the purpose of this analysis, can be: *organisational homogeneity* – regarding the relations between the subsystems within the entity; *constitutive homogeneity* – regarding the number and functions of the subsystems within the entity; *structural homogeneity* – regarding the nature of the subsystems within the entity and *process homogeneity* – regarding the possible temporal or spatial lags within the entity related to the moment of the shock impact. Consequently, the possibility of achieving a particular level of heterogeneity between the entities composing a system is a sure thing, and the general level of homogeneity depends on the specific levels of homogeneity:

$$N_g = f(N_o, N_c, N_s, N_p) \quad (2)$$

where:

N_g = general level of homogeneity;

N_o = level of organizational homogeneity;

N_c = level of constitutive homogeneity;

N_s = level of structural homogeneity;

N_p = level of process homogeneity.

The lower is the homogeneity within a particular system, or the higher is the heterogeneity of a particular system, the higher is the possibility that asymmetric shocks occur.

At the level of the international economic relations, the asymmetric shocks produce, theoretically, advantages and disadvantages at the level of the bilateral relations; practically, however, the asymmetric shocks produce only disadvantages because they denature the bilateral economic relations and eventually block them. The alteration of the bilateral economic relations also causes imbalances in the balance of foreign payments (BFP).

In conclusion, if there are no shocks within the bilateral economic relations, the situation of BFP can be regarded as sustainable; however, if asymmetric shocks produce within the bilateral economic relations, the situation of BFP will display several levels of imbalance which will remain so until those shocks are absorbed. The following relation of causality exists: the occurrence of shocks and their asymmetric evolution within a particular bilateral economic relation may lead to an imbalanced BFP, positive for one side and negative for the other side. The development of international economic relations in different directions would be an immediate solution for the short-term restoration of BFP balance in the case of the entity which was in deficit; thus, there will be no additional pressures on the system of the macroeconomic policies.

There also is the problem of absorbing the asymmetric shocks. Thus, a macroeconomic entity will absorb the asymmetric shocks by measures of macroeconomic policy, aiming to meet the

general strategic objective of sustainability; this calls sufficient freedom of macroeconomic decision-making and this is easier to do by a national macroeconomic entity than by a system undergoing integration, as mentioned earlier.

In conclusion, the macroeconomic model of a system undergoing integration is more difficult to manage than the national macroeconomic model when macroeconomic shocks appear and have to be absorbed.

Current Macroeconomic Risks

The current international macroeconomic risks originate in the macroeconomic organisational pattern.

At the European level, this organisational pattern is marked by the process of European integration – situation which, according to the previous discussions, induces difficulties in the macroeconomic administration.

Such a case of regional integration is an efficient model for the analysis of the asymmetric shocks, as follows:

- o The impact of an external macroeconomic shock on the regional system is followed by the propagation of the shock waves within the system, which reach the national entities in a form which is changed by the economic and organisational relations imposed by the system;
- o The impact of the changed form of shock on the components of the regional system is followed by the generation, at the national macroeconomic level, of personalized economic effects depending on the macroeconomic characteristics of the particular nation; the differences between these effects depending on the various national macroeconomic systems which compose the regional system represent the measure of shock asymmetry;
- o The asymmetry of the shocks received by several national macroeconomic entities generates additional effects on the channels of economic relations within the cluster of entities, which produce further imbalances compared to the initial shock, stressing thus the general macroeconomic misbalance at the entity level.

In such a situation: the asymmetric evolution of the shocks within the regional system generates, in a differentiated manner, imbalances in the different national macroeconomic organisations – which have an intrinsic level of heterogeneity towards the evolution of the process of integration and which, at the same time, are involved in a process of integration, of evolution towards specific states of unification of the main macroeconomic aspects. In such a situation, the generated imbalances produce in turn tensions within the process of integration; the macroeconomic policies of the national states have to alleviate and eventually eliminate these imbalances.

The main *risks* resulting from this situation are as follows:

- o If there is still an interest for the continuation, with priority, of the process of integration, additional tensions arise at the national macroeconomic level – tensions which determine pressures and changes of the macroeconomic conditions of integration;
- o If the priority objective is the alleviation and eventually the elimination of the national macroeconomic shocks generated by the received macroeconomic shocks, the deadline for the accomplishment of the macroeconomic conditions for integration has to be postponed.

In conclusion, the macroeconomic shocks received by an integrated macroeconomic system and propagated, asymmetrically, within the system towards the composing national macroeconomic entities are, in terms of administration and solution, the responsibility of the national

macroeconomic administrations, and they should become priority objectives for these administrations.

Administrative Significance of the Shock Asymmetry

For the national macroeconomic entities which receive shocks, the administrative significance of such economic phenomenon is the orientation towards the priority objective of alleviation and elimination of the shock effects.

