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EUROPEAN INTEGRATION AND INDEPENDENCE OF CENTRAL BANKS

Abstract

The 1990s and 2000s were marked by a global trend towards greater central bank independence. Were the institutional trajectories of strengthening such independence the same in European countries? Grouping countries according to the criterion of when they joined the EU demonstrated significant intergroup differences in the behavior of the central bank independence index proposed by Romelli (2024). The «old» EU countries, due to historical traditions, were less homogeneous with a lower level of independence at the beginning but turned out to have a higher level of independence and more homogeneous later, thanks to stricter requirements for membership in the eurozone. The countries of the «new» EU initially reformed their central banks in line with the logic of market transformation and only intensified reforms before joining the EU, remaining a less homogeneous group. For Central and Eastern European countries, the inverse relationship between the level of central bank independence and inflation could be questioned due to exogenous pressure to strengthen such independence due to European integration requirements. However, it does exist, confirming the established theoretical view. Also, the existence of an inverse relationship between inflation and the index of central bank independence is evidence that European integration alone cannot substitute for the status of monetary authorities.

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Problem Statement

During the 1990s, an unambiguous, academically recognized view emerged that structural reforms should be accompanied by a strengthening of the status of central banks, and that price stability and exchange rate flexibility policies were the best response to shocks which had repeatedly undermined the foundations of economic growth. By the time of the global financial crisis of 2008, this view had become relatively complete, being established in the policies of international organizations and the general agenda of good governance and the development of macroeconomic policy institutions.

The experience of European integration and the relative success of the transition to the euro also largely took place against the backdrop of reforms of monetary authorities in Europe and the emergence of the European Central Bank as one of the most independent in the world. However, the global financial crisis has shaken confidence in the belief that a sole focus on price stability is optimal. Financial stability has a complex relationship with price stability. Anti-crisis measures have blurred the clear demarcation line between monetary and fiscal policy. Moreover, the delegation of macroprudential powers to central banks has raised the question of whether the expansion of their responsibilities is consistent with their independence. However, academic discussions on these issues quickly fell by the wayside under the influence of a global wave of populist attacks on central bank independence (For a more detailed overview of this issue, see Vonessen et al. (2020), Koziuk (2021), Gavin & Manger (2022)).

Discussions about the role of central banks in the climate agenda, the aftermath of the covid crisis, and the subsequent surge in global inflation have raised questions about how effective the boundary between the volatile political environment and the independent status of monetary authorities is. A number of Central European countries have been caught up in the trend of torpedoing central bank independence, and the ECB has found itself at the epicenter of legal debates over the relationship between its actions, its mandate, as well as the hierarchy of European and national legislation (Vonessen et al., 2020).

In this context, the process of Ukraine's European integration is relevant to the issue of the NBU's independence. This is envisaged by cluster 3 of the negotiation process on the compatibility of economic policies and regulatory practices with the Acquis Communautaire principle. From a formal point of view, this means that the NBU's status is included in the perimeter of screening national legislation for compliance with European integration requirements. In other words, the European Commission assesses whether the NBU's independence meets EU standards. Such an assessment applies not only to formal legislation, but also to the practices of its application in the context of interactions between key political actors.

Membership in integration associations clearly has an impact on increasing the independence of central banks (Romelli, 2022; 2024). The European Union is no exception. However, the question arises as to what trajectory the EU member states have followed to increase the independence of their central banks. This question is also relevant to the practical aspects of Ukraine's EU membership negotiations. The perception of central bank independence and its formal representation in legislation is evolving, thus creating a basis for understanding in which direction domestic legislation should change.

Accordingly, the article compares the trajectories of increasing the independence of central banks in the «old EU members» and the «new EU members» and identifies the links between the level of such independence and inflation in Central and Eastern European countries. The results confirm that there are differences in the trajectories of increasing the independence of monetary authorities in the two groups of countries. The article proves the existence of an inverse relationship between inflation and the level of formal independence of central banks in CEE countries.

Literature Review

The literature on central bank independence is quite extensive. The traditional view of this issue is represented by a number of works that emphasize the importance of the formal status of monetary authorities for supporting low inflation (Grilli et al., 1991; Cukierman, 1992; Cukierman et al., 1992). Another idea is that there is a difference between formal and actual independence and the importance of the latter for maintaining an inverse relationship between independence and inflation (Cukierman et al., 1992; Cukierman & Webb, 1995).

Most studies focusing on emerging market countries confirm the established view of the importance of central bank independence for inflation (Crowe & Meade, 2008; Bodea & Hicks, 2015; Jacome, 2001; Jacome & Vazquez, 2008; Jacome et al., 2022; Garriga & Rodriguez, 2020; 2023). Cukierman et al. (2002) noted how the process of market transformation in post-communist countries has become an example of large-scale central bank reforms in the projection to overcome the effects of hyperinflation in the first years of transformation. The focus on the former Soviet Union confirms the general trend. The magnitude of hyperinflationary shocks is in a clear inverse relationship with the level of independence of central banks during the first years of market transformation (Lybek, 1999). Koziuk (2004) proposes his own index of central bank independence (CBI), demonstrating that it is inversely related to inflation for a group of post-communist countries. In other words, the special context of market transformation does not change the general algorithm of the relationship between the status of monetary authorities and macroeconomic processes. Hence, the transition from a planned economy to a market economy in post-communist countries fits into the general context of the first generation of structural reforms (Cukierman et al., 2002).

