# Decentralization as a Basis for Modernisation of Public Administration: European Experience for Ukraine

Oleksandr Pukhkal<sup>\*</sup>, Valentyna Karlova, Ihor Reiterovych, Svitlana Sytnyk and Ivan Tyutyunnik

### Department of Public Policy and Political Analytics, Institute of Public Administration and Administration, National Academy for Public Administration under the President of Ukraine, Kyiv, Ukraine

Abstract: Ensuring the development of Ukraine as a sovereign and independent, democratic, social, and legal state at the present stage requires, first of all, the establishment of an effective domestic system of public administration. The purpose of the paper is to analyse the modernisation of public administration in European countries. The analysis revealed the specific features of modernisation of public administration at the regional level, typical of the unitary countries of the European Union, close to Ukraine in terms of territorial, demographic, administrative-territorial structure, and other criteria. In particular, the authors explored the features of public administration at the regional level in Ukraine under Also, steps were identified to intensify modernisation of public administration at the regional level in Ukraine under decentralisation in the context of the experience of European countries. Upon substantiating the results of the study, authors concluded that the adaptation of modernisation of the European experience should take the obvious shortcomings into consideration so as not to exacerbate the problems of relations between different levels of public authority in the regions of Ukraine, which are already familiar to Ukrainian realities.

Keywords: Region, democratisation, public administration, regional level.

### INTRODUCTION

The practice of public administration in democratic European countries shows that in the development of civil society, the successful implementation of its modern models is possible on the basis of decentralisation of power. That is, the transfer of part of the functions of central government to local governments and ensuring extensive participation of citizens in the management of state and local affairs. Decentralisation as a process of redistribution of power and resources between central government and local government, creates political, legal, economic, and institutional prerequisites for the modernisation of public administration. Ukraine's choice of the path of European integration necessitates the study and implementation of the experience of decentralisation of power in the unitary states of Europe and modernisation of Ukrainian system of public administration on this basis (Ashikbayeva et al. 2018; Komilova et al. 2020a; Kostruba 2017a; Kostruba 2017b; Talismanov et al. 2019; Zhigir 2020).

Despite the fact that the concept of decentralisation is widely studied and practiced in economic, legal, political, public administration sciences, there is still no generally accepted definition and understanding. In the context of this scientific intelligence, decentralisation is considered in the broad meaning of this category,

\*Address correspondence to this author at the National Academy for Public Administration under the President of Ukraine, Kyiv, Ukraine; Tel: +38(044) 481-21-55; E-mail: al.pukhkal5861@uohk.com.cn

namely, as a management system in which competitive relations between the centre and regions, between central government bodies and local self-government bodies are modified in favour of the latter and, on this basis, modernisation of public power and management takes place. In authors' understanding, decentralisation as a complex public administration phenomenon includes several important political, administrative, financial, and control components in the relations between public authorities and local governments (Aubakirov *et al.* 2019; Karmanovskaya *et al.* 2020; Trusova *et al.* 2019a).

In the context of the initial stage of decentralisation of power, an important direction of reforms in Ukraine is the construction of a new territorial organisation of public power, i.e. such an administrative-territorial system that would become the basic institutional matrix of modern public administration (Pittsyk et al. 2008; Bakashbayev et al. 2020; Vladyka et al. 2016; Kravtsov et al. 2020; Luts 2018). This refers to construction of a new local and regional self-government that can ensure favourable conditions for sustainable socio-economic and cultural development of regions through the rational use of their economic, social, and natural potential (Makarov 2011; Pudikova et al. 2019). It should be noted that the decentralisation reform in Ukraine was launched by the Concept of Reforming Local Self-Government and Territorial Organisation of Government (On Approval of the Concept... 2014) approved by the Government in April 2014. The adopted Laws of Ukraine "On Voluntary Association of Territorial Communities" (2015) and "On Cooperation of Territorial Communities" (2014) allowed to actually begin the administrative decentralisation. These regulations formed the basis for the initial stage of decentralisation in Ukraine, the transfer of a certain amount of responsibility, power, and resources from the central government to the level of newly formed united territorial communities.

However, Ukraine faces many issues on this path, namely: unregulated distribution of powers between different levels of government; a lack of properly trained management staff and innovative development projects; effective control over the activities of new local governments by the state and the public is not organised; inefficient use of financial resources, etc. Solution of these problems will form the prerequisites for the transition to the highest level of decentralisation, namely to devolution at both the regional and local levels of public administration.

#### ANALYSIS OF MODERNISATION CHANGES IN PUBLIC ADMINISTRATION OF EUROPEAN COUNTRIES

Considering the European integration vector of development of Ukraine and society, the European experience in structural and functional reforms of the system of territorial organisation of power is of particular scientific interest. These reforms have led to the establishment of effective public administration at the regional level with a corresponding strengthening of the status, powers, and resources of public authorities, especially of self-government bodies, in the unitary states of Europe. Most European states have been modernising public administration based on decentralisation since the 1960s, especially at the local level. Although modernisation has been interpreted differently in different countries, it has been based on a number of fundamental principles:

- efficiency, which was first understood through the lens of consolidation of territorial units so as to increase their economic capacity in the provision of services, and then, given the lack of flexibility and competition, was considered in the context of the "new public administration";
- planning, which was based on the functioning of large territorial units, economic regions, which were capable of making strategic decisions, but paid less attention to the provision of services to the population;

- democratisation and public participation;
- relieving the central government of excessive political and administrative burden (Borislavska *et al.* 2012; Barashkin and Samarin 2005; Kruzhkova *et al.* 2018; Zhdanova and Milyaev 2016).

Thus, in Western Europe in the 1960s and 1970s, power deconcentration was initially carried out to "unload" the system of public administration, which was becoming increasingly cumbersome. Since the 1980s, one of the leading forms of decentralisation under "new public administration" in European countries has been devolution. It was argued that the more autonomous local government institutions are from the central government, the more real and effective it is to achieve results and use resources within the framework of the reform of the territorial organisation of power (Denysenko 2007; Komilova et al. 2020b; Magsumov et al. 2018; Zhukovskyy et al. 2019). The consequences of implementation of the principles of "new public administration" in European political and administrative systems have been the strengthening of the following the modernisation tendencies in of public administration at the regional level:

