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Article

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Amfiteatru Economic Journal

Provided in Cooperation with:

The Bucharest University of Economic Studies

Suggested Citation: Draškovic, Mimo; Bauk, Sanja; Streimikiene, Dalia; Draskovic, Veselin (2017) : Testing the Level of Alternative Institutions as a Slowdown Factor of Economic Development: the Case of Montenegro, Amfiteatru Economic Journal, ISSN 2247-9104, The Bucharest University of Economic Studies, Bucharest, Vol. 19, Iss. 45, pp. 477-492

This Version is available at:

<https://hdl.handle.net/10419/169084>

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TESTING THE LEVEL OF ALTERNATIVE INSTITUTIONS AS A SLOWDOWN FACTOR OF ECONOMIC DEVELOPMENT: THE CASE OF MONTENEGRO

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Please cite this article as:

Drašković, M., Bauk, S., Streimikiene, D. and Drasković, V., 2017. Testing the Level of Alternative Institutions as a Slowdown Factor of Economic Development: the Case of Montenegro. *Amfiteatru Economic*, 19(45), pp. 477-492.

Article History

Received: 10 December 2016

Revised: 11 March 2017

Accepted: 5 April 2017

Abstract

The purpose of the article is to test public's perception of the opportunistic behavior and alternative institutions existence and the degree of their influences on reproduction of the economic crisis. For that purpose, besides the theoretical considerations, the paper comprises quantitative analysis of affecting the inability of economic development, and reproduction of crisis, by the following factors: (a) non-market enrichment and log-rolling structures, (b) parties' monopolies and lobbyism, and (c) systemic corruption. Multiple regression linear approach is applied on a sample of 300 selected respondents in five towns in Montenegro: Podgorica, Nikšić, Cetinje, Herceg Novi, and Kotor. On the basis of the conducted statistical examines: standard error of the regression estimate, correlation coefficient, and coefficient of determination are calculated on the basis of previously determined regression coefficients and forecast values of the linear function of free variables (factors: a, b, and c). The regression plots for each of the considered cases, which verify the starting hypothesis, are shown along with the discussion and conclusions. Our results indicate the need to reduce and eliminate effects of the above factors in the society and economy, since they represent concrete manifestations of alternative institutions' negative impacts. The main conclusion of the research is that the authorities in Montenegro should identify all of the channels through which alternative institutions do affect the reduction of social and economic choices. In this sense, it is proposed overcoming the monistic neoliberal policies, along with affirmation of institutional pluralism.

Keywords: alternative institutions, quasi-institutional monism, institutional pluralism, multiple regression linear approach

JEL Classification: E26, O17, P37, C25

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Introduction

In the history of society there has always been a development paradigm with appropriate criteria and value systems. One of the most important and strongest driving power of the modern civilization is a mutual correlation, causality and dependence of the market economy (which basically includes private enterprises), technological progress and institutionally developed and flexible state regulation. Societies that ignore institutional pluralism are based on the anti-development strategies, mainly of the narrow interest type (Kiausiene, Streimikiene, 2013). They are doomed to deepen and reproduce the crisis. Monistic concept and context of alleged neoliberalism (doctrinal, terminology, institutional, developmental, cognitive, strategic, interest, redistributive, ownership, civilizational, geopolitical and ideological) has its numerous practical quasi-manifestations. In the critical period of the development, Montenegro is undergoing the stage of negotiations on its way to the EU membership. After years of discrepancy between pompous rhetoric on reforms and their disheartening results, there is no serious efforts on the horizon towards overcoming the problem. Montenegro's accession to the EU will primarily depend on the speed and level of overcoming the mentioned challenges, what must be preceded by the political willingness for real institutional changes and the appropriate reforms.

Since the socio-economic crisis is associated with the negative activity of alternative institutions, degree their impact on real economic activity in the Montenegro's has preoccupied the attention of many authors. Some authors have identified, explained and schematically modeled these phenomenon (Delibasic and Grgurevic, 2013; Delibasic, 2016). The analysis of institutional factors is directly associated with the dominance of politics over economy (Acemoglu et al., 2003). Creation and development of alternative institutions is possible only under the conditions of (North, Walis and Weingast, 2012). Therefore, the main aim of this research should be focused on the analysis of interaction between perception of existence of certain alternative institutional forms in Montenegro and their limiting impact on the economic development ie on the long-term reproduction of the crisis. The existence of strong alternative institutions creates major problems, which steadily increase transaction costs and the total loss for the society (due to the creation of artificial monopoly balances, which are far from the normal market equilibrium). Instead of strengthening of formal and informal institutions, alternative institutions are the ones becoming more powerful, directly affecting the institutionalization of privileges, the preservation of political power, and the expansion of monopolization in all areas. The trend of profitable privatization and nationalization of losses continues.

