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RULE OF LAW AND ECONOMIC GROWTH

Abstract. Using data from 41 countries for the 2013—2018 period, the dependence of GDP growth on the rule of law index that is calculated by the non-governmental organization World Justice Project has been estimated. Compared to other specialized indicators for assessing compliance with the rule of law, such as the World Governance Indicator, the International Country Risk Guide, or the Index of Judicial Independence, the WJP differs more fully into actual legal practice (not only the quality of legislation) by combining expert judgment with the results of questionnaires surveys of residents of the country. Cross-regression estimates for the 2013—2018 averages are quite contradictory for the general sample of countries, but a direct dependence of economic growth on the rule of law has been obtained for the countries of Central and Eastern Europe and the former Soviet Union. If Ukraine rose from the current level of the WJP index (0.50) to the level of Georgia (0.61), it allows to increase the GDP growth rate by 0.6 percentage points. Estimates for panel data using the a random effects model (RE) confirm the direct relationship between the state of the rule of law and eco-economic growth for CEE and the former Soviet Union, whereas a weak inverse relationship between the two indicators can be observed in Asia and Latin America. The results show that it is advisable to strengthen the rule of law in transformational economies, while this is not urgent measures in the other studied countries. The overall study does not deny the possibility of economic growth without advancing the legal foundations or deepening the process of democratization of political life, but this does not apply to the CEE countries and the former Soviet Union. In the extended specification of the regression model, it seems that the favorable influence of the rule of law on GDP dynamics for transformational economies can be realized by slowing down inflation. At the same time, no dependence of inflation on the WJP has been found for Asian and Latin American countries; there is also no effect of consumer prices on economic growth. It is noticeable that estimates for the general sample of countries show the negative impact of only high inflation — over 15% per annum. Among other results, the direct relationship between investment and GDP growth is worth noting, regardless of the regression model chosen. This is in line with the standard assumptions of economic theory and, accordingly,

reinforces the argument for the protection of property rights as a means of stimulating the investment process.

Keywords: rule of law, economic growth, panel data.

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ВЕРХОВЕНСТВО ПРАВА І ЕКОНОМІЧНЕ ЗРОСТАННЯ

Анотація. З використанням даних 41 країни за період 2013—2018 рр. оцінено залежність темпу зростання ВВП від індексу верховенства права, що розраховується неурядовою організацією World Justice Project. Порівнюючи з іншими спеціалізованими індикаторами для оцінки дотримання стандартів верховенства права, як World Governance Indicator, International Country Risk Guide чи Index of Judicial Independence, індекс WJP відрізняється повнішим урахуванням реальної юридичної практики (не лише якості законодавчих норм), адже поєднує експертні оцінки з результатами анкетних опитувань мешканців конкретної країни. Оцінки за допомогою перехресної регресії для середніх значень 2013—2018 рр. досить суперечливі для загальної вибірки країн, але для країн Центральної і Східної Європи та колишнього Радянського Союзу отримано пряму залежність економічного зростання від верховенства права. Якби Україна з нинішнього рівня індексу WJP (0,50) піднялася до рівня Грузії (0,61), це дозволяє підвищити темп зростання ВВП на 0,6 процентного пункту. Оцінки для панельних даних за допомогою методу зі змінною сталою (англ. *a random effects model — RE*) підтверджують пряму залежність між станом верховенства права і економічним зростанням для країн ЦСЄ і колишнього Радянського Союзу, тоді як слабкий обернений зв'язок між обома показниками простежується у країнах Азії і Латинської Америки. Отримані результати показують доцільність зміцнення верховенства права у трансформаційних економіках, тоді як з цим можна не поспішати в решті досліджуваних країн. Загалом, проведене дослідження не заперечує можливість економічного зростання без випереджувального зміцнення правових засад чи поглиблення процесу демократизації політичного життя, але це не стосується країн ЦСЄ і колишнього Радянського Союзу. У розширеній специфікації регресійної моделі все виглядає на те, що

сприятливий вплив верховенства права на динаміку ВВП для трансформаційних економік може реалізовуватися через гальмування інфляції. Водночас для країн Азії і Латинської Америки залежності інфляції від індексу WJP не виявлено; так само немає впливу споживчих цін на економічне зростання. Помітно, що оцінки для загальної вибірки країн показують негативний вплив лише високої інфляції – понад 15 % річних. З-поміж інших результатів вартує уваги прямий зв'язок між інвестиціями і темпом зростання ВВП, який простежується незалежно від обраної специфікації регресійної моделі. Це відповідає стандартним припущенням економічної теорії, а принагідно підсилює аргументацію на користь захисту майнових прав як засобу стимулювання інвестиційного процесу.