The asymmetric character of the shocks fits just the systemic approach of the macroeconomic entities hit by shocks: the entities are examined two by two in order to identify the generated effects and to identify the solutions necessary to dampen and eventually eliminate the effects.

The asymmetric character of the shocks is very important to be evaluated for the macroeconomic entities hit by shocks in order to identify the entire range of effects.

Another problem is the necessity for prediction – indispensable for the activity of macroeconomic administration – prediction which must rely on the proper evaluation and analysis of the situations that may possible arise. The importance of this problem results from the complexity of the international economic relations within the current context – complexity which has associated channels for the transmission of the macroeconomic shocks, within the international arena, from one national macroeconomic system to another.

A particular case of this aspect is represented by the asymmetric shocks manifested within the different macroeconomic entities of a system. The characteristics of shocks' asymmetry are also a measure of the heterogeneity existing within the system between the composing macroeconomic entities. As long as the relation between the entities composing a regional macroeconomic system is of mere economic cooperation, the asymmetric manifestation of the effects of an external macroeconomic shock induces tensions in the subsequent run of the economic cooperation programs between the entities composing the system, but the solution to such situations concerns the national macroeconomic administration. If the regional macroeconomic system is an integrated system, with a high level of complexity of the relations of economic integration, which generates a complex system of the channels transmitting the macroeconomic shocks within the system, the reception of an external macroeconomic shock will generate for sure, as mentioned previously, asymmetric effects within the system components, thus generating results that are opposing the programmed direction of the process of regionalization. From this perspective, a possible regional macroeconomic system should observe the following two requirements:

- It should be thus organised so that the possible external macroeconomic shocks are administered in such a manner that no effects are generated within the organisational structure of the system;
- The level of integration of the composing entities must be correlated with the level of heterogeneity existing between them, so that the effects generated by the reception of external macroeconomic shocks by a system do not induce tensions within the cooperation processes that define the relations within the system.

Conclusions

Regarding the evolution, at the national macroeconomic level, of the economic shocks generated by an external economic shock, the size of the produced effects gives the measure of the macroeconomic administrative capacity. We might say that the extension of such effects also is a measure of the complexity of the relations from the real economy and a measure of the

predictability at the national and international macroeconomic level. In the acceptance of this analysis, we contradict such a statement, this approach being motivated by the statement that the administrative capacity of the system of macroeconomic policies must be correlated with the level of complexity of the relations from the real economy, which also bears an influence on the improvement of the macroeconomic prediction. Considering the current international macroeconomic conjuncture characterised by a much higher and increasing level, compared to the previous periods, of the complexity of the international economic relations, under the circumstances of a higher heterogeneity of the involved macroeconomic entities – heterogeneity that increases with the expansion and enhancement of the cooperation, the risk for macroeconomic shocks and their associated effects is correspondingly high, which calls, once more, with necessity, the correlation of these characteristics with a proper level of the macroeconomic administrative capacity. In the absence of an administrative formula at the macroeconomic level, any effect generated by the inherent appearance of an economic shock may generate, in turn, such a phenomenological evolution that propagates on the transmission channels of the economic relations. The asymmetric shocks displayed within an integrated macroeconomic system, or within a macroeconomic system with a particular development of the economic relations, is a working case of this situation.

Consequently, the design of an administrative solution to the macroeconomic shocks must start from the correlation of the level of macroeconomic administration with the level of complexity of the relations from the real economy: the level of the macroeconomic administration should increase so as to meet the requirements resulting from the necessity for the administrative coordination of the evolution of the real economy towards the main strategic objective of a sustainable development of the society.

This analysis draws attention to the potential risk of increased worsening of the international macroeconomic risks, especially having in mind the current situation, overlapping insufficient administrative capacity of the system and macroeconomic policies, a situation that, in turn, produces a very low level of predictability.

Under such circumstances, it is considered necessary to enhance the system capacity associated with macroeconomic policies so that the appropriate management should become a complex level of current and future international economic relations - that has a complex network of channels for transmitting appropriate macroeconomic shocks.

For the specific case of the current economic situation and also having in mind the already decided European integration process, as it is working towards the expected objectives, it is recommended the permanent monitoring of the performance to further increase the integration process of the European Economic and Monetary Union, combined with the flexible approach of the national macroeconomic policies in order to prioritize the national interests for maintaining a sustainable state by talking about the national economy in the current international circumstances. Such an approach is considered, in the sense of this study, as a performance formula for a performance continuation of the process of the European integration, which must be associated with the national levels of accumulation of features, such as stability, balance and sustainability which provide the potential to build together the Union's macroeconomic and social process.

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