Our research contributes to concretely demonstrate some theoretical assumptions in terms of the real and negative influence of alternative institutions and equivalent quasi-neoliberal economic policy on the economic development, both in Montenegro and region. This should enrich the wide range of theoretical neo-institutional recommendations regarding the affirmation of institutional pluralism (Williamson, 1995; Stiglitz, 2000; North, 2005; Hodgson, 2006; Rodrik 2007; Mesaric, 2012; Acimovic, 2012; Yernzkyan, 2012; Williamson, 2014). Besides, institutional pluralism, as a form of limited institutional rationality (Delibasic, 2016) in the theory proved to be a civilization criterion of economic development and is expressed exclusively through complementary, pluralistic and simultaneous acting of all social and economic institutions (formal and informal), with parallel and greater neutralizing of alternative institutions. The level of compliance between institutions and individuals directly affects the motivation of economic subjects, the way of

business regulation, and economic development. Alternative institutions are a classic example of conflict of individual behavior and institutional structure. The reasons were social, political and those based on personal interests (Ciegis, Dilius, Mikalauskiene, 2015).

They have enabled adjustment, by forcing and reproducing institutional dis-functionalities (nepotism, violating the legal norms, paternalism, unpunished manipulations, lobbying, rent oriented behavior, etc.). This has been referred to the parallel process of disruption and erosion of the public interest, and strengthening interests and power of the ruling elite (Draskovic and Draskovic, 2010).

Negative results that produced alternative institutions showed predatory privatization. The mass access to resources, employment and freedoms, legal institutions (formal and informal) and to their pluralistic activity in the Montenegro have been fragmentary and episodic, rather than universal and compulsory. Neoliberal formulas, experiments and improvisations have caused enormous social and economic problems, inequality, discontent, devastating consequences, and crisis (Vveinhart and Andriukaitiene, 2015). The order of the above recipes is maintained by the same methodology by which it was created: paradoxes, promises, opportunistic behavior, interests of big capital and power ambitions. In this paper we have started from the conviction that the various levels of stakeholders directly and indirectly, through formal and informal institutions - support the vulgarization of neoliberalism and its transformation into a quasi-neoliberalism (Lakic and Draskovic, 2015), through which are built, strengthened and maintained the alternative institutions (Figure no. 1).

Privileges				Methods	
Most interests (nomenclature)	→	Formal and informal institutions (<i>misuse</i>)	→	Ideology of neoliberalism (in theory) ↓ <i>conversion</i>	
Meddle interests (lobbists)				Quasi-neoliberalism (opportunistic behavior in practice) ↓ <i>creation and strengthening</i>	
Minor interests (apologists)				Alternative institutions (domination in practice)	
↓				↓	
Limited access to resources				Crisis order	

Figure no. 1: The main causes of the economic problems in developing countries in transition

This paper criticizes all forms of monistic (reductionist) economic regulation, because it is considered that the economic development cannot be achieved by orchestrated institutional design, or by replacing one form of monistic regulation (state) with other (market), and particularly not by alternative institutions (shadow institutions). The starting hypothesis is: that the effects of alternative institutions enable the existence of informal and privileged combinations of institutional monism (market's and state's regulation), which are dictated by the new elites (Draskovic and Delibasic, 2014). For testing our hypothesis, to test our hypothesis, the article is structured as follows: Section 1 - reviews the relevant theoretical approach. Section 2 - presents the facts and paradoxes of modification liberal into neoliberal paradigm. Section 3 - describes the case study conducted in Montenegro. Subsections 3.1 and 3.2 contain the methodological framework and brief description of used software tools. Section 4 discusses the obtained results, while subsection

4.1 shows regression plots which confirmed additionally the coherence between empirical and by the model forecast relationships among the analyzed variables. Section 5 contains the concludes.

1. Theoretical approach

Deficit of institutions of state regulation and market regulation, along with its abuse has led to the affirmation of opportunistic and quasi-institutional behavior, and consequently to the formation and strengthening of alternative institutions (V. Draskovic and M. Draskovic, 2012, Delibasic and Grgurevic, 2013; Delibasic, 2014; Popov and Ersh, 2016). In such institutionally deficient conditions, economic choice has been reduced, and social and economic crisis have been reproduced, in a long run. Domination of alternative institutions over the formal institutions (Hodgson, 2006) was forced. Neoliberals, in orchestrated manner, and in all occasions criticize state regulation and advocate a minimal state. This is contrary to the basic conclusion of the book of T. Piketty (2014) that the economic disparities will increase in the future, if we do not take decisive action by government intervention.

The same author supports the view of Acemoglou and Robinson (2012) according to which inequality of treatment of business entities can be eliminated by improving economic and political institutions. Using the political power has led to a paradoxical submission of the politics and private interests (Marcouiller and Young, 1995). At the same time, neoliberals forget that the very recent words of A. Smith, from two centuries ago, that state should do, what an individual will not. Many foreign (Saad-Filho and Johnston, 2005; Rodrik, 2007; Stiglitz, 2008; Yeznkyan, 2012) and regional authors (Mesarić, 2011; Drašković, 2010) in scientific articles criticize neoliberal economic policy - neoliberalism, economic inequality, privileged redistribution of national goods, non-market enrichment, the criminalization of society, accelerated government debt crisis and a number of other crisis consequences. Although they often do not analyze or identify the main causes of these problems, the fact is that, however, they advocate institutional pluralism, on the basis of the model of developed countries. The media deal with numerous deviations of the economic reality and in their own way they take note of the above mentioned appearances. D. North (1981) emphasized the importance of the institutional structure, which included institutional pluralism. Many studies have shown the direct and indirect link between institutional pluralism and economic development (Denzau and North, 1994). However, in underdeveloped SEE countries, neoliberal economic policy is applied, which encourages market-regulation (institutional monism).