Ключові слова: верховенство права, економічне зростання, панельні дані.
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ВЕРХОВЕНСТВО ПРАВА И ЭКОНОМИЧЕСКИЙ РОСТ

Аннотация. С использованием данных 41 страны за период 2013—2018 гг. оценена зависимость темпа роста ВВП от индекса верховенства права, что рассчитывается неправительственной организацией World Justice Project. Сравнивая с другими специализированными индикаторами для оценки соблюдения стандартов верховенства права, как World Governance Indicator, International Country Risk Guide или Index of Judicial Independence, индекс WJP отличается более полным учетом реальной юридической практики (не только качества законодательных норм), ведь сочетает экспертные оценки по результатам анкетных опросов жителей данной страны. Оценки с помощью перекрестной регрессии для средних значений 2013—2018 гг. достаточно противоречивые для общей выборки стран, но для стран Центральной и Восточной Европы и бывшего Советского Союза получено прямую зависимость экономического роста от верховенства права. Если бы Украина с нынешнего уровня индекса WJP (0,50) поднялась до уровня Грузии (0,61), это позволяет повысить темп роста ВВП на 0,6 процентного пункта. Оценки для панельных данных с помощью метода с переменной постоянной (англ. *a random effects model — RE*) подтверждают прямую зависимость между состоянием верховенства права и экономическим

ростом для стран ЦВЕ и бывшего Советского Союза, тогда как слабая обратная связь между обоими показателями прослеживается в странах Азии и Латинской Америки. Полученные результаты показывают целесообразность укрепления верховенства права в трансформационных экономиках, тогда как с этим можно не спешить в остальных исследуемых странах. В общем проведенное исследование не отрицает возможность экономического роста без опережающего укрепления правовых основ или углубления процесса демократизации политической жизни, но это не касается стран ЦВЕ и бывшего Советского Союза. В расширенной спецификации регрессионной модели все похоже на то, что благоприятное влияние верховенства права на динамику ВВП для трансформационных экономик может реализовываться через торможение инфляции. В то же время для стран Азии и Латинской Америки зависимости инфляции от индекса WJP не обнаружено; так же нет влияния потребительских цен на экономический рост. Примечательно, что оценки для общей выборки стран показывают негативное влияние только высокой инфляции — более 15 % годовых. Среди других результатов внимания стоит прямая связь между инвестициями и темпом роста ВВП, которая прослеживается независимо от выбранной спецификации регрессионной модели. Это соответствует стандартным предположениям экономической теории, а попутно усиливает аргументацию в пользу защиты имущественных прав как средства стимулирования инвестиционного процесса.

Ключевые слова: верховенство права, экономический рост, панельные данные.

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1. Introduction

The rule of law is increasingly viewed as a factor of economic growth that is no less important than capital and labor, technological innovation, geographical location, economic openness, or cultural characteristics [25, p. 883—871]. Predominantly, the conclusions of the constructiveness of rule of law is based on cross-regression, which may have significant limitations, because it does not take into account the particularities of some countries; as a result it is better to use panel data estimation methods with fixed or variable effect [1, p. 44—49]. Moreover, countries with a historically established rule of law are usually compared to countries that lacked such an institutional feature in the past. The correlation between successes in achieving the rule of law and economic growth can be reciprocal when strengthening legal frameworks increases with income. Moreover, countries with a historically established rule of law are usually compared to countries that lacked such an institutional feature in the past. The correlation between successes in achieving the rule of law and economic growth can be mutual when strengthening legal approaches is occurred together with income increase.

Finally, regional specificity in the broad sense of cultural and religious characteristics may have its own influence [24, p. 313—349] to the selected form of state government [22, p. 1005—1030]. Such relevant considerations can be illustrated by the Rule of Law Index of the World Justice Project (WJP), created in 2006 by an international non-governmental organization headquartered in Washington and Seattle (USA). If for the former Soviet Union countries the lower rate of economic growth can be explained by lower values of the WJP index, then it is quite the opposite for the countries of Asia (*Fig. 1*).

The countries of Central and Eastern Europe (CEE) and Latin America have higher WJP values, but the GDP growth rate is much lower than that of Asian countries. The purpose of this research is to study the empirical dependence of GDP dynamics in a number of countries on the rule of law of the WJP. This is the first time when this problem is solved for the CIS, and it has an important practical meaning (1) that emphasizes the benefits of the rule of law as one of the factors of economic growth, as claimed by many researchers [3, p. 41—58; 12; 17, p. 445—470; 19, p. 1391—1419], or (2) denying the overriding importance of such a connection that also has arguments in its own right [7, p. 473—498].

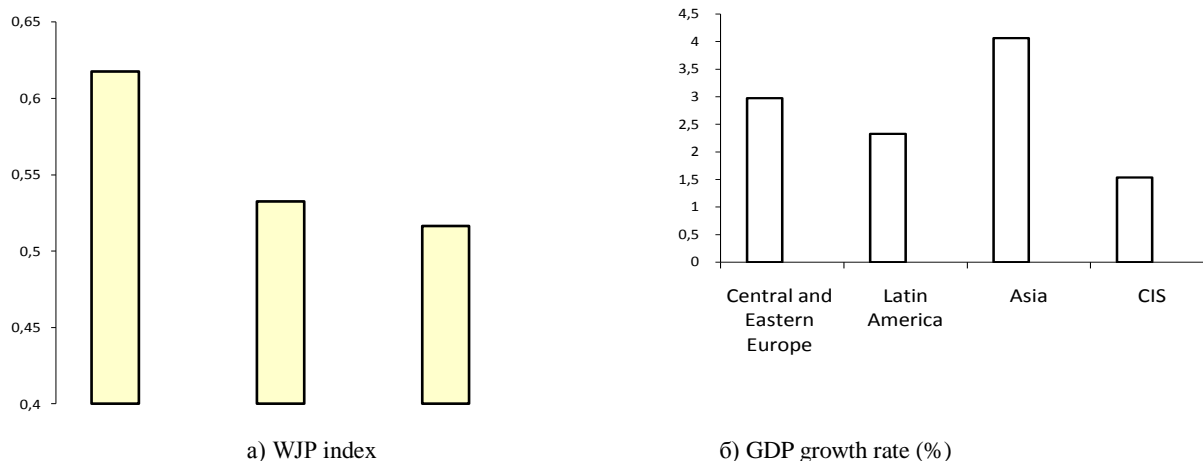


Fig. 1. Rule of law and economic growth, 2013—2018 (average)

Source: calculated from World Justice Project (www.worldjusticeproject.org) and International Financial Statistics (www.imf.org).

