UDC 338.24

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Analysis of the efficiency of levers in the context of implementation of the state regulatory policy

Abstract. The paper presents a methodical approach to analysing the efficiency of regulatory policy levers. The authors of the article have conducted analyses of the integrated index of socio-economic development and the indicators of financial credit and monetary levers. The regression models that reflect the nature of the relations between regulatory policy levers and the integrated indicator of socio-economic development of the country have been developed, namely, the dependence of the integrated index of socio-economic development on the financial-credit and monetary levers of Ukraine in the period between 2009 and 2016. The results of the research have proved that the cumulative impact of levers creates conditions for the environment in which the state must take measures in order to ensure effective implementation of its regulatory policy.
Keywords: Regulatory Policy Levers; Efficiency of Levers; Taxonomic Analysis; Integrated Indices; Regression Model
JEL Classification: B49; C10; H11; L51
DOI: https://doi.org/10.21003/ea.V165-09

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Аналіз дієвості важелів у контексті реалізації регуляторної політики держави
Анотація. Розроблено методичний підхід до аналізу дієвості важелів регуляторної політики держави. Надано аналіз залежності інтегрального показника соціально-економічного розвитку від показників аналізу фінансово-кредитних та монетарних важелів. Побудовано регресійні моделі, що відображають характер зв'язку між важелями регуляторної політики та інтегральним показником соціально-економічного розвитку країни. Доведено, що сукупний вплив важелів формує умови середовища, в якому мають відбуватись заходи держави щодо забезпечення реалізації ефективної регуляторної політики.
Ключові слова: важелі регуляторної політики; ефективність важелів; таксономічний аналіз; інтегральний показник; регресійна модель.

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Анализ действенности рычагов в контексте реализации регуляторной политики государства
Аннотация. Разработан методический подход к анализу действенности рычагов регуляторной политики государства. Проведен анализ зависимости интегрального показателя социально-экономического развития от показателей анализа финансово-кредитных и монетарных рычагов. Построены регрессионные модели, отражающие характер связи между рычагами регуляторной политики и интегральным показателем социально-экономического развития страны. Доказано, что совокупное влияние рычагов формирует условия среды, в которой должны применяться меры государства по обеспечению реализации эффективной регуляторной политики.
Ключевые слова: рычаги регуляторной политики; эффективность рычагов; таксономический анализ; интегральный показатель; регрессионная модель.

1. Introduction

When searching for new ways to ensure growth of social welfare, choosing the most suitable mechanisms corresponding to a particular economic situation, attempting to reach a compromise concerning interests of different groups deciding on regulatory issues, problems of state regulatory policy become increasingly relevant. However, when implementing the state regulatory policy, a number of issues, such as a formal approach to the analysis, wide disinterest in improving the regulation and absence of systematic work, appear. Therefore, to improve the efficiency and transparency of the state regulation of economy, it is crucial to choose proper tools (levers) and the way to combine them. This demonstrates the relevance and timeliness of the issues.

2. Brief Literature Review

Various aspects of the state regulation of economy have been studied and discussed for centuries by a great number of theorists and practitioners of public administration and economics. Problems related to regulatory levers and their classification are researched in the works by scientists such as Y. Ivanov and A. Kizym (Ivanov, Kizym, 2008) [1], I. Kobushko and Y. Kobushko (Kobushko, Kobushko, 2015) [2], P. Lascoumes and P. Le Gales (Lascoumes, Le Gales, 2007) [3], T. Lobunets (Lobunets, 2013) [4], P. Lunn (Lunn, 2014) [5], J. Macher and J. Mayo (Macher, Mayo, 2012) [6], V. Polyuha (Lobunets, 2005) [7], I. Radionova (Radionova, 2013) [8], N. Ruban and I. Chuynitska (Ruban, Chuynitska, 2010) [9], O. Tishchenko and K. Golyakova (Tishchenko, Golyakova, 2012) [10] and others.

3. Purpose

With regard to the importance of issues concerning the efficiency of the state regulation of economy and improvement of the quality of the existing rules and regulations in today's world, the purpose of the article is to establish a methodological approach to analyse the efficiency of the relevant levers in the context of implementation of the regulatory policy.

4. Results

When determining the effectiveness of the regulatory policy, it is crucial to analyse its levers. Before studying the essence of regulatory policy levers we should emphasise that levers are means and methods of direct and indirect impact on economic processes and objects applied by governmental bodies through the legal framework, and aimed at the development of economic, social and other sectors of society (Kolupaieva, 2016) [11]. It should be noted that the nature of their influence can be stimulating/encouraging, compensating/aligning or restrictive/unstimulating.