Transition from administrative decentralisation (deconcentration), which took place in the 1960s and 1970s, to political decentralisation, which envisaged a set of measures aimed at transferring the powers of public authorities to local governments. In particular, two stages of political decentralisation can be distinguished in Europe: the first covered the late 1970s - mid 1980s, the second - the late 1980s - early 2000s. At the first stage, the purpose of the reform was to transfer the maximum possible amount of authority from the central government to cities, especially in the budget sphere, and to develop a specific scale of criteria. At the second stage, the emphasis was shifted to strengthening the financial independence of local burden authorities. reducing the on central governments (Kovbasiuk et al. 2013: Pvlvpenko 2020a). For example, in the United Kingdom, the provision of social services has been decentralised so as to bring them closer to the local population. A similar decentralisation of many state functions occurred in Italy. In some countries (France, Italy, Spain) - the control functions of prefects over the activities of local governments have been abolished or significantly weakened (Kovbasiuk et al. 2014; Bogaevskaya et al. 2020; Komilova et al. 2019a; Komilova et al. 2019b);

- Establishment and strengthening of regional selfgovernment, accompanied by the emergence of administrative (England, Greece. Finland. Portugal) and political regions (Italy, France, Spain, Belgium, Sweden) (Borislavska et al. 2012). These subnational structures have acquired completely new forms of regional elected bodies that perform, inter alia, legislative functions (Belgium, Spain, Portugal, Italy). In countries with significant regional differences, these reforms have become an effective precaution against splitting states. The result was the establishment of regions with different competences (Spain, Italy, Great Britain, partly France) (Kresina et al. 2009; Bondarenko et al. 2016; Konurbayeva et al. 2018);
- Strengthening of the international aspect of the work of regional authorities: the emergence of new international organisations representing regional and local authorities; international organisations focused on certain types of cities or regions; lobbying and diplomatic actions on the part of regional and local authorities (Boryslavska *et al.* 2012; Borisova *et al.* 2020; Zhdanova *et al.* 2019; Zykova *et al.* 2021).

As for the countries of Central and Eastern Europe. especially such countries as Poland, Hungary, the Czech Republic, Slovakia, the Baltic States, the task of reforming public administration, including at the regional level, in the late 1980s - early 1990s was largely based on the strategic goals of these states, namely the course taken for European integration. The main vectors of public administration reforms in these countries were various forms of decentralisation, the introduction of the principle of subsidiarity and the approximation of the governance system to EU standards (Kresina et al. 2009; Korbozerova 2019; Pylypenko 2020b; Trusova et al. 2019b). The next stage of modernisation of public administration based on decentralisation, both in the EU and candidate countries, was based on principles such as building civil society, efficiency, transparency, openness, and accountability of government, flexibility and subsidiarity. (Commission of the European Communities 2001).

The concept of "good governance" fills the system of public governance with humanitarian and social components, and also forms a new approach to understanding due governance, which should be open, accessible, accountable, and controlled, and therefore sensitive to the demands of citizens and their needs. Good governance is a necessary element of modernising the public administration system (Kovbasiuk et al. 2014; Borodin et al. 2020; Kuznetsova and Onishchenko 2018). Of particular importance for public administration reforms, including at the regional level, based on the principles of "good governance" in modern EU countries, is the European Strategy for Innovation and Good Governance at the local level, approved by the Council of Europe Committee of Ministers (European Strategy for Innovation... 2008). Its adoption became an important factor in the further development of local and regional government. As one of the main prerequisites for reforming the public administration system in both European countries and Ukraine is the ability of local (and regional) authorities to effectively exercise the growing number of powers delegated by central authorities to provide better services to the population (Degtyarev et al. 2019; Korbozerova 2020; Molchanova et al. 2020; Shandruk et al. 2019; Trusova et al. 2017).

Authors believe that the obvious value for the study lies in the experience of countries close to Ukraine in area and population, form of government, as well as the model of territorial organisation of power and, in particular, the model of regional government. By area and population, the countries close to Ukraine are Great Britain, Germany (Federal Republic of Germany), Poland, France, Spain, Italy. However, when other selected criteria are applied, it turns out that in Germany, Britain, Spain, and Italy, the experience of building a system of government has significant features, which are not yet suitable for Ukraine.

As for France and Poland, they meet most of the parameters for the role of candidates for analysis. In these countries, at the regional level, there are selfgovernment bodies (representative and executive) and state executive bodies. The system of administrativeterritorial division, excluding the central level, is the same as in Ukraine, i.e. it has three levels (region district - territorial community). The administrativeterritorial units themselves are unified. This model is described by the functioning of local self-government based on the so-called "natural law doctrine". It is believed that the management of the former should be dominated by the interests of the state, while the latter may have considerable independence and be guided primarily by local interests, which are consolidated in competence (Prokopenko their et al. 2013: Mekratanakulpat et al. 2018; Molchanova et al. 2019a; Shmelev and Petrovsky 2020).

## SPECIFIC FEATURES OF PUBLIC ADMINISTRATION REFORMS IN FRANCE

The authors address the experience of modernising public administration in France, which carried out a major reform of its political and administrative system based on decentralisation and deconcentration in the 1980s. Since the beginning of independence, Ukraine has tried to follow the French model of government, i.e. to build a unitary republic of presidential type with a four-tier system of administrative-territorial division (including the central level) and a dualistic model of territorial organisation of power at regional (oblast) and sub-regional (district) levels.

Until 1980, France was a fairly centralised state. A key figure in the French system of local government remained the government representative, the prefect, who exercised strict legislative control over the activities of local governments. The latter transferred a significant part of their powers to the state level and this played a rather marginal role in the administrative system. It should be noted that further reforms did not take place out of nowhere. Their prerequisites were formed by an active movement of local (municipal) development, which gained momentum in the 1970s. During 1982-1986, France passed over 40 laws aimed at decentralisation and deconcentration, which are currently consolidated into a single Administrative Code (Administrative Code of France... 2019).

The most important novelty in the legislation was the legal provision stipulated in Article 1 of Law No. 82-213 "On the Rights and Freedoms of Communes, Departments, and Regions", adopted on March 2, 1982, which many researchers consider to be the start decentralisation France. "Communes, of in departments, and regions are freely governed by elected councils. The laws shall determine the division of competence between communes, departments, regions, and the state, as well as the distribution of public funds arising from the new rules of the local tax system and the transfer of state loans to local communities; the organisation of the regions, the statutory guarantees provided to the staff of territorial communities, the method of election and the status of the elected, as well as forms of cooperation between communes, departments, and regions, and the development of citizen participation in local life" (Pukhtynskyi et al. 2009; Denissova et al. 2018; Pysarenko 2018; Shmelev 2020; Trusova et al. 2018). The law introduced five key innovations into the administrative system of the French Republic:

- elimination of administrative supervision by the state and its replacement by control over the legality of decisions of local communities by the prefect, as well as the delegation of power to mayors and chairmen of general and regional councils;
- delegation of certain functions from the state to local authorities with the simultaneous transfer of financial and human resources for their implementation;
- the regions were endowed with the status of a full-fledged territorial community;
- granting legal and financial autonomy to local communities, as well as a complete lack of hierarchy and supervision between them;
- introduction of a single status, thanks to which all employees of local bodies form a local civil service (Devemi 2000; Sidorova *et al.* 2019).