Some studies point out that structural reforms aimed at strengthening macroeconomic policy institutions have been credited with a significant improvement in the inflation situation. Along with the increased independence of central banks, this makes it more difficult to empirically verify reliable inverse relationships between the status of monetary authorities and price dynamics. Nevertheless, even despite successful reforms, the inverse relationship between these indicators remains observable (Masciandaro & Romelli, 2015; 2018; Garriga & Rodriguez, 2020; 2023; Jacome et al., 2022; Romelli, 2022; 2024). This aspect is directly related to the focus of this article. If we assume that the level of central bank independence in the new EU member states has increased as a result of EU membership, to what extent has this affected the strength of the relationship between this level and inflation? As will be shown below, the theoretically predicted inverse relationship stays even under these conditions.

The academic literature, on the other hand, has clearly shown a trend that formal monetary authority status is not a sufficient condition for maintaining lower and more stable rates of inflation. Put another way, the extent to which central bank independence is endogenous (the choice for a more independent central bank is a consequence of a preference for low inflation, and the formal status may or may not reflect this) or exogenous (the choice for a more independent central bank) is influenced by a number of circumstances that may not correlate with a preference for low inflation (Hayo & Hefeker, 2002; Masciandaro & Romelli, 2015; 2018). Such perspective is equally relevant for the analysis of the European integration context, as the presence of membership requirements demands adaptation of national legislation and social practices. This may trigger both adaptive and resistant reactions from political and economic groups whose welfare will be affected by central bank reforms. In this regard, this issue is consistent with the literature on the role of institutions in ensuring the success of central bank reforms.

In particular, Acemoglu et al. (2008) indicate that central bank reforms are rather of a formal nature and do not address fundamental changes in the political processes through which monetary policy was positioned in the distribution of economic power. However, this does not mean that such reforms do not achieve their goal in certain circumstances. For instance, Quintyn & Gollwitzer (2010) demonstrate how central bank independence works even in the context of weak institutions. Another manifestation of this problem concerns the situation when the level of central bank independence has already been established, although it is at odds with the preferences of the dominant political and economic forces. In this case, two possible scenarios include politicization of appointments of heads of monetary authorities or a shift in the central bank's mandate (de-delegation). If the latter is accompanied by a higher level of political costs, the first scenario will prevail (Ioannidou et al., 2022; Bodea & Garriga, 2022). Potentially, European integration offers a good example of how reversing formal central bank independence is challenging due to the complex system of international obligations.

Specifically, political institutions or structural factors can have a considerable impact on the stability of the inverse relationship between the inflation rate and the status of the central bank. For example, the structural configuration of the political system, through the lens of the checks and balances mechanism, directly affects the extent to which the anti-inflationary effectiveness of central banks will be given real substance (Moser, 1999; Keefer & Stasavage, 2003). The same applies to the independence of the judicial system. In countries with higher de facto independence of the latter, it is more likely that the independence of central banks will be meaningful, which is positively associated with lower inflation (Hayo & Voigt, 2008). More broadly, the rule of law is a determinant of the convergence between de facto and de jure regulator's independence. As shown in several papers, the rule of law variable significantly improves the density of the inverse relationship between monetary authority autonomy and inflation (Nurbayev, 2017; Dincer & Eichengreen, 2013). The level of democracy with its positive impact on the rule of law is equally important, even if the actual level of independence is more clearly manifested in the transparency of central banks than in formal legislation (Dincer & Eichengreen, 2013). On the other hand, the cultural characteristics of a society and its structure are considered when analyzing the relevant relationships (De Jong, 2002; Koziuk, 2020). Based on the example of 22 countries, Koziuk (2019) shows that fractionalization of society affects the ability of central banks in Central European countries to maintain low inflation, however the inverse relationship between the level of independence of monetary institutions and inflation persists even during the period of low-price volatility in the post-crisis period.

Another dimension of central bank independence in the process of European integration relates to the debate over the factors that determine the variation in its country level. Romelli (2022; 2024) notes that the factor of membership in a monetary union influences the increase in this level. The «peer pressure» channel takes place as well. In other words, if the level of CBI increases in neighboring countries, it will be important for the third country as well (Romelli, 2022; Bodea & Hicks, 2015). In the light of European integration requirements, it is natural to assume that there should be some institutional convergence in the status of central banks. On the other hand, the peculiarities of structural reforms in post-communist countries suggest that the European integration factor of reducing the variation in the level of central bank independence should be complemented by factors of structural and institutional characteristics of the countries. Especially at the stage when European integration reforms of monetary authorities have not yet clearly crystallized.

With regard to the justification of country variations in the level of independence of monetary authorities, we can distinguish studies that focus on structural features of the country, political and economic factors, and globalization processes.

Posen (1993; 1995) argues that a developed financial sector is a factor in higher levels of central bank independence due to the negative impact of inflation on finance. Masciandaro & Passarelli (2013) analyze this issue from the perspective of financial wealth distribution. Labor market institutions can also have an impact. The level of their centralization is inversely related to the level of independence of central banks (Cukierman & Lippi, 1999). Resource wealth has a negative impact on this level (Koziuk, 2016). De Haan & Van't Hag (1995) and D'Amato & Pistoresi (2009) debate the validity of structural factors, suggesting that strategic considerations for delegating higher levels of independence are not always correlated with empirical evidence. De Haan & Eijffinger (2016) point out that structural arguments do not always hold in the real political world, as policymakers analyze the costs and benefits of delegating a particular level of independence to central banks.