For a better understanding of the influence of the regulatory policy levers on economic, social and other processes in society, it is expedient to provide a detailed and critical analysis of the foreign and domestic developments on the issues raised.

According to P. Lascoumes and P. Le Gales (2007) [3, 2], the political and sociological approach to understanding the tools for implementing public policy becomes of paramount importance. They point out that existing tools present one of the main problems of the public policy, since each tool is a contraction of the largely theoretical knowledge of social control and ways of its implementation. Such point of view is shared by S. Wolff (2015) [12, 923], who in her work explores the factors that influence the choice of political tools in an evolutionary way. In turn, M. Maor (2014) [13, 470] proposes strategies for determining and measuring political bubbles, which refer to a real and/or predictable revaluation of policies, backed up by positive feedback over a long period of time. The paper emphasises that certain types of political bubbles are formed as a result of the application of specific regulatory policy tools.

M. Maggetti and F. Gilardi (2011) [14,830] define the European Regulatory Network (ERNs) As a main managerial tool for informal coordination of social regulations at the EU level. They argue that the existence of a central network is associated with a faster internal adoption of standards.

The emphasis on the application of a behavioural approach to the definition of the essence of the regulatory policy is placed in P. Lunn's work «Regulatory Policy and Behavioral Economics» (2014) [5, 31], which deals with the assessment of the effect of regulation, as a tool for identifying the effects of a particular intervention. From this point of view, the most valuable are the works by the American scholars J. Mayo and J. Macher (2012, 2015) [6; 15], who proposed to calculate the index of regulatory influence to determine how organisations in different countries influence the process of making regulatory decisions. It has been discovered that not only the traditional factors of influence at the level of industry, but also institutional factors at the country level, as well as a uniqueness of its activity provide an important source of regulatory influence of the organisation.

From the point of view of the complexity of state regulation, N. Soloviova and M. Fediaieva (2015) [16, 145] solve the problem of forming an integrated system of state strategic planning by using the principles of development of state regulatory policy and the SMART-regulation technology. The coherence of partnership and unity of interests of economic entities, public organisations and state administration are important. The famous Israeli politologist and scientist D. Levi-Faur (2014) [17, 600] expands the prospect of the governmental policy, its regulation and management in the context of welfare, and clarifies the relationship between fiscal and regulatory tools.

An opposite approach to justifying state regulation is developed by B. Mannix and S. Dudley (2015) [18, 706], who suggest taking into account the increasing dependence on the alleged irrationality.

Thus, let us note that there is a fairly small number of attempts to empirically examine the relationship between regulatory policy levers and their impact on the level of socio-economic development of a country. Therefore, in order to identify the most powerful tools for the implementation of the state regulatory policy in Ukraine, a methodological approach is proposed (Figure 1), the essence of which is to analyse the effectiveness of regulatory policy levers by assessing their impact on the general indicator of socio-economic development of the country, the provision of which is the main goal of the regulatory policy. This approach, in contrast to the existing ones, synthesises the quantitative and qualitative assessment of regulatory policy levers and is based on the use of taxonomic (the definition of the integral indicator of socioeconomic development) and correlation-regression (construction and analysis of economic and mathematical models) analysis that allows us to identify the relationship between cause and effect and increase the validity of the implementation of the state regulatory policy.

The first stage consists in determining the integrated indicator of socio-economic development of the country. This indicator will give a clear assessment of the level and dynamics of the investigated process. Therefore, it is proposed to use the integrated indicator of socio-economic development of the country to assess the impact of regulatory policy levers. The integrated indicator has been calculated based on a taxonomic analysis.

For this purpose, the following set of primary indicators has been formed: gross domestic product per capita (stimulant), growth capital investments (stimulant), consumer price index (destimulant), index of industrial production (stimulant), volume of agricultural products (stimulant), volume of construction (stimulant), balance of exports and imports of goods and services (stimulant), level of employment (stimulant), level of unemployment (destimulant), growth rate of average real wage per employee (stimulant), arrears of wages (destimulant), average disposable income per person (stimulant), cargo turnover (stimulant), passenger turnover (stimulant), and growth rate of commissioned housing (stimulant).