It is important to emphasise that the legislation immediately envisaged the competence of decentralised levels of government in economy and finance. That is, the driving force of the reform was precisely the economic interests and relations that gradually developed at the local level. From the very beginning, an important condition for the successful implementation of decentralisation reforms was the simultaneous transfer of the powers and financial resources necessary for their implementation, to local communities (Maiev 2012). In particular, currently, as a result of the reforms, the basis of local government budgets in France, including regional ones, includes: means of inter-budgetary equalisation (transfers), loans; income from the use of property and services (Makarov 2011; Dotsenko et al. 2017; Molchanova et *al.* 2019b).

It should be noted that the regions in France were first formed in 1960 to introduce a regional structure of state economic planning. Since 1982, representative bodies of power and its executive bodies, as well as prefects as representatives of the state, have been functioning in the regions. The representative body of self-government at the regional level is the regional council, elected according to a proportional system for six years, headed by its President. The regional council elects its executive body – the regional administration. The highest official of the regional administration is the director general of the regional services, who is directly responsible to the president of the regional council

International Journal of Criminology and Sociology, 2020, Vol. 9 2995

(Evdokimov 2001). According to the division of competences between the self-governing and state levels of government in the region, the regional self-government bodies are responsible for such areas as economic development; land use and planning; transport; education, retraining programs and culture; maintenance and construction of secondary schools; healthcare; management of European structural funds (Boryslavska *et al.* 2012; Ermilova 2019; Ezdina 2017; Molchanova *et al.* 2018; Pavenkov *et al.* 2016).

Along with local governments in the region, there is a regional prefect (representative of the state in the regions), who monitors the decisions of regional local governments and coordinates the prefects of the departments. This position is automatically given to the prefect of the department on the territory of which the administrative centre of the region is located. The prefect of the region plays a crucial role in overseeing the legality of local government decisions. In particular, the law obliges the regional council to submit the decisions to the prefect within two weeks. If they consider that the decision made by the council does not comply with current legislation, within two months they shall have the right to apply to the administrative court in order to declare it illegal or suspend it until the final decision in court (Malinowski 2011). The regional prefect has wide powers in assurance of the socioeconomic development of the region. In particular, the mechanism of coordination of the work of the representative regional government and selfgovernment bodies attracts attention in this regard. Its content lies in that the prefect of the region prepares a national plan of socio-economic development at the regional level, and monitors its combination with the regional plan developed by the regional council.

An equally important element in the cooperation of governmental and self-governing institutions in the development of a regional development plan is the participation of stakeholders in the region, which is institutionalised in the form of a special advisory body – the Socio-Economic Committee, which comprises representatives of entrepreneurs (35%); trade union representatives (35%); representatives of collective life, family, joint, cooperative organisations, universities (25%); highly qualified persons appointed by the Prime Minister (5%) (Congress of Local and Regional... 2007).

The last reform in the public administration system of France is the administrative-territorial reform of 2014-2016. Its essence lies in reduction of the number of regions by enlarging them. With that, the status of the newly created regions has not changed: the powers of regional public administration bodies are inherent in this administrative-territorial unit. In fact, as is evident from the proclaimed aims of the reform, it is currently aiming at optimisation of national budget expenditures by eliminating duplication of functions and powers of different authorities. Time will tell how successful the reform is and whether it is expedient to use the experience of consolidation of regions according to the French model in Ukraine, because the reform has just started. However, it should be borne in mind that its relevance arose not only against the backdrop of outdated and largely artificial formation of regions in the middle of the last century, but also due to problems caused by administrative reforms of the 1980s (Matvijenko 2010: Fedotova et al. 2019a: Kostruba and Lukianov 2019; Montaev et al. 2020; Pavenkov et al. 2018a).

Thus, the experience of public administration reforms at the regional level in France has proven that to preserve the unitary structure of the state and to optimise public governance, it is necessary to transfer an exhaustive list of powers to self-government, concerning economic, social, and cultural development, but retaining the state political functions by means of retaining control over the legality of decisions of selfgoverning bodies by the representatives of the central government (prefects).

### ORIGINALITY OF MODERNISATION OF PUBLIC ADMINISTRATION AT THE REGIONAL LEVEL IN POLAND

The experience of modernising public administration at the regional level in Poland is also useful for Ukraine both from scientific and practical standpoints. Apart from similar problems of post-socialist transformation, the orientation of both countries to the French experience of building a system of local government (the Polish system of local government is based on the French model) (Grosse 2004; Polyakova and Balanyuk 2018; Trusova et al. 2020), meticulous attention of scholars and practitioners is akin to the Ukrainian administrative-territorial division: voivodeships and oblasts, powiats and districts in Poland and Ukraine are almost the same in terms of area. Thus, the Polish experience of reforms allows to avoid the politically and financially costly administrative reformatting of oblasts and districts, as is occurred in France in particular.

On the eve of the reform, the Polish government prepared a full package of relevant bills in just one year

and quickly passed them through the Sejm. The direct authors of the reform of public administration were scientists who developed an optimal model of the administrative and territorial system based on their scientific achievements. Expert support for Polish researchers and politicians was provided by the Council of Europe. The Poles have taken the reform itself very seriously, and it is worth paying attention to expert support in places where a significant number of counselling and training centres have been established (Shapovalova and Presniakov 2017; Soloviova 2020; Fedotova et al. 2019b; Fomina 2018). An important factor in the success of public administration reform at the regional level was the beginning of many branchrelated reforms, namely: public service, education, social assistance, healthcare, police, fire protection, etc.

Apart from the desire to create voivodeship selfgovernment as a governing body capable of implementing regional policy and to strengthen interregional cooperation, an important factor in the establishment of the regional level of government was the intensification of Polish efforts to join the European Union. Accordingly, implementation the of administrative reforms was seen as a key element of a set of measures for EU integration. In particular, the decrease in the number of voivodeships was explained by the globalisation of economic and social processes, the need to coordinate and rationalise the regional policy of Poland in the run-up to accession to the European Union. In turn, the abolition of the practice of centralised decision-making has created the preconditions for receiving financial support from the structural funds of the European Union, intended for regional development. For the same reasons, the territory of Poland was divided in such a way as to meet the European Nomenclature of Territorial Units for Statistics (NUTS): NUTS 1 - grouping of voivodeships; NUTS 2 - voivodeships; NUTS 3 subregions (powiat associations); NUTS 4 – powiats and cities on the rights of powiats; NUTS 5 - gminas (Makarov 2011: Fedotova et al. 2020: Kostruba and Vasylyeva 2020a; Mykhyda et al. 2019).

