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PAPER

Is the Rule of Law Essential for Economic Growth? Evidence from European Countries

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Abstract This paper aims to measure the influence of human capital, the rule of law, and the protection of property rights on GDP. The works of Acemoglu have inspired the research. This study has used a self-structured sample containing eight countries: Germany, Czech Republic, Hungary, Serbia, Italy, the UK, Spain, and Sweden. The selection of countries in the sample was intentional. While choosing it, the countries' business culture, path dependence, and geopolitical situation have been taken into account. The analysis showed a high correlation of all three observed indices with GDP/cap. In order to determine the relative share of overall indices in economic growth, a graphic representation was used. The regression analysis showed that the change in the IPRI value by one percentage point leads to a more significant positive impact on GDP growth in the group of less developed countries than in the leading developed economies. Although GDP jumps percent are higher in countries with lower IPRI, they are roughly equal to those recorded in developed countries if observed in real terms. This can be explained by the fact that countries with high IPRI have accumulated a higher mass of GDP over time.

Keywords*:* Economic growth, property rights, rule of law, human capital.

Jel Classification: P14, O43, O57.

1. Introduction

From its inception (Veblen, 1994) to the present day, the institutional economics has gone through several evolutionary waves. A special stamp in the development of this economic discipline was given by theorists such as Coase, Becker, North, Ostrom, and Williamson. These scientists have been awarded the Nobel Prize in Economic Sciences for their innovative achievements. The mentioned authors found shortcomings in the concept of an economy that relies on the full information of individuals and put in the

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foreground the importance of institutions in shaping economic development. In this sense, North (1990, 1995) presented a specific analysis of the impact of institutions on the economic performance of states. David Baron (2010) pointed out the importance of strengthening the nonmarket environment. Problems such as the cause of prolonged stagnation or absolute decline of well-being in some societies, causes of different paths of historical changes are problems that economic science is interested in. Besides, there are always the interests of the ruling elite directed towards institutional changes and the basis of economic policy. In this regard, informal rules, customs, and culture (Pejovich, 2003) can slow down or provoke an inadequate response to changes in formal rules. According to Acemoglu, which inspired our research, elites have great power to change rules and shape institutions (Acemoglu et al., 2014).

Three groups of variables have an important impact on economic output. These are the rule of law, the protection of property rights, and human capital. This research included eight European countries with various path dependence. Since 2000, numerous scholarly articles have been published on the impact of the rule of law and human capital on GDP. However, earlier studies and reports do not measure the relative contribution to economic growth that human capital, the rule of law, and the degree of protection of property rights have. The rule of law and property rights protection are not statistically associated in a model. The specificity of this study lies in measuring the relative share of the human capital index, the rule of law, and the protection of property rights in GDP growth per country. In order to determine the relative share of overall indices in GDP growth per country, a graphic representation and regression model were used.

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2. Literature Review

Economists such as Acemoglu, Robinson, Gallego, Woodberry have improved the analysis of the institutional impact on the economy (Gallego & Woodberry, 2010). The authors offered:

1. new aspects,
2. more diverse argumentation,
3. more sophisticated analysis, compared to previous institutionalists.

1. This group of authors has demonstrated the importance of the influence of political

elite decisions on institutional change. As Becker (1983) argued, there will be the possibility of a significant change in the situation, where elites have certain interests. The direction in which elites operate usually changes when they are forced to, and the interest of organizations occurs in a situation where it is more profitable to invest in politics in order to change these rules than to invest in the context of existing policies and regulatory constraints. In distinguishing political institutions, that govern the allocation of *de jure* power in society (Acemoglu & Robinson, 2006) and economics (affecting strengthening and protection of property rights), there is a need to analyze the success of institutional management changes. The way the changes can be will depend on factors on the side of the elite but also on the side of citizens. Elites are characterized by different degrees of commitment, not only to proposing new institutional changes but also to their implementation and strengthening of the rule of law. Citizens are distinguished by a smaller or greater degree of trust in institutions, which is one of the social capital variables. The problem of institutional trust is particularly pronounced in a number of transitional societies, for instance in Serbia, which is characterized by low stocks of social capital. Social capital is a kind of political elixir and the value of networks that assimilate institutional changes with reduced transaction costs (Acemoglu & Robinson, 2012). According to Knowles (2005), the issues of social capital represent a very important factor in the mentioned issue.

