

# The Higher Essence of Economic Convergence Regarding Monetary Impacts<sup>1</sup>

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## Abstract

*The increasing pace of achieving socio-economic growth and convergence into developed structures represents the main desire of most countries. Moreover, membership in monetary unions has quite a significant impact on the economies of participating countries, since integration processes have become undoubtedly the undisputed accelerator of convergence and integration catalyst, reflecting on the development of the world economy. The growing intensity of world trade, the ever-deepening division of labor and specialization, international movement of capital and labor mobility as well as investments into education, research and development, innovations are among the factors that lead to the creation of increasingly closer ties between economies, deepening their mutual dependence, further reflected in knowledge-based societies. Thus, the close ties between national economies themselves represent a further incentive for more intensive cooperation through the different stages of economic integration. International economic integration is an objective to promote a gradual process of linking and connecting existing economic units, i.e. national economies to the greater interconnected units in the global economy. The aim of our research paper, by using the methods of analysis and comparison, is to closely present the issue of monetary integration, focusing on the impact of monetary integration on countries' economy, resulting in the issue of benefits and costs of the countries' entry into the monetary union, associated with initial economic shocks.*

## Key words

*Economic Convergence, Economic Shocks, Monetary Union*

**JEL Classification:** A13, O4, O10

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## Introduction

Economic integration into higher structures or politico-economic unions, such as the European Union, can be classified according to various criteria however purpose of our research, it is essential to focus on integration at the macroeconomic level. In addition, integration processes at the microeconomic level can be observed as mergers of enterprises and the emergence of so-called multinationals enterprises, which are one of the main manifestations of globalization and at the same time, they reflect globalization

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<sup>1</sup> This research is part of VEGA nr. 1/0224/15 *Consumer behavior and individual consumption in the periods of unemployment and relative deprivation of population: implications for decision taking bodies and business.*

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tendencies. On the other hand, integration at the macroeconomic level leads to the formation of regional integration of countries at different stages of free trade areas to political and economic unions. This connection of countries can then occur on a purely economic level or can even go beyond, regarding foreign policy and defense, practically leading to the creation of federations or even confederations. The most significant approach to analyzing the benefits and costs of countries' integration into monetary unions is the optimum currency area theory as the framework of economic efficiency regarding single currency, with emphasis on the loss of the exchange rate as a tool for absorption of asymmetric shocks and the adjustment of economies in the event of imbalance, by defining optimum currency area criteria (Meade, 2007). In other words, this convergence theory concentrates on the issue whether it is appropriate for the country to participate in the monetary integration, pointing out the criteria to fulfill, which should enable it to maximize the benefits of integration into the monetary union.

## 1 Methodology

Our research article focuses on comparing different types of views among the issue of convergence of optimum currency area theory, based on our own research and our own previous research articles dealing with the issue of convergence, using the methods of analysis, induction, deduction and comparison. Optimum currency area represents an optimal geographic zone of a single currency or previously existing several currencies (now standardized), whose exchange rates are fully pegged. The old discussion of 'Market or State' is obsolete. There will always have to be a mix of market and state. The only relevant question is what that mix should look like (De Grauwe, 2017). What bring independent countries or political unions sharing a single currency closer together? The single currency with stable exchange rate can fluctuate only against currencies used outside this territory, while optimality is determined contingently depending on several properties, also known as the theory (theories) of optimum currency area. Accession of countries into politico-economic unions such as the European Union also means the commitment to adopt a common currency. Monetary union is based on assumption to fixed exchange rate between its members, or the single currency within the union. An important tool, therefore, plays the exchange rate, which is used as a stabilizer in response to the asymmetric shocks in countries, before joining the monetary union. Naturally, after the entry the opportunity to use this tool fades away, meaning that countries need to know under what conditions it is beneficial for them to the join monetary union and give up their autonomous monetary policies (Hudec, 2017). Therefore, the aim of our research paper is to closely present the issue of monetary integration, focusing on the impact of monetary integration, conceptual elements and various economic shocks on countries' economy.

The Questions for Research:

- What are the fundamental characteristics of the optimum currency area and how did they shape over time?
- What are main benefits and risks of membership in the monetary union?
- Can the fix exchange rate between two or more countries be beneficial if their economic cycles are strongly correlated?

- Which factors have influence for stabilization of an economy after suffering external shocks or as the tool to ensure competitiveness?
- When is it more favorable to join the monetary union for a small open economy?
- How do a/symmetric economic shocks affect members and non-members of monetary union?
- How does the interrelationship between trade volume; similarity of shocks and cycles; the degree of labor mobility and a system of fiscal transfers affect potential and existing members of the monetary union?