One of the issues that needed to be addressed during the reforms was the improvement of the administrative-territorial system, which was "artificially" introduced in 1975 solely for political reasons. This system envisaged the establishment of numerous small voivodeships and aimed to create a centralised vertical system of government. In general, the administrative system of the times of the Polish People's Republic was based on the dominance of the departmental structure over the territorial one. At the local level, power was exercised by people's councils and its executive committees, which essentially constituted local branches of central government. As for the 49 voivodeships, they were not territorial units that could be described as regions in geographical, spatial, and historical terms. They did not have the necessary resources for independent development, as well as any tools for implementing regional policy, in particular, their own budget (Pankulych 2019; Filatov *et al.* 2019; Kostruba and Vasylyeva 2020b).

According to the Law "On the Introduction of the Basic Three-Tier Territorial Division of the State" (The Law of Poland... 1998), which came into force on January 1, 1999, three levels of territorial selfgovernment were introduced: gmina, powiat, and voivodship. This reform was based on the principle of decentralisation of public power, which was previously stipulated at the constitutional level in Art. 15 of the Constitution of Poland of 1997: "The territorial structure of Poland guarantees the decentralisation of public power" (Constitution of the Republic of Poland... 1997). Special legislation on the financial support of local selfgovernment includes, in particular, the laws "On public finances", "On incomes of local self-government entities", "On liability for violation of discipline in public finances" (Stefan 2014: Vikhrova 2019: Franchuk et al. 2020; Kostruba et al. 2020; Nosik 2018).

The main laws that regulate the regional level of public administration are the Law "On Local Self-Government" (The Law of Poland... 1998) and the Law "On Voivode and Government Administration in Voivodeship" (2009). According to Polish law, the state administration and regional self-government operate at the voivodeship level, which, unlike gminas and powiats, is not considered to be local (Nelicki 2006; Kostruba 2019; Kostygova *et al.* 2019; Omelchuk *et al.* 2020; Pavenkov *et al.* 2018b). In turn, at the level of gminas and powiats there are no public authorities, and only local governments. This led to the distribution of competences in the management of local affairs between all levels of territorial organisation of power.

Based on the competences envisaged by the reform for different levels of public administration, at the regional level in Poland function the following units: the sejmiks of the voivodeship as a representative body and the voivodeship administration as an executive body headed by a marshal, as well as a public authority such as the French prefect represented by the voivode and regional administration (auxiliary body of the voivode). According to the legislation, the voivodeship sejmik is elected by the population of the voivodeship for 4 years. Decisions of the sejmik are made at sessions that take place at least once a guarter. As already mentioned, the executive body is the voivodeship government, which is formed by the sejmik for the period of its term of office. The government comprises marshal (head), vice-marshal (deputy) and members of the government. Structurally, the regional government is divided into departments (The law of Poland... 1998). The main goals of the voivodeship self-government bodies lie in the implementation of the region's development policy, which aims to achieve such tasks as: promotion of economic activity development; increase in the level of competition and innovation of the voivodeship economy; cultivation of the Polish tradition and fostering of the national and cultural consciousness in citizens, as well as the development of a sense of Polish identity; area improvement; protection of cultural and natural environment. In other words, the knowledge of voivodeship self-government includes provision of regional development; provision of public services at the regional level; labour market development; functioning of higher education institutions, voivodeship-level hospitals, theatres. regional museums, and voivodeship road infrastructure (The Law of Poland... 1998).

Furthermore, since 2000, the practice of concluding regional contracts between the Council of Ministers and the voivodeship self-government has been introduced in Poland (Malinowski 2011; Maydanyk 2018). Along with the self-government bodies at the regional level, similar to the French and Ukrainian models, there are state administration bodies united in the bodies of the so-called "unified government administration" headed bv voivodes and "non-unified government administration". The voivode is responsible for the implementation of national policy in the voivodeship, namely:

- adapts the policy objectives of the Council of Ministers to local conditions;
- ensures the interaction of all governmental and self-governing administration bodies operating in the voivodeship;
- performs and coordinates tasks in defence and security of the state;

- submits draft government documents in matters concerning the voivodeship to the Council of Ministers through the Minister;
- performs other tasks defined by the Council of Ministers and the Chairman of the Council of Ministers in separate laws (Law of Poland "On the Voivode" ... 2009).

Civil service reform has been an equally important aspect of Polish reforms. Special laws on civil service and service in territorial self-government bodies regulate the activities of all persons working in government administration bodies, including regional organisations dealing with civil service affairs, as well as in local self-government bodies. However, scholars note the overly liberal nature of this legislation. In particular, M.O. Pukhtynskyi *et al.* (2009) emphasises that this has led to the emergence of weak, incompetent employees appointed for political reasons, and the tradition where the winner of the election forms their own team.

Thus, the reforms carried out in Poland were not without certain shortcomings, but in general allowed to form a new European model of public administration, including at the regional level. Which is based on broad decentralisation, elements of deconcentration, as well as the principles of "new public management", and later, "good governance" – in the post-reform period, when there was a need to adjust the institutional framework of modernisation under study.

### CONCLUSION

٠

In conclusion, authors state that European models of modernisation of public administration at the regional level, at least those that are inherent in the unitary states – France and Poland – are based on a set of political, legal, organisational, and financial measures. These measures are aimed at creating a system of decentralised governance that is capable of preserving the territorial unity of the country, of preventing excessive autonomy of the regions in the political meaning; of ensuring the development and implementation of regional development policy by coordinating the efforts of regional bodies of state and self-government, with extensive involvement of stakeholders.

Modernisation of public administration at the regional level in European countries is a permanent process and therefore the domestic reformer must be

careful to adapt foreign experience. To intensify the modernisation of public administration at the regional level in Ukraine under decentralisation in the context of the experience of European countries, the first steps, in our opinion, should be identified as follows:

- to amend the Constitution of Ukraine on decentralisation, which should establish a constitutional framework for the functioning of the new system of territorial organisation of power;
- to adopt the fundamental law "On the administrative-territorial system of Ukraine", which must define the principles of national policy in this area, the construction of a new administrative-territorial system, unified requirements and criteria for administrativeterritorial units of all levels, etc.;
- to prepare and adopt a new version of the Law of Ukraine "On Local Self-Government in Ukraine" by improving the functioning of full-fledged local self-government at various levels of government;
- to adopt the Law of Ukraine "On Service in Self-Government Bodies", which should define strategic directions of personnel policy in local self-government in accordance with the ideology of local self-government reform;
- to legislate the establishment of the institution of prefects to monitor compliance with the Constitution and laws of Ukraine by local governments.