2. Detailed data and rich argumentation of the influence of institutions on economic growth in the works of Acemoglu et al. (2012), date back to the distant colonial era, and through the application of quantitative analysis bring a whole range of cause-and-effect results.

3. Sophisticated analysis on the relationships among institutions, human capital, and economic development (Acemoglu et al., Robinson 2014) is based on the long-term data series, using OLS regression, semi-structured models, and other techniques, whereby the authors showed a significant degree of scientific creativity.

The link between the rule of law and growth was in focus in the recent research papers on China - a country that has implemented modernization following a model atypical of Western countries. According to Zhon Zhang (2018), the recent decline in China's growth rate may be explained by an underdeveloped rule of law system. According to Andrei Lisitsyn-Svetlanov, Aleksandar Vasilevich -Malko,and Sergei Fedorovich Afanas'ev (2018), the correlation between economic and judicial institutions becomes more significant because efficient market relations exist only in a legal framework. The legal framework provides all interested agents with high institutional and procedural standards in the field of justice. As for developing countries, Pavle Petrović, Danko Brčerević, and Mirjana Gligorić (2019) highlight the key importance of the rule of law to economic growth. According to the authors, growth in Serbia is 1 percentage point behind due to an underdeveloped rule of law, primarily because of the weakness of institutions. Thi Thuy Huong Luong, Tho Minh Nguyen, and Thi Anh Nhu Nguyen (2020) investigated the connections between the rule of law, economic growth, and the shadow economy in

18 transition countries. According to the authors, the size of the shadow economy could be controlled by improving the effectiveness of the rule of law and the growth of the economy. Analyzing the impact of the rule of law on economic growth in a sample of 41 countries, the authors came to interesting results (Shevchuk et al., 2020). According to these authors, the rule of law benefits are a factor in the CEE's economic growth and the former Soviet Union countries. However, no such dependence has been identified for Asia and Latin America. On the other hand, according to the authors, further exploration of functional linkage between the rule of law and economic growth requires additional research using WJP sub-indices and expanding the number of independent variables in regression models (*ibid.*).

3. Sample Design and Analysis

This chapter measures and analyzes the impact of human capital, the rule of law, and the degree of protection of property rights on GDP/capita PPP. As the instrument for measuring human capital, it was used the human capital index (World Economic Forum, 2017). Human capital represents the economic value of a set of skills an employee has. For economic policymakers, human capital refers to the capacity of the population that strives for economic growth. Traditionally, human capital can be linked to education and experience. Lately, human capital has included the health aspect of the nation as well (physical, cognitive, and mental health). According to the newest WEF report (2017), the human capital index ranks 130 countries. Countries are ranked based on the extent of the development and implementation of human capital potential. Covering 21 indicators, the human capital index measures on a scale from 0 (worst) to 100 (best) how well countries are developing their human capital across four thematic dimensions such as capacity, deployment, development, and know-how. The human capital index considers five distinct age groups to capture the full demographic profile of a country (WEF, 2017). For the purpose of the research, the overall human capital index is used.

A synthetic index is used to measure the rule of law (World Justice Project, 2018). This index measures how the rule of law affects the daily lives of 113 countries. The measurement is carried out on a sample of more than 110,000 citizens and based on the evaluation of 3000 legal experts collected worldwide. The rule of law is evaluated on the basis of 44 indicators organized in 8 composite factors (indices): Constraints on government powers, absence of corruption, the openness of the government, fundamental rights, order and security, regulatory enforcement, civil justice, criminal justice. The values of each of the indices range from 0.00 (minimum value) to 1.00 (maximum value). The total value of the rule of law index is calculated on the basis of the average value of 8 indices (WJP 2018). The analysis uses the overall index of the rule of law, the regulatory enforcement index, and the absence of corruption index.

The international property rights index (Levy-Carciente2019) is used when studying the problem of property rights and their impact on economic development. This

synthetic index aims to offer politicians, researchers, businessmen, and government officials the instrument for understanding the significance of the impact of private ownership on economic development. In societies where private property and the rule of law are respected, citizens enjoy economic freedom from a strong property rights system (Dedigama & De Soto, 2008). The index concept is based on the assumption that there is a significant correlation between property rights and the nation's economic growth. The international index of property rights consists of three sub-indices: 1. The legislative and political environment, 2. Physical property rights, and 3. Intellectual property rights. The overall grading scale of the IPRI ranges from 0 to 10, where 10 is the highest value for a property rights system and 0 is the lowest value (most negative) for a property rights system within a country (Levy-Carciente, 2019).