## 2 Results and Discussion

### 2.1 An Optimum Currency Area Odyssey

Optimal currency area criteria constitute as a precondition for minimizing the costs associated with entry into the monetary union, resulting in adverse consequences of economic adaptation to an asymmetric shock, related to the previously existing monetary policy tools. The importance of the mobility of production factors is emphasized as criteria for the definition of an optimal currency area, while differences lie in the significance of specific criteria. Firstly, Professor Robert Mundell in his research puts emphasis on the importance of labor mobility, which might mitigate the effects of shocks in the unemployment rate after entering the monetary union. The optimum currency area is characterized by internal mobility and external factor immobility, while countries that are part of this region, share among them a fixed rate, which floats against third countries. Optimality is therefore seen as the ability to stabilize the national employment and price level. Mundell illustrates a situation where there are two countries A and B. Both countries have their own currencies, which are fixed to each other. In both countries, full employment, the balance of payments, wages and prices are in the short term inflexible downwards, meaning that if there is an increase in unemployment, it is forcing the monetary authority to enforce the anti-inflationary policy.

Suddenly, there is an asymmetric shock, which causes a shift in demand from the products of country B to the products of country A. This causes deficit in the balance of payments and unemployment in country B and on the other hand, the balance of payments surplus and inflationary pressures in country A. Both problems could be solved by moving unused production factors from country A to country B (Mundell, 1961). Mundell, therefore, focuses on the willingness of the workforce to migrate in response to changes in the employment rate, which cause economic shocks. Additionally, the willingness of the workforce to migrate naturally differs in various countries - there are also several obstacles related to the transfer of labor, such as differences in language, culture, laws, work habits, while in the United States it is clearly higher than in European countries. Moreover, we have to take into the account immobility of physical capital such as machinery, buildings, also delaying the transfer or creation of jobs. This means that the issue can be resolved through mobility of the factors of production, specifically the labor factor. Secondly, Professor Peter Kenen considers the most appropriate criterion for determining the optimal currency area the degree of diversification of production in

the economy (country). He emphasizes that an economy with a diversified production will rarely face up to changes in the demand for exported goods, while fluctuations in the export in an economy will be much smaller. Diversification of products entails to reducing the likelihood of asymmetric shocks and if so, it will moderate the negative effects of shocks. If countries A and B are part of a monetary union, the exchange rate correction could not occur, and if they both produce a different kind of goods, the economic shock would hit them asymmetrically. In relation that both countries A and B produce and exchange types of goods in the same or at least similar production volumes, the economic shock would hit them symmetrically (Kenen, 1969).

Therefore, countries with diversified economy, but producing similar types (mix) of goods are much more suitable candidates when for entering a common monetary union - fixed exchange rate, while on the other hand, countries with a low degree of diversification should rather have flexible exchange rate, allowing through its changes to absorb external shocks. Thirdly, according to Professor Ronald McKinnon, the key criterion is the degree of openness of the economy as the proportion of tradable and non-tradable goods. This condition is based on the supposition if a country mainly produces tradable goods, flexible exchange rate does not present a negligible loss, while integration into the monetary area into the fixed exchange rate regime can be advantageous. If we have two countries A and B, which are open economies and trade very closely with each other, the difference between domestic and foreign goods is not that significant, since competitive environment balances prices of most goods, when expressed in the same currency (McKinnon, 1963). On the other hand, this means that the possibility of the effective use of a flexible exchange rate as an instrument of macroeconomic policy in open economies is questionable and might have a negative impact on the internal price stability, since currency depreciation leads to an increase in the prices of traded goods, both export and import, if there is a high proportion of tradable goods to non-tradable, reflected in the increase in the domestic price level.

In practice, variations in the optimal currency area rating often occur based on three main amplitudes, namely socio-economic integration (in conjunction with country's openness); income correlation in the currency region; flexibility of all states directly engaged, participation-wise within the currency area. Firstly, the level of financial openness and the correlation of wages are vital in evaluating the net advantages of money union. Nations sharing an abnormal state of either openness or income correlation among them naturally want to be in a single monetary union. This exchange off is represented by the descending inclining the optimal currency area line (OCA line) in Figure 1, while the line represents the gathering of blends of symmetry and coordination among participating countries for which the cost and advantages of the monetary union simply adjust. It is descending inclining for the accompanying reason - a decrease in symmetry (increment in asymmetry) raises the expenses of a monetary union. These expenses are for the most part macroeconomic in nature, while they emerge the passing of a national financial approach instrument is more expensive as the level of asymmetry increments. Integration is, in that case a wellspring of advantages of a monetary union, i.e. the more prominent the level of integration, where the more the member states advantage from the proficiency additions of a monetary union. In this manner, the extra macroeconomic

