

**Macroeconomics**

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**INSTITUTIONAL BARRIERS  
TO THE ANTI-INFLATION EFFICIENCY  
OF INDEPENDENT CENTRAL BANKS:  
A POLITICAL-ECONOMIC ANALYSIS**

**Abstract**

The paper reviews institutional factors of independent central banks success. This problem is rooted in cases when fractionalized societies and societies with weak institutions adopt autonomy of central banks mostly legally. It is highlighted that lack of rule of law and fractionalization of society may be viewed as competitive hypotheses to explain why actual independence deviates from legal one. The paper establishes that increase in the level of central banks independence without political support for independent monetary policy is possible only if institutional quality reaches the necessary threshold that is sufficient for activating structural reforms but insufficient for ensuring that there is no influence on the policy from the side of different institutional distortions. It is found that political regime, rule of law and structure of society constitute more complicated institutional framework for independence of monetary institutions. Due to this, the main question is whether the central bank is included in the limits of oligarchical consensus or not. If yes, then the rule of law does not matter for acquiring legal independent status. If no, then the rule of law is the core requirement for actual independence.

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Moreover, the rule of law in most cases may compensate the problem of structural heterogeneity of the society.

### **Key words:**

Central banks independence, inflation, monetary policy, fractionalization of society, rule of law, institutional quality.

**JEL:** E58, E59, O23, Q33.

### **Introduction**

The inverse relationship between central bank independence and inflation is considered the norm. Recommendations for structural reforms in the field of macroeconomic policy are formed based on this. Most of the reforms initiated in the last two decades have indeed concerned strengthening the institutional capacity of monetary authorities. However, the predicted – inverse – relationship is not always present.

The lack of a predictable link between central bank independence and inflation has traditionally been attributed to the difference between de-jure and de-facto status. No less traditionally, increasing level of independence is associated with the quality of institutions, in particular, the «quality» of democracy. However, the question remains as to what additional factors determine the fact that in some societies, the difference between the legal and actual status of central banks is virtually absent, and in others – it is huge. Why can such differences be significant for inflation?

A number of institutionally oriented surveys have shown that the societal structure affects macroeconomic processes by influencing the macroeconomic policies of group interests. The fractionalization of society may be the explanation for this (Alesina et al. 2002). On the other hand, we can theoretically assume that the quality of institutions, such as the rule of law, effective governance, can compensate for the problem of fractionalization of society. In other words, institutional factors can be a serious obstacle to the anti-inflationary function of independent central banks, and political inclusion and public trust can reduce the role of legal

changes in the status of monetary authorities if there is social homogeneity of preferences for optimal inflation. This requires a deeper understanding of the problem and the structuring of theoretical positions to explain the failures of monetary authorities to maintain price stability.

This paper is structured in the following way. The second part reviews the literature on the institutional aspects of the relationship between central bank independence and inflation. The third part provides a theoretical description of which institutional distortions may affect the nature of this relationship. The conclusions summarize the results of the research.

### **Literature review**

Macroeconomic arguments in favour of central bank independence are usually based on the theory of dynamic inconsistency (Kydland and Prescott 1977) as a source of inflationary bias and the Barro-Gordon model (Barro and Gordon 1983). In empirical terms both early (Grilli et al 1991), and recent studies confirm the inverse connection (Lybeck 1998; Jacome 2001, Jacome et al. 2005, Arnone M. et al 2006-2007). However, the specification of the index is important, as Siklos shows (2002, 2008). Deviations from the inverse relationship also occur, and its closeness may be caused by both the structure of the index and the extent to which the actual status of central banks corresponds to their legal standing (Cukierman et al 1992, Eijffinger and Schaling 1993).

Changes in the status of central banks are analysed in terms of the development of democracy and the effectiveness of governance. Dincer and Eichengreen (2014) note a more significant increase in transparency in developed countries compared to middle-income countries, which have also taken a step forward in protecting their central banks. Other studies positively correlate the higher level of monetary authorities' independence with the quality of institutions, noting that such countries are more inclined to a flexible exchange rate. (Arnone et al. 2007; Crowe and Meade 2008).

These positions can be considered a textbook view of the relationship between central bank independence and inflation. There are obvious alternatives to this view. For example, if a country has not experienced an inflationary shift, then dynamic inconsistency does not seem like an argument in favour of higher levels of legal monetary autonomy. Under the contract approach, it is clarified that the «specialization effect» and the «experience curve» may be the reason for political choices in favor of establishing monetary institutions with independent status (Crowe 2006, Eggertsson and Le Borgne 2003, 2007). The contract approach can be considered part of a broader theoretical view on the political nature of monetary authorities, although this follows directly from its macroeconomic func-

tionality. The autonomy of monetary bodies is either a product of the genesis of political branches of power, the distribution of powers between them or the product of attempts to facilitate the creation of viable coalitions. Competing players establishing control over monetary institutions is more likely to prevent a fundamental political compromise than to facilitate it, as shown by Crowe (2006), Eggertsson and Le Borgne (2003, 2007). Therefore, removing central banks from the coalition negotiations and giving them autonomous status can improve the likelihood of achieving long-term redistributive status quo in society.