Although various specialized indexes, such as the Anti-Director Rights Index, the Creditor Index [16, p. 1131—1150], Index of Judicial Independence [12], Anti-Self Dealing Index [9, p. 430—465], World Governance Indicator [19, p. 1391—1419], International Country Risk Guide [3, p. 41—58], are used to evaluate the link between legitimacy and economic growth, as well as sub indexes of economic and political freedom of the Heritage Foundation and Freedom House [26, p. 100—137] etc., in order to study the relevant dependencies for the CIS countries, it is necessary to take into account the results of questionnaires on the estimation of the real state of affairs with the rule of law, rather than the quality of legal norms that could have been formal in the countries of the former Soviet Union. As noted in a recent research work [11, p. 25], the rule of law is not enshrined in any particular legal rule; far more important is what actually happens in actual legal practice.

2. Literature review

Although the study of the link between the state of legal factors and economic growth was initiated in the early 1960s in the works of R. Coes [8, p. 1—44], until the early 1990s, these studies were limited to microlevels¹. The researchers then drew attention to the differences between the Anglo-Saxon and French legal systems, and later began to analyze the link between the state of the legal system and economic growth. It is clear that at once there were nuances related to the complexity of the basic definitions of the rule of law category, which is multidimensional and encompasses various components: from personal security and protection of property rights to mechanisms of restraint in the upper echelons of power and the fight against corruption [14, p. 673—685]. Usually, the rule of law includes: predictability of legislation, protection of business, a clear legal definition of property rights, transparency of officials of all levels, maintaining a balance between all branches of government (executive, legislative, judicial), accountability of government to citizens [23]. In the coordinates of the system of institutions, the rule of law can be attributed to the factors of the second (formal law) and third (sphere of public administration) levels [28, p. 596—599]². Formal law defines the particularities of the institutional environment: protection of property rights, judiciaries, and laws, including constitutional guarantees (it takes 10 to 100 years

¹ A substantive review of studies on the functional connection between the rule of law and economic growth has been made in the works of G. Xu [25, p. 863—871], S. Haggard, A. McIntyre, and L. Thide [13, p. 205—234], C. Dobler [10]. Several rule of law indicators compared in the study of M. Versteeg and T. Ginsburg [26, p. 100—137]. Various interpretations of the rule of law in a broad and narrow sense are systematized by J. Møller and S.-E. Skaaning [20, p. 136—152].

² According to the proposed classification, the first level includes informal institutions (norms, customs, mores, traditions, etc) as well as religion (such institutions are very stable and inertial in time, so that they need at least a century to change) [28, p. 596—599]. Finally, the fourth institutional level concerns the quality of macroeconomic governance in terms of (1) resource allocation and (2) economic policy optimality. It should be taken into account that the rationality of individuals (this implies optimality of behavior) interacts with legal norms [18, p. 951—970]

for appropriate qualitative changes at the national level). The functioning of public administration (governance) implies the maintenance of private order, contract enforcement and the effective functioning of public structures (the period of respective changes is much shorter from 1 to 10 years). Protection of property rights has traditionally been regarded as the most important element of law that is directly related to investment and economic growth [29, p. 537—572], but loses its validity in the absence of proper compliance with contracts, which is only possible under the rule of law and an independent judiciary [10]. In one of the theoretical models D. Acemoglu, S. Johnson, and J. Robinson consider the protection of property rights derived from the availability of natural resources and ways of reconciling the interests of the ruling elite, which is especially relevant for the former Soviet Union countries [2, p. 385—472]. The key is the distinction between formal (*de jure*) and real (*de facto*) political power, when the latter's holders are able to protect their own interests bypassing formal (official) power institutions. Usually, such opportunities are explained by access to natural resources and impede the activities of official authorities, in particular through lobbying mechanisms that are generally inherent in even highly democratic countries without significant raw material dependency. R. Castro, D. Clementi, and G. McDonald proposed a model that explains the lack of protection of property rights, as a result of low capital investment in the production of fixed assets, because this involves higher risks than the production of simpler consumer goods [6, p. 529—561]. The greater the difference in the above mentioned risks, the less the protection of property rights. The result is less investment and higher cost of investment goods, which impedes economic growth. R. Barro identifies the benefits of property rights and a well-functioning legal system in the context of incentives for work and investment [3, p. 41—58]. In the absence of legal guarantees, and excessive administrative regulation and corruption, there is no hope for a high rate of economic growth. Relevant considerations have been empirically confirmed using the ICRG index, but no strong link has been found between democratization and economic growth. One study found this analogy in ancient Greece, where democratic institutions were lacking, but this did not impede economic growth [5, p. 29—47]. In one study researchers found this analogy in ancient Greece, where was lack of democratic institutions, but this did not impede economic growth [5, p. 29—47]. L. Feld and S. Foigt have analyzed 57 countries and found that only the real independence of the judiciary from political influence was favorable to economic growth [12], while the attributes of formal independence is not affected on dynamics of GDP. If rational politicians are interested in the independence of the judicial system *de jure* and *de facto* (this guarantees the election promises keeping), then politicians with their own narrow-group interests have completely opposite priorities. Similar findings were obtained in another study for 71 countries [17, p. 445—470], but it was pointed out that the rule of law depends on the institutional characteristics of some countries. At the same time, there is no dependence of the macroeconomic effects of the rule of law on the level of income per person [27, p. 197—211].