The political system factors are presented in diverse ways in literature. For instance, Mooser (1999) argues that the number of veto players should have a positive effect on the level of central bank autonomy. Bodea et al, (2019), Romelli (2022), Binder (2021), Gavin & Manger (2022) point out that political preferences matter: leftist and nationalist governments are not tolerant to independent central banks. The level of democracy, the quality of political institutions, and the independence of the judiciary, in turn, positively affect social choices regarding higher levels of central bank independence (Keefer & Stasavage, 2000; Hayo & Voigt, 2008; Dincer & Eichengreen, 2013).

The impact of globalization factors on central bank independence can be interpreted within the context for how the quality of policy institutions helps to compete for capital inflows. In particular, Jacome (2001) and Bodea & Hicks

(2015) point out that central bank reforms aimed at increasing the level of independence are driven by attempts to signal to markets that the preconditions for stable macroeconomic policy are in place. Dincer and Eichengreen (2013) show that openness is associated with higher levels of formal central bank autonomy.

Most empirical studies note that the recent increase in the level of central bank independence has become a global trend (Dincer & Eichengreen, 2013; Romelli, 2022; 2024). Nevertheless, changes in the interpretation of the content of central bank independence, the definition of its elements, and the ways of its legislative representation are still on the rise (Dincer et al., 2024). This has direct implications for the European integration process. The further evolution of the perception of monetary authority independence may have an impact on the type of changes that countries have to make to their legislation, based on how far back the process is in time from 1992, the year the EU was founded, or from 2004, the year of the first wave of enlargement.

This article proposes the hypothesis: «old» and «new» EU members followed slightly different paths of increasing central bank independence according to the fulfillment of formal conditions for institutional convergence. Membership in the eurozone with more rigorous formal requirements should have resulted in a higher level of independence and lower variations in the respective index in the «old EU members» group. Instead, the process of market transformation, inflationary experience, and other structural characteristics should lead to a greater degree of variation in the level of central bank independence in the «new EU members» compared to the first group. The empirical analysis confirmed this hypothesis, showing that the trajectories of strengthening formal monetary independence in the two groups of countries do differ. The paper reveals that inflation and the level of central bank independence in CEE countries continue to be inversely related, pointing to the fact that European integration requirements do not create absolute homogeneity in inflation preferences and preferences for the way in which central bank independence should be addressed towards ensuring price stability.

The purpose of the article. Following the hypothesis, the purpose of the article is to identify dissimilarities in the institutional trajectories of strengthening central bank independence in the process of European integration between the «old» and «new» EU members, to develop theoretical arguments justifying this and to empirically confirm them. The article seeks to demonstrate how, despite the formal requirement for a high level of independence in the process of EU accession, European integration cannot essentially replace it.

Methodology

Methodologically, this article relies on a combination of formal theoretical and empirical arguments in the process of confirming the hypothesis. Taking into account the hypothesis and purpose of the article, the methodology consists of two parts. First, the identification of differences in the institutional paths of strengthening central bank independence by groups of countries is based on: analytical grouping of countries; determination of the average group value of the index of central bank independence; defining of the standard deviation of the value of the relevant index within the group. The selected index (cbie_index) is proposed by Romelli (2024), which is an extended version of the GMT-index (Grilli et al., 1991) and the CWN-index (Cukierman et al., 1992). The corresponding calculations are made for the period since 1990. Since the index is based on the assessment and interpretation of legislation, changes in the index level mean relevant changes in legislation. Extrapolating to the timing of fulfillment of European integration requirements, this allows us to analytically determine how changes in the level of the respective index correspond to a particular stage of membership. Secondly, the relationship between the level of CBI and inflation for the group of Central and Eastern European countries is assessed using a univariate-factor regression analysis. Under the assumption that European integration significantly strengthens the status of central banks, there should be no stable inverse relationship between its formal independence and the inflation rate. If such a relationship is observed, it means that the status of monetary authorities, despite the influence of European integration, continues to determine the inflation rate in the country. In other words, European integration does not replace the status of central banks, even if it significantly affects the lower bound of its variation among countries.

Research Results

Independence of central banks in integration associations

European integration has traditionally been seen as a laboratory for the adaptation of macroeconomic policy institutions to the conditions of a single economic space. The Maastricht Treaty envisaged the creation of the Economic and Monetary Union (EMU) and therefore protecting the prospects of a single currency required a credible institutional solution. The independence of the central bank tasked with ensuring the functioning of the single currency appears to be a concentration of academic consensus on monetary policy and practical experience in implementing macroeconomic policy under the constraints imposed by integration and the requirements for openness that, again, stem from the fact of integration and, more broadly, global openness. The experience of the German Bundesbank and its image of a strong and efficient monetary institution cannot be dismissed, as it has become a kind of projection on the further trajectory of the European Central Bank. (For more details, see Koziuk (2005)).

Bruni (1996) shows, central bank independence in the EU should as well be seen as an alternative to those mechanisms of macroeconomic stability relying on fixed exchange rates. This debate turned out to be extremely relevant for Europe in light of the ERM I crisis and the subsequent transition to ERM II. Later, it was echoed in the experience of virtually most emerging market countries. Central bank independence as an institutional guarantee of price stability policy is a better and more flexible alternative to monetary regimes based on fixed exchange rates, which lose their viability in the context of the removal of restrictions on capital flows (Obstfeld, 2000). Meanwhile, Bruni (1996) argues that in the case of an economic union, it is not enough to rely on the so-called endogeneity of central bank independence. It should be reinforced at the formal level to ensure credibility and to act as a counterbalancing institutional solution in an environment where labor market regulation and fiscal imbalances make optimal disinflation difficult. In other words, if nominal convergence is necessary for economic and monetary union to exist, then central bank independence is the best way to set the stage for structural reforms that would facilitate such convergence and reinforce credibility of money.