There are other examples of alternative views of the problem. Studies can be divided into those that focus on the problem of the weak link between the level of legal independence of central banks and inflation, and those that consider the institutional factors that shape the structure of society.

Thus, some critical limitations are as follows. While empirical tests show a weak inverse relationship, the independence of central banks cannot be considered a theoretical predictor of lower inflation. Problems with the statistical stability of relationships, sampling, or the time period during which such relationships are identified (Eijffinger and Schaling 1993, Siklos 2008) may shake the trust in the independence of central banks. We also cannot rule out other factors of inflation levels and volatility country by country. Monetary regimes and economic structure are important. For example, fixed exchange rates may reduce inflation variation, and higher openness may encourage macroeconomic policies of more restrained nature. Raw material dependence is often seen as an additional factor in inflation vulnerability. Taken together, these factors mean that central bank independence is not key in explaining the difference in inflation conditions across countries.

Criticism that emphasizes unconvincing empirical results remains theoretically limited. In particular, the institutional side of the problem is ignored. Institutional analysis makes it possible to identify the structure of motivations for choosing a legal status of central banks as well as the motivation for the actual behaviour of monetary authorities regardless of the legal status. For example, Cukierman (1992), Cukierman et al (1992) emphasize the need to distinguish between legal and actual independence of central banks, proposing a different approach to its assessment by calculating the rate of turnover of central bank governors.

On the other hand, the choice in favour of a particular status of central banks reflects the nature of social trust in society. Berggren et al (2012) state that a higher level of legal independence of central banks can occur in countries with both low and high levels of social trust. In the first case, it will be a kind of compensation for the inefficiency of the institutions of collective action. In the second situation, it is the evidence that social choice corresponds to the design of authority institutions, i.e. it is a consequence of the democratic institutions' effectiveness.

The contract approach emphasizes the differences in the legal and actual independence of monetary authorities (Loungani and Sheets 1997), necessitating the inclusion of additional institutional factors into the analysis of the problem. There are several lines of research that focus on why legal independence does not mean actual independence, or what is additionally required for inflation to be inversely correlated with a higher level of central bank autonomy. Berger et al (2001) argue that an independent central bank needs a leader with inflationary preferences that are lower than public ones. Moser (1999) emphasizes the problem of «second round commitment». Keefer and Stasavage (2003) find that central banks that are more independent are the result of a political system with a better balance of checks and balances. Eijffinger and Stadhouders (2003) indicate that the rule of law is the factor that minimizes the differences between legal and actual independence. Nurbayev (2017) also proves empirically that the inverse relationship between central bank independence and inflation occurs where the rule of law prevails.

Research in this area indicates the importance of legal factors in analysing the effectiveness of central banks. Hayo and Voigt (2008) believe in the assumption that the level of independence of the judiciary is one of the actual manifestations of the rule of law, like how the index of Cukierman is a measure of actual rather than legal independence of central banks. They demonstrate that the index of judiciary independence developed by them inversely corresponds to the level of inflation. However, it also inversely corresponds to Cukierman's index. That is, the level of independence of the judiciary directly causes an increase in the actual level of independence of central banks. At the same time, the direct impact of the judiciary independence on inflation is stronger compared to its indirect influence due to the addition of a variable on the actual independence of central banks. Changing the index of judiciary independence to a variable of legal trust (from the World Values Map) does not affect the result. In other words, the rule of law should strengthen the inverse relationship between inflation and central bank independence in one dimension or another.

Another area of institutional analysis is the study of the social homogeneity's impact on economic growth and the quality of institutions. Here we can also focus on the design of macroeconomic mechanisms and their relative efficiency. For instance, Easterly and Levine (1997), Mauro (1995), La Porta et al (1999), Alesina et al (2002) reveal the negative impact of society's fractionalization on GDP dynamics and governance efficiency. The main reason is that in fractionalized (linguistically, ethnically, racially, etc.) societies there is a high level of mistrust between groups. Their ability to compromise is low, which negatively affects the formation of institutions designed to provide governance and macroeconomic solutions aimed at the well-being of society as a whole. In some cases, fractionalization leads to overtly redistributive policies and radical inter-group confrontations that make sustainable economic growth impossible. Aghion et al (2002) demonstrate that in fractionalized societies, certain groups seek to impose restrictions on political freedom in order to control or expropriate the welfare of

other groups. As a result, democracy is more likely to be highly developed in homogeneous societies. Although it cannot be ruled out that the more developed democracy can reduce the extent of inter-group conflicts, such a result requires a more general institutional maturation. Alesina et al (2002) emphasize that ethnic fractionalization is the most macroeconomically and institutionally significant kind.

The idea of fractionalization of society is used to explain why less homogeneous societies are incapable of fiscal restraint and are vulnerable to excessive debt. Crivelli et al (2016) state that the greater heterogeneity of society is transferred to the efficiency of governments and parliaments, as a result of which the political structure of society does not contribute to the development of macroeconomically responsible fiscal decisions. This problem can be extrapolated to central banks. In particular, it can be assumed that in less homogeneous societies the effectiveness of measures against inflation will be limited by inter-group confrontations. Even if the central bank is legally independent, the low quality of institutions, which is a consequence of inter-group conflicts, will not allow it to realise its mandate due to either direct pressure or pro-inflationary fiscal policy. Koziuk (2019) confirms this hypothesis on the example of post-socialist countries, pointing out that the deviation of inflation from the inverse relationship with the level of central bank independence should be associated with such an indicator of society fractionalization as Fractionalized Elites Sub-Index of Fragile State Index.