### REFERENCES

- Administrative Code of France on Local Self-Government. 2019. Retrieved June 15, 2020 (http://pdp.org.ua/legislation/billsforeign/133-39-I4-)
- Ashikbayeva, Asem, Nazira Gumar and Gaukhar Zhanibekova. 2018. "Setting up individual indicators of economic efficiency for environmental protection in oil refineries". Espacios 39(18): 1-9.
- Aubakirov, Yermek, Larissa Sassykova, Zhaneta Tashmukhambetova, Akhmetova, Subramanian Faty Sendilvelan, Kamalidin Sharipov, Sholpan Kubekova, Aigul Batyrbayeva, Ryskul Azhigulova, Roza Ryskaliyeva, Aisulu Zhussupova and Tamila Abildin. 2019. "Thermo-catalytic processing of polymer waste over catalysts on the basis of natural zeolite from the tayzhuzgen field (Kazakhstan) modified by molybdenum". Rasayan Journal of Chemistry 12(4): 1701-1709.

https://doi.org/10.31788/RJC.2019.1245435

Bakashbayev, Azatbek, Aliya Nurgaliyeva, Nazira Gumar, Zhanat Khamidullina and Markhabat Saduakassova. 2020. "Examining the trends in bank deposits through internal and external factors based on the supply chain strategies: A primary and secondary data survey". International Journal of Supply Chain Management 9(2): 526-536.

Barashkin, Roman and Ilya Samarin. 2005. "Computer system of simulating operating duty of a gaslifting well". Pp. 161-162 in 11th International Scientific and Practical Conference of Students, Postgraduates and Young Scientists; "Modem Techniques and Technologies", MTT 2005 – Proceedings. Tomsk: IEEE.

https://doi.org/10.1109/SPCMTT.2005.4493238

- Bogaevskaya, Oksana, Irina Batrakova, Olga Slyusar and Vladymyr Talismanov. 2020. "Pharmacogenetic testing: Effectiveness of the use of the indirect anticoagulant warfarin". Journal of Global Pharma Technology 12: 160-169.
- Bondarenko, Nataliya, Tatyana Maksimova and Olga Zhdanova. 2016. "Agro-industrial clusters: Opportunities for innovative development and financing". Journal of Internet Banking and Commerce 21(Special Issue 6), 1-9.
- Borisova, Alena, Madina Rakhimberdinova, Elvira Madiyarova, Inna Riazantseva and Natalia Mikidenko. 2020. "Staffing search and recruitment of personnel on the basis of artificial intelligience technologies". Entrepreneurship and Sustainability Issues 7(3): 2456-2469. https://doi.org/10.9770/jesi.2020.7.3(66)
- Borodin, Alex, Makpal Zholamanova, Galina Panaedova and Svetlana Frumina. 2020. "Efficiency of price competition in the telecommunications market". E3S Web of Conferences 159: 03003. https://doi.org/10.1051/e3sconf/202015903003
- Boryslavska, Olena, Iryna Zaverukha and Eduard Zakharchenko. 2012. Decentralisation of public power: Experience of European countries and prospects of Ukraine. Kyiv: Sofia LLC.
- Commission of the European Communities. European governance. 2001. Retrieved June 15, 2020 (http://eukraina.com/load/eurointegration/4-1-0-113).
- Congress of local and regional authorities. European Charter for Regional Democracy. 2007. Retrieved June 15, 2020 (www.despro.org.ua/img/upload/european\_charter.doc+&cd= 1&hl=ru&ct=clnk&gl=ua).
- Constitution of the Republic of Poland of April 2. 1997. Retrieved June 15, 2020 (http://www.sejm.gov.pl/prawo/konst/rosyjski/ kon1.htm).
- Degtyarev, Sergey, Lybov Polyakova, Leonid Balanyuk and Jasmin Gut. 2019. "Justice system of Northeastern Ukraine and the influence of Russian judicial practice (middle XVII - XVIII centuries)". Bylye Gody 52(2): 491-501. https://doi.org/10.13187/bg.2019.2.491
- Denissova, Oxana, Marina Kozlova, Madina Rakhimberdinova, Yevgeniy Varavin and Mainur Ordabayeva. 2018. "International experience in the development of green economy". Journal of Environmental Management and Tourism 9(3): 564-575. https://doi.org/10.14505//jemt.9.3(27).16
- Denysenko, Valeriy. 2007. Reforming the institutional system of political relations and power in transit countries (on the example of Ukraine). Lutsk: Vezha.
- Devemi, Jan. 2000. Local government in France. Kyiv: UADU.
- Dotsenko, Elena, Natalya Ezdina, Angelina Prilepskaya and Kirill Pivnyk. 2017. "Sustainable development strategy for Russian mineral resources extracting economy". E3S Web of Conferences 21: 04014. https://doi.org/10.1051/e3sconf/20172104014
- Ermilova, Maria. 2019. "Introduction of mechanisms and instruments of foreign systems of housing market financing in Russian practice". Test Engineering and Management 81: 4286-4297.
- European Strategy for Innovation and Good Governance at Local Level. 2008. Retrieved June 15, 2020 (http://irgo.org.ua/ politika-i-vlast/yevropejska-strategiya-shhodo-innovacij-tadobrogo-vryaduvannya-na-miscevomu-rivni).