Although central bank independence in a monetary union is obvious for reasons of single currency credibility and the elimination of political domination by individual members of the integration association, the issue of strict formal requirements for such independence at the level of individual countries requires additional argumentation. This is not just a matter of preparation for the introduction of a single currency. The issue is one of the fundamental principles underlying the economic basis of integration processes.

The principle of the single market and competition within it creates a tolerable perimeter of interference in market processes formally related to trade restrictions, regulations, or competition and industrial policy. Implicitly, however, this perimeter allows for the need to create common macroeconomic policy principles to prevent the redistribution of demand in favor of some countries at the cost of others. The absence of barriers to the movement of goods and capital is a prerequisite for the temptation to shift domestic producers' stimulation mechanism from the trade regime to the exchange rate. The same applies to the monetary ability to support fiscal expansion. Looser policy in one country can have repercussions for other countries. Dissatisfaction with this will intensify the discussion about trade protection measures, thereby undermining the basis for the single market.

Standardization of regulatory approaches in the financial sector is technically easier to achieve with independent regulators than with agencies that are sensitive to the electoral cycle. While this was not the case at the inception of the integration process, the evolution towards a banking and capital market union was an obvious response to the gaps in regulatory mechanisms that allowed for deepening asymmetries in the accumulation of macroeconomic imbalances and led to the vulnerability of the banking sector in many EMU member states. The introduction of macroprudential regulation reflected a new trend toward strengthening the independence of institutions that are supposed to implement financial stability policies.

Overall, we can conclude that the formal requirement for central bank independence in the EU (regardless of the rationale and structure of the ECB's independence, as well as the need for institutional compatibility for membership in the European System of Central Banks) is based on the following arguments. First, the autonomy of monetary authorities is a derivative of common macroeconomic policy principles that underlie integration processes. Second, price stability policy in the integration area ensures nominal convergence (convergence of inflation and interest rates) and creates the monetary basis for real convergence (convergence of GDP per capita and increased correlation of business cycles). Third, the implementation of a common monetary policy principle of price stability eliminates the preconditions for political interference to create gains in some countries at the cost of others, for example, through exchange rate and interest rate channels, lending programs, etc. Fourth, such a joint approach confirms the principle of fiscal discipline and national responsibility for debt sustainability. Fifth, the elimination of opportunities to manipulate macroeconomic instruments to redistribute aggregate demand in favor of a one country creates preconditions for the sustainability of the trade regime of mutual openness in the economic union. Sixth, policies focused on macroeconomic stability reduce the likelihood of shocks in one country, the consequences of which spill over to other countries. Seventh, coordination in capital market integration and the formation and further functioning of the banking union is more effectively realized at the level of independent regulators. Macroprudential powers and, more broadly, financial stability policy should also be institutionally protected, as should price stability policy.

While the experience of the eurozone turmoil of 2011-2015 revealed that the independence of the ECB and national central banks, combined with national responsibility for debt sustainability, is not sufficient to ensure macro financial stability, subsequent reforms in the EU-EMU have shown that the principle of regulatory autonomy has not compromised itself, yet has highlighted weaknesses in the regulatory perimeters which contributed to the accumulation of imbalances.

The institutional trajectory of central bank independence in the «old» and «new» EU members: similarities and differences

The hypothesis assumes that the strengthening of central bank independence in the «old» and «new» EU members followed different institutional paths. The theoretical arguments in favor of this hypothesis are as follows:

- the founding countries of the EU reformed their central banks under the influence of already established formal requirements for institutional convergence. Therefore, such reforms took place ex post;
- membership in the eurozone required the adaptation of national legislation to ensure institutional, functional, and technical compatibility within the European System of Central Banks. Whereas for the «old» EU members, the requirements for convergence of central bank legislation were also implemented ex post with respect to the criterion introduced, the interpretation of compliance with membership appears to be more stringent and binding;
- the institutional trajectory of central banks in post-communist countries was initially strongly influenced by the national dimension of the market transformation process. Thus, it did not follow the logic of fulfilling the Maastricht criteria for institutional convergence. For reasons of a combination of causes and consequences of hyperinflation, experience of cooperation with international financial organizations, etc., the calibration of national preferences for positioning the status of the central bank in the frame of macroeconomic policy is much closer to the models of the first generation of structural reforms in Latin America and Asia. Hence, while European integration is a pure example of the exogeneity of central bank independence, the experience of market transformation has formed obvious signs of its endogeneity;
- the fulfillment of formal membership requirements has created the preconditions for central bank reforms aimed at strengthening their independence to take place ex ante. Meeting the criteria of institutional convergence became a passing signal for EU membership. Consequently, legislative changes in the status of monetary authorities from a certain point on were dictated by the European integration agenda rather than by the existing endogeneity, the level of which was obviously quite different in the post-communist countries;

