# DO INSTITUTIONS INFLUENCE ECONOMIC GROWTH?

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**Abstract**
Economic growth has been the subject of much focus throughout the history of economic thought as it has profound economic, social and political consequences. The sources of economic cycles are surrounded by intense and controversial scientific dispute. In our article, we want to contribute to the institutional economics debate by analysing selected institutional factors and testing their influence on economic growth. On a 2012–2018 dataset, we prove that soft factors such as property rights, freedom of corruption, level of freedom on different markets and other components of the Index of Economic Freedom and legal framework explain the differences in GDP per capita dynamics across countries. We present new evidence on how institutional factors determine economic growth. Unlike previously conducted studies, we use panel data and a set of general control variables in an attempt to respect causal inference. Moreover, we show that the mainstream economic conviction – more economic freedom leads to higher economic growth – fails in some cases, and regulation does not always hamper economic growth.

**Keywords:** Institutions, institutional economics, economic growth, Index of Economic Freedom, soft factors of economic growth
**JEL Classification:** E02, E17, E69

## 1. Introduction

Institutional economics in its modern form began to develop after 1990 when Soto (1989) and North (1991) offered a new approach to the topic of economic growth based on so-called rules of institutional behaviour (*i.e.*, factors) such as legal framework or religion. There was little interest in these factors in mainstream economic theory before the 1990s; however, these so-called "soft" factors may be the cause of variation in economic growth, intensity of convergence and changes in inequality among countries. Although there have always

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been richer and poorer countries, it is well known that the inequality among countries is constantly growing, in some cases at exponential rates. While in times of the Industrial Revolution, the difference between the richest and the poorest countries, measured in GDP per capita, was negligible, it was 68 times higher in the 1960s, whereas now it is 456 times higher. In some countries, the rate of growth has also changed. The era of unprecedented GDP per capita growth in the first half of the 20th century seemed promising. However, in the second half of the century, it failed to exceed 20 years (Parente, 2008). S. Kuznets called this development the "*modern economic growth*" (Parente, 2008, p. 24).

Although economists have been trying to find causes of economic growth, factors that influence it and conditions of its long-run sustainability, to this day we do not have many satisfactory answers. Traditional theories of economic growth concentrate on what are called hard growth factors (*e.g.*, investment and technologies), but many indicators show that conditions under which economies grow experience substantial change. That means that so-called soft factors of economic growth, which include institutions, are important for explaining growth as well as convergence and inequality among countries.

The aim of this paper is to demonstrate the influence of selected institutional factors on economic growth and, by implication, the contribution of institutional economics to growth theory. So-called soft factors (10 parameters of the Index of Economic Freedom) and legal framework are evaluated using panel data.

After the economic crisis of 2008/09, the index became a target of criticism and its methodology was widely questioned. As the idea that capitalism is the optimal economic environment became widespread, economies labelled as average (rather than free) became an increasingly discussed topic. We are talking mainly about the BRIC(S) countries that were only slightly affected by the crisis (Russia) or not at all (China). However, we can also name several developing countries that experienced an improvement in the parameters included in the Index of Economic Freedom during the period of instability.

The econometric model presented here gives results based on their significance for GDP growth. The hypothesis tested is that countries with high freedom indicators (better scores for Property Rights; Freedom from Corruption; Fiscal Freedom; Labour Freedom; Monetary Freedom or Trade Freedom) would have higher growth. The article follows recent research by Procházka and Čermáková (2015), who tested liberalisation of capital flows and foreign trade. However, no correlation between trade openness (and also foreign direct investment) and economic growth in the mid-term horizon was confirmed.

The paper is structured into five parts. Following the introduction, we present a brief overview of the evolution of economic growth theories with a focus on institutional economics theories (Section 2). The third section is devoted to the methodological approach and methods of investigation applied. In Section 4, results from a regression

analysis and panel data models are interpreted and commented on. Comments are divided into two sections, separating two main groups of factors: (i) IEF and (ii) legal framework. Results are summarised in the conclusion (Section 5).