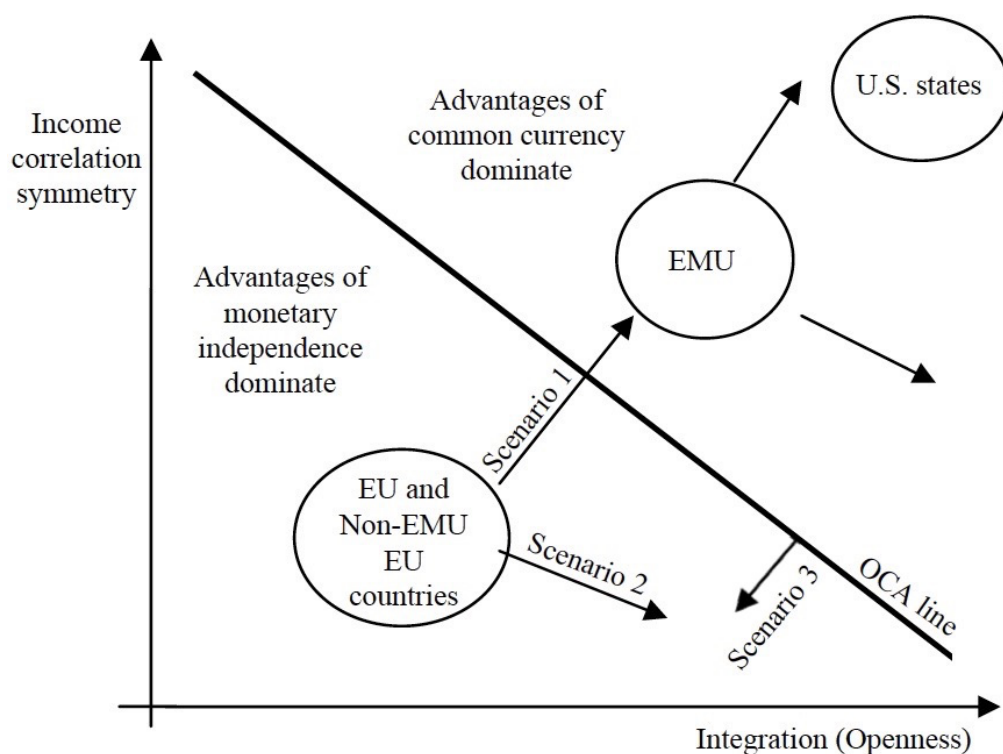
costs delivered by less symmetry can be reimbursed by the extra microeconomic benefits created by more coordination<sup>3</sup>.

When looking on the right side of the OCA-line (in Scenario 1), we can see groupings of states for which the advantages of a monetary union surpass its expenses - U.S. states and the European monetary union (EMU), since microeconomic advantages of these monetary unions reimburse their macroeconomic expenses. On the left side of the OCA line, the advantages from monetary autonomy overwhelm the potential convergence efficiency gains - productivity growth from the union. Non-EMU EU countries (9 vs. 19) are located on the left side OCA-line since they are not yet adequately coordinated to produce productivity growth that will make up for the macroeconomic expenses of the union. In the context of monetary union, the level of economic reconciliation and wage correlation naturally develop after some time, while openness increases among countries sharing monetary money. The essence of the single currency lowers trading expenses both straightforwardly and in a roundabout way, i.e., by evacuating conversion scale dangers (and the cost of supporting).

Furthermore, there is contradiction concerning the degree to which wage correlation may rise or fall. On the one hand, the expanded openness may increase income correlation and diminishes asymmetry of shocks and the non-EMU EU countries then moves along the upward OCA line. On the other hand, we to take into an account the degree of flexibility and specialization (Scenario 2 - movement towards the downward sloping arrows, creating the inverse impact, and therefore greater flexibility is required). Lastly, points on the OCA line characterize symmetry of wage correlation and adaptability for which the expenses and the advantages of a monetary union simply adjust. It is adversely slanted on principles that a declining level of symmetry, which raises the expenses, requires an expanding adaptability (which is a wellspring of advantages of the monetary union). On the right side, the level of adaptability is huge given the level of symmetry, so that the advantages of the union surpass the expenses. On the other side of the OCA-line, there is inadequate adaptability for any given level of symmetry, i.e. when a whole Union is not yet ready to share a single currency (Scenario 3).

<sup>3</sup> According to Professors Paul De Grauwe & Francesco Paolo Mongelli, the existence of interaction between integration ( $I$ ), flexibility ( $F$ ) and symmetry ( $S$ ) can be seen, if we postulate that the net benefits of monetary union are a positive function of the degree of the three variables - flexibility, symmetry and integration - by specifying the linear relation between them and net benefits ( $B$ ), while  $B = aF + \beta I + \gamma S$  (where  $a, \beta, \gamma$  are positive parameters). This allows us to derive the OCA ("plane"), i.e. the combinations of  $F, I$  and  $S$  for which the net benefits of a monetary union are zero. Setting  $B=0$ , then  $F = -\beta I - \gamma S$  (where  $\beta' = \beta/a$  and  $\gamma' = \gamma/a$ ), normalizing the variables so that  $0 < I < 1$  and  $-1 < S < 1$  and therefore,  $S$  can be positive and negative depending on whether shocks are symmetric or asymmetric.