Countries with problems in the legal sphere may find themselves in the so-called «double trap» when the poor quality of legal and other institutions does not allow to increase the rate of economic growth, and this does not allow to improve institutional characteristics [15, p. 243—259]. The presence of such adverse dependence has been proven empirically for many low-income countries. Because low- and middle-income countries lack the direct link between the rule of law and economic growth, the fight against corruption or the protection of property rights may not have the expected significant positive effect on economic growth [21, p. 107—117]. If causality from economic growth to institutions (including the rule of law) prevails, than vice versa, financial and human resources are better to use for other needs that have a greater impact on economic growth: education, infrastructure, support for industry [7, p. 473—498]. In such an interpretation, the improvement of the rule of law situation will eventually become a natural consequence of economic development, which in turn will strengthen its institutional levers. At the same time, for South Asian low-income countries, a favorable dependence of economic growth on the quality of public administration has been obtained, which is one of the dimensions of the rule of law [19, p. 1391—1419]. The directly stimulating effect of the rule of law on GDP dynamics has been obtained in studies for CEE countries [4, p. 5—18].

3. Methodology of statistical research

To investigate the dependence of economic growth on the rule of law, we have used the WJP index, which is based on a survey of both experts and residents (this differs from the rest of such indexes, which use only expert estimates). Higher index value means better state of rule of law. Compared to indexes of the World Bank, Heritage Foundation and Freedom House, the WJP index has the highest completeness of consideration of the rule of law, although empirical studies have found a high correlation with the other indices mentioned above [26, p. 100—137]. For each of the countries the total value (overall score) and the value of 8 sub indices in the range from 0 to 1 are given: 1) limited government powers, 2) absence of corruption, 3) order and security, 4) fundamental rights, 5) open government, 6) effective regulatory enforcement, 7) access to civil justice, 8) effective criminal justice. In our study we used data from 41 countries related to the transformation economies of CEE and the former Soviet Union, Latin American and Asian countries, as well as Egypt and South Africa. South Korea belongs to high-income countries, but its indicators are nevertheless included in this study. Instead, Venezuela's data, which is characterized by extreme values of both the WJP index and the selected macroeconomic indicators, is not taken into account. As is the case with empirical studies, firstly we estimate the relationship between the rule of law and GDP dynamics by cross-regression, and subsequently compare the results with panel estimates using the following statistical model:

$$\Delta Y_{it} = \alpha_0 + \alpha_1 LAW_{it} + \alpha_2 INV_{it} + \alpha_3 CPI_t + \eta_i + \tau_t + \varepsilon_{it}, \quad (1)$$

where ΔY_{it} — GDP growth rate of country i in the time period t (%), LAW_{it} — rule of law index WJP, INV_{it} — investment (% of GDP), CPI_{it} — consumer price inflation, η_i — identifier of some country, τ_t — time variable, ε_{it} — stochastic factor. It can be assumed that the rule of law is beneficial for economic growth ($\alpha_1 > 0$), although the magnitude of the impact may differ across countries. There is also no reason to dispute the direct relationship between investment and GDP dynamics ($\alpha_2 > 0$). The impact of high inflation is usually negative, but moderate price increases can be beneficial for economic growth ($\alpha_3 < 0$).

Table 1

Statistical characteristics of the raw data, 2013—2018

Variable	Obs	Mean	Std. Dev.	Min	Max
Rule of law index (LAW_{it})	210	0,54	0,11	0,36	0,81
GDP growth rate (ΔY_{it})	210	2,68	3,42	-9,77	12,52
Investments (INV_{it})	205	24,35	6,48	13,40	47,57
Inflation (CPI_{it})	246	4,68	6,18	-2,51	48,71

Source: own calculations.

Venezuela, Kyrgyzstan, Mongolia and Uzbekistan were excluded for reasons of improvement in the statistical characteristics of the sample of the studied countries (elimination of outliers). The statistical characteristics of the raw data are presented in Table. 1. In the sample of the study of countries, the TRL index ranges from 0.36 (Egypt) to 0.81 (Estonia), while the average is 0.54. Ukraine has a minimum of GDP (2015) and investment (2014) value as well as a maximum of inflation rate (2015). The highest GDP growth rate was reached in Iran (2016) and investment — in China (2013). Because the standard deviation for GDP dynamics and inflation seems too large, the basic statistical model (1) is estimated both for the general sample of countries and separately for two subgroups of countries: 1) CEE and CIS, and 2) Asia and Latin America (plus Egypt and South Africa). In addition, the CPI15it inflation rate is used, taking into account only values below 15% pa.