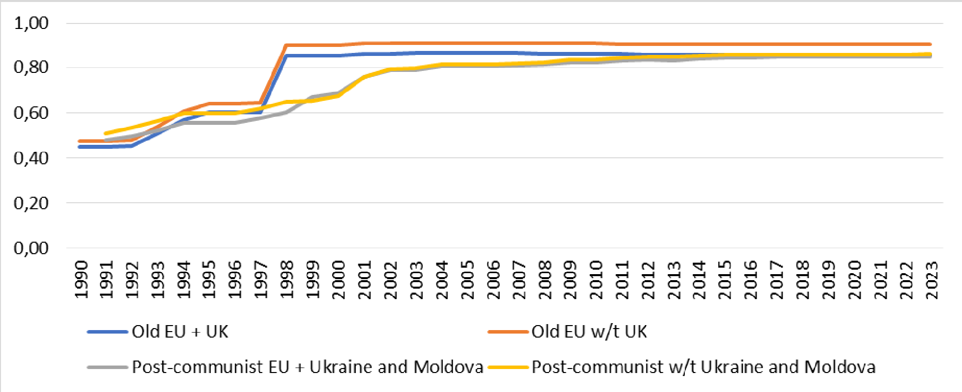
- national preferences regarding the level of independence of central banks can only remain within the limits of how flexible the European Commission will be in interpreting national legislation to meet the criteria of institutional convergence. Given the evolution of the understanding of what constitutes such independence, what elements define it, and how they are represented in national legislation, it is likely that subsequent rounds of enlargement will require more radical changes. Ukraine's experience in negotiations with the European Commission shows that the latter is concerned not only with meeting formal criteria, but also with the actual recognition of the principle of regulatory autonomy by key political actors. Naturally, in the context of central banks, this approach is fully consistent with the discussion of how their formal and actual independence relate to each other (Cukierman et al., 1992; Cukierman & Webb, 1995; Hayo & Hefeker, 2002; Masciandaro & Romelli, 2015; 2018; Binder, 2021; Dincer et al., 2024).

The independence index (cbie_index) proposed by Romelli (2024), which is an extended version of the GMT-index (Grilli et al., 1991) and the CWN-index (Cukierman et al., 1992), was used to empirically assess the trajectory of changes in central bank legislation. The data in Figure 1 illustrate the tendency for the «old» (United Kingdom, Ireland, France, Spain, Portugal, Italy, the Netherlands, Belgium, Luxembourg, Greece, Germany, and Austria) and «new» (Czech Republic, Slovakia, Hungary, Slovenia, Croatia, Poland, Estonia, Latvia, Lithuania, and Romania) EU members to strengthen the independence of monetary authorities. This trend can be considered fully consistent with the general trend of increasing central bank independence that has been taking place since the 1990s and is well documented in the literature (Dincer & Eichengreen, 2013; Romelli, 2024; Dincer et al., 2024).

Nevertheless, several differences should be noted, which, although of insignificant quantitative dimension, are important for the purposes of this analysis. As can be seen from Figure 1, post-communist countries in the early 1990s demonstrated a somewhat higher formal level of central bank independence than the countries of «old Europe». The reason for this can be attributed to the fact that central bank legislation was created based on completely different ideas about CBI and its elements compared to developed countries. In the latter, prior to the implementation of the Maastricht criteria for institutional convergence, central bank legislation reflected historical legal and macroeconomic traditions that were obviously more rigid than actual central bank practices or academic consensus on what institutional design should guarantee the implementation of monetary policy for price stability. Subsequently, reforms to strengthen the independence of central banks in both groups proceeded almost simultaneously. However, the approach to the introduction of the euro resulted in a significant gap in the level of such independence by country group, not in favor of post-communist countries.

Figure 1

CBI Index and Eurointegration



Source: created by the author based on data in Romelli (2024).

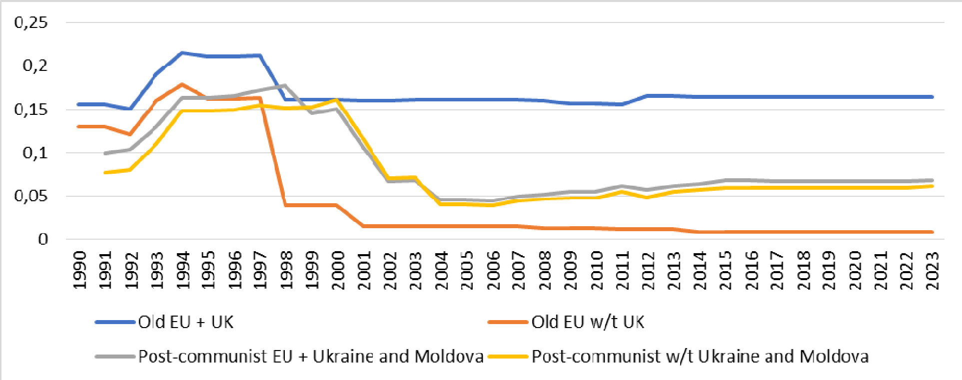
Preparations for EU membership have resumed reforms of central bank legislation, as can be seen from Figure 1. Post-communist countries, fulfilling European integration requirements, have resorted to strengthening the status of their central banks. On the eve of 2004, however, such strengthening did not occur on a scale comparable to that of the countries that joined the eurozone in 1999. Moreover, subsequent changes in the status of the post-communist central banks brought them closer to the «old» EU members, but did not surpass them.

The differences in the institutional trajectory of strengthening the independence of monetary authorities in the context of the two groups of countries are marked by the group variation indicators of the values of the selected index (Figure 2).