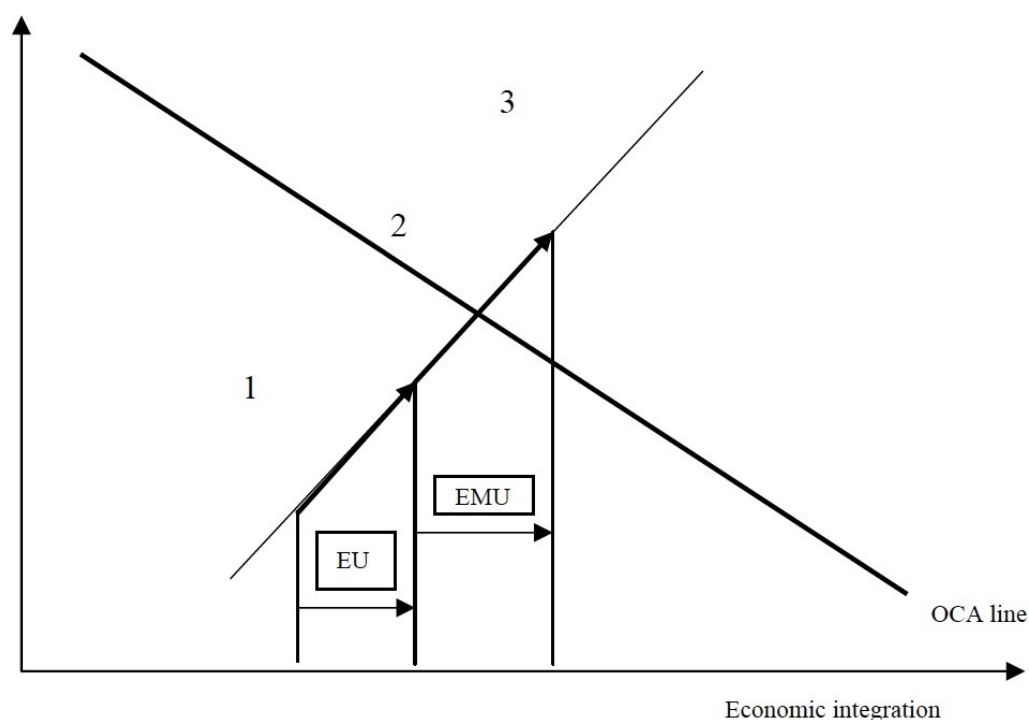
**Figure 1** Fostering Openness, Income Correlation and Symmetry as Conceptual Elements