4. The results of the study

If we use cross-section regression for the 2013—2018 averages, the conclusions regarding the link between the rule of law and economic growth are quite contradictory (Fig. 2). For the general sample of countries, everything indicates the presence of a reverse link, but for the CEE and

CIS countries it is just the opposite: the rule of law contributes to economic growth. If Ukraine rose from the current level of the rule of law index (0.50) to the level of Georgia (0.61), it would increase the GDP growth rate by 0.6 percentage points. However, the low value of the coefficient of determination R^2 does not allow thinking that obtained results are too convincing.

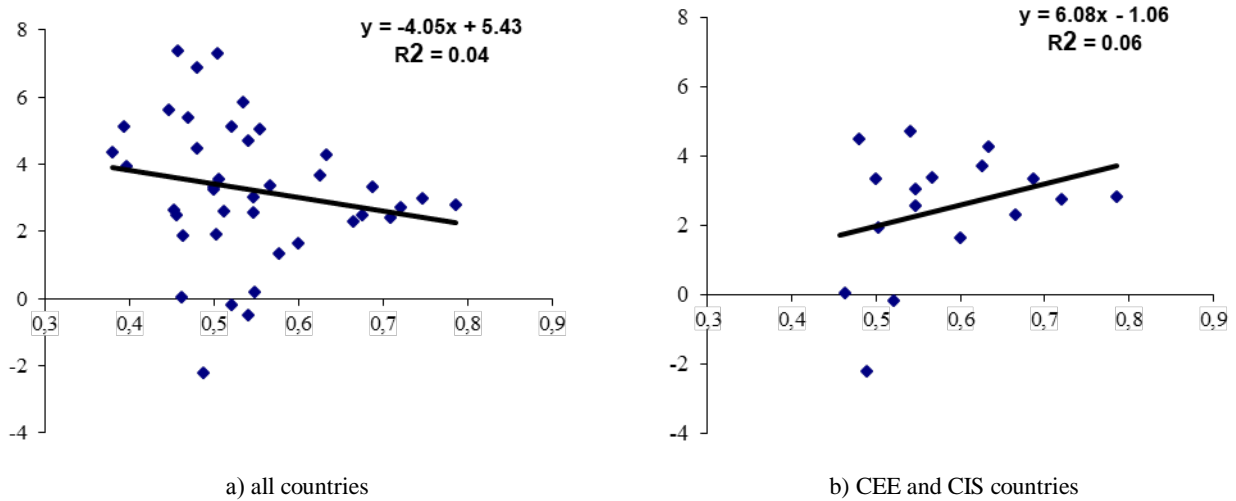


Fig. 2. The dependence of GDP dynamics on the value of the TRL index
 Note: excluding Venezuela, Kyrgyzstan, Mongolia and Uzbekistan.

The empirical estimates for the panel data are given in Table 2.

Table 2

GDP growth factors (ΔY_{it}) for the general sample of countries

Variable unit	(1)	(2)	(3)	(4)
Const	-0,795 (-0,35)	-5,738 (-1,97*)	-4,789 (-1,64*)	-5,085 (-1,75*)
LAW_{it}	6,266 (1,84*)	7,730 (1,82*)	6,284 (1,45)	7,806 (1,85*)
INV_{it}	—	0,173 (2,78***)	0,191 (3,96***)	0,139 (2,19**)
CPI_{it}	—	—	-0,112 (-2,63***)	—
$CPI15_{it}$	—	—	—	0,059 (0,71)
N	168	168	164	157
R^2	0,01	0,09	0,16	0,07
Wald	2,51	10,92***	17,67***	8,35***

Note: here and next in parentheses z-values; * indicates statistical significance at the level of 10%; ** at the level — 5%; *** at the level — 1%.

Source: own calculations.

Based on the Hausman test, a random effects model (RE) was used. The statistical characteristics of the estimated regression models are worse for specification (1), but in other cases quite satisfactory. For example, in specification (2), the Wald test shows that the obtained coefficients are statistically differ from zero, and the variables included explain 9% of changes in GDP dynamics.

First of all, there is a weak direct relationship between the rule of law and GDP growth (the coefficient is statistically significant at the level of 10% in 3 of 4 specifications). In all cases, investment stimulates the dynamics of GDP, which meets the standard assumptions of economic theory, and reinforces the argument for the protection of property rights as a means of stimulating the investment process [6, p. 529—561]. Inflation has a negative impact but becomes neutral for

ΔY_{it} after neglecting more than 15% per annum; that is mean that only high inflation is harmful. In order to study the stability of the obtained results, the econometric estimates are made separately for two subgroups of countries: 1) CEE and the former Soviet Union countries (*Table 3*) and 2) Asia and Latin America (*Table 4*).

Table 3

GDP growth factors (ΔY_{it}) for CEE and the former Soviet Union countries

Variable unit	(1)	(2)	(3)	(4)
Const	-3,436 (-1,41)	-8,420 (-2,59 ^{**})	-2,956 (-0,84)	-1,884 (-0,68)
LAW_{it}	10,252 (2,45 ^{**})	9,612 (2,18 ^{**})	1,672 (0,50)	1,954 (0,51)
INV_{it}	—	0,227 (2,52 ^{***})	0,192 (2,94 ^{***})	0,176 (2,29 ^{**})
CPI_{it}	—	—	-0,242 (-6,75 ^{***})	—
$CPI15_{it}$	—	—	—	-0,224 (-3,01 ^{***})
N	72	72	72	68
R^2	0,01	0,20	0,43	0,18
Wald	5,99 ^{**}	11,63 ^{***}	65,53 ^{***}	17,29 ^{***}

Source: own calculations.