As can be seen from Figure 2, in the early 1990s, the standard deviation of the central bank independence index for the group of «old» EU members was significantly higher than for the group of post-communist countries. The exclusion of the United Kingdom, known for its low formal independence of the Bank of England (while apparently having a high actual independence), from the sample still leaves the «old EU» group more variable. This confirms that in the early 1990s, for these countries, the historical tradition was still preserved in the format of national legislation. In contrast, this was not the case for the post-communist countries, whose central bank legislation was developed in a different environment and based on the experience of other emerging markets.

Figure 2

StDeviation of CBI Index and Eurointegration



Source: created by the author based on data in Romelli (2024).

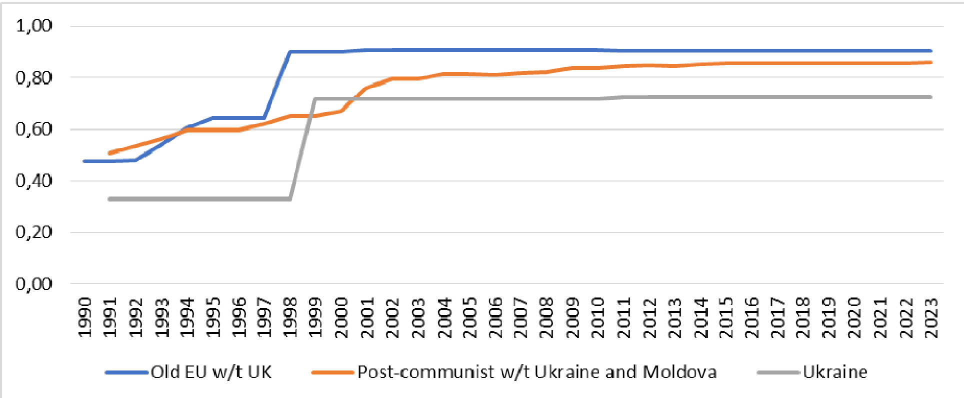
However, the situation changed with time. Membership in the eurozone caused a significant drop in the standard deviation of the index for the respective group of countries. There is a significant difference in the values of this indicator for the group of «old» EU members with and without the UK. In other words, the homogeneity of the group of «old» EU members is ensured by strict formal requirements for membership in the monetary union. As for the post-communist countries, EU membership has also had a significant impact on increasing the homogeneity of the group. However, the standard deviation of the index of central bank independence did not decrease as much as in the case of the «old EU» group without the UK. In fact, over time, this value has even slightly increased, which is not the case for the group of countries that established the Single European currency. This picture is evidence of the differences in the criteria for assessing the level of central bank independence when joining the EU and when joining the eurozone.

The softer requirements for EU membership compared to EMU membership, on the other hand, allow for the strengthening of national factors of choice in favor of a particular level of independence, but not formally lower than that conditioned by European integration requirements. This may explain why post-communist countries after joining the EU tend to have a more pronounced increase in the level of variation of the independence index compared to the increase in the average group value. Such trend is not typical of the «old EU» group. The accession of the Baltic States, Slovakia, and Croatia to the monetary union may explain this pattern. However, examples of populist pressure on each central bank in post-communist countries indicate that the problem of the discrepancy between the actual and formal status of monetary authorities does not automatically disappear with EU membership, at least because the EU itself has not removed the torpedoing of central bank independence by certain political actors from its agenda (Vonessen et al., 2020). The deviation of the actual level of independence from the formal level is to some extent possible where institutions for monitoring compliance with membership criteria are weaker. This expands the space for soft political and economic attacks on central bank independence, not just in the scenario of aggressive populist de-delegation (Gavin & Manger, 2022), but also in the politicization of monetary authority appointments (Ioannidou et al., 2022; Bodea & Garriga, 2022).

As for Ukraine, the data in Figure 3 indicate that there is considerable room for improvement of the NBU legislation and bringing it in line with European standards. Fundamentally, the status of the National Bank of Ukraine does not differ significantly from the established practices of EU countries. However, the combination of deviations from such practices creates a cumulative effect of a significant gap in the levels of formal independence between the NBU and central banks in most member states. This means that changes in the NBU legislation will mostly have signs of tuning rather than radical reform.

Figure 3

CBI Index in groups of EU countries and Ukraine



Source: created by the author based on data in Romelli (2024).

However, Figure 3 shows how low the level of independence of the NBU was, compared to European countries. Naturally, the domestic inflationary experience is quite revealing in this context.

Central bank independence and inflation in post-communist countries

After a period of high and volatile inflation in the first decade of market transformation, during which the institution of central bank independence was still in its infancy, the Central European countries have now entered the period of EU membership with the corresponding adaptation to the Maastricht criteria of institutional convergence. Inflation rates in most post-communist countries have also declined significantly, meeting the current understanding of price stability. The increase in the level of central bank independence and the significant drop in the variation of its values in the «new» EU group should raise the question of how relevant the inverse relationship between inflation and formal central bank independence is in the context of European integration.

Even if we assume that there is a certain gap between formal and de facto independence (which should not be significant under the EU monitoring instruments), reforms aimed at strengthening the status of monetary authorities should weaken the relationship between the independence index and inflation. As inflation declines, sectoral shocks become more important. The role of the common factor in price behavior increases with tight economic integration. The above is an additional structural argument that the tightness of the relationship between inflation and central bank status in a limited group of CEE countries should be weakening.