The works mentioned above emphasize the additional institutional factors that give real meaning to the independence of monetary authorities. In contrast to them, Gollwitzer and Quintyn (2010) are more cautious in their conclusions. Institutional quality indicators may be inferior to the level of monetary authority independence when it comes to explaining inflation. They focused on quantifying the threshold conditions for the transition from a natural state to an open-access order (according to the definition of North, Wallis, Weingast, given in *Violence and Social Order*). This approach allowed them to look at the rule of law in the dynamics of broader institutional change. In conclusion, they state that the stage of approaching the open-access order is not so important for the success of the independent central bank in combating inflation, but is extremely important for the emergence of fiscal institutions (fiscal councils) and their ability to reduce budget deficits and public debt.

From the literature review, it follows that the question of the direction of the relationship between the level of autonomy of monetary authorities and inflation continues to be debated; deviations from the inverse relationship are analysed mostly in the institutional context; there is no homogeneity of views on which of the institutional variables can best explain diverging cases. The aim of the article is to deepen the understanding of institutional factors in explaining why independent central banks do not always achieve price stability. In particular, it is emphasized that the rule of law and the fractionalization of society can be competing hypotheses based on which cases of failure of independent monetary au-

thorities are analysed. At the same time, consideration is given to the idea that the connection between the political regime and social heterogeneity and the rule of law may be more complicated and, thus, generate preconditions for differences between the actual and legal status of central banks.

**Research results:  
theoretical explication of the interactions  
of central bank independence,  
inflation and institutions**

The mid-1990s debates (Cukierman 1992, Cukierman et al 1992, Eijffinger and Schaling 1993) over the nature of the relationship between monetary authority independence and inflation were based on empirical arguments. Proponents of opposite positions argue that the results are determined by the limited set of countries in the sample. Later studies, using a large number of countries, reveal more complex modalities of relationships (Dincer and Eichengreen 2014), paving the way for the expansion of analysis through institutional factors. The latter allow us to focus less on the basic principles of the impact that the status of monetary institutions has on macroeconomic processes, and more on deepening the understanding of the causes of deviations or changes in the central bank independence over time.

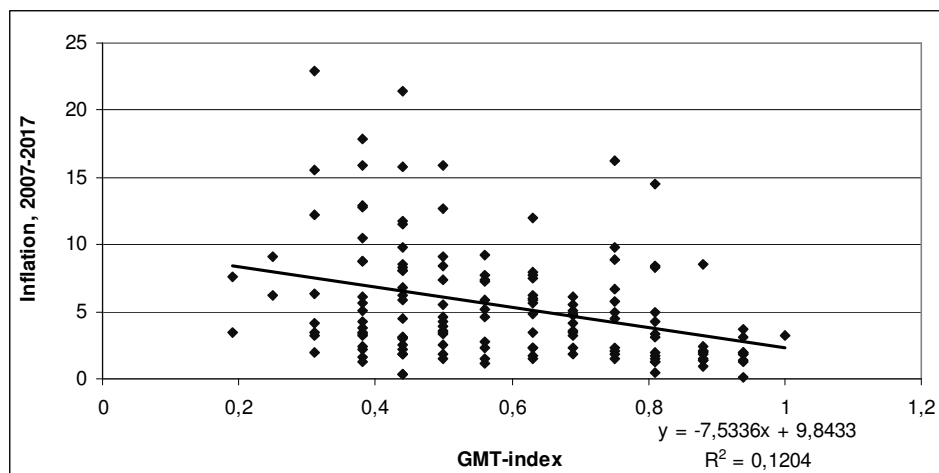
A simple empirical example of 150 countries (Figure 1) is a clear confirmation that the presence of traditional inverse patterns between relevant variables and deviant cases requires a broader understanding of why less independent central banks can be more successful than ones that are more independent.

As can be seen from Figure 1, deviations down from the trend in the zone of low values of GMT-index are smaller than the deviation upwards – in the zone of higher values. The largest upward deviations in the zone of low values of the central bank's independence index are most likely a reflection of how weak institutions generate poor macroeconomic policies. In the countries that are similar in terms of the low level of autonomy of their monetary institutions, inflation is caused by more or less the same factor – bad policies. Figures 2, 3 and 4 show that inflation inversely corresponds with the rule of law (Rule of Law Index from World Bank) and directly – with the heterogeneity of society (Fragile State Index from Freedom House, Ethnic Fractionalization Index from Alesina et al, 2002). In other words, it can be argued that higher inflation is more likely to occur where central bank independence is lower, the rule of law is not respected, and society is more heterogeneous. This pattern can be considered basic in type: there are factors that affect the maintenance of weak institutions; the latter determine the framework conditions of bad policy, which results in higher inflation. However, as