Table 4

GDP growth factors (ΔY_{it}) for Asia and Latin America countries

Variable unit	(1)	(2)	(3)	(4)
Const	5,570 (2,67 ^{***})	3,170 (1,35)	3,565 (1,42)	3,826 (1,37)
LAW_{it}	-5,224 (-1,34)	-5,675 (-1,61 [*])	-6,477 (-1,65 [*])	-7,438 (-1,71 [*])
INV_{it}	—	0,117 (1,86 [*])	0,122 (1,87 [*])	0,144 (2,07 ^{**})
CPI_{it}	—	—	-0,036 (-0,57)	—
$CPI15_{it}$	—	—	—	-0,052 (-0,83)
N	96	96	92	89
R^2	0,01	0,01	0,01	0,03
Wald	1,75	5,59 [*]	5,42	6,24 [*]

Source: own calculations.

For former transformation economies, the beneficial influence of the rule of law can be seen in specifications (1) and (2), but is lost in the light of inflation rate. The inverse dependence of GDP dynamics on inflation is very stable, regardless of the amplitude of price changes. There are no objections to the constructive impact of private investment. The specificity of Asia and Latin America countries is that improving the rule of law situation rather impedes economic growth (a negative coefficient when LAW_{it} is statistically significant at the level of 10% in most specifications). There is also no dependence of GDP dynamics on inflation. Investments are beneficial for economic growth. It is possible to make a conclusion that for some countries the possibility of economic growth without outstripping strengthening of the legal framework or even deepening the process of democratization of political life has been confirmed, as it was obtained in other studies [3, p. 41—58; 21, p. 107—117].

For Asian countries, the lack of dependency between the rule of law and economic growth is most easily explained by the features of local corruption, which, under centralized governance, does not impede business activity, since lower-level officials do not have the opportunities to create their own corruption schemes [13, p. 205—234]. It is more difficult to find an explanation for the inverse

connection between the WJP index and GDP dynamics for Latin American countries. One of them may be the increased antagonism of political life, which is only exacerbated by attempts to strengthen the legal foundations of the functioning of the state mechanism, which has a negative impact on GDP dynamics. Because that for CEE countries and the former Soviet Union, the direct correlation between LAW_{it} and the rate of GDP growth disappears, taking into account the inflation, one can assume that price dynamics depend on the rule of law (with a time lag). This hypothesis is empirically confirmed:

a) all countries

$$\begin{aligned} CPI_{it} = & 12,364 & -13,613LAW_{it-1}, \\ & (3,12^{***}) & (-1,88^*) \\ R^2 = & 0,03 & Wald = 8,67^* \end{aligned} \quad (2)$$

b) CEE and the former Soviet Union countries

$$\begin{aligned} CPI_{it} = & 20,714 & -29,418LAW_{it-1}, \\ & (3,63^{***}) & (-2,94^{***}) \\ R^2 = & 0,03 & Wald = 8,67^* \end{aligned} \quad (3)$$

c) Asia and Latin America countries

$$\begin{aligned} CPI_{it} = & 10,585 & -8,775LAW_{it-1}, \\ & (1,80^*) & (-0,79) \\ R^2 = & 0,08 & Wald = 0,62 \end{aligned} \quad (4)$$

At the same time, it can be noted that for Asian and Latin American countries, the rule of law does not affect inflation at a statistically significant level. These differences can be explained by the peculiarities of determining the priorities of macroeconomic policy, which in the CEE countries and the former Soviet Union countries is much more dependent on legal factors in the conditions of more democratic of political life.

Conclusions. The study does not deny the benefits of the rule of law as a factor of the economic growth of the CEE and the former Soviet Union countries, but no such dependence has been identified for Asia and Latin America. This means that outside the countries of the former socialist camp, there is no urgent need to strengthen the rule of law, and the resources should be better used for development of infrastructure, education and health systems, etc. For CEE and the former Soviet Union countries, one of the mechanisms of stimulating economic growth with a help of the rule of law may be an inflationary pressures reduce. However, further exploration of other mechanisms of functional linkage between the rule of law and economic growth requires further research using WJP subindices and expanding the list of explanatory (independent) variables in regression models. Taking into account the definite dependence of inflation on the WJP index, the next research study should be devoted to the possible causality between the rule of law and the ways in which fiscal and monetary policies are conducted.

Література

1. Acemoglu D. From Education to Democracy? / D. Acemoglu, S. Johnson, J. A. Robinson, P. Yared // AEA Papers and Proceedings. — 2005. — Vol. 95. — № 2. — P. 44—49.
2. Acemoglu D. Institutions as Fundamental Causes of Long-Run Growth / D. Acemoglu, S. Johnson, J. A. Robinson // Handbook of Economic Growth. — 2005. — Vol. 1A. — P. 385—472.
3. Barro R. Democracy, Law and Order, and Economic Growth / R. Barro // Index of Economic Freedom. — Washington : Heritage Foundation, 2013. — P. 41—58.
4. Bayar Y. Public governance and economic growth in the transitional economies of the European Union. / Y. Bayar // Transylvanian Review of Administrative Sciences. — 2016. — № 48. — P. 5—18.
5. Carugati F. Is development uniquely modern? Ancient Athens on the doorstep / F. Carugati, J. Ober, Weingast // Public Choice. — 2019. — № 181. — P. 29—47.
6. Castro R. Legal Institutions, Sectoral Heterogeneity, and Economic Development / R. Castro, G. L. Clementi, G. MacDonald // Review of Economic Studies. — 2009. — Vol. 76. — № 2. — P. 529—561.

