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# THE ANALYSIS OF DEPENDENCE OF EASTERN EUROPE COUNTRIES INVESTMENT ATTRACTIVENESS ON ECONOMIC, POLITICAL, LEGAL AND SOCIOCULTURAL FACTORS

Identifying the strengths and weaknesses that affect the investment attractiveness of the country serves as an indicator of the need for measures implementation oriented to slope of enlightenment and creating wider opportunities for increasing the competitive advantages and investment attractiveness of the country. And the use of existing opportunities will allow to realize the existing innovative and human potential and will become a prerequisite for the gradual strengthening of Ukraine's competitive positions and the adaptation of the national economics to global transformations [1].

The done SWOT-analysis [7] made it possible to provide insight into the need to include any factor in a regression model. The logic of determining the factors of the regression model is also related to the BDO International Business Compass methodology for estimation the investment attractiveness of the countries of the world. The calculation of the index BDO International Business Compass takes into account the influence of economic, politico-legal and sociocultural factors [3-8]. The regression equation also takes into account three factors and is written as:

$$Y = b_0 + b_1 x_1 + b_2 x_2 + b_3 x_3$$

where $Y$ — investment attractiveness index BDO International Business Compass; $b_0$ — absolute term of an equation; $b_1, b_2, b_3$ — regression coefficients; $x_1$ — Global Peace Index. Defines the security level, the degree of internal or international conflicts, and the degree of

militarization; $x_2$— Corruption Perceptions Index (CPI), rating is compiled by Transparency International Company, an indicator reflects the level of corruption based on the assessments of entrepreneurs and analysts; $x_3$— Legatum Prosperity Index, an indicator from the British analytical organization The Legatum Institute, measures the prosperity of countries according to 9 parameters: economy, business, management, education, health, safety, individual freedom, social capital, ecology. According to the results of the analysis, a regression model is constructed that has the form:

$$Y = 32,23 - 5,3x_1 + 0,15x_2 + 0,46x_3$$

The comprehensive interpretation of the regression coefficients is the following:

under otherwise equal conditions, the more war events, war dead and the percentage of refugees (which characterizes the Global Peace Index), the lower the value of the BDO investment attractiveness index — an average of 5.3 units of measurement;

the higher the position of the country in the rating on Corruption Perceptions Index (0 — the maximum level of corruption, 100 — the lack of corruption), the higher the investment attractiveness for the subjects of investment;

the value of the investment attractiveness index increases by a mean of 0.46 units of its own scale of measurement with a change in the Legatum Prosperity Index per unit of measurement with the invariance of other factors included in the regression model and under otherwise equal conditions [7].

The indicators of the standard regression analysis table (contains all the correlational relationship characteristics), calculated by the Excel environment in the Data Analysis package, indicate a significant and substantial connection between the reported characteristics. The factors included in the regression model explain 90,7% of the variation of the investment attractiveness index BDO International Business Compass. It was checked the significance of determination coefficient: for the investigated series, the actual value far exceeds the critical value: RI = 0,907 > $R^2_{0,95}(2;15) = 0,232$, which with probability 0,95 confirms the sufficiency of the equation to the real process. The value of t-statistics for all factors exceeds the critical value $t_{0,95}(15) = 2,131$, which, with a probability of 0,95,

confirms the significance of the influence of these factors. To compare the effect influences on each factor included in the model, standardized rates of regression are calculated — beta coefficients $\beta_i$. On the basis of the calculated $\beta_i$ — coefficients, it may be concluded that among the impact factors on the investment attractiveness of the country, included in the model, the level of prosperity and human progress are the most important ($\beta_3 = 0{,}411$). The difference between the influence of other factors is insignificant: the next effect of influence is the level of perception of corruption ($\beta_1 = -0{,}344$), and the last — the level of peace ($\beta_2 = 0{,}298$) [7].

Taking into account the conclusions of United Nations Conference on Trade and Development regarding the investment attractiveness of Ukraine, which was the most affected by the conflict, it is evidently that the continued aggressive policy of Russian Federation, the occupation of Crimea and military operations in the east of Ukraine has a significant impact on the national investment climate. However, from the viewpoint of the statistical aggregate of Eastern European countries, which do not have military conflicts, the impact of such events is insignificant, as among the impact factors on the investment attractiveness of the country included into the regression model the most important is the level of prosperity and human progress (economy, business, management, education, health, safety, personal liberty, social capital, ecology). Except the observance of national security, the investment attractiveness of the country depends on socioeconomic processes, including economic growth, welfare of citizens, prosperity of human potential. Otherwise, the threat of overgrowing of social instability in the political crisis increases.

The results of the analysis determined the need for a comprehensive estimation of the state and trends of the investment climate in Ukraine, using statistical tools for analysing and agreeing quantitative and qualitative components of the model of investment attractiveness estimation of Ukraine and other EU member states. The data obtained during the analysis and the empirical analysis carried out may promote to further research for making informed decisions in order to improve the investment image of Ukraine and increase the volume of attraction of foreign investments and capital investments into the state economy [1, 7].

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## CONSTRUCTION OF INDICATORS PRECURSORS FOR BITCOIN TIME SERIES USING METHODS OF NONLINEAR DYNAMICS

Bitcoin (abbreviated as BTC) is an electronic payment system which is not regulated by any bank, department or any state entity, and relies only on the cryptographic protocols, and the distribution system of users involved in all transactions [1]. All members of the