- Evdokimov, Viacheslav. 2001. Local Authorities of Foreign Countries: Legal Aspects. Moscow: Spark.
- Ezdina, Natalya. 2017. "Humanity and environment co-influence in the shadow of technological convergence". E3S Web of Conferences 21: 04015. <u>https://doi.org/10.1051/e3sconf/20172104015</u>
- Fedotova, Nina, Elena Solovyeva, Viktor Vtorov and Lyudmila Yun. 2019a. "Implementing Sino-Russian educational programs for training Chinese engineers". Integration of Education 23(2): 164-181.

https://doi.org/10.15507/1991-9468.095.023.201902.164-181

- Fedotova, Nina, Gou Jingyuan and Boris Kovalenko. 2020. "Types of communicative coordination in dialogues in academic sphere of communication". International Journal of Learning and Change 12(1): 44-54. <u>https://doi.org/10.1504/JJLC.2020.105956</u>
- Fedotova, Nina, Valentina Sentsova, Natalya Marusenko, Tatyana Avlova, Boris Kovalenko and Daria Shchukina. 2019b. "Sounding multicode texts: Codes, structure, components". Asia Life Sciences 21(2): 593-615.
- Filatov, Vladimir, Natalia Zaitseva, Anna Larionova, Svetlana Maykova, Lidia Kozlovskikh, Vera Avtonova and Natalia Vikhrova. 2019. "Assessment of the socio-economic impact of the implementation of regional environmental programs for waste management". Ekoloji 28(107): 267-273.
- Fomina, Tetiana. 2018. "Personal obligation: procedural characteristics and practice of application". Journal of the National Academy of Legal Sciences of Ukraine 25(2): 41-54. https://doi.org/10.31359/1993-0909-2018-25-2-41
- Franchuk, Vasil, Oleg Omelchuk, Stepan Melnyk, Mykhailo Kelman and Oksana Mykytyuk. 2020. "Identification the ways of counteraction of the threats to the financial security of hightech enterprises". Business: Theory and Practice 21(1): 1-9. <u>https://doi.org/10.3846/btp.2020.11215</u>
- Grosse, Grzegorz. 2004. Polityka regionalna Unii Europejskiej: Przykład Grecji, Włoch, Irlandii. Warszawa: Polski Instytut Spraw Publicznych.
- Karmanovskaya, Natalya, Anastasiia Smirnova, Vladimir Litovchenko and Svitlana Efa. 2020. "Automated systems of ecological control in Norilsk". IOP Conference Series: Materials Science and Engineering 734(1): 012175. https://doi.org/10.1088/1757-899X/734/1/012175
- Komilova, Nilufar, Husan Oblakulov, Umriniso Egamberdiyeva, Shaxnoza Mirzayeva and Nigora Shadieva. 2020a. "Some theoretical issues of social geographical research". Asia Life Sciences 22(2): 157-170.
- Komilova, Nilufar, Lolakhon Karshibaeva, Umriniso Egamberdiyeva, Zulfiya Abduvalieva and Shuxrat Allanov. 2020b. "Study of nozogeographic situation and its study on the basis of sociological survey". Indian Journal of Forensic Medicine and Toxicology 14(3): 2093-2098.
- Komilova, Nilufar, Rukhsora Hudayberganova, Isabek Murtazaev, Hidoyathon Abdinazarova and Zafarjon Madaminov. 2019a. "Economic and geographic problems of improvement of industrial sectors and local structure of Uzbekistan". Journal of Advanced Research in Law and Economics 10(6): 1916-1928.
- Komilova, Nilufar, Suraya Haydarova, Ahmadjan Xalmirzaev, Shukhrat Kurbanov and Furkat Rajabov. 2019b. "Territorial structure of agriculture development in Uzbekistan in terms of economical geography". Journal of Advanced Research in Law and Economics 10(8): 2364-2372.
- Konurbayeva, Zhadyra, Oxana Denissova, Madina Rakhimberdinova and Alfiya Zakimova. 2018. Food security as a formation factor of the import substitution potential of the economy. Journal of Applied Economic Sciences, 8(62), 2251-2260.
- Korbozerova, Nina. 2019. "Guidelines of the syntactic models analysis of complex sentences in Spanish". Asia Life Sciences 21(1): 217-226.

- Korbozerova, Nina. 2020. "Trends in the development of the Spanish complex sentence syntax". Astra Salvensis 1: 437-450.
- Kostruba, Anatoly and Dmitrii Lukianov. 2019. "Multivariability of rights in the structure of corporate legal relations". Journal of Advanced Research in Law and Economics 10(7): 2035-2039.

https://doi.org/10.14505/jarle.v10.7(45).13

- Kostruba, Anatoly and Valentina Vasylyeva. 2020a. "International regulation of termination of rights in the field of civil and intersubjective state relations". Astra Salvensis 1: 131-153.
- Kostruba, Anatoly and Valentina Vasylyeva. 2020b. "Termination of right in the mechanism of civil legal relations". Rivista di Studi sulla Sostenibilita 2020(1): 287-300.
- Kostruba, Anatoly, Roman Maydanyk and Vitaliy Luts. 2020. "Bonum requirements of the beneficiary in the corporate rights protection system in Ukraine: Implementing best practices". Asia Life Sciences 1: 189-207.
- Kostruba, Anatoly. 2017a. "Methodological basis of legal personality of the state (civil aspects)". Journal of Legal, Ethical and Regulatory Issues 20(Special issue 1): 15-44.
- Kostruba, Anatoly. 2017b. "Occurrence of resolutive condition of a deed as a juridical fact in civil law of Ukraine". Journal of Advanced Research in Law and Economics 8(3): 857-864.
- Kostruba, Anatoly. 2019. "The notion and attributes of right terminating legal facts". Journal of Advanced Research in Law and Economics 10(1): 254-262.
- Kostygova, Lyudmila, Elena Sidorova and Natalia Vikhrova. 2019. "Modern clusters and assessment of their innovative development". Entrepreneurship and Sustainability Issues 7(1): 603-614. https://doi.org/10.9770/jesi.2019.7.1(42)
- Kovbasiuk, Yuriy, Kateryna Vashchenko and Volodymyr Tolkovanov. 2014. Local self-government in Ukraine: Current state and main directions of modernisation. Kyiv: National Academy of Public Administration under the President of Ukraine.
- Kovbasiuk, Yuriy, Kateryna Vashchenko and Yuriy Surmin. 2013. Modernisation of public administration and European integration of Ukraine. Kyiv: National Academy of Public Administration under the President of Ukraine.
- Kravtsov, Yuri, Marianna Tkalych, Nina Korbozerova and Olga Ponomarenko. 2020. "Communicative rationality as a problem fields and semantic emphasis of educational paradigm". Astra Salvensis 1: 391-401.
- Kresina, Iryna, Anton Kovalenko and Kateryna Vitman. 2009. Administrative and territorial reform in Ukraine: Political and legal issues. Kyiv: Lohos.
- Kruzhkova, Galina, Yurii Kostyukhin, Y.Y., Ivan Rozhkov. 2018. "Choice procedure for expedient composition of electronic waste". Mining Informational and Analytical Bulletin 2018(9): 47-57. https://doi.org/10.25018/0236-1493-2018-9-0-47-57
- Kuznetsova, Natalia and Natalia Onishchenko. 2018. "The role of the
- legal initiative in the establishment of civil society". Journal of the National Academy of Legal Sciences of Ukraine 25(1): 120-133.
- Law of Poland "On the Voivode and the Government Administration in the Voivodeship". 2009. Retrieved June 15, 2020 (http://www.slideshare.net/kyivsolidarityfundpl/23-2009-51450845).
- Law of Ukraine No. 1508-VII "On cooperation of territorial communities". 2014. Retrieved June 15, 2020 (http://zakon.rada.gov.ua/laws/show/1508-18).
- Luts, Volodymyr. 2018. "Phenomenon of contract in civil law". Journal of the National Academy of Legal Sciences of Ukraine 25(2): 130-141. https://doi.org/10.31359/1993-0909-2018-25-2-130
- Magsumov, Timur, Svetlana Artemova and Leonid Balanyuk. 2018. "Regional problems of public schools in the Russian Empire

in 1869-1878 (using an example of the Vyatka Province)". European Journal of Contemporary Education 7(2): 420-427. https://doi.org/10.13187/ejced.2018.2.420