In this study, it was used a self-structured sample. Eight countries were selected for the sample: Germany, Czech Republic, Hungary, Serbia, Italy, the United Kingdom, Spain, and Sweden. The selection of countries in the sample was intentional. While choosing it, the countries' business culture, path dependence, and geopolitical situation have been taken into account. The criteria for the sample were to compare the impact of institutional factors on the economic results of different groups of countries. The first group includes mature market economies with long-standing and stable institutions (Sweden, Germany, and UK). Italy and Spain represent the second group of mature market economies with continuous institutional design and unstable governments problems. The Czech Republic (the most developed country among post-socialist countries) and Hungary (having moderate reforms in the last period of the socialist government) are examples of the successful transition process.As the major part of current Serbia had a long development period based on the oriental traditions, the transaction costs of introducing new formal institutions and the rule of law are different and higher, compared to the Czech Republic and Hungary, still having a memory of the rule of law in Austro-Hungarian Empire (Pejovich, 2003).According to the latest reports, Serbia is classified by the IMF as part of the Emerging and Developing Europe group and by the World Bank as an upper-middle-income country (Levy-Carciente, 2019). Serbia is still living the period of transition recession, with the permanent problem of the weak rule of law. The pace of accession to the EU of Serbia and Western Balkan countries is strongly related to the performance of the rule of law and protection of property rights (Zaric, 2015). In this context, Serbia is identified as a separate group. Table 1 shows values of the overall human capital index measured in eight countries.

Table 1. The Human Capital Index

	Overall index
Germany	74.30
Czech Republic	71.41

Hungary	66.40
Serbia	62.50
Italy	67.23
UK	71.31
Spain	65.60
Sweden	73.95

Source: World Economic Forum 2017

Table 2 shows the values of the rule of law indices. The highest values of all three indices were recorded in the cases of Germany and Sweden. This can be explained by institutional consistency and continuity in these countries (North, 1990).

Table 2. The Rule of Law Indices

	Overall index	**Regulatory enforcement**	**Absence of corruption**
Germany	0.84	0.85	0.82
Czech Republic	0.73	0.71	0.65
Hungary	0.53	0.47	0.51
Serbia	0.50	0.48	0.44
Italy	0.66	0.61	0.63
UK	0.79	0.81	0.82
Spain	0.73	0.70	0.73
Sweden	0.86	0.84	0.91

Source: WJP 2018

Table 3 shows the values of property rights indices. This research, whose results are specially monitored by global companies and potential investors, shows that Serbia was ranked 110th, Hungary 48th, Italy 49th, Spain 35th, the Czech Republic 30th, Germany according to the overall property rights index 16^{th,} and UK 13th. Sweden is ranked the best among countries observed and occupies third place in the global ranking (Levy-Carciente, 2019).

Table 3. International Property Rights Indices, country comparison

	Overall index	**Physical Property Rights**	**Intellectual property rights**
Germany	7.85	7.60	8.29
Czech Republic	7.03	7.04	7.40

Hungary	6.22	6.53	6.73
Serbia	4.76	6.02	3.89
Italy	6.13	6.14	6.77
UK	8.04	7.87	8.47
Spain	6.45	6.61	6.72
Sweden	8.28	8.17	8.37

Source: Levy-Carciente 2019

The research started with the hypothesis H1: *Human Capital and GDP/capita PPP are positively correlated.* Table 4 shows the values of GDP/capita for eight countries (World Bank, 2018).

Table 4.GDP/cap/PPP (current int. $)

Germany	53074.5
Czech Republic	39743.6
Hungary	31102.5
Serbia	17434.9
Italy	41830.4
UK	45973.6
Spain	39715.4
Sweden	53208.9

Source: World Bank Group 2018.

In order to test the hypotheses, the correlation between the human capital index and GDP was measured (Table 5).

Table 5. Correlation between the Human Capital Index and GDP/cap PPP

		Human Capital Index	**GDP cap/ppp int $**
Human Capital Index	Pearson Correlation	1	,896**
	Sig. (2-tailed)		,003
	N	8	8
GDP cap/PPP int $	Pearson Correlation	,896**	1
	Sig. (2-tailed)	,003	
	N	8	8

**. Correlation is significant at the 0.01 level (2-tailed).

Source: Authors' calculation

A significant correlation between the human capital index and GDP is achieved, and it is concluded that hypothesis H1 is confirmed.