Neoliberal monistic modeling of economic reality (in theory) is manifested in practice through rhetoric glorification of the absolute domination of private ownership, entrepreneurial initiatives, and economic freedoms, unlimited markets and the so-called minimal state. This is followed by different forms quasi-neo-liberal behavior, which has socio-pathological and opportunistic origins. It is a phenomenological ignorance of actual conditions for realization of economic choice and causes of big problems (economic and social). Alibi-reformers by its silence, by omission, and by commission (dogmatic description and apologetics) were complicit of transition negativity. But it probably acts also as an insider (in terms of small material interest), because it is hard to believe in neutrality of the long-term orchestrated and impassioned support to neoliberalism.

2. Facts and paradoxes of modification liberal into neoliberal paradigm

One of the basic contradictions of neoliberal economic policy is that it has enabled paradoxical gap between the privileged elite of power and limited institutional power of the state. The second paradox has directly resulted from the first: an elitist urge for the fast acquiring and increasing wealth, dominance and total power, substituting the institutional control. In such circumstances institutional vacuum (created intentionally, for the neoliberal conceptions of institutional redundancy) has reproduced the power of networking and informal groups. The third paradox consists in the fact that neoliberal theorists remain at the level of hypothetical modeling of economic reality. In this way they have apologetically excluded the fact that neoliberalism in the practice of some transitional countries has essentially turned into a quasi-neoliberalism. The fourth paradox consists in individualistic abuse of state regulation institution, which has irresponsibly adopted the neoliberal economic policy, which was in the function of strengthening alternative institutions that have begun to dominate over formal and informal institutions. Quasi-institutionalization is possible only in politically desirable and strictly controlled institutional and economic conditions, which naturally bring to life exclusivity and contradiction (alternation) of institutional relations, which prevent real institutional change and institutional competition. In such quasi-institutional terms, in which sophisticated imposes and dominates socio-pathological form of domination of alternative institutions (Figure no. 2) comes to production and reproduction of many anti-institutional privileges of a minority who come from circles of nomenclature authorities and their lobbyists. Furthermore, there is an enormous and non-market enrichment of narrow groups of society based on privilege.

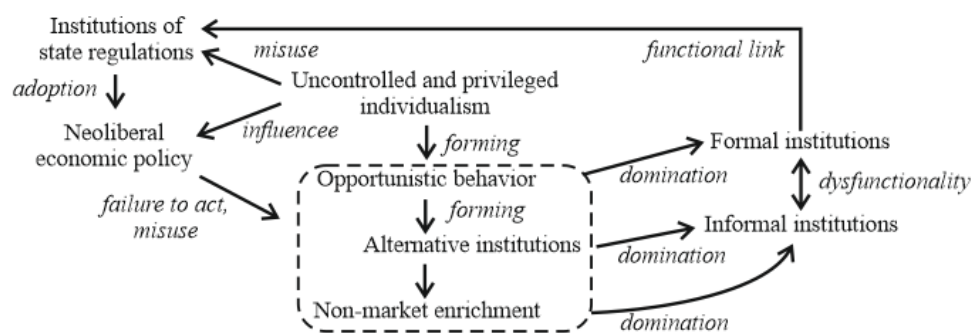


Figure no. 2: The substance of neoliberal quasi-institutionalization

Many authors (see eg. North, Walis and Weingast, 2012) point out that the nontraditional context of neoliberal economic policies, globally and locally, manifest themselves as immoral, inhumane, brutal, chaotic, crisis and hegemonic system of power, domination, violence, exploitation and greed. All this is a result of neoliberal quasi-monopolization. However, neoliberalism is a new form (model) of liberal thought and practical economic policy. It cannot be understood as recovery of lost tradition of liberal political thought, because all political theorists and professional politicians advocate for freedom and democracy, which are the primary values of liberalism. Neoliberal ideology is always about the liberal principles of individual freedom, but it has formulated entirely different scheme, which adds a radically new dimension to its meaning.

Through alternative institutions which are very personalized, and annuity-oriented, quasi-market, and privileged in the access to the resources, it is achieved a great influence to the interest groups. To the alternative institutions belong all socio-pathological phenomenon, the *shadow* economy, the persistence in applying wrong prescriptions of monistic neoliberal so-called shock therapy, compensating rigor of formal rules with their failure to perform, corruption, violation of the property rights, formation of various stereotypes behavior, influence of informal norms of behavior (by expanding institutional conflict), the impact of connections and lobbying of strong political figures, etc. (Infante and Smirnova, 2016).