in the case of Figure 1, higher inflation also occurs in more fragmented societies (Fig. 3-4), and is less likely to occur where the rule of law prevails (Fig. 2). It seems that the rule of law can better explain better policies. Nonetheless, this does not answer the question of why countries with similar inflationary preferences may have different designs of monetary authorities, and why countries with different levels of inflation may delegate a high level of independence to central banks. In the first case, we can assume that the main thing is not so much the design of monetary institutions, as the introduction of public preferences for inflation into the practice of central banks. Theoretically, as Berggren et al (2012) show, this is achieved only in situations with a high degree of social trust. Moreover, such trust should be synergistic. Society trusts the central bank, and the latter does not try to behave opportunistically, although it is better to say – politicians do not try to use the central bank for their individual needs. However, in the case of the already delegated level of independence, the situation is different. The very fact of such a delegation may reflect a formal political response to identified public preferences, but it also may not. In societies with high social trust, the former will occur, as politicians behave in accordance with social preferences. However, in case of low social trust, the independence of the central banks is in a different institutional environment, at the very least because low social trust is institutionally conditioned.

Fig. 1.

### Central Bank Independence and Inflation Globally

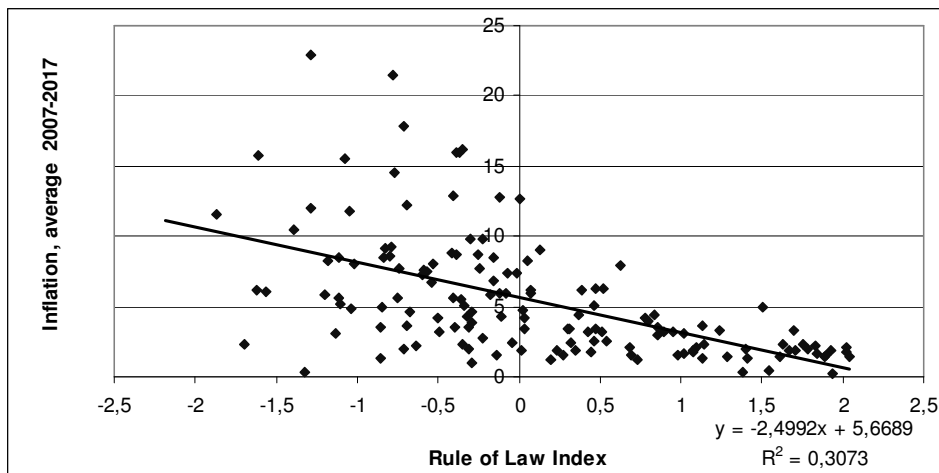


Note 1. Created by the author. Inflation data – IMF. GMT index data is updated on the basis of Crowe and Meade (2008).



Fig. 2.

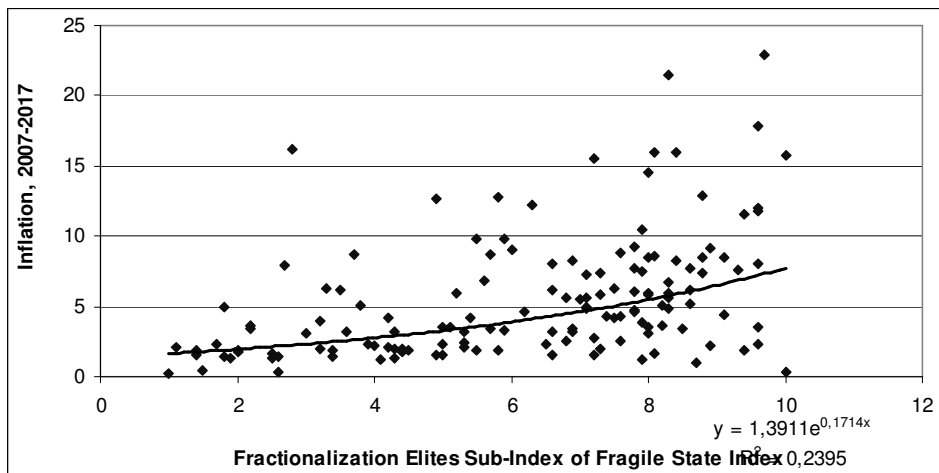
**Rule of Law and Inflation Globally**



Note 1. Created by the author. Inflation data – IMF. Data on the Rule of Law Index – World Bank.

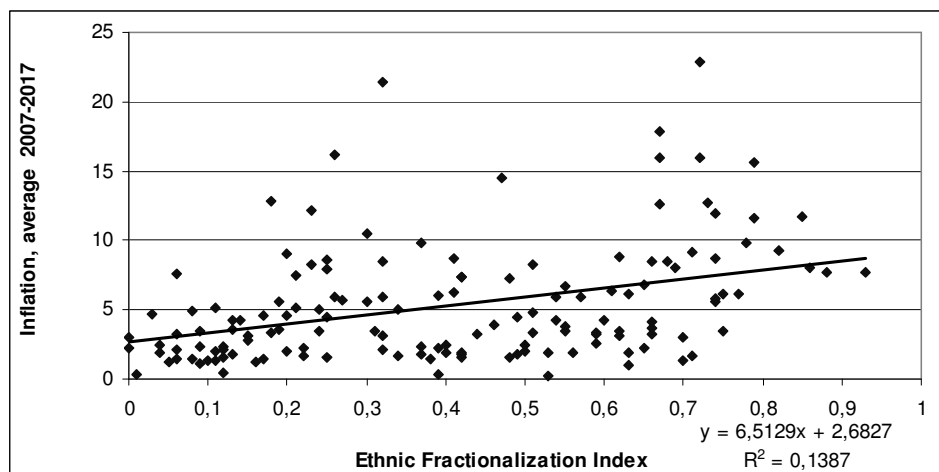
Fig. 3.