## 2. Contribution of Institutional Economics to Growth Theory

Theories of economic growth have had a long history and can be traced back to the works of classical economy, *e.g.*, Ricardo's model of growth limited to agriculture. Ricardo was the first to tackle identification of growth factors. Later, the development brought Keynesian and Neoclassical approaches and their evaluation using econometric measures as well as mathematical modelling attempts. However, growth theories were based on a series of limiting parameters which only remotely resembled real-life events in the economy. These models operated with a limited number of parameters and only under specific conditions. Solow's growth model (1956), for example, used four variables but fell short of explaining them. Ramsey's model (1928) introduced into the equation unreal parameters in the form of an infinitely long period. Romer's new theory of growth (1990), on the one hand, introduces the R&D sector into the model; on the other hand, it does not explain differences between individual countries. This presents a problem, given that they all have access to the same technologies. A complete overview of growth theories has been assembled by, for example, Barro and Sala-i-Martin (2003) or Blaug (1997).

The shortcomings of existing growth theories in explaining differences among countries, coupled with the inability to lead countries along the path of balanced growth, have resulted in a rise in the popularity of institutional economics and intensive study of the influence of informal and formal rules of behaviour on economic growth since the 1990s. When searching for the influence of so-called soft factors on economic growth, we work with data included in the Index of Economic Freedom (IEF). In accordance with the studies cited below, we believe that these factors can help us clarify the differences among countries. Many authors have focused on other soft factors that fall into the category of formal and informal rules of behaviour. Besides legal framework, we can name cultural differences, religion, national customs or, for example, colonial legacy. In this context, Xu (2011, p. 834) stated that: "*Before the 1990s scholars of law and economists were concerned mostly about how legal rules influence individuals' incentives and firms' behaviour on a micro-level, instead of relating different levels of economic growth to the differences of legal rules on a macro-level. A wave of research on the relationship between law and economic growth has greatly deepened our understanding of the sources of growth, as well as contributed to shift the attention of scholars of law and economics to macro-economic outcomes of legal systems.*"

In their 1994 study on the sustainability of economic growth, Grossman and Helpman pointed out that when conducting analyses, it is necessary to use a number of variables from various scientific fields. Grossman and Helpman believe that any country can "converge" to a more developed country on a different growth trajectory due to different structural and political parameters. Their work was then followed by Mauro (1995), who saw ethnic composition and colonial legacy behind economic growth. Hall and Jones (1999) elaborated on this statement by emphasising the influence of Western Europe, which determined the main trend in adopting legal protection in the development of African countries even after the period of decolonisation. Grier (1999) examined why former British colonies achieved better economic results than French or Spanish colonies. Again, he saw the cause in the colonial legacy of the legal framework. The important role of colonisation in establishing institutional frameworks was also highlighted by Hansson (2009). Grier's approach was followed by Joireman (2004) who studied the degree of influence of a specific legal framework on a country's development.

However, some authors still rely on so-called "hard" factors of economic growth. For example, Parente (2008) suggests concentrating on total factor productivity (TFP), which is "*the efficiency at which a society uses its resources to produce goods and services*" (Parente, 2008, p. 26). He draws on a study carried out by the McKinsey Global Institute (1996), which compares productivity of individual enterprises in various countries. The conclusion of this study is that differences in output per worker are caused by TFP rather than by workers' skills or the amount of machines used in production.

The important roles of businesses, free competition and the reduction of barriers that hinder free enterprise became a base for Baumol's theory of maximising growth (Baumol *et al.*, 2007). Baumol *et al.* proposed a universal solution for growth measures and defined four key conditions for achieving appropriate growth.

Baumol *et al.* (2007) together with Parente (2008) and other authors occupy themselves with freedom of enterprise and the necessity of setting limits to state interventions. Mitchell (2013) delegates Baumol's thesis on destructive effects of granting privileges to the border of macroeconomic instability. Privileges may undermine short-term macro stability. Difficulties arise when "*gains are privatized while losses are socialized*" (Mitchell, 2013, p. 64). For such behaviour, the economic theory uses the term "moral hazard". To tackle the issue of granting privileges, Mitchell (2013) works with real data documenting the period following the financial crisis in the USA and the EU and massive financial subsidies, proceeding from a study on a number of emergency measures undertaken by the International Monetary Fund (see Deniz *et al.*, 2009). The study shows that companies that relied on active lobbying were much more inclined to risky investment and were affected the most in the crisis period. Demsetz (2008) also tackles important

issues of capitalism and its institutions and evaluates the importance of institutions in a market economy.