In this paper, we have chosen three types of alternative institutions: non-market enrichment and log-rolling structures, parties' monopolies and lobbyism, and systemic corruption, with an aim to analyze their impact on economic development, using an extensive survey. The methodology and the obtained results are presented in the following sections.

4. Montenegro case study

Since Montenegro is a South-East European country which is in transition for almost thirty years, we considered as important to examine the influence of alternative institutions on enabling economic development and re-producing and magnifying crisis. As a methodological framework for the quantitative analysis – a linear multiple regression model is employed, while 300 selected citizens, that possess certain level of awareness and knowledge about the economic situation in Montenegro, and high level of logical thinking, were interviewed. Among the respondents were: (i) employees in governmental institutions, (ii) employees in NGOs, (iii) non-employed persons, (iv) students, and (v) pensioners. Each group was formed of 12 respondents from five towns in Montenegro: Podgorica (Town_1), Niksic (Town_2), Cetinje (Town_3), Herceg Novi (Town_4), and Kotor (Town_5). They were asked to estimate, on the base of their best knowledge, experience, and/or intuition, the degree of disabling economic development and re-producing crisis in the past period in the country. Also they were asked to estimate the values of three factors (types of alternative, or shadow institutions) which are presumed as key ones for generating, re-producing and intensifying the economic crisis: (a) *non-market enrichment and log-rolling structures*, (b) *parties' monopolies and lobbyism*, and (c) *systemic corruption*. The respondents used in all cases the scale (1.0; 1.5; 2.0; 2.5; 3.0; 3.5; 4.0; 4.5; 5.0), while 1.0 represents the lowest and 5.0 the greatest impact.

4.1 Linear multiple regression model

A multiple regression model is a more complex approach in comparison to the simple regression model (Balakrishnan et al., 2007). Adding additional independent variables turns a simple regression model into a multiple regression one. In the paper we use linear multiple regression model, even it can be in some cases quadratic, cubic, logarithmic, etc. Simply, it allows creating a model with several independent variables. Here, we have as the dependent variable: *slowing down the economic development and reproduction of crisis* in Montenegro, and three variables which we treated as independent ones: (a), (b), and (c) being specified in the previous section (Section 3). The dependent variable is the item we are trying to forecast, and the independent variables are the items we think might have

casual effects on the dependent variable. The form of the multiple regression equation in this case is:

$$\bar{Y} = b_0 + b_1X_1 + b_2X_2 + b_3X_3 \dots \quad (1)$$

Where,

\bar{Y} - is a forecasted average value of the dependent variable (slowing down the economic development and re-producing crisis);

b_0 - Y-axis intercept, based on the current sample; and

b_1, b_2, b_3 - slopes of the regression for the i -th independent variable $X_i, i = \overline{1,3}$ respectively.

Note that we refer to \bar{Y} as the forecasted average value since it is, in fact, the average (or expected value) of a probability distribution of possible values of Y for a given value of $X_i, i = \overline{1,3}$. To obtain the value of \bar{Y} , we use a practical statistical method known as the last-squares procedure (Bertsikas et al., 2008). Mathematically we can express the last-squares procedure as follows: find the values of b_0, b_1, b_2 , and b_3 that minimizes the sum of squared errors (SSE), defined as:

$$SSE = \sum_{k=1}^n (Y_k - \bar{Y}_k)^2 = \sum_{k=1}^n (Y_k - (b_0 + b_1X_{1k} + b_2X_{2k} + b_3X_{3k}))^2 \dots \quad (2)$$

Where,

n - is number of respondents (in our case for each of five considered towns it is equal to 60, i.e. 300 in total).

Let us note here that last-square method finds a line that minimizes the sum of all vertical differences from that line to each of the considered data points (Balakrishnan et al., 2007), in other words, it is about finding the best-fitting straight line in the corresponding set of points. So, we have to determine optimal values for intercept (b_0), and slopes (b_1, b_2, b_3) in order to achieve as accurate as possible value of \bar{Y} for given $X_i, i = \overline{1,3}$ and $Y, \forall k$.

Calculations in multiple regressions are very complex and best left to a computer. It can be realized, e.g., in SPSS (Sheridan and Coakes, 2013; Pallant, 2011) or by different Excel tools. In our analysis we used Excel Modules solver embedded to classical Excel.

4.2 Measuring forecast error-accuracy

The forecast error is a measure that indicates how well the model performed against itself in accordance to the historical data (Balakrishnan et al., 2007). In our analysis we shall

examine the following error measures: mean absolute deviation, i.e. MAD, mean squared error, i.e. MSE, and mean absolute percent error, i.e. MAPE. These values are calculated by the following formulae:

$$MAD = \sum_{k=1}^n |A_k - F_k| / n \dots \quad (3)$$

$$MSE = \sum_{k=1}^n (A_k - F_k)^2 / n \dots \quad (4)$$

and

$$MAPE = 100 \sum_{k=1}^n [|A_k - F_k| / A_k] / n \dots \quad (5)$$

Where,

A_t - actual value;

F_t - forecast value; and

n – is number of samples, here number of responds (300 in total).