**Fractionalization Elites and Inflation Globally**



Note 1. Created by the author. Inflation data – IMF. Data on Fractionalization Elites Sub-Index of Fragile State Index – Peace Foundation.

Fig. 4.

**Ethnic Fractionalization and Inflation Globally**

Note 1. Created by the author. Inflation data – IMF. Data on the Ethnic Fractionalization Index – Alesina et al (2002).

Is the lone fact of central bank independence enough to give anti-inflation policy solid foundation? A number of institutionally oriented investigations indicate that there are not enough changes in the legislation. A number of points that can be distinguished.

To reduce inflation, it is not enough to legislate the level of independence unless, at the same time, the head of the central bank is an economic agent with lower inflation preferences, not unlike a «conservative central banker» a la Rogoff (1985). This position, expressed by Berger et al (2001), suggests that legal status is needed for the institutional protection of the «conservative» head of the central bank, and conservatism itself is needed to give such status with real meaning. Otherwise, either the status will be replaced by inflationary indulgence, or the «conservative» head of the central bank will have no formal basis for political confrontation with opponents of the pegged monetary exchange rate. The weakness of this approach is the lack of clarity on the incentives to combine both legal independence and the appointment of a «conservative» leader. Adolph (2013) proposed a solution to this problem by assuming: the presence of a «shadow principal» who determines the career prospects of the head of the central bank after the end of his term; «conservative positions», the probability of obtaining which increases in the case of anti-inflationary success achieved by the

former head of the central bank. However, why there are areas of political and business activity that reward past «conservatism» remains an open question within this approach. It is possible that the opposite situation will occur when tougher anti-inflationary preferences will not be respected if most political players prefer opportunistic behaviour, or are openly populist. The availability of other benefits from a more independent central bank, such as lower budget deficits, lower public debt, lower vulnerability to financial crises, etc., is more a consequence of the choice in favour of a certain institutional modality of monetary authority than an incentive to make it. De Haan and Eijffinger (2016) confirm, for example, that such benefits from central bank independence occur in democracies rather than autocracies in their review.

There is also a problem of «second round commitment». Moser (1999) indicates that the country can choose to increase the level of independence of the central bank, but this does not mean automatic changes in the institution of independence. There are many ways to frustrate the formal status of monetary authorities to please political players, re-elected governments, and so on. The success of anti-inflationary policy will depend on whether independence is pursued in practical policy. This requires the existence of a certain institutional environment, which creates a natural pressure towards rapprochement between formal status and practical actions. One of the elements of such an environment is a system of checks and balances. According to Keefer and Stasavage (2003), a more (de facto) independent central bank may appear where there are several veto players. The absence of one or two veto-wielding political players makes the independent central bank's anti-inflationary policy more successful. This means that the structure of the political system is important in understanding how decentralized political power is and what checks and balances are available that can ensure that political players do not manipulate the veto power and turn it into a way to maximize their own rather than public welfare. A similar view was expressed by Acemoglu et al (2008), arguing that in political systems with soft and rigid institutional constraints, increasing central bank independence should not be expected to have a positive anti-inflationary effect. Hielscher and Markwardt (2012) point to the importance of democratic accountability and political stability in giving central bank independence real meaning successfully. Free press as a manifestation of the quality of democratic institutions and the «operational» component of the system of checks and balances also has a positive effect on the ability of an independent central bank to reduce inflation (Bodea and Hicks 2014).

The analysis of Moser (1999), Keefer and Stasavage (2003) shows the special significance of the connection between informal institutions and the structure of political power. In this context, the central bank's independence will be given real meaning not only because it is the result of the consent of competing political players, limited by mutual checks and balances, but also because there are real legal mechanisms that can be appealed to in defence of independence.

This suggests that the rule of law should be an additional factor that would guarantee an inverse relationship between the level of independence and inflation.

The inclusion of the Rule of Law Index in the analysis has broadened the institutional parameters of the problem. Eijffinger and Stadhouders (2003) empirically demonstrated that the rule of law has a direct positive effect on reducing inflation and, also, strengthens the inverse relationship between inflation and the level of legal independence of the central bank. Gollwitzer and Quintyn (2010) do not object to the positive effects of quality of legal institutions variable on inflation. Nurbayev (2017) confirms that the rule of law variable is strongly inversely related to inflation for 182 countries, regardless of the level of GDP per capita, the level of openness or vulnerability to crises. At the same time, the level of central bank independence is significantly inferior in importance to the impact on inflation. It can be assumed that the reason for such results is the chosen index – CWN, which often contrasts, for example, with the GMT-index in terms of explaining the inflation rate.