The role of institutions within an economy is a recurring topic in most recent economic research. An interesting research was carried out by Son (2016), who discusses the relationship between economic growth and social norms and standards. The study stresses the importance of institutional factors in building social capital and public trust, the key factors of economic growth. Many research papers discuss a wide range of soft factors, *e.g.*, the role of healthcare systems in economic growth (see Hejduková, 2015; Hejduková and Kureková, 2016); other studies discuss the relationship between globalization and selected elements of institutional environment (see Zielenkiewicz, 2013).

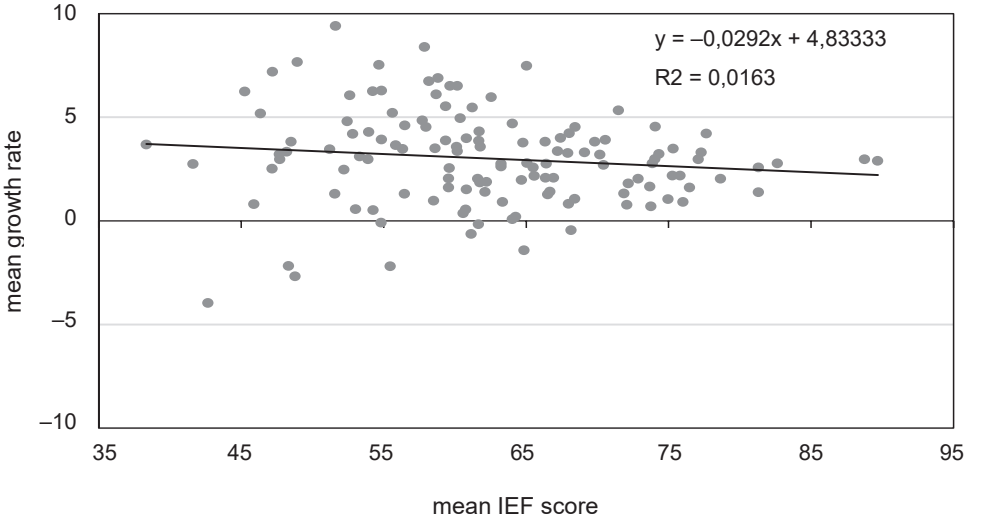
Last but not least, research into the role of institutions in resource and common property management carried out by Ostrom (*e.g.*, 2005) was awarded the Nobel Prize in 2009.

## 3. Methods and Methodologies

For our research, we use three data sources: (i) *the World Bank,* (ii) *the CIA* and (iii) *the Heritage Foundation*. The World Bank publishes data for GDP per capita, economic growth and information about the country's legal framework. Countries are sorted into groups according to their jurisdiction and religion using The CIA World Factbook database. *The Heritage Foundation* publishes the Index of Economic Freedom (IEF) and evaluates individual countries using 10 parameters divided into four groups: (i) Rule of Law (Property Rights, Freedom from Corruption), (ii) Limited Government (Fiscal Freedom, Government Spending), (iii) Regulatory Efficiency (Business Freedom, Labour Freedom, Monetary Freedom) and (iv) Open Markets (Trade Freedom, Financial Freedom, Investment Freedom). We consider making use of international consulting organisations a good way to assess the influence of institutional factors because investors are often interested in institutional affairs, law and its enforceability, effectiveness of bureaucracy, probability of nationalisation and the extent of corruption. The IEF score or IEF indicators have been most often compared with GDP per capita, the annual change in growth (year-on-year), or average growth rate in a medium-term period (mostly a five-year period).

Figure 1 illustrates the relationship between the mean IEF score and the mean GDP growth rate. Data were available for the period 2012–2018. The slope of the linear line, represented by the fitted values, indicates that there may be an indirect linear relationship between the observed variables, but this relationship is very weak, as is also indicated by the value of Pearson's correlation coefficient (pwcorr = −0.1276).

**Figure 1: A comparison of the mean IEF score (axis x) and the mean five-year growth rate (axis y) between 2012 and 2018**




Source: Based on the Index of Economic Freedom (2019)

At first glance, countries with higher average IEF scores seem to have lower growth rates; however, this relationship is very weak. These findings have led us to a more detailed examination of the relationships between the variables. Therefore, our interest was to find out how institutional factors represented by the IEF parameters affect economic growth.