In other way, the global economy has faced a number of disinflationary and pro-inflationary shocks in recent years, the response to which allows for differences in central bank preferences, which should have resulted in more pronounced differences in inflation paths. Supposing that such central bank preferences stem from status (exogenous) or reflect society's choice of status (endogenous), there is still room for the theoretically predictable inverse relationship between the independence index and inflation.

The empirical test confirms that European integration does not weaken the structural preconditions for an inverse relationship between the respective variables. The relationship between the cbie_index (see above) and inflation (data from the World Bank and IMF) is tested by period. Period 1 – 1991-2001 (Figure 4), which is characterized by the completion of the market transformation stage and high inflationary instability. Period 2 – 2002-2023 (Figure 5), which covers the preparation for membership in the EU. At the same time, the division between periods 1 and 2 is due to the fact that it was in 2002 when the formal independence of central banks in Central and Eastern Europe began to be significantly strengthened (Figure 1). Period 3 – 2002-2008 (Figure 6), which is characterized by a spiral of global imbalances and accelerating inflation on the eve of the global financial crisis. Period 4 – 2009-2023 (Figure 7), which is characterized by several opposing inflationary trends. The post-crisis deflationary bias, the covid shock, and the post-covid inflationary explosion. This periodization and the choice to use average inflation over the period as the dependent variable allows us to see whether there are anti-inflationary preferences expressed in the formal status of central banks. The accession to the eurozone by individual countries may also reflect a choice in favor of lower inflation and greater central bank independence, given the stricter conditions for EMU membership than in the EU.

The results of the empirical test (Figures 4-7) suggest that European integration does not replace the status of the central bank by itself, so that even despite the significant requirements for such a status, there is still room for the manifestation of country preferences for inflation and institutional factors influencing the central bank.

First, in all periods, there is a clear inverse relationship between the cbie_index and inflation.

Second, the patterns of the inverse relationship differ across periods. The largest distance is observed between the first period and the other three.

Third, the first period, which covered the hyperinflationary experience, shows a weak but theoretically correct relationship. Representing inflation in logarithmic form still did not allow us to eliminate the significant variation in the dependent variable. However, for periods characterized by such a significant difference in inflationary experience, this is predictable.

Fourth, European integration affects the patterns of the relationship between the respective index and inflation in terms of narrowing the range of fluctuations of the independent variable. For example, period 3 (Figure 6) is characterized by a very high slope of the regression line. But it does not replace the status of central banks, since, as periods 2 (Figure 5) and 4 (Figure 7) show, the form of the relationship becomes more traditional as the variation in inflation widens.

Fifth, the differences in the patterns of feedback in period 3 (Figure 6) and period 4 (Figure 7) can be explained by the fact that inflation shocks had different nature during these periods. Before the global financial crisis, the behavior of inflation did not require differences in inflationary preferences, and European integration created an impetus for the status of central banks to change in the same direction. For this reason, the slope of the regression line is the highest (Figure 6). But in the next period, this angle decreased (Figure 7).

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Figure 4

CBI and inflation in CEE countries (1991-2001)

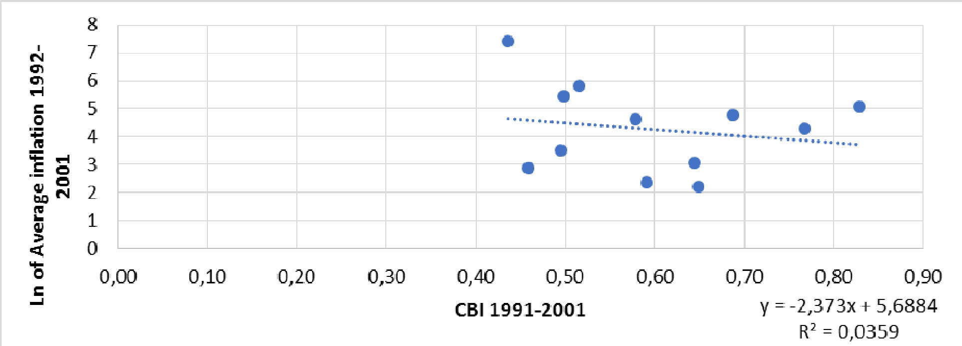


Figure 5

CBI and inflation in CEE countries (2002-2023)

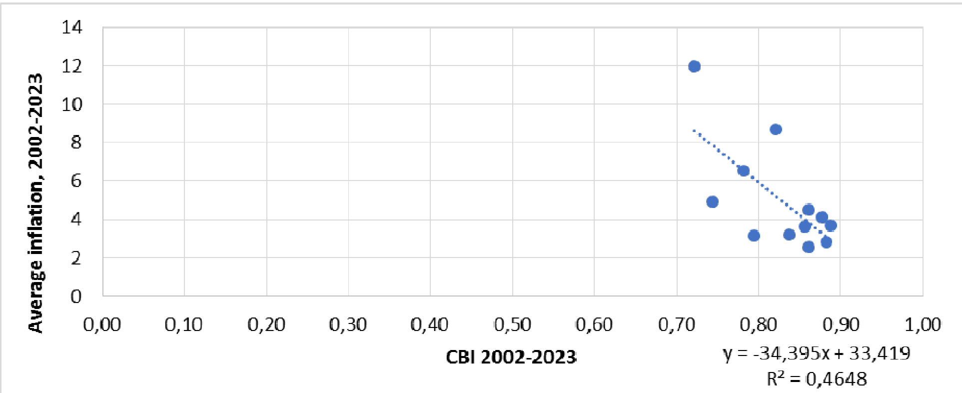


Figure 6

CBI and inflation in CEE countries (2002-2008)