7. Chang H.-J. Institutions and economic development: theory, policy and history / H.-J. Chang // *Journal of Institutional Economics*. — 2011. — Vol. 7. — № 4. — P. 473—498.
8. Coase R. H. The Problem of Social Cost / R. H. Coase // *Journal of Law and Economics*. — 1960. — Vol. 3. — № 1. — P. 1—44.
9. Djankov S. The law and economics of self-dealing / S. Djankov, R. La Porta, F. Lopez-de-Silanes, A. Shleifer // *Journal of Financial Economics*. — 2008. — Vol. 88. — № 3. — P. 430—465.
10. Dobler C. The Impact of Formal and Informal Institutions on Economic Growth: A Case Study on the MENA Region / C. Dobler // *Hohenheimer volkswirtschaftliche Schriften*. — № 65. — Frankfurt : Peter Lang International Academic Publishers, 2011. — 234 p.
11. Elert N. The Entrepreneurial Society. A Reform Strategy for the European Union / N. Elert, M. Henrekson, M. Sanders // *International Studies in Entrepreneurship*. — Berlin : Springer-Verlag GmbH, 2019. — Vol. 98. — 173 p.
12. Feld L. Economic growth and judicial independence: Cross country evidence using a new set of indicators / L. Feld, S. Foigt // *CESifo Working Paper*. — Munich : CESifo, 2003. — № 906. — 35 p.
13. Haggard S. The Rule of Law and Economic Development / S. Haggard, A. MacIntyre, L. Tiede // *The Annual Review of Political Science*. — 2008. — Vol. 11. — P. 205—234.
14. Haggard S. The Rule of Law and Economic Growth: Where are We? / S. Haggard, L. Tiede // *World Development*. — 2011. — Vol. 39. — № 5. — P. 673—685.
15. Kar S. The double trap: Institutions and economic development / S. Kar, A. Roy, K. Sen // *Economic Modelling*. — 2019. — Vol. 76 (C). — P. 243—259.
16. La Porta R. Legal determinants of external finance / R. La Porta, F. Lopez-de-Silanes, A. Shleifer, R. Vishny // *Journal of Finance*. — 1997. — Vol. 52. — № 3. — P. 1131—1150.
17. La Porta R. Judicial checks and balances / R. La Porta, F. Lopez-de-Silanes, C. Pop-Eleches, A. Shleifer // *Journal of Political Economy*. — 2004. — Vol. 112. — № 2. — P. 445—470.
18. Lawson T. The Relative / Absolute Nature of Knowledge and Economic Analysis / T. Lawson // *The Economic Journal*. — 1987. — Vol. 97 (388). — P. 951—970.
19. Maroof Z. Determinants of industrial development: a panel analysis of South Asian economies / Z. Maroof, S. Hussain, M. Jawad, M. Naz // *Quality & Quantity*. — 2019. — Vol. 53. — № 3. — P. 1391—1419.
20. Møller J. Systematizing thin and thick conceptions of the Rule of Law / J. Møller, S.-E. Skaaning // *The Justice System Journal*. — Vol. 33. — № 2. — P. 136—152.
21. Ozpolar A. Does Rule of Law Affect Economic Growth Positively? / A. Ozpolar, G. Guven, F. Ozsoy, A. Bahar // *Research in World Economy*. — 2016. — Vol. 7. — № 1. — P. 107—117.
22. Pagano M. The political economy of corporate governance / M. Pagano, P. F. Volpin // *American Economic Review*. — 2005. — Vol. 95. — P. 1005—1030.
23. Stolper A. Rule of Law, Economic Growth and Prosperity: Report of the Rule of Law Working Group / A. Stolper, M. Walker, C. Sabatini, J. Marczak. — New York : Americas Society and Council of the Americas, 2007. — 114 p.
24. Stulz R. M. Culture, openness, and finance / R. M. Stulz, R. Williamson // *Journal of Financial Economics*. — 2003. — Vol. 70. — № 3. — P. 313—349.
25. Xu G. The role of law in economic growth: A literature review / G. Xu // *Journal of Economic Surveys*. — 2011. — Vol. 25. — № 5. — P. 883—871.
26. Versteeg M. Measuring the Rule of Law: A Comparison of Indicators / M. Versteeg, T. Ginsburg // *Law & Social Inquiry*. — 2017. — Vol. 42. — № 1. — P. 100—137.
27. Voigt S. Economic growth and judicial independence, a dozen years on: Cross-country evidence using an updated Set of indicators / S. Voigt, J. Gutman, L. Feld // *European Journal of Political Economy*. — 2015. — Vol. 38 (C). — P. 197—211.
28. Williamson O. E. The New Institutional Economics: Taking Stock, Looking Ahead / O. E. Williamson // *Journal of Economic Literature*. — 2000. — Vol. 38. — № 3. — P. 595—613.
29. Williamson C. R. Securing Private Property: The Relative Importance of Formal versus Informal Institutions / C. R. Williamson, C. B. Kerekes // *Journal of Law and Economics*. — 2011. — Vol. 54. — № 3. — P. 537—572.