Complementary to the IEF, countries are divided into groups according to their jurisdiction using The World Factbook 2018 (CIA) and are incorporated in a regression analysis so that we can observe if there are differences between countries with different legal frameworks (see Figure 1). We created a unique data set of countries divided into seven groups according to their legal frameworks (LFR): Common Law (Origin); Common Law (Import); Civil Law (Origin); Civil Law (Import); Civil and Common; Common and Religious; Religious and Sharia Law). Data about the legal framework take into account the colonisation factor, or more precisely, voluntary acceptance of the former colonisers' law. This issue has been tackled by Hansson (2009) and Schramm (2008), who warn against taking over institutions without a deeper understanding and sufficient integration into the country's cultural environment. Mauro (1995) states that there is colonial heritage behind economic development that plays a crucial role in a country's development. Hall and Jones (1999) broaden this statement to include the influence of Western Europe, which determined the main trend of adopting legal protection in developing African countries in the aftermath of decolonisation.

Legal framework and its proper understanding overlap with other parameters, for example the inflow of FDI into a country. As demonstrated by Feulner (2013, p. 35): "*The rule of law is a critically important factor in determining which countries attract dynamic flows of global investment capital.*"

For more accuracy, the relationship between the parameters can be demonstrated using panel regression analysis and the following equation:

$$Y_{it}=\alpha + Y_{it-1}\varphi + X_{it}\beta + Z_{it}\Phi + u_{it} \quad (1)$$

where the dependent variable ($Y_{it}$) is GDP growth rate in the country *i* and the year *t*; it is represented by two statistical indicators, namely annual growth and medium-term period growth (five-year period). $Y_{it}-1$ represents a lagged dependent variable with a lag of one period. Lagged dependent variables were used for dynamic regression modelling and as a strategy to eliminate autocorrelation in the residuals. The vector variable ($X_{it}$) consists of key independent variables: *IEF parameters* and *legal framework*. Our model also incorporates control dependent variables: a vector variable ($Z_{it}$), which is the *logarithmic transformation of GDP per capita in 2013, region, logarithmic transformation of population, unemployment rate, inflation, foreign direct investment per capita and public debt* (% GDP). We also include a set of control variables that are commonly used in economic growth analysis. This vector of control variables helps us avoid omitted variable bias and thus take account of unobserved heterogeneity. Distribution of countries by region and legal framework is shown in Table 1.

Data for the regression analysis were available for the period 2012–2018. The sample consists of a data panel from 129 countries for the years 2012–2018, *i.e.*, 903 observations in total (NxT; N = 129 countries and T = 7 years). Prior to the estimation of the panel regression, the problem of non-stationarity in the panel data must be considered. Nowadays, most statistical software implements a variety of tests for unit roots or stationarity in panel datasets. Moreover, we should also consider the relative sizes of N and T: when the number of time periods, T, is small (less than 10 or 15), the panel unit root tests suffer from severe size distortions when fixed effects or time trends are included. Since T is relatively small (T = 7), it can be assumed that there is stationarity in the panel datasets.

We performed a series of robustness checks and additional analyses with the goal of determining the mechanisms that drive our results and eliminating biases. We considered the presence of multicollinearity between independent variables using the VIF score. We found that all the VIF scores were below 10, so there was no need to exclude any variables from the model. We then considered which estimation method would be more appropriate for our panel data model. We use the so-called dummy variables for region and legal framework; these variables are invariant in time, which is why the FE model

is not suitable for further analysis. This implies that an RE model would fit our analysis; however, unfortunately, a post-estimation likelihood-ratio test (P = 0.0000) showed the presence of heteroskedasticity in the estimated RE model. To eliminate the problem of heteroskedasticity, we decided to refit a random panel-data estimator obtaining GLS. The GLS regression results are presented in Table 2.

**Table 1: Distribution of countries by region and legal framework**

| **Region** | | **Percent (%)** |
|---|---|---|
| Asia-Pacific | (region1) | 20.16 |
| Europe | (region2) | 31.01 |
| Middle East / North Africa | (region3) | 5.43 |
| North America | (region4) | 2.33 |
| South and Central America / Caribbean | (region5) | 16.28 |
| Sub-Saharan Africa | (region6) | 24.81 |
| **Legal framework** | | **percent** |
| Common Law (Origin) | (lfr1) | 5.84 |
| Common Law (Import) | (lfr2) | 11.68 |
| Civil Law (Origin) | (lfr3) | 29.20 |
| Civil Law (Import) | (lfr4) | 29.93 |
| Civil and Common | (lfr5) | 13.14 |
| Common and Religious | (lfr6) | 3.65 |
| Religious and Sharia Law | (lfr7) | 6.57 |

Source: Based on the Index of Economic Freedom, The CIA World Factbook and Transparency International

## 4. Results and Discussion

Two regression models were run to test the impact of key and control variables on two dependent variables: annual growth and medium-term period growth (see Table 2) to assess how much variance is explained by these variables. We were specifically interested in the role of institutional factors (IEF indicators and legal framework) in explaining variance in economic growth.