It can be agreed that changes in the legislation alone do not guarantee the meaningfulness of independence. However, of particular interest is the question of why societies that have already agreed to a legally higher level of autonomy for their monetary institutions are unable to generate sufficient political demand for such institutions conducting themselves in accordance with the mandate delegated to them. The problem of «second round commitment» posed by Moser (1999) is much more complicated. In other words, the country has already developed a certain inflationary experience, which potentially does not satisfy political elites not because it does not maximize public welfare, but because high and unstable inflation reduces loyalty and worsens electoral prospects, resulting in certain structural changes focused on macroeconomic stability.

It is from these perspectives that the influence of international organizations is often seen as an important reason why countries agree to increase the level of central bank independence (for example, since the late 1990s, this has become standard IMF practice). External pressure may originate from membership in integration associations that are built around the principles of macroeconomic discipline. In both cases, a political coalition in support of changes in the actual status may not form when the change in the institutional status of the central bank seriously affects the redistributive status quo in the country, or directly weakens the political dominance of any given political player. The tendency towards lower level of central bank independence in resource-rich countries, and especially in oil-producing countries, confirms this. It follows that the agreement for the change reflects at least a few points all on its own.

A) Countries agree to the changes because they are associated with structural reforms. The anticipation of their results will increase the electoral attractiveness of certain political groups or certain political actors. This situation can be considered a rational choice made in a situation where the status of the central

bank was not a priori rigidly tied to the redistributive status quo in society. But even then, there are situations where a rational choice for a more independent central bank is a case of asymmetric depth of structural reforms, generating a «swing effect» (Acemoglu et al 2008).

B) Political elites agree to changes in the status of central banks if they are making a move in a long game. In the case of medium-term balance of payments problems, the implementation of programmes with international donors may be accompanied by the implementation of a package of structural reforms. However, with a more complex configuration of institutions that implicitly regulate the behaviour of key political actors, such reforms are most likely a formality. In this situation, legal changes are more likely to reflect the long game of the ruling elite. It can be assumed that in these situations there is a sufficient level of confidence that legal changes will not affect the actual role of the central bank in the institutional format of macroeconomic policy. This level of «intertemporal confidence» can occur when there are no convincing expectations that legal changes in the status of the central bank will be a prerequisite for weakening the position of the ruling elite. In other words, these are cases of soft autocracies, which, on the one hand, are ready to reform in many directions, but on the other hand, cannot abandon the centralization and hierarchies that determine the political regime. For example, in Algeria, Kazakhstan, Azerbaijan, the legal level of autonomy of central banks is higher than average (GMT-index). Given the ability of such regimes to minimize the cost of budget negotiations, either steps to change the status of the central bank are dictated by rather random external events or monetary reforms have taken place before the ability to minimize the cost of forming budget coalitions.

C) Political elites agree at random under the pressure of circumstances and therefore do not distinguish between the consequences of legal changes and established practices. Because of this, there is no single «beneficiary» from an institutionally strong central bank. It can also be assumed that it is not necessary to distinguish between the consequences of legal changes and established practices in the case when one or another political force expects to «take over» the central bank for electoral purposes. Alternatively, the central bank is being used to limit political competitors. However, given that inflation and financial instability bring some electoral discomfort, the implementation of policies aimed at macroeconomic stability becomes politically motivated. From this follows a return to the classical problem of dynamic inconsistency. In other words, electoral constraints in the form of losses from price and financial instability, on the one hand, and electoral competition through an «enthusiastic regulator», on the other, determine the potential range of tolerance for a politically weak central bank, even if its legal status is different. It is not difficult to guess that these are cases of weak democracies, or countries with developed democratic regimes, but with a political bias towards populism. Admittedly, in such countries it is possible to change the status of the central bank in both directions, but again within a certain politically optimal range. Romelli (2015) cites the example of Argentina, where recent cen-

tral bank reforms both strengthened and weakened its independence in turn. However, as Bodea and Hicks (2014) show, the level of central bank independence has not declined since the global financial crisis, although Masciandro and Romelli (2015) emphasize the opposite. De Haan and Eijffinger (2016) indicate that the differences in trends are explained by the fact that the CWN index and the GMT index specify different forms of responsibility for financial stability.

The first and especially the third case depict the situation in the categories of political behaviour. This needs to be supplemented by identifying the reasons for such political behaviour or lack of restrictions on such behaviour. The case of the discrepancy between legal and actual status with negative inflationary consequences is special because the described political behaviour may be the result of more complex and often hidden processes caused by the heterogeneity of society. Political actors do not endogenously seek to maximize the well-being of society as a whole. Deviation of the actual status from the one prescribed by law also means there is no structure to the rights and responsibilities of political players, which would encourage them to follow the letter of the law. The correspondence of checks and balances can also be purely formal if political actors rely on a conventional understanding of the inefficiency of formal coercion or legal punishment. Otherwise, there would always be groups that would consider a return to formal demands to be an electoral doctrine, thus creating political pressure on opponents. That is, if the existing legal statuses of institutions behave in accordance with the implicit set of regulators of political behaviour, it only means that each of the potential beneficiaries of such a situation is ready for the status quo as a prerequisite for a likely monopolization of political power or strengthening dominance. This suggests that the rule of law itself may be frustrated by tensions between political actors, and the motives for their behaviour are fuelled by the scale of differences between them. It is in this context that the negative impact of social fractionalization on the quality of institutions is described (Easterly and Levine 1997, La Porta et al 1999, Alesina et al 2002, Aghion et al 2002).