Source: Author

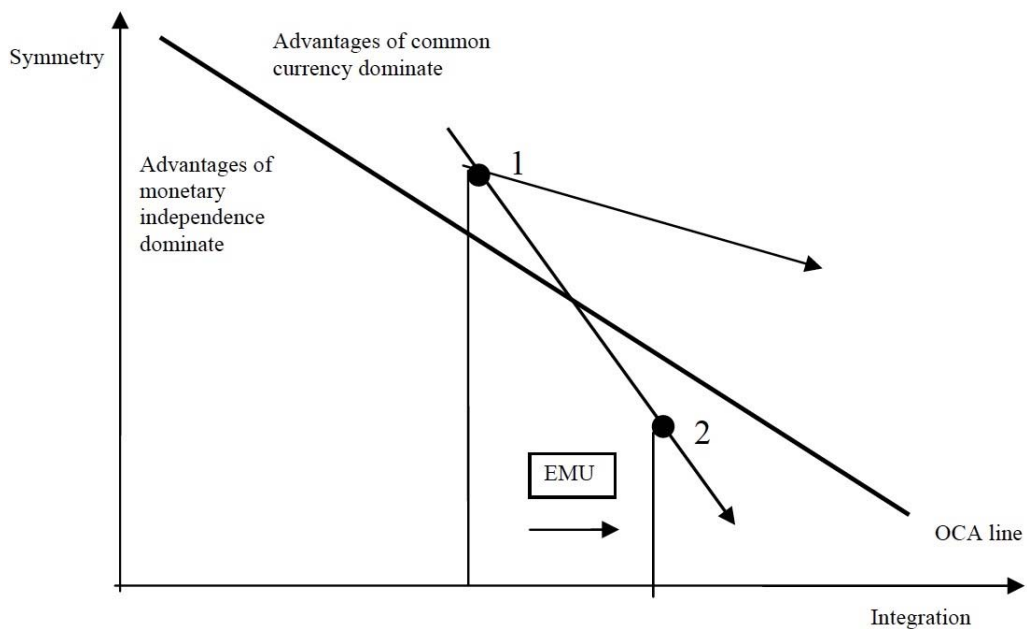
## 2.2 Diversification vs. Endogeneity

The last fundamental stage of development is the optimal currency area regarding monetary integration, into economic and monetary union/s, is the criteria of endogeneity (created by Professors Jeffrey Frankel and Andrew Rose) that further argues that trade integration, namely the development and liberalization of mutual exchange, depends on the correlation of business cycles of member countries of monetary union (Frankel – Rose, 1998). However, the relationship between strengthening mutual trade and correlation of business cycles is in contradiction with the so-called specialization hypothesis, proposed by Professor Paul Krugman. According to his hypothesis, the consequences of a growing business integration will be exactly the opposite. Countries of the monetary union, due to a reduction in transaction costs and subsequent growth of mutual trade, will begin to specialize in the production of goods with comparative advantage (Krugman, 1993). In other words, the endogenous nature of the optimal currency area, expects an increase in intra-industry trade in the monetary union, while the specialization hypothesis argues that trade will become increasingly inter-sectoral in terms of structure of export, import will thus lead to more asymmetric shocks and secondly, due to lower transaction costs, which will cause specialization on a regional or country-wise level and lead to asymmetry in the business cycle.

**Figure 2** Endogeneity Domination

Source: De Grauwe, 2014

An example of endogeneity can be seen on Figure 2. Point 1 is perceived as the default position, which is a group of countries. It is apparent that these countries are located on left from the OCA line, which means that advantages of monetary independence dominate. If these countries would join a union, in the case of our scheme the European Union, there would occur a shift to point 2. With this shift, the correlation of income increases, as well as the degree of openness of member states. If those same countries created a monetary union, in this case the European Monetary Union (EMU), there would occur a shift to point 3. Along with the further increase in the correlation of income and level of openness there is a shift to the right side of the OCA line, indicating that members are getting dominant advantages of monetary union, while benefits depend on how those countries are similar. If these countries are highly diversified, subject to similar shocks, quite open, prefer low inflation, characterized by high labor mobility and high price and wage flexibility, fiscally integrated, then after monetary unification they will be located on the right side of the OCA line and benefits of higher correlation of income and greater openness will be significant for them. Conversely, a group of countries that does not meet these OCA criteria, are would be located on Figure 2 above point 3 of OCA line and they should wait longer for the entry into the monetary union (De Grauwe, 2014). Likewise, between countries in the monetary group prevail common demand shocks and therefore the economic cycles of member countries are highly correlated.

**Figure 3** The Specialisation Paradigm

Source: De Grauwe, 2014

As shown in Figure 3, the increase of monetary integration may cause country's shift away from the OCA line, a decrease in the correlation of income and increase of openness (a shift from point 1 to point 2). In point 2 dominate the advantages of monetary independence, unlike in the starting point 1 (in which predominated the benefits of a single currency). This means that in point 2 outweighs the advantages of a single currency over the cost of the loss of monetary independence. On the contrary, in point 1 it is better for the participating countries to maintain a floating exchange rate, because the advantages of independence outweigh the monetary savings from decreased transaction costs when adopting the common currency. In the case of Krugman's Specialization Hypothesis, economic cycles become less matched due to the higher susceptibility of member countries to industry-specific shocks.

Kenen claims that the condition of optimum currency area is the diversification of production. It is thus clear that both Krugman's specialization hypothesis, the hypothesis of endogenous nature of the optimum currency area are based on diversification, but each has a different outcome, diverging in its consequences. Krugman's approach towards countries of the monetary union leads to divergence of economic cycles, while endogenous scenario assumes tendency towards convergence. This is a crucial issue in terms of the appropriateness of monetary policy, general cohesion and practical application of optimum currency area. The main differences in views between researchers can be therefore seen on how they access the issue of foreign (international) economies, respectively depending on their stability since foreign instability causes fluctuations in demand for certain goods, which may result in the uneven state of the economy. This leads to the need for diversification of products, so that these shocks can be compensated for any increase in market demand for other goods. However, if the shock created



inside the economy, while considering the stability of other foreign economies, the imbalance could not be removed using diversification.

Another criterion by which it is possible to evaluate the appropriateness of entering monetary union is according to Professor Marcus Fleming, the flexibility of prices and wages in the economy. The flexibility of prices and wages is particularly important in the short term, since it is to some extent limited by the mobility of production factors (i.e. labor mobility plays in the process of adapting to shocks an important role in the medium to long time period) (Fleming, 1971). Moreover, we can include among conditions of optimum currency area the similarity of supply and demand shocks and responses to it (the diversification in production and consumption); the similarity of inflation rates; the ability of fiscal transfers to eliminate the consequences of asymmetric shocks (fiscal integration); similarity of attitudes towards government promoted policies (political integration); the degree of economic openness (Mongelli, 2008). In conclusion, if economies take into an account the above-mentioned aspects, they are more often considered, by consensus, to be a suitable candidate for membership of the monetary union, outweighing the potential costs associated with the loss of autonomous monetary policy (Hudec, 2017).