The choice of such indicators can be explained by the fact that according to the statistical data obtained from the State Statistics Service of Ukraine (2017) [19], Ukraine's socio-economic development is defined in the context of the analysis of the main indicators of socio-economic and demographic

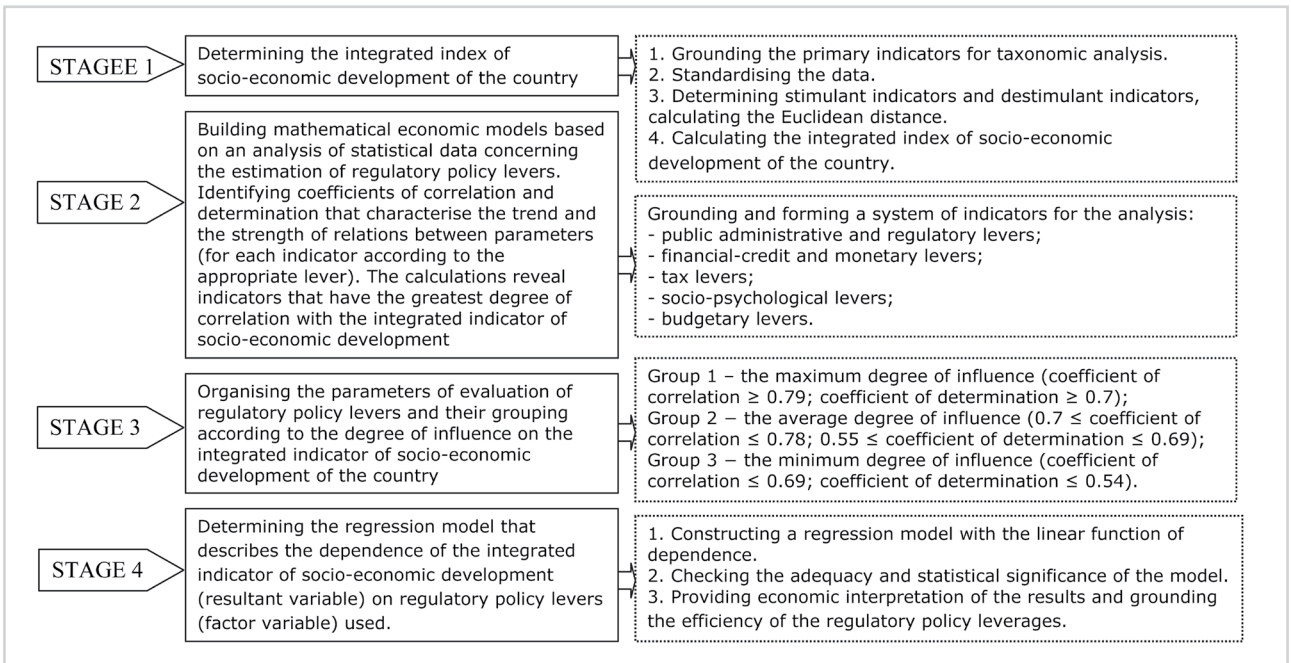

Fig. 1: **Scheme of the methodical approach to analysing the efficiency of state regulatory policy levers**
Source: Compiled by the authors

statistics. Their values and dynamics are presented in «Diversified Statistical Information», Section «Complex statistics» (2017) [19]. The dynamics of the integrated indicator of Ukraine's socio-economic development in the period between 2009 and 2016 is shown in Figure 2.

We should note that the integrated index allows taking into account economic and social components of the investigated process and making an assessment of the process with respect to its objectivity and adequacy. The results of the taxonomic analysis are as follows.

The most significant level of integrated indicator of the country's socio-economic development was observed in 2012 (0.64), while the lowest level was in the years 2009 and 2014 (0.19). The situation demonstrates a significant impact of the global financial crisis in 2008 that influenced the country's social and economic indicators.

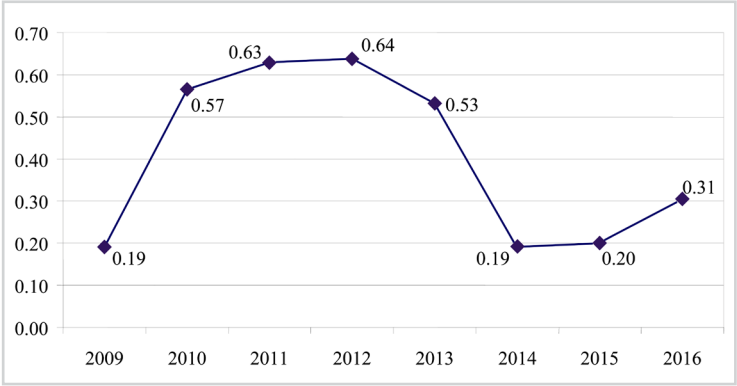

Fig. 2: **Dynamics of the integrated index of Ukraine's socio-economic development in the period between 2009 and 2016**
Source: Compiled by the authors based on data of the State Statistics Service of Ukraine