- Maiev, Andriy. 2012. "Decentralisation of Power in France: Experience for Ukraine". Current Problems of Public Administration 3: 85-88.
- Makarov, Glib. 2011. Interaction of state authorities and local selfgovernment within the new system of territorial organisation of power in Ukraine. Kyiv: Legal Unity.
- Malynovskyi, Valentyn. 2011. Conceptual principles of transformation of the territorial organisation of power of Ukraine: Regional and local levels. Lutsk: Lesia Ukrainka Volyn State University.
- Matviienko, Anatoliy. 2010. Political and legal principles of decentralisation of power in the context of administrative reform in Ukraine. Kyiv: Lohos.
- Maydanyk, Roman. 2018. "Virtual currency in the civil law of Ukraine: state, trends, perspectives". Journal of the National Academy of Legal Sciences of Ukraine 25(2): 114-129. https://doi.org/10.31359/1993-0909-2018-25-2-114
- Mekratanakulpat, Natcheewan, Nina Fedotova, Tatyana Lypkan, Sergev Khromov and Nina Nikonova. 2018. "Level of phonetic sensitivity of Thais when imitating Russian syllables". International Journal of Mechanical Engineering and Technology 9(13): 772-783.
- Molchanova, Violetta, Leonid Balanyuk, Evgeniya Vidishcheva and Irina Potapova. 2020. "The development of primary education on the Cossack territories in 1803-1917 years (on the example of the Kuban region). Part 3". Bylye Gody 55(6): 88-104.

https://doi.org/10.13187/bg.2020.1.88

Molchanova, Violetta, Leonid Balanyuk, Evgeniya Vidishcheva and Irina Potapova. 2019a. "The development of primary education on the cossack territories in 1803-1917 years (on the Example of the Kuban Region). Part 1". Bylye Gody 53(3): 1049-1058.

https://doi.org/10.13187/bg.2019.3.1049

- Molchanova, Violetta, Leonid Balanyuk, Evgeniya Vidishcheva and Irina Potapova. 2019b. "The development of primary education on the Cossack Territories in 1803-1917 years (on the example of the Kuban Region). Part 2". Bylye Gody 54(4): 1524-1536. https://doi.org/10.13187/bg.2019.4.1524
- Molchanova, Violetta, Svetlana Artemova and Leonid Balaniuk. 2018.
- "Teaching singing in the Russian empire educational institutions: Importance and results". European Journal of Contemporary Education 7(1): 220-225. https://doi.org/10.13187/ejced.2018.1.220
- Montaev, Sarsenbek, Sabit Zharylgapov, Nurgul Montaeva and Bekbulat Shakeshev. 2020. "Research of possibility of producing ceramic paving stones by vibrocompression with the purpose of using them in the improvement of urban areas". IOP Conference Series: Materials Science and Engineering 775(1): 012118. https://doi.org/10.1088/1757-899X/775/1/012118
- Mykhyda, Serhii, Svitlana Shandruk, Kamilla Mahrlamova, Lina Smirnova, Laryssa Yarova and Ganna Polishchuk. 2019. "Collaborative learning in academic English classroom: Preparation of PhD candidates". Asia Life Sciences 21(1): 399-409.
- Nelytskyi, Andriy. 2006. The structure, tasks, and practice of territorial self-government in Poland. Warsaw: Eastern European Democratic Center.
- Nosik, Volodymyr. 2018. "Issues of legislative support of legal use of farming lands in collective ownership in Ukraine". Journal of the National Academy of Legal Sciences of Ukraine 25(2): 72-82

https://doi.org/10.31359/1993-0909-2018-25-2-72

- Omelchuk, Oleh, Nataliia Borsuk, Igor Samsin, Myroslav Lutskyi, Yuliia Trufanova and Anatoliy Kovalenko. 2020. "Management and regulation of electronic money circulation: Information and juridical aspects". International Journal of Management 11(4): 634-644.
- On approval of the Concept of reforming local self-government and territorial organisation of power in Ukraine: Order of the Cabinet of Ministers of Ukraine No. 333-r. 2014. Retrieved June 15, 2020 (https://zakon.rada.gov.ua/laws/show/333-2014-%D1%80)
- On voluntary association of territorial communities. 2015. Law of Ukraine No. 157-VIII. Retrieved June 15, 2020 (http://zakon.rada.gov.ua/go/157-19).
- Pankulych, Larysa. 2019. Features of reforming the administrativeterritorial structure of Poland. Retrieved June 15, 2020 (http://www.pravoznavec.com.ua/period/article/17229/%CB)
- Pavenkov, Oleg, Ilya Shmelev and Maria Rubtcova. 2016. "Coping behavior of orthodox religious students in Russia". Journal for the Study of Religions and Ideologies 15(44): 205-224.
- Pavenkov, Oleg, Maria Rubtsova and Ilya Shmelev. 2018a. "The transformation of gender visualization in photography: Soviet and Russian multisemiotics". Discursos Fotograficos 14(24): 219-256. https://doi.org/10.5433/1984-7939.2018v14n24p219
- Pavenkov, Oleg, Maria Rubtsova and Ilya Shmelev. 2018b. "The transformation of gender visualization in photography: Soviet and Russian multisemiotics". Discursos Fotograficos 13(24): 219-256.