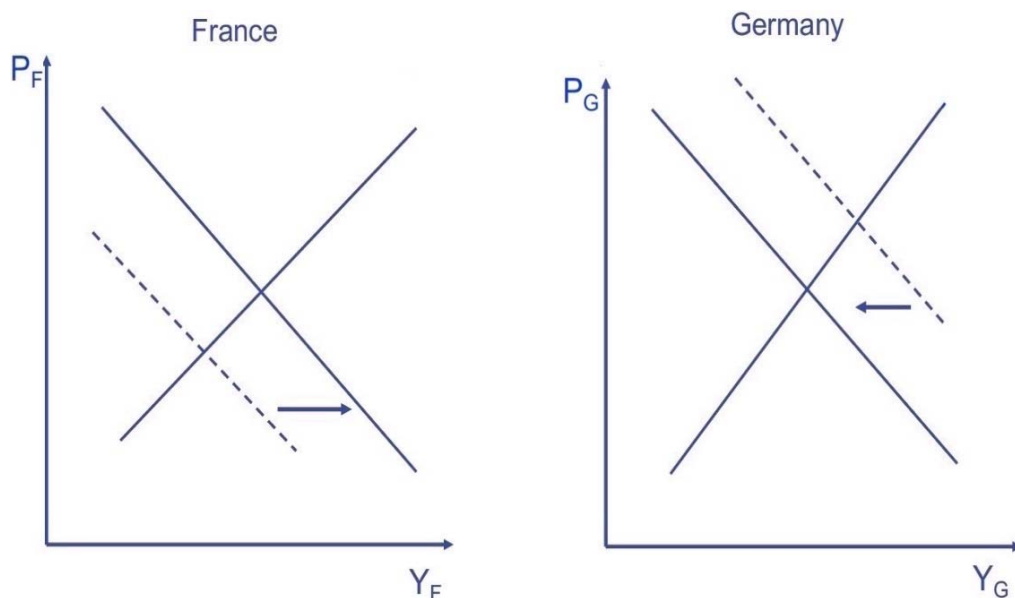
### 2.3 Symmetric and Asymmetric Shocks as Two Sides of the Same Coin

Under the term economic shock, we understand a certain degree of unexpected or unpredictable event that disturbs an economy, either in a positive or a negative way, characterized as change occurring in exogenous factors, which is subsequently transferred into endogenous economic variables and affects them. Naturally, these events have different causes, nature, course, as well as frequency (common, rare), duration (one-off, temporary, permanent), intensity (mild, catastrophic), scope (idiosyncratic, co-variant), while impacts on the economy can considerably vary (United Nations, 2011). According to their nature, we distinguish between economic shocks affecting supply and demand, but also in terms of the length (short and long-term), origin - formation (endogenous, exogenous), impact on economic activity (positive, negative), impact on countries (symmetric, asymmetric) and by a sector of the economy which they affect (De Grauwe, 2016). The main difference, in the context of response to economic shock, depends on whether an economy is a member of the monetary union and has ability to affect its monetary policy.

When a country with an autonomous monetary policy is hit by a negative shock, this shock may be at least partially absorbed through floating exchange rate. An independent monetary policy also means the opportunity to use monetary policy instruments to influence economic conditions in the country. Another potential mechanism is the possibility of absorbing the shock through fiscal transfers by changing wage rates or by the mobility of factors of production. However, if the adaptation to shock is not effective, then it is most likely that consequence of the shock will transfer into price level increase, having impacts in the form of rising unemployment and lower output. This means that the ability to absorb shocks depends on the flexibility of adjustment mechanisms and used channels. Generally, we can say that exchange rate change is relatively less painful

adaptation mechanism, compared to the price level increase (and the nominal wage rate) or unemployment<sup>4</sup>.