Since 2012, the integrated index of socio-economic development has dropped because of the deindustrialisation and degradation of Ukraine's economy. Most high-tech economic activities, such as aircraft construction, shipbuilding, electronic devices, etc., have disappeared or are struggling to survive. Such a situation was caused by a low level of high-tech products in the industry, which practically hasn't increased (the 5th and 6th technological modes comprise only 4.1%). In addition, in 2014 the low level socio-economic development was affected by a political crisis and economic processes, which resulted in a crisis of high-tech products.

During the period between 2015 and 2016, the situation changed and the socio-economic development recovered. This is confirmed by the attempts of the national economy to develop rapidly and its active involvement in social and economic processes through integrating into the European Community.

In terms of the European integration, the comparison of the results with the dynamics of the indicators for assessing the socio-economic development of leading European countries is an important element of the study. In recent years (2009-2016), there has been a moderate growth of the EU and Euro zone economies, as evidenced by [20]:

- the positive dynamics of GDP per capita (GDP per capita in the EU (28 countries) amounted to EUR 25,000 in 2009, whereas the relevant amount was EUR 26,900 in 2016, which is by 7.6% more);
- the stable share of GDP used for gross investment in the EU (28 countries) amounted to 20.06% in 2016;
- an increase in labor productivity per hour in the EU (28 countries) increased by 9.3% in 2016 in comparison with that in 2009;
- a decrease in unemployment (8.5% in 2016 versus 10.9% in 2013) and employment growth in the EU (28 countries) (in 2016 it was 71.1%) reached the highest level.

The second stage of the analysis includes sequential implementation of the following activities: forming a system of economic and mathematical models based on statistical analysis with respect to the estimation of regulatory policy levers; determining the coefficients of correlation and covariance (each indicator for the relevant lever) which describe the direction of relations between the parameters and the degree of their strength; identifying the indicators with the highest degree of interconnection with the integrated indicator of the socio-economic development (based on calculations).

To conduct the analysis, the indicators of state administrative, regulatory, financial, credit, financial, fiscal, social, psychological and budgetary levers have been used. Before applying the indicators which can be quantitatively measured, the selected totality of levers were divided into groups by the

impact they had had on the studied parameters and the regression models presenting mathematical expression of such an impact were built.

To estimate the impact of state administrative and regulatory levers, including the results of investigation provided by the Better Regulation Delivery Office, an independent governmental structure established by the Ministry of Economic Development and Trade of Ukraine, the World Bank and the Government of Canada in 2016 [21], the following indicators were chosen:

- total number of draft regulations in terms of sectors (construction, energy, control and surveillance, agriculture and transport);
- ratio of adopted regulations to the planned ones;
- share of regulations amended in the total number of tracked regulations;
- share of invalid regulations in the total number of tracked regulations;
- efficiency of revised regulations;
- level of legitimacy of regulations in sectors of the economy;
- level of relevance of regulations in sectors of the economy;
- level of effectiveness of regulations in sectors of the economy;
- share of regulations of high and medium level of corruption risks in the sectors of the economy;
- level of impact of regulations on businesses in the sectors of the economy.

To estimate the impact of financial-credit and monetary levers based on the theoretical synthesis methodology for assessing debt sustainability presented by Karapetyan, 2008 [23], Prysyazhnyuk, 2011 [24], Stavnych, 2012 [25-26], and Resolution «On Approval of the Basic Principles of the Development of Monetary Policy and Control of Its Implementation» of the National Bank of Ukraine (2017) [27], the following parameters were selected:

- ratio of Ukraine's public debt to gross domestic product;
- ratio of external debt to GDP;
- ratio of domestic debt to GDP;
- total amount of debt guaranteed by the state; level of public debt of Ukraine per capita;
- level of external debt per capita;
- ratio of public debt to annual exports of goods and services;
- ratio of government debt of government securities to GDP;
- growth rate of public debt; growth rate of domestic debt;
- growth rate of the debt guaranteed by state;
- growth rate of domestic debt guaranteed by state;
- official discount rate of the National Bank of Ukraine;
- average refinancing rate for all instruments (loans granted through tender, overnight loans, repos, loans to maintain long-term liquidity of banks, stabilisation loans, swap operations, refinancing loans secured by property rights for funds deposit placed in NBU loans under the program of financial recovery and other loans);
- growth rate of net external assets;
- growth rate of official reserve assets;
- growth rate of the monetary base;
- level of monetisation;
- share of deposits by legal entities;
- share of deposits by physical persons;
- share of loans by legal entities;
- share of loans by individuals.