MAD is calculated as the average value of the absolute individual forecast errors. MSE indicates that we prefer to have several smaller deviations rather than even one large deviation. MAPE is the easiest value to be interpreted and it measures the size of the error in percentage terms. Besides these three values, in our analysis are included as well the following statistical measures of the model validity and accuracy (Balakrishnan et al., 2007; Bertskas and Tsitsiklis 2008; Montgomery, 2008): standard error of regression estimate (S_{YX}), correlation coefficient (r), and coefficient of determination (r^2). The easiest and the fastest ways to calculate these statistical values are by means of the Excel embedded functions:

$$S_{YX} = STE_{YX}(\text{given_Y's, given_X's}) \dots \quad (6)$$

$$r = \text{CORREL}(\text{array1, array2}) \dots \quad (7)$$

and

$$r^2 = \text{RSQ}(\text{given_Y's, given_X's}) \dots \quad (8)$$

The standard error of regression estimate is useful in creating confidence intervals around the regression line. The correlation coefficient helps measure the strength of the linear relationship. Although there is no specific rule to decide when two variables can be deemed to be highly correlated, in general, correlation coefficient magnitudes of 0.6 and greater are indicative of a strong relationship. The coefficient of determination tells us how much of the variability in the dependent variable is explained by the independent variable.

Within the next section we shall present the results of our statistical analysis for the case of exploring shadow or alternative institutions impacts on economic of Montenegro as a developing country in transitional environment.

5. Results and discussion

Below are given all relevant results and errors, i.e. accuracy measures for our model (Table no. 1). Due to the responds of the interviewed persons of different profiles in five Montenegro towns, the values of the coefficients: b_0, b_1, b_2, b_3 are shown; as well as, error measures: mean absolute deviation (MAD), mean squared error (MSE), and mean absolute percent error (MAPE); and, statistical validity parameters, relevant for the model, as: standard error of regression estimate (S_{YX}), correlation coefficient (r), and coefficient of determination (r^2). What we can notice from Table 1 is that in all cases, except one (Town_1), mean absolute percentage error, i.e. MAPE is less than 10%.. In the case of survey in Town_1 this percentage is little bit higher, i.e. 11.45%.

Table no. 1: Values obtained by the multiple regression models

Towns/ Parameters	Town_1	Town_2	Town_3	Town_4	Town_5
b_0	0.750	0.805	0.481	1.171	1.764
b_1	0.426	0.387	0.403	0.266	0.319
b_2	0.197	0.204	0.131	0.062	0.217
b_3	0.133	0.171	0.253	0.218	-0.019
MAD	0.365	0.288	0.238	0.292	0.246
MSE	0.232	0.125	0.090	0.130	0.103
MAPE	11.45 %	7.87 %	6.83 %	9.94 %	6.22 %
S_{YX}	0.499	0.366	0.311	0.373	0.323
r	0.533	0.784	0.915	0.599	0.495
r^2	0.284	0.614	0.837	0.359	0.245

Also, it is clear that there is a strong positive correlation ($r \approx 0.6$) between considered variables in three cases (Town_2, Town_3, and Town_4), while in two considered cases it is not so strong (Town_1 and Town_5). It is worth to emphasize that coefficients of determination are rather high in the cases of Town_2 and Town_3. More precisely, in the case of Town_2, 61.4% of total variation in slowing down the economic development and reproduction of crisis is explained by three here considered independent variables: (a) non-market enrichment and log-rolling structures, (b) parties' monopolies and lobbyism, and (c) systemic corruption, while only 39.6% remains unexplained (or explained by other variables, not taken into consideration here). By analogy we can draw conclusions for the surveys being conducted in other towns.

The F-test evaluates the significance of each developed multiple regression model on the basis of previously conducted surveys. The null and alternate hypotheses for this test are as follows:

$$H_0 : b_1 = b_2 = b_3 = 0 \dots \quad (9)$$

and

$$H_1 : \text{at least one of } b_1, b_2, b_3 \neq 0 \dots \quad (10)$$

If H_0 is true, then the overall regression model is not significant, and if H_1 is true at least one variable in the model is significant. The hypothesis H_1 is valid for our experiments. It is important to note here, that the results of F-test should not be interpreted as an indication that all variables $X_i, i = \overline{1,3}$ are significant. However, we can conclude that the overall model is significant.

According to the values (b_1, b_2, b_3) in Table no. 1, we can make some conclusion about the significance of the independent variables (i.e., non-market enrichment and log-rolling structures, parties' monopolies and lobbyism, and systemic corruption) in the model, in terms of their influence to the dependent variable (e.g., slowing down the economic development and reproduction of crisis). For instance, in the case of Town_1, the first independent variable has the greatest influence to the dependent variable, while the second one has considerably smaller influence, and the third one has the lowest one. By the same principle we can make the conclusions for the models formed for another towns covered by the surveys. Namely, in the cases of Town_3 and Town_5 the relation between the considered coefficients, i.e., corresponding independent variables are the same as in the case of Town_1. On the other side, in the cases of Town_2 and Town_4 the importance of the third independent variable is greater than the second one, while the first considered one is still in both cases on the first place and has the greatest influence on slowing down economic development.