The following research was based on hypothesis H2: *The rule of law and the GDP/capita PPP are positively correlated*. The correlation of the rule of law indices and GDP/capita PPP is measured to test the hypothesis. In Table 6, the values of Pearson's correlation coefficient between the rule of law indices and GDP are given.

Table 6. Correlations between Rule of Law Indices and GDP/cap PPP

		Rule of Law overall index	**Rule of Law Regulatory enforcement**	**Rule of Law Abscence of corruption**	**GDP cap/ ppp int $**
Rule of Law overall index	Pearson Correlation	1	,990**	,976**	,942**
	Sig. (2-tailed)		,000	,000	,000
	N	8	8	8	8
Rule of Law Regulatory Enforcement	Pearson Correlation	,990**	1	,962**	,905**
	Sig. (2-tailed)	,000		,000	,002
	N	8	8	8	8
Rule of Law Abscence of Corruption	Pearson Correlation	,976**	,962**	1	,936**
	Sig. (2-tailed)	,000	,000		,001
	N	8	8	8	8
GDP cap/PPP int. $	Pearson Correlation	,942**	,905**	,936**	1
	Sig. (2-tailed)	,000	,002	,001	
	N	8	8	8	8

**. Correlation is significant at the 0.01 level (2-tailed).

Source: Authors' calculation

In all three variants of the index, very high values of Pearson's coefficient were obtained. Notably, the sub-index of "absence of corruption" has a slightly more significant impact on GDP than the "regulatory enforcement." Therefore, it is concluded that hypothesis H2 is confirmed.

In addition, hypothesis H3 has been tested*: Property Rights Index and GDP/capita PPP are positively correlated*. In Table 7, correlations between 3 property rights indices (overall index, physical property rights index, and intellectual property rights index) and GDP were measured. The results are the following values of the Pearson's coefficient: 0.922, 0.801, and 0.937, respectively. It can be noted that the sub-index "intellectual property rights" has a more significant impact on the growth of GDP than the sub-index related to the protection of physical property.

Table 7. Correlations between IPRI and GDP/cap PPP

		IPRI overall	**Physical Property Rights**	**Intellectual property Rights**	**GDP cap/ ppp int $**
IPRI overall	Pearson Correlation	1	,956**	,963**	,922**
	Sig. (2-tailed)		,000	,000	,001
	N	8	8	8	8
Physical Property Rights	Pearson Correlation	,956**	1	,846**	,801*
	Sig. (2-tailed)	,000		,008	,017
	N	8	8	8	8
Intellectual property Rights	Pearson Correlation	,963**	,846**	1	,937**
	Sig. (2-tailed)	,000	,008		,001
	N	8	8	8	8
GDP cap/ppp int $	Pearson Correlation	,922**	,801*	,937**	1
	Sig. (2-tailed)	,001	,017	,001	
	N	8	8	8	8

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Source: Authors' calculation

It is concluded that hypothesis H3 is confirmed. The analysis showed a high degree of correlation of all three observed indices with GDP/capita. Considering the very high value of Pearson's coefficient in all cases (Table 8), it is not possible to conclude, from

the analysis that included the used reports, what is the relative share in economic growth that human capital, the rule of law, and the degree of protection of property rights have.

Table 8. Correlation Matric: Overall Indeces and GDP/cap PPP

		Human Capital Index	Rule of Law overall index	IPRI overall	GDP cap/ ppp int $
Human Capital Index	Pearson Correlation	1	,881**	,939**	,896**
	Sig. (2-tailed)		,004	,001	,003
	N	8	8	8	8
Rule of Law overall index	Pearson Correlation	,881**	1	,917**	,942**
	Sig. (2-tailed)	,004		,001	,000
	N	8	8	8	8
IPRI overall	Pearson Correlation	,939**	,917**	1	,922**
	Sig. (2-tailed)	,001	,001		,001
	N	8	8	8	8
GDP cap/ppp int $	Pearson Correlation	,896**	,942**	,922**	1
	Sig. (2-tailed)	,003	,000	,001	
	N	8	8	8	8

**. Correlation is significant at the 0.01 level (2-tailed).

Source: Authors' calculation

In order to determine the relative share of overall indices in GDP growth per country, a graphic representation was used. To achieve a precise and comparable graphic representation of the country distance to overall index averages, it was necessary to align the overall rule of law index values and IPRI overall with the human capital index. To achieve this, it was used weighting. The rule of overall law index is multiplied by 100 while IPRI overall is multiplied by 10. Figure 1 shows the countries distance to index averages.