To estimate the impact of tax levers, the following indicators were chosen:

- total tax debt;
- corporate income tax to the state budget of Ukraine;
- value added tax on goods (works, services) made in Ukraine to the state budget of Ukraine;
- revenues from excise tax to the state budget of Ukraine;
- share of revenues to the state budget of Ukraine for tax payments;
- share of revenues to the state budget of Ukraine from customs payments;
- number of tax benefits in the context of direct taxes;
- consolidated budget losses due to benefits from income tax;
- share of tax incentives that lead to budget losses;
- share of benefits that are not budget losses;
- related losses from providing benefits for direct taxes to GDP;
- rate of the social single tax;
- tax rate of personal income;
- total tax rate (according to the Doing Business Rating by the World Bank).

Taking into account the major current trends in monitoring of the social sector and the labour sector, to estimate the impact of socio-psychological tools, the following indicators were chosen:

- natural increase (decrease) of population;
- migration increase (decrease) of population;
- number of registered marriages;
- number of registered divorces;
- level of economically active population of working age;
- average number of full-time employees at enterprises;
- number of trained (graduate) qualified workers at vocational education;
- number of medical advisors of all specialties per 10,000 people;
- share of pensioners;
- growth rate of average monthly pension;
- share of adopted children in the total number of orphans and children deprived of parental care;
- total average expenses on household per month and others.

To estimate the impact of budgetary levers, the following indicators were selected:

- volume of the Ukraine's budget;
- consolidated budget expenditures;
- budget credit;
- budget investments;
- share of expenditures on economic development;
- share of expenditures on social programs;
- size of the budget deficit;
- volume of funding on social programs;
- ratio of government deficit to GDP;
- ratio of consolidated budget deficit to GDP;
- input balance of single treasury account;
- ratio of government revenues to GDP;
- ratio of state budget expenditures to GDP;
- absolute growth of official international reserves of Ukraine and growth provided by government guarantees.

The third stage of the analysis presents systematisation of the parameters of evaluation regulatory policy levers and their grouping by the degree of influence on the integrated indicator of socio-economic development. The fragment of the research, that is determining the level of impact the financial-credit and monetary levers have on the integrated indicator of socio-economic development and their grouping according to the degree of impact, is given in Table 1.

The fourth stage of the analysis includes determining an adequate and statistically significant regression model which describes the dependence of the integrated index of socio-economic development (effective variable) on the regulatory policy levers (factor variable).

Thus, verification of regression models (in terms of the financial-credit and monetary levers) by using the coefficients of multiple correlation and determination criteria (Student and Fisher) has discarded unnecessary variables and highlighted the indicators that most significantly influence the resultant variables - the growth rate of the monetary base and the growth rate of public debt. The regression models obtained in the context of the analysis of regulatory policy levers are presented in Table 2.

Thus, the analysis of indicators to estimate the impact of state administrative and normative-legislative levers was carried out based on the statistics provided by the Ministry of Infrastructure of Ukraine and the Ministry of Regional Development, Construction and Housing and Communal Services of Ukraine. It should be emphasised that the activity of regulatory policy with regard to the above sectors is aimed at aligning the legislative acts that regulate its activity, implementing measures to ensure maximum transparency of the process of the regulatory activity. However, not

Tab. 1: **Dependence of the integrated index of socio-economic development (Y) on the financial-credit and monetary levers of Ukraine in the period between 2009 and 2016**