**Table 2: Regression analysis results – Random effect GLS regression**

| | | M1 annual growth | | M2 medium-term period growth 2013 and 2018 | |
|---|---|---|---|---|---|
| | | coef. | se | coef. | se |
| lagged var. | growth_lag | 0.600*** | 0.029 | 0.488*** | 0.021 |
| i | Property Rights | 0.850* | 0.463 | 0.547 | 0.463 |
| | Freedom from Corruption | 0.167 | 0.522 | 1.666*** | 0.569 |
| ii | Fiscal Freedom | 0.227 | 0.632 | 0.569 | 0.633 |
| | Gov Spending | 0.733* | 0.433 | 1.304*** | 0.498 |
| iii | Business Freedom | −1.153** | 0.532 | −1.817*** | 0.451 |
| | Labour Freedom | 0.549 | 0.397 | 1.200*** | 0.373 |
| | Monetary Freedom | −1.177 | 1.535 | −1.625 | 1.166 |
| iv | Trade Freedom | 0.306 | 0.851 | −1.433 | 0.922 |
| | Investment Freedom | −0.212 | 0.446 | 0.723 | 0.510 |
| | Financial Freedom | −0.260 | 0.520 | −1.725*** | 0.564 |
| legal framework | lfr2 | −0.433** | 0.211 | −1.112*** | 0.215 |
| | lfr3 | 0.136 | 0.249 | 0.791** | 0.314 |
| | lfr4 | −0.012 | 0.182 | 0.167 | 0.178 |
| | lfr5 | 0.440 | 0.269 | 0.597*** | 0.222 |
| | lfr6 | 0.245 | 0.245 | 0.038 | 0.312 |
| | lfr7 | 0.874** | 0.364 | 0.426 | 0.326 |
| convergence | lnGDP_2012 | −0.452*** | 0.121 | −0.584*** | 0.107 |
| region | region2 | −0.457* | 0.268 | −1.391*** | 0.330 |
| | region3 | −0.788** | 0.314 | −0.098 | 0.259 |
| | region4 | −0.347 | 0.258 | −1.681*** | 0.214 |
| | region5 | −0.564*** | 0.165 | −0.579*** | 0.160 |
| | region6 | −1.187*** | 0.307 | −0.567*** | 0.208 |
| other control variable | population | 0.016 | 0.036 | 0.093*** | 0.032 |
| | unempl | −2.272** | 0.930 | −4.809*** | 0.656 |
| | inflation | −6.344*** | 2.258 | −3.548** | 1.513 |
| | FDI per inhabitant | 0.0001** | 0.000 | 0.0001*** | 0.000 |
| | public debt to GDP | 0.022 | 0.078 | −0.003 | 0.081 |
| | cons | 6.277*** | 1.654 | 8.525*** | 1.235 |
| Number of obs. (NxT) | | 576 | | 192 | |
| chi2 | | 3,064.29 | | 3,005.93 | |
| *p*-value | | 0.000 | | 0.000 | |

Note: The values were obtained from the program STATA. 0.01 - ***; 0.05 - **; 0.1 - *
Source: Based on the Index of Economic Freedom and The CIA World Factbook

The overall significance of both models indicates that the models are statistically significant ($p$-value = 0.0000), yet the $t$-tests for individual significance regression showed that the coefficients were not always significant. Despite this deficiency, we attempted to summarize the results of the estimated predictors. If we compare models M1 and M2 in terms of dependency directions, *i.e.*, in terms of estimated signs of coefficients, in the case of 4 regressors, there was a change in dependency: Trade Freedom, Investment Freedom, lfr4 – Civil Law (Import) and public debt to GDP. Thus, it can be assumed that the medium-term period growth (long-run effect) is affected by these variables in the opposite direction to the annual growth (short-run effect).