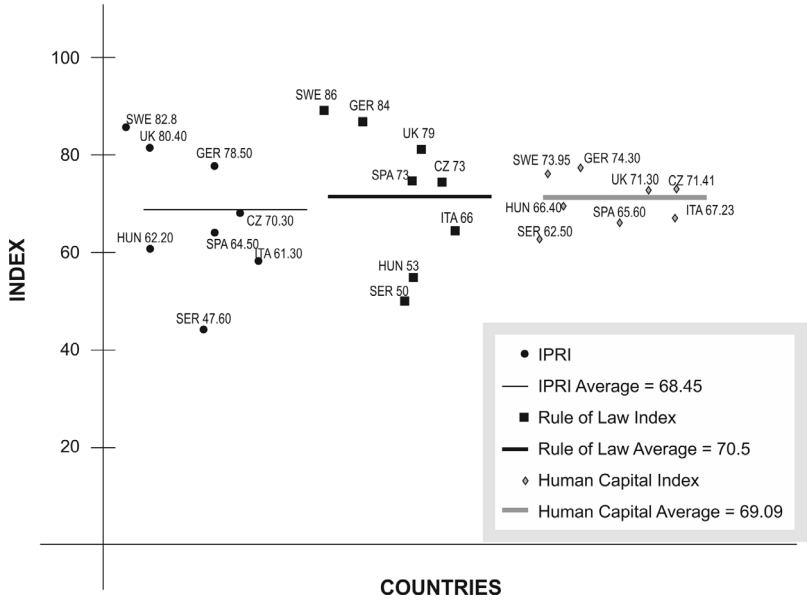

Figure 1. Country distance to overall index averages
Source: Authors' calculation

As can be seen, in the Serbian case it was measured the largest distance below the IPRI average. The intention was to calculate how much GDP is growing in the case of an IPRI increase by one percentage point. The following regression model was set:

$$Y_i = \beta_0 + \beta_1 x_{i+} \varepsilon_i \quad (1)$$

Where, for $i=n$ **observations:**

Y_i = dependent variable (GDP/cap/PPP int. $)
β_0 = y intercept (constant)
β_1 = slope
x_i = the independent variable or predictor: IPRI (International property rights index)
ε_i = random error

Based on the results (Table 9), it can be concluded that 84.9% of the variability of the dependent variable GDP can be explained by the influence of the IPRI predictor, with the statistical significance p = 0.001 (Table 10).

Table 9. Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,922[a]	,849	,824	4938,9413

[a.] Predictors: (Constant), IPRI weighted

[b.] Dependent Variable: GDP cap/ppp int $

Source: Authors' calculation

Table 10. ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	826046206,852	1	826046206,852	33,864	,001b
	Residual	146358848,303	6	24393141,384		
	Total	972405055,155	7			

[a.] Dependent Variable: GDP cap/ppp int $

[b.] Predictors: (Constant), IPRI weighted

Source: Authors' calculation

Table 11 shows the contributions by coefficients.

Table 11. Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	-22149,890	10866,005		-2,038	,088
	IPRI weighted	911,766	156,681	,922	5,819	,001

[a.] Dependent Variable: GDP cap/ppp int $

Source: Authors' calculation

In order to carry out the interpolation of the model, there were considered two conditions in the Serbian economy. In the first case, the GDP /cap PPP for Serbia was used, which, according to World Bank 2017, amounts to 17434.9 int. $. From model 1 it follows:

$GDP1 = -22149.89+911.77*47.60–3815.26 \approx 17435\$$

where $\beta_0 cons.$ = -22149.890, β_1 = 911.77 and ε = -3815.26 for $IPRI$ = 47.60