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References

1. Acemoglu, D., Johnson, S., Robinson, J. A., & Yared, P. (2005). From Education to Democracy? *AEA Papers and Proceedings*, Vol. 95, 2, 44—49.
2. Acemoglu, D., Johnson, S., & Robinson, J. A. (2005). Institutions as Fundamental Causes of Long-Run Growth. *Handbook of Economic Growth*, Vol. 1A, 385—472.
3. Barro, R. (2013). Democracy, Law and Order, and Economic Growth. *Index of Economic Freedom*. Washington: Heritage Foundation.
4. Bayar, Y. (2016). Public governance and economic growth in the transitional economies of the European Union. *Transylvanian Review of Administrative Sciences*, 48, 5—18.
5. Carugati, F., Ober, J., & Weingast, B. (2019). Is development uniquely modern? Ancient Athens on the doorstep. *Public Choice*, 181, 29—47.
6. Castro, R., Clementi, G. L., & MacDonald, G. (2009). Legal Institutions, Sectoral Heterogeneity, and Economic Development. *Review of Economic Studies*, Vol. 76, 2, 529—561.
7. Chang, H.-J. (2011). Institutions and economic development: theory, policy and history. *Journal of Institutional Economics*, Vol. 7, 4, 473—498.
8. Coase, R. H. (1960). The Problem of Social Cost. *Journal of Law and Economics*, Vol. 3, 1, 1—44.
9. Djankov, S., La Porta, R., Lopez-de-Silanes, F., & Shleifer, A. (2008). The law and economics of self-dealing. *Journal of Financial Economics*, Vol. 88, 3, 430—465.
10. Dobler, C. (2011). The Impact of Formal and Informal Institutions on Economic Growth: A Case Study on the MENA Region. *Hohenheimer volkswirtschaftliche Schriften*, 65. Frankfurt: Peter Lang International Academic Publishers.

11. Elert, N., Henrekson, M., & Sanders, M. (2019). The Entrepreneurial Society. A Reform Strategy for the European Union. *International Studies in Entrepreneurship*, Vol. 98. Berlin: Springer-Verlag GmbH.
12. Feld, L., & Voigt, S. (2003). Economic growth and judicial independence: Cross country evidence using a new set of indicators. *CESifo Working Paper*, 906. Munich: CESifo.
13. Haggard, S., MacIntyre, A., & Tiede, L. (2008). The Rule of Law and Economic Development. *The Annual Review of Political Science*, Vol. 11, 205—234.
14. Haggard, S., & Tiede, L. (2011). The Rule of Law and Economic Growth: Where are We? *World Development*, Vol. 39, 5, 673—685.
15. Kar, S., Roy, A., & Sen, K. (2019). The double trap: Institutions and economic development. *Economic Modelling*, Vol. 76 (C), 243—259.
16. La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. (1997). Legal determinants of external finance. *Journal of Finance*, Vol. 52, 3, 1131—1150.
17. La Porta, R., Lopez-de-Silanes, F., Pop-Eleches, C., & Shleifer, A. (2004). Judicial checks and balances. *Journal of Political Economy*, Vol. 112, 2, 445—470.
18. Lawson, T. (1987). The Relative / Absolute Nature of Knowledge and Economic Analysis. *The Economic Journal*, Vol. 97 (388), 951—970.
19. Maroof, Z., Hussain, S., Jawad, M., & Naz, M. (2019). Determinants of industrial development: a panel analysis of South Asian economies. *Quality & Quantity*, Vol. 53, 3, 1391—1419.
20. Møller, J., & Skaaning, S.-E. Systematizing thin and thick conceptions of the Rule of Law. *The Justice System Journal*, Vol. 33, 2, 136—152.
21. Ozpolar, A., Guven, G., Ozsoy, F., & Bahar, A. (2016). Does Rule of Law Affect Economic Growth Positively? *Research in World Economy*, Vol. 7, 1, 107—117.
22. Pagano, M., & Volpin, P. F. (2005). The political economy of corporate governance. *American Economic Review*, Vol. 95, 1005—1030.
23. Stolper, A., Walker, M., Sabatini, C., & J. Marczak. (2007). Rule of Law, Economic Growth and Prosperity: Report of the Rule of Law Working Group. New York: Americas Society and Council of the Americas.
24. Stulz, R. M., & Williamson, R. (2003). Culture, openness, and finance. *Journal of Financial Economics*, Vol. 70, 3, 313—349.
25. Xu, G. (2011). The role of law in economic growth: A literature review. *Journal of Economic Surveys*, Vol. 25, 5, 883—871.
26. Versteeg, M., & Ginsburg, T. (2017). Measuring the Rule of Law: A Comparison of Indicators. *Law & Social Inquiry*, Vol. 42, 1, 100—137.
27. Voigt, S., Gutman, J., & Feld, L. (2015). Economic growth and judicial independence, a dozen years on: Cross-country evidence using an updated Set of indicators. *European Journal of Political Economy*, Vol. 38 (C), 197—211.
28. Williamson, O. E. (2000). The New Institutional Economics: Taking Stock, Looking Ahead. *Journal of Economic Literature*, Vol. 38, 3, 595—613.
29. Williamson, C. R., & Kerekes, C. B. (2011). Securing Private Property: The Relative Importance of Formal versus Informal Institutions. *Journal of Law and Economics*, Vol. 54, 3, 537—572.

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