## 4.1 Institutional factors (IEF)

### 4.1.1 Rule of law

The results indicate that the property rights variable might have raised annual and medium-term growth (M1 = 0.850; M2 = 0.547); the coefficient for property rights is positive and significant (at the 10% level) at least in the short run; thus, the data suggest a positive trend between property rights and economic growth. This means that countries in which property rights are respected might have higher economic growth, demonstrating that property rights are very important elements of a country's institutional structure.

We assume that countries with a higher level of corruption are, as a result of many obstacles, generally less effective and therefore achieve lower growth. The issue of corruption is described in the studies of Ehrlich and Lui (1999), Mauro (1995) and Drury *et al.* (2016). The data reveal a positive trend between economic growth and the freedom of corruption (M1 = 0.167; M2 = 1.666). This dependence seems to be stronger and significant in the long run. This means that countries with a lower level of corruption (or better mechanisms of prosecuting corruption) achieve higher economic growth and probably a higher standard of living in the long run.

### 4.1.2 Limited government

Focusing on the influence of variables representing Limited Government, we can see that Fiscal Freedom (M1 = 0.227; M2 = 0.569) and Government Spending *i.e.*, limited government spending (M1 = 0.733; M2 = 1.304) both seem to have a positive effect on economic growth, but only the coefficients for Government Spending were statistically significant. Therefore, an increased level of limited government (mainly the fiscal burden imposed by the government, limited government expenditure) has a positive effect on economic growth. On the other hand, rising public debt has raised economic growth

in the short run (M1 = 0.022). In the long run, however, growing public debt slows down economic growth (M2 = −0.003). These findings suggest that it cannot always be clearly stated that restricting the role of the public sector must necessarily lead to an increase in economic growth (at least in the short run). Although these outcomes might seem intuitive, policy-makers often do not seem to pay much attention to the fact that public spending should not grow at a higher rate than economic growth and that cumulative government budget deficits are not beneficial for economic growth in the long run. Gómez-Puig and Sosvilla-Rivero (2018) arrived at the same conclusion with the case of central and peripheral countries of the Euro area in the period 1961–2013.

### 4.1.3 Regulatory efficiency

In this group of dependent variables, there are no differences in the estimated direction of dependency between the short and long run, but we can observe that not all the variables have a positive effect on economic growth. The results show that Business Freedom (M1 = −1.153; M2 = −1.817) and Monetary Freedom (M1 = −1.177; M2 = −1.625) may cause a slowdown of economic growth, but only the coefficients for Business Freedom were significant in the long run. Business Freedom measures the extent to which regulatory and infrastructure environments impede efficient operation of businesses. It seems that some form of business regulation does not always lead to a reduction in economic growth. On the contrary, an increase in Labour Freedom led to a positive effect on economic growth (M1 = 0.549; M2 = 1.200) statistically significant in the long run. Our results have broader implications on how labour markets influence the shape of an economy. Labour market flexibility is a key prerequisite for economic growth. The results are consistent with Jalilian *et al.* (2006), who found that the quality of governance processes has a positive effect on growth. Besides the quality of governance, regulatory frameworks also depend on the efficiency of the regulatory policies. Regulations concerning minimum wages, laws inhibiting layoffs, severance requirements and measurable regulatory restraints on hiring and hours worked obviously lead to raising labour market rigidity and to a slowdown of the economy.

### 4.1.4 Open markets

We can also see that not all the variables have a positive effect on economic growth. Additionally, the direction of dependency differs between the short and the long run: this holds for Trade Freedom (M1 = 0.306; M2 = −1.433), Investment Freedom (M1 = −0.212; M2 = 0.723) and Financial Freedom (M1 = −0.260; M2 = −1.725). As only one coefficient proved to be statistically significant, we consider the results obtained from data on open

markets insignificant. However, should we disregard statistical significance, the results may suggest that overall, a high level of open markets does not necessarily lead to rising economic growth. We do not conclude that an immediate regulation of financial markets is required; rather, we suggest to implement mechanisms to minimise the volatilities of capital flow and to prevent possible rise and spread of a financial crisis followed by an economic crisis, as was the case in the relatively recent past.[1]

## 4.2 Legal framework

Considering the values of the estimated coefficients, it seems that only countries that adopted the Common Law – lfr2 (M1 = −0.433; M2 = −1.112) and Civil law – lfr4 (M1 = −0.012) have, on average, lower economic growth than countries with Common law (Origin). On average, other countries with different legal frameworks (lfr3–7) have higher rates of economic growth. Unfortunately, coefficients are mostly insignificant in this set of variables, which is why it is difficult to make a general conclusion that legal framework has a solely positive or negative effect on economic growth. The explanation that Baumol *et al.* (2007) offer is that taking over a legal framework without a deeper understanding of the relationships between institutions and residents will not lead to desirable economic growth.