In order to measure the GDP change in case of an increase in IPRI, it is considered that the new *IPRI2* value is 41.40($\Delta IPRI$ =1percentage point). In this case, GDP increased by 911.77, so the new value was 18346.9$

$$GDP2=-22149.89 + 911.77 * 48.60 – 3815.26=18346.9\$$$

where $\beta_0 cons.$ =-22149.890, β_1 = 911.77 and ε = -3815.26 for $IPRI$ = 48.60

$$\Delta GDP\ (\%) = \frac{GDP2 - GDP1}{GDP1} * 100=5.23\% \quad (2)$$

We can note that the jump of IPRI by 1 percentage point in the Serbian case leads to an increase of GDP/cap PPP of 5.23%. According to model 1 and equation 2, when the IPRI increases by 1 percentage point, the Hungarian GDP increases by 2.93%. Sweden, UK, and Germany have the highest scores for IPRI. According to model 1 and equation 2, for each increase in IPRI by 1 percentage point, there is an increase in GDP in the case of Sweden1.71%, the UK of 1.98%, and Germany1.72%. It can be concluded that countries with lower IPRI scores have higher GDP jumps in a percentage than those with the highest IPRI values. Although GDP jumps percent are higher in countries with lower IPRI, they are roughly equal to those recorded in developed countries if observed in real terms. This can be explained by the fact that countries with high IPRI have accumulated a higher mass of GDP over time.

4. Conclusion

Based on this analysis, it can be concluded that the impact of property rights protection (as a separate and important segment of the rule of law problem) is of the greatest importance for economic development. It means the research is not based on the non-causal association of the rule of law and property rights protection. The rule of law and the level of human capital have a positive impact on economic development. It is also confirmed the result of Acemouglu's research with Gallego and Robinson that the impact of institutional factors is more important than the impact of education and the formation of human capital (Acemoglu et al., 2014).Investments in the human capital of one country affect the GDP growth in others, primarily in neighboring countries (Malešević-Perović et al., 2018).The institutional changes, on the contrary, are not characterized by such a type of spillover. Acemoglu and Autor (2012) published a review of Goldin's and Katz's work (2010) on the race between education and technology. But, paraphrasing the title of this study, there are significant researches on the "race between" education and institutions. The conclusions are of great importance to the creators of economic policies. It should be kept in mind that different political institutions create different, divergent influences in protecting their rights (Justesen, 2015).

The regression analysis done for Serbia and Hungary, i.e., Germany, Sweden, and the United Kingdom, showed that a change in the IPRI value by one percentage point leads to a more significant positive impact on GDP growth in a group of less developed countries than in the leading developed economies. This can be explained by the degree of protection of property rights already achieved in developed market economies, representing a historical development and one of the foundations of the rise of Sweden, Germany, and the United Kingdom.Whether the institutional infrastructure, starting from a constitutional solution, supports economic activity is a question discussed in the literature, and Daron Acemoglu, Georgy Egorov, and Konstantin Sonin (2012) paid attention to it, too. In post-communist countries, where the very concept of transition must be understood, first of all, as a process of redesigning institutional infrastructure (and not primarily as property transformations, macroeconomic stabilization, and liberalization), the efforts to define property rights and create instruments for their protection are crucial, as argued by the data on the connection of these changes (based on international indices) with changes in the field of economic development.

Conflicts of interest/Competing interests

The authors declare no conflict of interest.

References

Acemoglu, D, Georgy, E, Konstantin, S. K (2012) Dynamics and Stability of Constitutions, Coalitions and Clubs.*Am. Econ. Rev.* 102(4): 1446–1476. https://doi.org/10.1257/aer.102.4.1446

Acemoglu, D,Francisco, A. G,James, A. R (2014) Institutions, Human Capital, and Development.*Annu. Rev. of Econ.* 6(1): 875–912.DOI: 10.3386/w19933

Acemoglu, D, Simon,J,Robinson, J.A (2012) Colonial Origins of Comparative Development: An Empirical Investigation: Reply.*Am. Econ. Rev.* 102(6): 3077-3110. DOI: 10.1257/aer.102.6.3077

Acemoglu, D,David, A (2012) What Does Human Capital Do? A Review of Goldin and Katz's Race between Education and Technology. *J. of Econ. Lit.* 50(2): 426–463. DOI: 10.3386/w17820

Acemoglu, Daron,Robinson, J. A (2012) *Why Nations Fail: The Origins of Power, Prosperity, and Poverty.* New York: Crown Publishers. DOI: https://doi.org/10.1080/10803920.2012.742407

Baron, D (2010) *Business and Its Environment*. Stanford: Pearson Education International

Becker, G (1983) A Theory of Competition among Pressure Groups or Political Influence. *Q. J. of Econ.* 98(3): 371-400

Dedigama, A.C, Hernando De Soto, F **(**2008)*2009 IPRI Report*. Washington: Property Rights Alliance

Gallego, F, Robert, W (2010)Christian Missionaries and Education in Former African Colonies: How Competition Mattered. *J. of Afr. Econ.*19(3): 294-329.

https://doi.org/10.1093/jae/ejq001.