5.1 Regression plots

An alternate method for assessing the validity and accuracy of the causal model is to draw line plots of the actual values for dependent variable given by the respondents and forecasted values obtained by multiple regression models. The line plots for the surveys conducted in Towns_1-5 are shown in Figure no. 3-7. The line plots in Figure no. 3 indicate that causal model which we developed does well replicate the respondents' assessments of the dependent variable - slowing down the economic development and reproduction of crisis. However, the presence of a few sizable forecast errors (e.g., in responds no. 19 and 48) become obvious by the plots, as well. The corresponding squared error values in these cases are: 2.787, and 1.384. The average forecast value of the dependent variable is approximately between 3-4 at the predefined scale of the inability of economic development and re-producing the crisis.

Like in the previous case the causal model corresponds quite well to the respondents' assessments in the case the poll realized in Town_2 (Figure no. 4). But, some sizable errors can be noticed (e.g., in responds no. 49 and 50). The related squared errors are: 0.572, and

0.795. Also few smaller errors can be noticed for responds no. 13, 17, 31, 32, and 58, while the belonging squared errors are respectively: 0.522, 0.273, 0.245, 0.261, and 0.263. The approximately average values of the forecast dependent variable are between 3.5 and 4.5. It means that the level of disabling economic development and generating crisis is quite high and worrying.

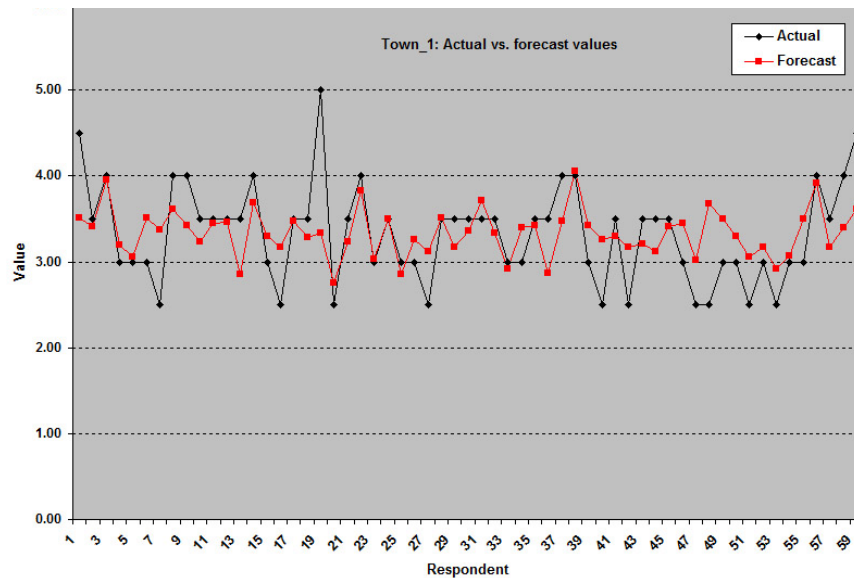


Figure no. 3: Plot of causal model for Town_1

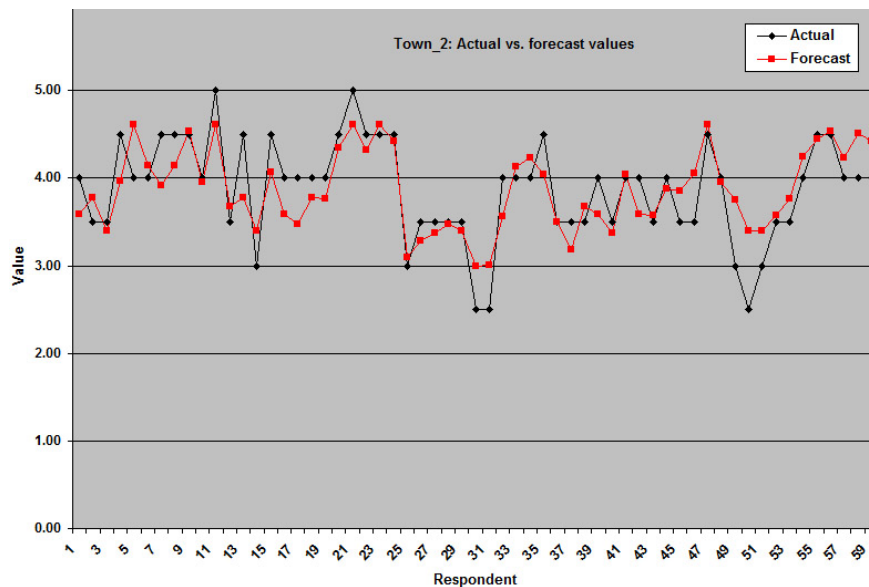


Figure no. 4: Plot of causal model for Town_2

By employing the same logic as in the previous cases, while concerning the poll conducted in Town_3, we can notice some error in the following responds in Figure no. 5: 1, 14, 28, 38, and 41, with the corresponding squared errors: 0.342, 0.307, 0.342, 0.306, and 0.432. They cause variations in the assumed measure of the dependent variable in the extended range, so that the expected values are between 2.5 and 4.5. It is obvious that the upper boundary level of the analyzed dependent variable is high, similarly to the previous cases.