**Figure 4** Monetary Independence: Asymmetric Shocks



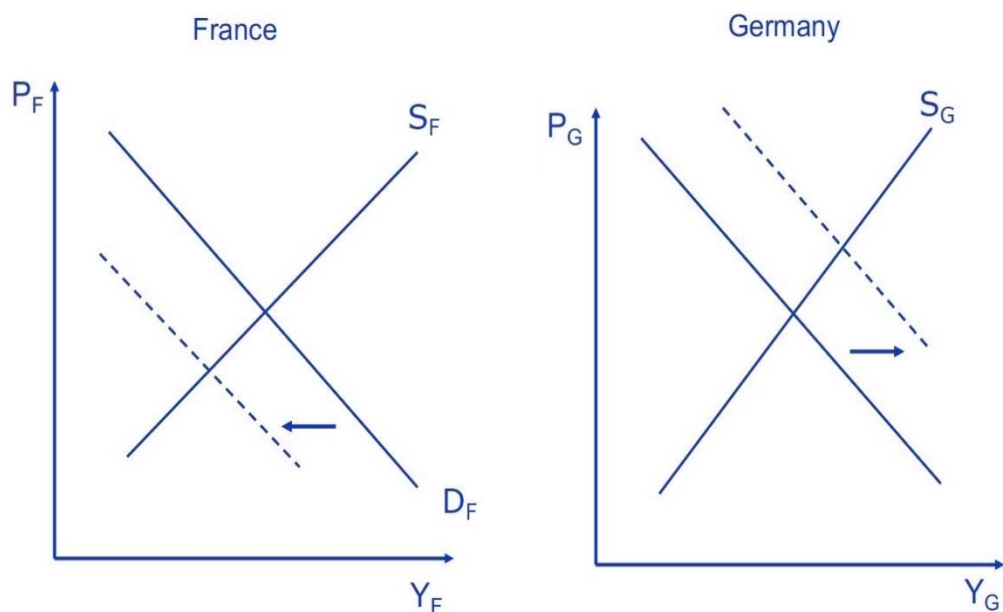
Source: Author

This situation is graphically illustrated in Figure 4, on the example of France (showing effects of monetary expansion) and Germany (showing effects of monetary restriction), if they had kept their own currency (monetary independence) and we are able to manage their national interest (exchange) rate in the case of asymmetric shocks. On the other hand, if a country is part of the monetary union and the whole monetary union is exposed to a symmetric negative shock, any government transfers and tax adjustments will depend on the degree of economic integration in the monetary union, or on whether countries have a joint budget and the opportunity to use it for stabilization needs. However, fiscal transfers can also occur at the level of individual member states from their national budgets. A different situation occurs when the monetary union is affected by an asymmetric shock. When the shock hits single country or small group of countries within the monetary union, we can expect that there will only be a slight correction in common exchange rate.

<sup>4</sup> We may also argue that this statement is valid only for autarkic economies, since i.e. in the Czech Republic, the devaluation of EUR/CZK by Czech National Bank (CNB) by 5% caused a spike in prices for import goods and accelerated inflation (however, this was the goal of the CNB in the first place). If the rise in prices resulting from depreciation is vast, let's say, in Brazil or Russia, it can cause a recession. On the other hand, the concept of autarky can be also applied to a specific state – business – entity policy, not necessary in the context as a whole, but also can be constricted to a narrow field.

Moreover, another situation would arise if the shock hits a major economy and a large part of the monetary union, since we cannot expect a change in the joint exchange rate as easy as it would occur in the case of a non-member state. This situation is graphically illustrated in Figure 5 showing asymmetric shock in demand, on the example of France (decline in aggregate demand) and Germany (increase in aggregate demand) however, since they are both parts of the monetary union, France is not able to stimulate demand by using tools of monetary policy and nor can Germany restrict aggregate demand using tools of monetary policy. Solution to this situation illustrates Figure 6 showing the automatic adjustment process (i.e. by using tools such as wage flexibility or labor mobility), while we can see that aggregate supply in France shifts downwards and aggregate supply in Germany shifts upwards as a part of the new adjustment.

**Figure 5** Monetary Union: Asymmetric Shocks

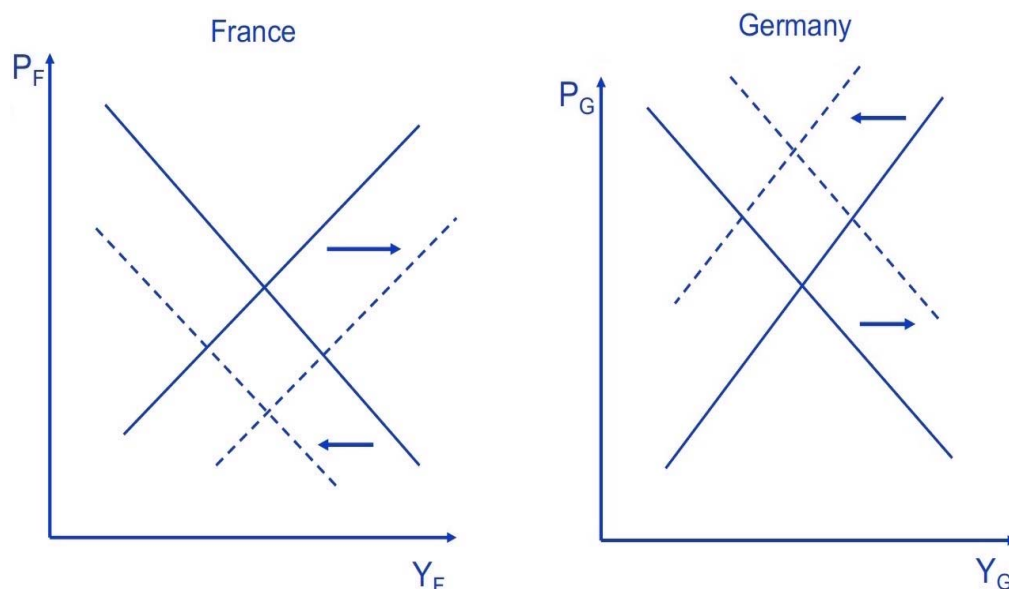


Source: Author

Monetary union membership, therefore, emphasizes the stabilizing role of fiscal policy and puts a greater weight on the mobility of factors of production and flexibility in prices and wages as well as the reduction of exchange risk leading to greater trade and foreign investments. Likewise, this partnership includes increased transparency in price comparison and political gains or risks, associated with tighter cooperation. The monetary union must for these reasons have mechanisms that enable it to absorb such shocks without significant impact on the levels of production and unemployment. Generally, these mechanisms can be divided into adaptation mechanisms, which include flexible labor market, flexible prices, wages and on the other hand, individual and institutional mechanisms, which includes diversification of risk on capital markets and fiscal transfers (De Grauwe, 2014). Furthermore, if we look at the issue of structural similarity (i.e. fulfilling the convergence criteria; development of macroeconomic indicators), this