Parameters of analysis for financial-credit and monetary levers	Regression model	Coefficient of correlation R	Coefficient of determination R^2
1	2	3	4
Group 1 (maximum degree of influence)			
Growth rate of the monetary base	У=-1.6455 + 0.8384 x	0.84	0.703
Growth rate of external public debt	У=0.9723 – 0.7903 x	0.79	0.702
Group 2 (medium degree of influence)			
Growth rate of external debt guaranteed by the state	У=1.0307 – 0.7899 x	0.79	0.624
Average rate of refinancing for all instruments	У=0.8012– 0.7903 x	0.79	0.625
Official discount rate of the National Bank of Ukraine	У=0.7358– 0.7635 x	0.7636	0.583
Group 3 (minimum degree of influence)			
Ratio of public debt of Ukraine to GDP	У=0.6923– 0.6377x	0.64	0.407
Ratio of external debt to GDP	У=0.7208– 0.651 x	0.65	0.423
Ratio of domestic debt to GDP	У=0.7146– 0.5849 x	0.585	0.342
Growth rate of the monetary base	У=-0.9352 + 0.3912 x	0.39	0.15
Level of monetisation	У= 1.0758- 0.2619 x	0.26	0.07
Share of deposits by legal entities	У= 1.4549- 0.5665 x	0.57	0.32
Growth rate of domestic debt	У=0.8458 – 0.5069 x	0.51	0.26
Total amount of public debt guaranteed by the state	У= 0.5635- 0.5366 x	0.54	0.29
Level of public debt of Ukraine per capita	У= 0.5585- 0.5435 x	0.54	0.3
Level of external debt per capita	У= 0.5486- 0.5374 x	0.54	0.29
Ratio of public debt to annual exports of goods and services	У= 0.6851- 0.6829 x	0.69	0.47
Ratio of government debt of government securities to GDP	У= 0.6953- 0.575 x	0.58	0.33
Share of deposits of physical persons	У= -1.3088 + 0.5665x	0.57	0.32
Growth rate of domestic debt guaranteed by the state	У=0.4707– 0.368 x	0.37	0.14
Growth rate of net external assets	У=0.4743– 0.1639 x	0.16	0.03
Growth rate of official reserve assets	У=0.4464– 0.082x	0.08	0.01
Share of loans of legal entities	У= 0.7826- 0.1278 x	0.13	0.16
Share of loans of physical persons	У= 0.2937+ 0.1278 x	0.13	0.16

Source: Compiled by the authors

Tab. 2: **Regression models that reflect the nature of the relations between the indicators of Ukraine in the period of 2009-2016 (results of stepwise regression)**

Levers of regulatory policy	Indicators	Equation dependence	Coefficient of multiple correlation R	Coefficient of determination R^2	Economic interpretation
Public administration and legal levers	X_1 – ratio of adopted regulations to the planned ones, % X_2 – efficiency of revised regulations, %	$Y = -2.8387 + 1.183X_1 + 0.884X_2$	0.86	0.74	Growth of the ratio of adopted regulations to the planned ones by 1% will increase integrated indicator of socio-economic development (II_{SED}) by 1.183 if other factors of the model are constant. Growth of effectiveness of the revised regulations by 1% will increase II_{SED} by 0.884 if other factors of the model are constant.
Financial-credit and monetary levers	X_3 – growth rate of the monetary base, % X_4 – growth rate of external public debt, %	$Y = -0.6843 + 0.5898X_3 - 0.4926X_4$	0.94	0.88	Increase of growth rate of the monetary base by 1% will increase II_{SED} by 0.59 if other factors of the model are constant. Increase of growth rate of public debt by 1% will lead to a reduction of II_{SED} by 0.49 if other factors of the model are constant.
Tax levers	X_5 – losses of the consolidated budget by incentives of income tax, % X_6 – ratio of losses of providing benefits for direct taxes to GDP, %	$Y = 1.4447 - 0.934X_5 + 1.528X_6$	0.92	0.85	Increase in losses of consolidated budget by incentives of income tax by 1% will lead to a reduction of II_{SED} by 0.934 if other factors of the model are constant. Growth of the ratio of losses of providing benefits for direct taxes to GDP by 1% will increase II_{SED} by 1.528 if other factors of the model are constant.
Social and psychological levers	X_7 – natural growth, thousands of persons X_8 – total average monthly cost per householder, UAH	$Y = 1.954 + 0.2937X_7 - 0.7996X_8$	0.85	0.73	Increase of natural growth per thousands persons will increase II_{SED} by 0.294 if other factors of the model are constant. Increase of total average monthly cost per householder by 1 USD will lead to a reduction of II_{SED} by 0.79 times if other factors of the model are constant.
Budgetary levers	X_9 – input balance of single treasury account, million UAH X_{10} – absolute growth of official international reserves of Ukraine, million USD X_{11} – growth rate of guarantees provided by government, %	$Y = 0.4872 - 0.8638X_9 + 0.4988X_{10} + 0.5786X_{11}$	0.86	0.74	Increase of input balance of single treasury account by UAH 1 million will lead to a reduction of II_{SED} by 0.864 if other factors of the model are constant. Increase of absolute growth of official international reserves of Ukraine by USD 1 million will increase II_{SED} by 0.499 if other factors of the model are constant. Increase of the growth rate of guarantees provided by government by 1% will increase II_{SED} by 0.579 if other factors of the model are constant.