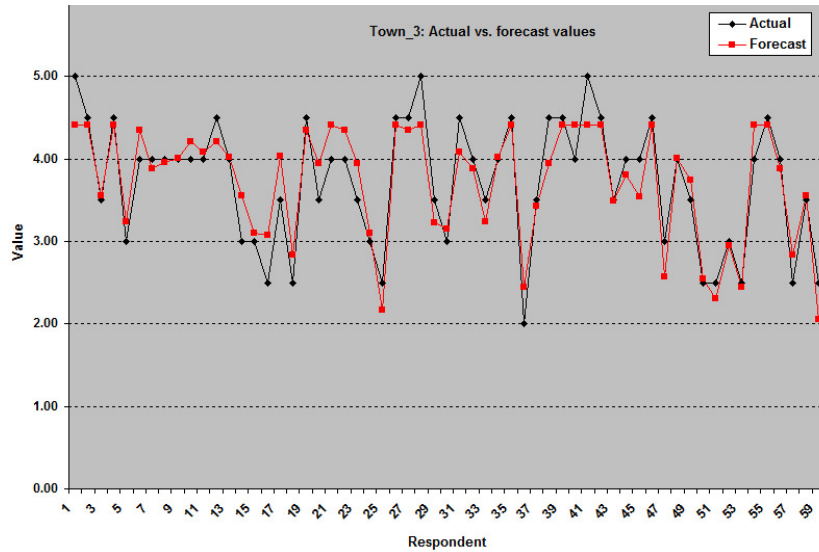


Figure 5: Plot of causal model for Town_3

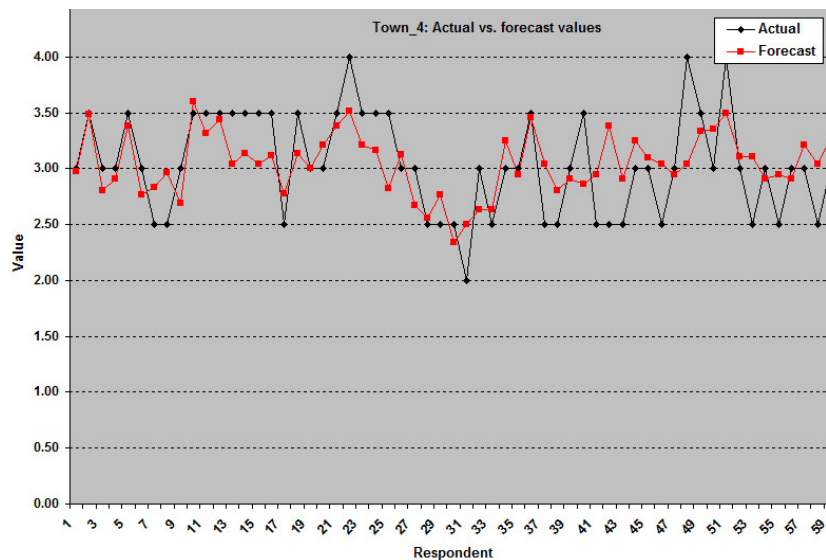


Figure 6: Plot of causal model for Town_4

In Figure no. 6, which represents the results of the poll conducted in Town_4 analysis, we can notice the sizable error in the next responds: 25, 42, and 48 with the corresponding squared errors: 0.454, 0.773, and 0.914. In the case that we are not satisfied with the assessment of some respondents, we can exclude them and include other ones, change the independent variable(s), or add new one(s).

In the case of Town_4 the level of the forecasted value of the dependent variable is between 2.5 and 3.5.