However, in the case of central banks, the situation is complicated by the direct and indirect effects of negative feedback between social fractionalization and the quality of institutions. For example, Hayo and Voigt (2008) emphasize the direct and indirect effects of the rule of law on the macroeconomic situation and the efficiency of central banks, but consider only the judiciary independence as a proxy for the quality of institutions. As the fractionalization of society can be a factor in the quality of institutions, and conversely, the quality of democratic institutions can offset the negative effects of fractionalization through broad political and economic inclusion, direct and indirect effects of institutional factors on central bank efficiency should be considered in more detail.

First, as shown above, the fractionalization of society directly affects the inability to build political institutions through which the rule of law is ensured. There is a direct link between the rule of law and economic growth – the positive impact of the quality of institutions on increasing potential GDP by minimizing

transaction costs, protecting property rights and, consequently, encouraging investment, incentives for savings and long-term planning, innovation, reducing financial intermediation. In this regard, the impact of fractionalization on economic growth may be mediated by the quality of institutions consistent with inclusiveness and allocation efficiency. Hence, the more homogeneous a society is, the higher number of institutions that encourage economic growth. Such society is also less likely to be dissatisfied with the economic situation and less likely to put pressure on the central bank to create incentives on the demand side.

Second, fractionalization can generate open conflicts. Intergroup violence can encourage attempts of monopolizing power to ensure security. Conflicts and political instability negatively affect the economic potential, or even openly provoke the involvement of the central bank in the financing of violent actions.

Third, fractionalization complicates the ongoing political processes and generates significant costs for coalition negotiations. Even assuming that conflicts of this type are neutral in ensuring the rule of law, in all likelihood, intergroup tensions undermine fiscal responsibility, create attempts to shift the burden of economic losses, and thus exacerbate the risks of accelerating inflation through debt instability. The central bank will end up being fiscally dominant even with a relatively developed legal system.

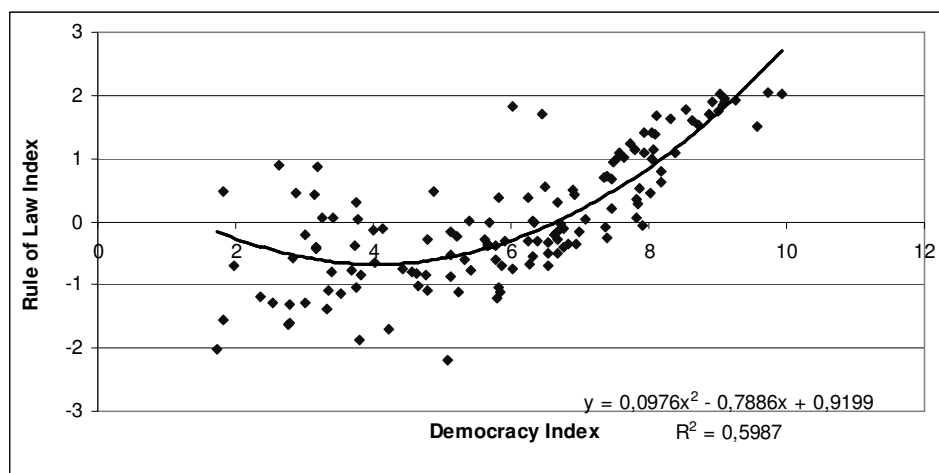
Fourth, the heterogeneity of society leads to increased competitive populism. Manipulation of macroeconomic decisions for the sake of electoral consolidation of a close social group creates a basis for inconsistent policy in the short term. In the long term, such behaviour threatens the loss of political and macroeconomic stability, as it mobilizes the idea of «social revenge». Consolidating one group by deteriorating the welfare of another is more likely to reproduce political instability, as the likelihood of a change in the ruling coalition and a new round of redistribution increases each time. The urge to control the central bank will become part of ensuring dominance, and the higher inflation tax passed on to society as a whole will be offset by alternative ways of influencing the welfare of the dominant group. As a result, higher inflation and dissatisfaction with it will co-exist with implicit compensations focused on the welfare of the group that supports the ruling coalition.

Fifth, regardless of the reasons for the lack of the rule of law as a factor in protecting the independence of the central bank, weak institutions of checks and balances impair the ability to achieve price stability due to politically meted out protection of the «conservative leader» of the central bank. In such circumstances, even a small supply shock can provoke political interpretation of deviations from inflation targets. Legally high level of independence becomes a precondition for changing the undesirable leadership of the central bank, and prolonged deviations from inflation targeting can be tolerated under the desired leadership if it does not contradict the electoral goals or direct benefits away from interested political business groups.