aspect should ensure that if an economy is hit by an external shock, its exchange partner – economy will also be hit by a shock, therefore leading to a symmetric situation, while economic policies aimed at the treatment of such shock will be even and benefit all regions equally.

**Figure 6** Monetary Union: Automatic Adjustment Process to Asymmetric Shocks



Source: Author

Another factor is a similar rate of inflation rates, which is important for the stability of monetary union, since monetary policy is transferred from a single central bank, meaning that if inflation rises in one of the countries significantly more than in others, it increases the costs and differences in inflation between countries, leading to different real interest rates. Interest rate change in one of the monetary union member state causes influx or outflow of capital in this country, working as a tool of balance or rather a substitute for settlement in the event of asymmetric shocks, since the cross-border movement of capital has no barriers in integrated markets (Spanjers, 2009).

Foreign ownership of securities is another form of insurance mechanism when dealing with offsetting asymmetric shocks in integrated markets, where residents of member states of the monetary union have held the securities (shares, bonds) of companies of other nationalities. In a member state with a weak demand, companies will feel the loss, resulting in a decline in the value of securities that are held by nationals of other countries, however these residents may also hold securities of a member state, where the value of securities of local companies has increased along with demand for their goods, and are thus also profitable. In other words, all members of the monetary union participate in the profit and loss caused by an asymmetric shock, while the advantage of public insurance mechanism (i.e. the federal budget) is certainly the elimination of moral hazard compared to the private mechanism. The private mechanism, unlike the public never

includes absolutely everyone, therefore there is a statistical population of the country, owning no foreign securities, and thus are not insured against the potential decline in demand, also not participating in the profits abroad (Baldwin, 2012).

The monetary and fiscal policy create an optimal mix of economic policies, which will be targeted at solving the problems of all regions together and the differences between regions would be then compensated through fiscal transfers from the common budget. These regions of the monetary union, whose members include number of states should, therefore, be structurally similar. It is important that international transfer of income is primarily directed into productive investments, not only purely sponsoring population welfare – social benefits, since these transfers should serve to compensate the economic level of the regions. Transfers in the form of welfare and unemployment benefits only act as the pause button of the default state, negatively affecting automatic balancing mechanisms, labor mobility, and wage flexibility. The premise of this public insurance mechanism as a shift of income from one country to another is dependent on a high degree of integration and willingness of the population to proceed such a redistribution of wealth. Lastly, a crucial factor which all economies should take into an account contributing to a reluctance is the risk of moral hazard, the gain of one party at the expense of another party (Lacina, 2007).

## Conclusions and policy implications

Theoretical concept for assessing the readiness of countries to join the monetary union with a single currency is the theory of optimum currency areas, trying to find automatic balancing mechanisms against asymmetric shocks. Under these shocks, we understand the reduction in aggregate demand in one country and the simultaneous growth of aggregate demand in another country, while it is not possible to face them by monetary instruments, since they affect only individual countries or regions, not the entire monetary union. Moreover, they may occur at different times, have different intensity and length of duration. Optimal currency area is, therefore, a geographical area or a monetary union, where the likelihood of asymmetric shocks is small, because of the existence of economic mechanisms that can prevent or eliminate them. If a country is not a member of the monetary union, it is possible to solve this issue by changing the nominal exchange rate and restore the balance. However, in the case of the monetary union, automatic balancing mechanisms are necessary, namely labor mobility; flexibility of wages, prices, and diversification of production structure and export.

Measuring and evaluating the correlation of cyclical components of selected indicators of national economic activity across countries, regions, and zones is a significant way for assessing the dynamics and achieved degree of convergence of the economies wanting to join the monetary union. Countries adopting the single currency lose the autonomy of monetary policy and the opportunity to influence key interest rates. With membership in the monetary union is naturally also connected the irreversible loss of exchange rate policy as well as the usage of autonomous fiscal policies of national governments as a stabilizing tool in the economic and monetary union is limited by the need to respect stability and growth pacts and fiscal discipline as a set of rules created to make sure that economies follow comprehensive public finances and synchronize their

fiscal policies. The limits of national macroeconomic policy as a stabilizing tool in case of the economic imbalances after joining the monetary union, the similarity of long-term trends in key indicators of economic activity approximating the economic cycle is therefore naturally crucial to minimize the risks of single currency, since a lower risk of asymmetric shocks also reduces the need for the existence of autonomous monetary policy at the national level.

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