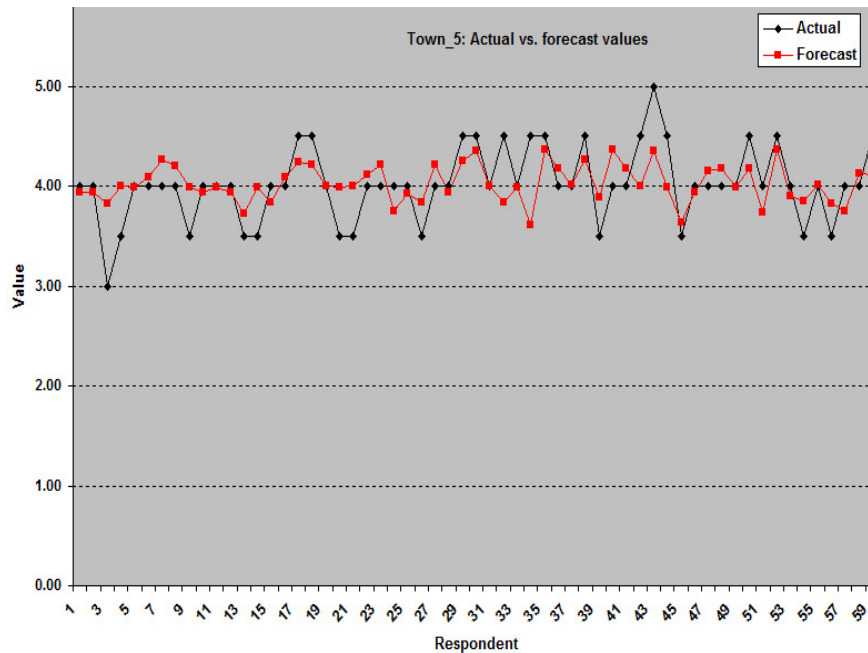


Figure 7: Plot of causal multiple model for Town_5

In Figure no. 7, which demonstrates the model outcomes for the poll realized in Town_5, one can notice the sizable errors in the next responds: 3, 32, 34, and 43 with the squared errors: 0.676, 0.447, 0.784, and 0.425, respectively. Towards improving model accuracy, it is in any case possible to replace some responds with new, repeated ones, or to include other, or even more independent variables, what might be the subject of our further investigations in the field. The approximately average value is as in the previous cases high and it is between 3.5 and 4.5. This speaks about the high negative influence of alternative or shadow institutions to the economy development of Montenegro and preventing the regenerative crisis.

In aim to summaries the results of the statistical analysis based on the surveys conducted in five Montenegrin towns, in Table no. 2 are given the approximate average forecast values of the dependent variable: slowing down the economic development and reproduction of crisis in the country, due to the considered independent ones: non-market enrichment and log-rolling structures, parties' monopolies and lobbyism, and systemic corruption.

Table no. 2: Forecasted values of the dependent variable, i.e., disabling economic development and crisis reproduction in Montenegro (on the scale 1.0-5.0)

Town	1	2	3	4	5
Forecasted values	3.0-4.0	3.5-4.5	2.5-4.5	2.5-3.5	3.5-4.5

It is obvious that the impacts of alternative institutions (representing like independent variables in our model) in Montenegro to the economic development is undoubtedly high and consequently rather demanding in terms of reduction and/or elimination in the near future.

Conclusion

The research results verified the initial hypothesis. For the first time, on the basis of the public opinion polls, the perception of the existence of key elements of alternative institutions in Montenegro has been demonstrated. The scientific contribution of the paper is reflected in the application of well-known and -structured quantitative multiple linear regression method in analysing, in a quite novel manner, the public perception of existence and impacts of alternative institutions in Montenegro. The paper provides specific guidelines for the application of multi-variable linear regression model for the research of institutional structures and deviations in the present transitional socio-economic environment. The results imply an urgent need for investing great social efforts towards permanent suspension of proven deviant actions caused by the alternative institutions. Maximizing profits at any cost, regardless of its origin (mainly enrichment through transferring the state property into private) was and still is the most important value criteria of neoliberal economic formulas in some countries in transition. This has not brought economic prosperity to none in the world, except for the rare and privileged individuals. It is a proven and visible result of quasi-neoliberal absolutism of market freedom and exclusivity of its supporters, who were often formal or ideological "reformers" in the transitional countries of South-East Europe. These countries today are drowning in social, economic and institutional problems, crisis, debt, poverty, inequality and rich socio-pathological milieu. Paradoxically, the transitional countries of Southeast Europe have seen the abuse of state regulation of neoliberal economic policies and enforcement of privileged individualism, which has led to the strengthening of alternative institutions, making them dominant in relation to the formal and informal institutions.

On the basis of in the paper performed quantitative analysis; it is shown that there is a strong positive correlation between the analyzed types of alternative institutions and hindering economic development in Montenegro. It is also shown that the greatest impact on the reproduction of the crisis has non-market enrichment and log-rolling structures, then parties' monopolies and lobbyism, and then systemic corruption. The forecast impacts are rather high in all examined cases and the highest upper value of the negative influences is between 3.5 and 4.5 (at the scale 1-5) due to perception of selected citizens of Montenegro from five different towns and from five different social categories. It is important to emphasize that statistical significance of the proposed model and its forecast values is analytically proved. Regardless of the analyzed cases, in larger context, it can be concluded that small, medium and large stakeholders supported the anti-development and anti-institutional reforms. Their monistic, exclusive, normative, subjectivist and approach based on their own interests, which represents the interests of narrow and privileged social groups. The main mechanism for realizing these interests are alternative institutions. They

conceptually generate complex and contradiction environment, which has its own doctrine, terminology, institutional, developmental, cognitive, strategic, interesting, redistributive, ownership, civilization, geopolitical and ideological meaning and numerous practical quasi-events. They contain many paradoxes, contradictions, scams and myths. On the other side, in the literature, as well as in the practice of developed countries has been proven that the institutional rationality in the economy is expressed through complementary, pluralistic and simultaneous operation of all social and economic institutions, in parallel with the greatest possible elimination of alternative institutions.

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