## 4.3 Control variables

The coefficient for lnGDP_2012 is significant in both the short and long run (M1 = −0.452; M2 = −0.584) as it indicates whether convergence occurs among countries. Given that the coefficients are negative, it may be assumed that all economies converge in terms of per capita income. We added dummy variables for regions as control variables and observed a negative sign for all the estimated regions' coefficients. This may indicate that economic growth varies among regions, and countries in regions 2–6 a lower rate of economic growth on average have than countries in region 1 (Asia-Pacific). Focusing on regions 2 and 4 (Europe and North America), the most significant stagnation of economic growth in the long run can be observed ($M2_{region\ 2} = -1.391$; $M2_{region\ 4} = -1.681$). Countries in regions 2 and 4 have relatively high GDP per capita; a high negative coefficient also indicates the validity of the catch-up effect, *i.e.*, economic convergence among countries.

The control variables that increased economic growth are Population (M1 = 0.016; M2 = 0.093) and FDI per Inhabitant (M1 = 0.0001; M2 = 0.0001). Dependency is

1 This conclusion corresponds with International Monetary Fund financial openness research (Cerdeiro and Komaromi, 2019).

significant and so are Rising Unemployment (M1 = −2.272; M2 = −4.809) and Inflation Rates (M1 = −6.344; M2 = −3.548) on slowed economic growth. The impact of public debt was discussed in more detail in the context of Limited Government; growing public debts have a significant indirect effect on medium-term period economic growth.

## 5. Conclusions

The influence of institutions – formal and informal rules of behaviour – is increasingly reflected in economic research. This article presents new evidence on the influence of institutional factors on economic growth and development.

We employ a panel regression to look at the impact of institutional factors on annual economic growth (short-run) and on average growth rates in a medium-term period (long-run). Our key dependent variables are represented by 10 indicators of the Index of Economic Freedom and legal framework. We also include a set of control variables that are commonly used in economic growth analysis.

For our research, we used secondary data provided by (i) the World Bank, (ii) the CIA and (iii) the Heritage Foundation. The sample consists of a data panel from 129 countries for the years 2012–2018. The advantage of these data sources is clear methodological definition and comparability over time. In the future it is possible to replicate or extend our research with further observations.

The results of the econometric analysis revealed that 4 IEF indicators had a positive effect on economic growth; this effect was more obvious in the long run. Countries with a higher level of Property Rights, Freedom from Corruption, Limited Government Spending and Labour Freedom achieve higher economic growth and probably a higher standard of living in the long run. Furthermore, the results showed that 2 IEF indicators slow down economic growth. This statistically significant negative effect on economic growth was observed for two variables: Business Freedom and Financial Freedom. These findings suggest that a higher level of business and financial freedom do not necessarily lead to an increase in economic growth. Our explanation of this result rests in the fact that countries most affected by the recent economic crisis belong to traditionally most open economies with low regulation of the capital market. Based on our findings, it is not possible to make a general conclusion that legal framework has an effect on economic growth, as the coefficients are mostly insignificant. The results for the control variables are generally consistent with our expectations. Growing public debts, rising unemployment and inflation rates have a negative effect on economic growth. As can be expected, increasing FDI and population size increases economic growth and we found evidence of convergence across countries.

Unlike previous studies, we focus on the explanatory power of institutional factors. Secondly, we use panel data; our sample contains 903 observations; and thirdly, we use a set of general control variables in an attempt to respect causal inference.

This study leaves some questions as a subject of further discussion. Most importantly, legal frameworks are burdened by their complexity (institutions are determined by cultural and religious aspects as well as legal aspects) and the legal system itself cannot support economic growth without sufficient understanding of local people. The speed of implementation of new sets of rules may also be important (shock therapy vs. gradual reforms).

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