Source: Compiled by the authors

all sectors of the economy (due to the documents of the Ministry of Energy and Coal Mining of Ukraine, Ministry of Agrarian policy and Food of Ukraine) share a common approach to preparing and presenting the reports on the implementation of the regulatory policy because of the shortage of information and inability to carry out a comprehensive analysis of the draft regulations.

When studying the financial-credit and monetary levers of the regulatory policy, it was determined that in 2016 the increase in volume of foreign debt was caused by devaluation of the national currency, funding of the budget deficit, capitalisation of state banks, including converting PJSC «PrivatBank» to state ownership and extending the loans of the Deposit Guarantee Fund, i.e. there were objective reasons for restructuring caused by the inability of the government to service debts through budget funds.

This state of events arose after as a consequence of the accumulated debt and a drop in GDP. The value of public debt reached a critical level of 90% of GDP in 2015. Based on these conclusions, the most appropriate levers of the regulatory policy in the field of financial, credit and monetary spheres should be the following: floating exchange rate, monetary targeting, fine-tuning operations and structural operations of liquidity regulation, compulsory redundancy and intervention in the foreign exchange market.

Filling the revenue part of the state budget is the main goal of the state policy in the field of taxation. Due to this incentive for business development in Ukraine, a simplified tax system was established in order to create thousands of new workplaces and to significantly increase revenues to state and local budgets.

Regarding the impact of budget tools in the context of regulatory policy, it should be noted that the key issues requiring a regulatory impact are low budget discipline, service debt, record needs for defense and security, economic decline and currency devaluation, as well as a fall in exports because of Russia's trade sanctions.

Thus, an important step towards improving the implementation of regulatory policy is a new Strategy for Public Finance Management in 2017-2021, a key element of which is implementing medium-term budget planning, insuring its direct connections with sectoral priorities and improving the efficiency of state expenditures. This will respond to the following problems: unpredictability of the budget and tax policies in the mid-term prospective; a lack of an integrated strategic planning system (weak relations between existing programs and priorities of the state development); a focus on cost control mechanisms (formal compliance with requirements is in focus rather than improvement in the level of services).

5. Conclusions

Having calculated the multifactor regression models, we found that the implementation of regulatory policy in the context of forming effective tools (levers) depends greatly on a certain set of qualitative and quantitative factors that characterise public administration and the legal, financial-credit and monetary, taxation, socio-psychological, budget sectors of state development. It is the cumulative effect that creates conditions for the environment in which the state must take steps towards implementation of the regulatory policy. The proper use of regulatory policy levers determines further effectiveness of the steps taken.