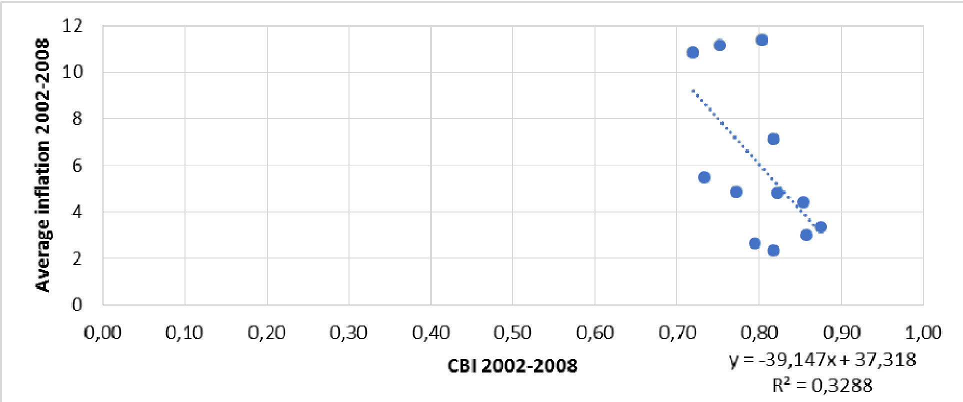
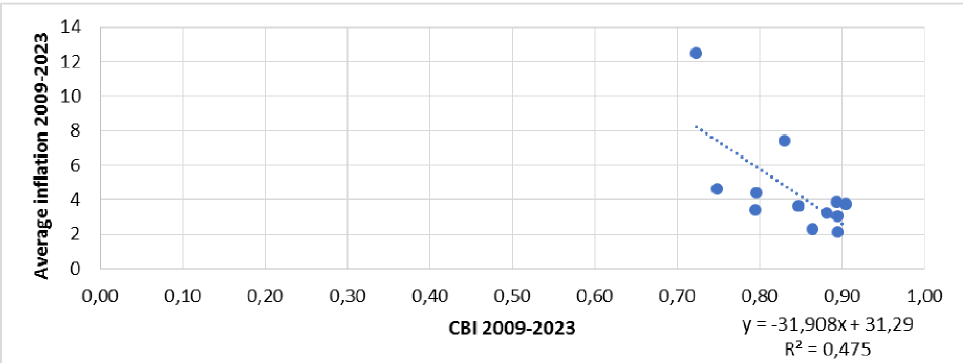


Figure 7

CBI and inflation in CEE countries (2009-2023)



Note: the results presented in Figs. 4-7 can be further detailed.

Clearly, the multidirectional inflation shocks allowed country differences in central banks' inflation preferences and in the institutional design of society's inflation preferences to emerge (including membership in the eurozone). Even though the variation in the variable denoting the formal status of monetary authorities is a subject to European integration restrictions, it is sufficient to see the theoretically predictable inverse relationship between this variable and inflation.

The findings demonstrate that European integration affects the patterns of the relationship between central bank status and inflation, but not the direction of the relationship, which remains consistent with the conventional wisdom. Thus, on the one hand, the fact of EU membership has a strong impact on reforms aimed at strengthening central bank independence. On the other hand, there is still room for country's preferences on how price stability will be ensured. This means that European integration alone cannot substitute for central bank independence.

Conclusions

Throughout the 1990s and 2000s, strengthening central bank independence remained a central point of structural reforms aimed at creating a solid institutional foundation for macroeconomic stability. European countries have followed this trend. Moreover, they set it. European integration, with its formal criterion of monetary authority independence, has become a powerful incentive to strengthen the formal status of the respective institutions. Nevertheless, the institutional trajectories of increasing the independence of central banks in the process of European integration differ significantly between the «old» and «new» EU.

Such distinctions relate to: initial levels of independence; ex post and ex ante enhancement; the level of enhancement determined by membership in the eurozone or only in the EU; and the space for preserving country preferences for the positioning of central banks in the institutional coordinates of macroeconomic policy. It was found that the «old» EU countries formed a more heterogeneous group on the eve of the European integration, pushing to strengthen the independence of their central banks. However, reforms of their status were more radical. They form a more homogeneous group with a higher level of formal independence as members of the eurozone. In contrast, the countries of the «new EU» started from a position of higher formal independence, with the first impetus for reforms determined by the logic of market transformation and only later adding European integration requirements. Their implementation has significantly strengthened the status of monetary authorities, but differences in the requirements for EU and EMU membership have left room for country variability.

Evidently, European integration is a powerful factor in the exogeneity of central bank independence. However, an empirical test of the relationship between it and inflation on the example of Central and Eastern European countries allowed us to clarify this statement. The existence of an inverse relationship confirms the traditional view of the role of the monetary authorities' status in ensuring price stability. The inverse relationship between the relevant variables indicates that European integration alone cannot substitute for the status of monetary authorities and its actual reading in the process of political and interinstitutional interactions. Country preferences regarding the institutional design of monetary policy and preferences of the central banks themselves can manifest themselves even though European integration, through formal criteria, defines a certain minimum for central bank independence, and this minimum is quite high.

The NBU's formal status indicates a fairly high level of independence, but it is hardly sufficient by the standards of the EU experience. Strengthening the NBU's independence is likely to be accomplished through tuning rather than radical changes. However, this does not mean that the progress on certain elements of independence can be neglected.

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