Sixth, it cannot be conclusively denied that the rule of law, the fractionalization of society and the nature of the political regime may have more complex and not always obvious connections. Even rather heterogeneous societies may not fall into the extreme of social conflicts if democratic institutions are sufficiently developed and guarantee some form of political inclusion (even if this does not always convert to economic institutions of open access). However, this does not guarantee that such societies automatically achieve the rule of law, as it can be replaced by informal domination of hidden hierarchies or outright oligarchic manipulation of democratic institutions. The degree of central bank independence in such circumstances may vary widely and depend more on external pressure for reform. In contrast, autocracies can be a form of suppression of social conflicts caused by the heterogeneity of society. At the same time, autocracies can form a specific modality of the rule of law, which is determined by traditionalist regulators of social behaviour (for example, Islamic countries are quite illustrative of this). Figure 5 demonstrates that, among the 150 countries, higher levels of the rule of law occur in countries with both higher and lower levels of democracy.

Fig. 5.

#### Democracy and Rule of Law Globally



Note 1. Created by the author. Data on the Democracy Index – Heritage Foundation. Data on the Rule of Law Index – World Bank.



In such circumstances, the independence of the central bank is likely to be low with relatively good values of the Rule of Law Index, which inherent in many autocracies. One can observe an asymmetric-functional manifestation of the rule of law. The latter can effectively guarantee rights at the private level, but the public level of relations will be governed by a different set of motives and restrictions or restraints. As a result, the central bank will not be party to political conflict, and the lack of its independence will be compensated by minimizing the cost of budget negotiations. In the end, relatively effective institutions of law and price stability will appear as components of an informal social contract between the ruling regime and citizens. The relatively low values of the TOR index and the level of central bank independence along with price stability in a number of resource-rich autocracies (Koziuk 2016, Dreher et al 2007) confirm this hypothesis.

The analysis shows that it is quite difficult to make a clear distinction between the direct / indirect effects of the institutional factors' influence on inflation through the status of monetary authorities if the set of such factors is expanded. In some countries they will be mutually compensatory, and in others – mutually reinforcing. However, it should be recognized that the connections between the political regime, the rule of law and the structure of society are quite complex, due to which the institutional framework of monetary autonomy becomes extremely sensitive to whether the central bank is included in the consensus on social order. This problem is most typical in oligarchic societies, where resource rent, ethnic fractionalization and social stratification generate strong tendencies to create a redistributive status quo based on confrontation / competition of a limited number of strong social actors. Social tensions generated in this way do not always require open confrontation between elite groups. On the contrary, such confrontation often has a latent form. The «oligarchic consensus» is formed by exploiting elites without the participation of legitimate actors who, through official authorities, represent a fractionalized society. In the event that the central bank is considered within such a consensus, the rule of law will not matter for its legal status. The functionality of the central bank is subject to maximizing the welfare of elite groups, but within limits that avoid overt social conflict. In other words, the level of inflation or the stability of the financial system alone will not have an independent significance, as it is more important to subordinate the functionality – monetary instruments or supervisory procedures built into the welfare function of elite groups. When the central bank is outside the «oligarchic consensus», the rule of law is of fundamental importance for its actual independence. This is especially true in cases of social heterogeneity, when certain social actors are inclined to establish dominance because of «capturing» the central bank or directing it based on electoral processes. In other words, it is the combination of the rule of law with a developed democracy that will bring legal and actual independence closer together.

The conducted analysis shows that the institution of central bank independence may have some resilience to the challenges associated with the heterogeneity of society. However, in some cases the fractionalization of society and

the lack of social harmony can be the starting point for the degradation of institutional capacity to ensure price stability through the inclusion of monetary policy in the framework of inter-group confrontation. Of course, it is possible that there is a grouping of countries for which social fractionalization is key in explaining the failures of legally independent monetary authorities (for example, in Koziuk (2019) this is demonstrated by the example of post-socialist European countries). In broad samples, the factors of fractionalization of society may be less obvious, which in turn increases the importance of the rule of law. The rule of law can directly affect the reduction of inflation, increase the potential of the economy, and thus relieve tensions around the political demand for monetary incentives. Of course, it can have a more indirect effect if the system of checks and balances is frustrated and political guarantees of disinflation are not credible. This does mean that the fractionalization of society cannot act as a starting factor for the weak rule of law. However, in the more developed democracies with more pronounced political inclusion, the weakness of this institution is likely to be determined by competitive populism and the lack of interest from political actors in creating effective legal systems. This makes the central bank extremely sensitive to progress in the rule of law.

## Conclusions

The combination of price instability and the legally high level of central bank independence was the impetus for further research into the institutional environment of monetary policy. The additional preconditions for the success of independent central banks in the realisation of their mandate are the appointment of a conservative leader, the system of checks and balances, the development of democratic institutions that bring effective governance, and the rule of law. Given the discussed conditionality of a number of macroeconomic processes and the quality of governance in society, it is assumed that fractionalization and lack of social harmony can create an environment of weak institutions in which even independent central banks are not successful. However, society must be developed and mature enough to accept the increasing independence of central banks, even when it is contrary to the political demand for certain monetary policy. On the other hand, the sources of institutional weakness may be different in various societies. For example, the inclusion of the central bank in an oligarchic consensus makes legal independence insignificant in terms of inflation, while the central bank's removal from such a consensus highlights traditional problems of competitive populism and monetary policy pressure for electoral advantage.

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