References

1. Ivanov, Yu. B., Krysovatyi, A. I., & Karpova, V. V. (2008). *Tax management.* Kyiv: Znannia (in Ukr.).
2. Kobushko, I. M., & Kobushko, Ia. V. (2015). The Main Directions of State Regulation of the Ukrainian Investment Market in Terms of Globalization. *Mechanism of Economic Regulation, 1,* 79-87 (in Ukr.). Retrieved from http://mer.fem.sumdu.edu.ua/content/acticles/issue_24/IHOR_M_KOBUSHKO_IANA_V_KOBUSHKOThe_Main_Directions_of_State_Regulation_of_the_Ukrainian_Investment_Market_in_Terms_of_Glo.pdf
3. Lascoumes, P., & Le Gales, P. (2007). Understanding Public Policy through Its Instruments - From the Nature of Instruments to the Sociology of Public Policy Instrumentation. *Governance, 20*(1), 1-21. doi: https://doi.org/10.1111/j.1468-0491.2007.00342.x
4. Lobunets, T. V. (2013). *Regulators and levers of the investment process in the corporate sector. (Doctoral dissertation).* Irpin: National University of State Fiscal Service of Ukraine (in Ukr.).
5. Lunn, P. (2014). *Regulatory Policy and Behavioural Economics.* OECD Publishing. doi: https://doi.org/10.1787/9789264207851-en
6. Macher, J. T., & Mayo, J. W. (2012). The World of Regulatory Influence. *Journal of Regulatory Economics, 41*(1), 59-79. doi: https://doi.org/10.1007/s11149-011-9178-8
7. Polyuga, V. O. (2005). *Economic and organizational levers of regulatory policy of tourism development.* (Doctoral dissertation). Uzhgorod: Uzhgorod National University (in Ukr.).
8. Radionova, I. F. (2013). The theory of financial instability in the modern macroeconomics tools. *Visnyk KNU imeni Tarasa Shevchenka (Herald of Taras Shevchenko Kyiv national University), 146,* 63-67.
9. Ruban, N., & Chunytska, I. (2010). Sources of efficiency of fiscal instruments in terms of the crisis of financial relations. *Naukovyi Visnyk NUDPSU (Ekonomika, Pravo) (Scientific Journal of NUSFSU (Economics, Law), 1,* 42-48 Irpin (in Ukr.).
10. Tyshenko, O., & Golyakova, K. (2012). Theoretical and methodological analysis of regulation aspects of intergovernmental relations. *Problemy Ekonomiky (Problems of Economics), 1,* 24-29 (in Ukr.).
11. Kolupaieva, I. V. (2016). *Regulatory policy: theory and methodology.* Kharkiv: Smuhasta typohraphiia (in Ukr.).
12. Wolff, S. (2015). EU budget support as a transnational policy instrument: above and beyond the state? *Public Administration, 93*(4), 922-939. doi: https://doi.org/10.1111/padm.12177
13. Maor, M. (2014). Policy Bubbles: Policy Overreaction and Positive Feedback. *Governance, 27*(3), 469-487. Retrieved from https://www.researchgate.net/publication/256047605_Policy_Bubbles_Policy_Overreaction_and_Positive_Feedback
14. Maggetti, M., & Gilardi, F. (2011). The policy-making structure of European regulatory networks and the domestic adoption of standards. *Journal of European Public Policy, 18*(6), 830-847. doi: https://doi.org/10.1080/13501763.2011.593311
15. Macher, J. T., & Mayo, J. W. (2015). Influencing public policymaking: Firm-, industry-, and country-level determinants. *Strategic Management Journal, 36*(13), 2021-2038. doi: https://doi.org/10.1002/smj.2326
16. Soloviova, N., & Fediaieva, M. (2015). Improvement of state strategic planning based on new regulatory policy. *Aktualni problemy ekonomiky (Actual Problems of Economics), 6,* 145-151 (in Ukr.).
17. Levi-Faur, D. (2014). The welfare state: a regulatory perspective. *Public Administration, 92*(3), 599-614. doi: https://doi.org/10.1111/padm.12063
18. Mannix, B. F., & Dudley, S. E. (2015). The limits of irrationality as a rationale for regulation. *Journal of Policy Analysis and Management, 34*(3), 705-712. doi: https://doi.org/10.1002/pam.21841
19. State Statistics Service of Ukraine (2017). *Statistical information.* Official web-site. Retrieved from http://www.ukrstat.gov.ua (in Ukr.)
20. Eurostat (2017). *Statistical information.* Official web-site. Retrieved from http://ec.europa.eu/eurostat/data/database
21. Better Regulation Delivery Office (BRDO) (2016). *Recent results of the evaluation regulations.* Retrieved from http://brdo.com.ua/numbers (in Ukr.)
22. The Cabinet of Ministers of Ukraine (2004, March 11). *On approval of methodologies for impact analysis and tracking of the regulatory act No. 308.* Resolution. Retrieved from http://zakon3.rada.gov.ua/laws/show/308-2004-%D0%BF (in Ukr.)
23. Karapetyan, O. M. (2008). Public external debt management: assessment methodology of debt sustainability. *Nauka moloda: zbirnyk naukovykh prats molodyhk vchenuch (Young Science: Research Works by Young Scientists), 10,* 101-110 (in Ukr.).
24. Prysyazhnyuk, O. O. (2011). The public debt of Ukraine as an indicator of the debt security. *Visnyk sotsialno-ekonomichnykh doclidgen' (Journal of Social and Economic Research), 42*(2), 94-98 (in Ukr.).
25. Stavnych, M. M. (2012). The impact of the debt security on the budget sector of Ukraine. *Ekonomika Kryma (Economy of the Crimea), 1*(38), 70-76 (in Ukr.).
26. International Bank for Reconstruction and Development. International Development Association or The World Bank (2012). *Global Development Finance 2012: External Debt of Developing Countries.* Washington. Retrieved from https://openknowledge.worldbank.org/handle/10986/2392
27. The Council of the National Bank of Ukraine (2017, January 31). *On approval of the procedure for the elaboration of the fundamental principles of monetary policy and control over its implementation: Decision of the Council of the National Bank of Ukraine No. 2-rd.* Retrieved from https://bank.gov.ua/doccatalog/document;jsessionid=CC444C92B9F3992F89B067E74F8C4112?id=43602905 (in Ukr.)

Received 5.06.2017