Goldin, C, Lawrence,K. F (2010)*The Race between Education and Technology.* 6390th ed., Belknap Press

Justesen, M **(**2015) Making and Breaking Property Rights: Coalitions, Veto Players, and the Institutional Foundation of Markets. JITE, 171(2):238-262. DOI: 10.1628/093245615X14273596658928

Knowles, S (2005) Is Social Capital Part of the Institutions Continuum? Centre for Research in Economic Development and International Trade, University of Nottingham Working paper 05/11

Levy–Carciente, S(2019)*2019 International Property Rights Index.* Washington: Property Alliance

Lisitsyn-Svetlanov, A, Vasilevich, A, Afanas'ev, S.F(2018) The Rule of Law As a Factor of Economic Development."*Her. Of Rus. Acad. of Sci.* 88(2): 119-126

https://doi.org/10.1134/S1019331618020028

Luong, T. T. H, Nguyen, T. M, Nguyen T. A. N (2020) Rule of Law, Economic Growth and Shadow Economy in Transition Countries. *J. of Asian Fin, Econ & Bus.* 7(4): 145-154

doi: https://doi.org/10.13106/jafeb.2020.vol7.no4.145

Malešević-Perović, L, Golem, S, Mihaljević-Kosor, M **(**2018)The impact of education expenditures on growth in the EU28 – a spatial econometric perspective. *Acta Oeconomica*, 68(2): 271-294. DOI: 10.1556/032.2018.68.2.5

North, D. C (1995) The Paradox of the West. In R. Davis. (ed)*The Origins of Modern Freedom in the West.* Stanford: Stanford University Press, pp 7-34

North, D. C (1990) *Institutional Change, and Economic Performance*: New York: Cambridge University Press.https://doi.org/10.1017/CBO9780511808678

Pejovich, S (2003)Understanding the transaction costs of transition: it's the culture, stupid. *Rev. of Austrian Econ.* (16)4: 341-361.

DOI: 10.1023/A:1027397122301

Petrović, P, Brčerević, D, Gligorić, M (2018) Why is Serbian Economic Growth Underachiever? *Ekonomika preduzeća* 67(1-2): 17-33.

DOI: 10.5937/EKOPRE1808017P

Robinson, J. A, Acemoglu, D (2006) *Economic Origins of Dictatorship and Democracy*. Cambridge: University Press. *DOI*: https://doi.org/10.1017/CBO9780511510809.

Shevchuk V. O., Blikhar M. M., Komarnytska I. I., Tataryn N. M (2020) Rule of and Economic Growth. *Finanac. & Cred. Activity Problems of Theory and Pract.* 1(32):278-289

DOI: https://doi.org/10.18371/fcaptp.v1i32.200522

World Bank (2018) International Comparison Program Database, GDP per capita, PPP(current international $). https://data.worldbank.org/indicator/NY.GDP.PCAP.PP.CD, (accessed April 28, 2020)

Veblen, T (1994)*The Theory of the Leisure Class*.New York: Dover Publications Inc.

World Economic Forum (2017) *The Global Human Capital Report 2017*. Geneva: WEF

World Justice Project (2018) *World Justice Project Rule of Law Index 2017-2018*. Washington: The World Justice Project

Zaric, S **(**2015) Protection of Property Rights and Accession to EU: Comparative Analyses of EU Members and Candidate Countries. In: Vesselin, Mintchev, Nikolay, Nenovsky, Xavier, Richet (ed) *Western Balkans and the European Union. Lessons from the past enlargements, challenges to further integrations*, Sofia: University Publishing House "Stopanstvo", pp69-79,

Zhong, Z (2018) Law and Economic Growth in China: A Case-Study of the Stock Market.*Asian . J. of Law & Soc.*5(2): 333-357.DOI: https://doi.org/10.1017/als.2018.17