https://doi.org/10.5433/1984-7939.2018v14n24p219

- Pittsyk, M.V., Y.I. Hanushchak, D. Shymanke and H. Tsymmermann. 2008. Cities and Communities in Administrative and Territorial Reform: International Experience and Practical Proposals. Association of Cities of Ukraine and Communities, Kyiv, Ukraine, 136 p.
- Polyakova, Lybov and Leonid Balanyuk. 2018. "The black sea province in the first world war: A historiographical review". Bylye Gody 48(2): 838-849. https://doi.org/10.13187/bg.2018.2.838
- Prokopenko, Larysa, Olha Rudik, Iryna Shumliaieva. 2013. Strategy and principles of reforms of the territorial organisation of public authorities in the EU countries. Kyiv: National Academy of Public Administration under the President of Ukraine.
- Pudikova, Galina, Vera Perminova and Nina Korbozerova. 2019. "Formation of linguistic culture in the process of teaching lexical disciplines to university students". Espacios 40(41): 1-14.
- Pukhtynskyi, Mykola, Petro Vorona, Oleksandr Vlasenko. 2009. Foreign experience in organising the work of local authorities. Kharkiv: HarRI NAPA Publishing House "Mahistr".
- Pylypenko, Denys. 2020a. "Foreword: Theory and practice in waste management processes and alternative energy developments in connection with agribusiness growth and prospects". Industrial Engineering and Management Systems 19(1): 1-2. https://doi.org/10.7232/iems.2020.19.1.001
- Pylypenko, Denys. 2020b. "Scientific way of the world cognition and its harmonious combination with the spiritual development of personality and society". Astra Salvensis 1: 5-6.
- Pysarenko, Nadiia. 2018. "The rule of law in administrative proceedings: from the doctrinal idea to practical implementation". Journal of the National Academy of Legal Sciences of Ukraine 25(1): 134-145.
- Shandruk, Svitlana, Lina Smirnova, Natalia Cherednichenko, Liudmyla Lysenko, Tetyana Kapitan, Yaroslav Chernionkov and Ihor Spinul. 2019. "Future human development from the standpoint of dominant philosophical concepts of the United States pedagogical education". Astra Salvensis 1: 323-333.

- Shapovalova, Nataliya and Igor Presniakov. 2017. Administrative reform in Poland: Directions for change and real results. Retrieved June 15, 2020 (http://dialogs.org.ua/ ru/cross/page3636.html).
- Shmelev, Ilya and Vadim Petrovsky. 2020. "The problem of differentiation of groups of religious personalities in Russia: The experience of psychological research". Astra Salvensis 1: 37-55.
- Shmelev, Ilya. 2020. "The dynamics of clothing changes, an aspect of the subculture after the USSR's Collapse". Visual Anthropology 33(2): 138-150. https://doi.org/10.1080/08949468.2020.1721207
- Shtefan, Viktoria. 2014. "Experience of foreign member countries of the European Union in reforming the administrative-territorial system". Problems of Legality 125: 184–192. <u>https://doi.org/10.21564/2414-990x.125.52479</u>
- Sidorova, Elena, Yurii Kostyukhin and Vladimir Shtanskiy. 2019. "Creation of conditions for the development of production of science-intensive products based on the potential of Russian applied scientific organizations". Smart Innovation, Systems and Technologies 139: 584-591. https://doi.org/10.1007/978-3-030-18553-4 71
- Soloviova, Oksana. 2020. "Personal features of identification and uniqueness in the anthropological field of social discourse". Visual Anthropology 33(1): 81-100. https://doi.org/10.1080/08949468.2020.1696131
- Talismanov, Vladymyr, Sergey Popkov, Alla Alekseenko, Svetlana Zykova and Olga Karmanova. 2019. "Synthesis of O-[2-(1H-1,2,4-triazol-1- yl)ethyl]phenylthiocarbamate and O-[2-(1Himidazol- 1-yl)ethyl]phenylthiocarbamate with fungicidal activity". International Journal of Pharmaceutical Research 11(3): 1237-1240.
- The Law of Poland "On the Introduction of the Basic Three-Tier Territorial Division of the State" of July 24. 1998. Retrieved June 15, 2020 (http://isap.sejm.gov.pl/DetailsServlet?id= WDU19980960603)
- Trusova, Natalia, Natalia Tanklevska, Oleksandr Prystemskyi, Oksana Hryvkivska and Nadiia Advokatova. 2019a. "Determinants of the development venture financing of the subjects of Agrarian market of Ukraine". Asia Life Sciences 21(1): 377-398.
- Trusova, Natalia, Oksana Hryvkivska, Natalia Tanklevska, Larysa Vdovenko, Oleksandr Prystemskyi and Svitlana Skrypnyk. 2019b. "Regional aspect of formation: The potential of financial safety in Agrarian enterprises of Ukraine". Asia Life Sciences 21(1): 169-186.
- Trusova, Natalia, Serhii Kalchenko, Volodymyr Tsap, Volodymyr Ternovsky and Olha Levchenko. 2017. "Restrictions of financing the budget deficit of Ukraine". International Journal of Economic Research 14(14): 353-364.

Received on 20-11-2020

Accepted on 18-12-2020

Published on 31-12-2020

DOI: https://doi.org/10.6000/1929-4409.2020.09.364

© 2020 Pukhkal et al.; Licensee Lifescience Global.

This is an open access article licensed under the terms of the Creative Commons Attribution Non-Commercial License (<u>http://creativecommons.org/licenses/by-nc/3.0/</u>) which permits unrestricted, non-commercial use, distribution and reproduction in any medium, provided the work is properly cited.

- Trusova, Natalia, Serhii Karman, Maksym Tereshchenko and Yurii Prus. 2018. "Debt burden of the financial system of Ukraine and countries of the Eurozone: Policy of regulating of the risks". Espacios 39(39): 1-10.
- Trusova, Natalia, Yurii Kyrylov, Viktoriia Hranovska, Oleksandr Prystemskyi, Viktoriia Krykunova and Alina Sakun. 2020. "The imperatives of the development of the tourist services market in spatial polarization of the regional tourist system". Geojournal of Tourism and Geosites 29(2): 565-582. <u>https://doi.org/10.30892/gtg.29215-490</u>
- Vikhrova, Natalia. 2019. "Recycling aluminium waste within the "circular" economy paradigm". International Multidisciplinary Scientific GeoConference Surveying Geology and Mining Ecology Management, SGEM 19: 605-612. https://doi.org/10.5593/sgem2019/5.3/S21.076
- Vladyka, Marina, Oksana Vaganova, Svetlana Kucheryavenko, Nadezhda Sivtsova and Alexander Borodin. 2016. "Investments as an accelerator of regional innovation development". International Business Management 10(16): 3438-3442.
- Zhdanova, Olga and Konstantin Milyaev. 2016. "Criteria for the selection of venture projects by the business accelerators". International Journal of Applied Business and Economic Research 14(14): 785-798.
- Zhdanova, Olga, Tatiana Bondarenko and Tatiana Maksimova. 2019. "Peer-to-peer lending in the modern financial system". Journal of Advanced Research in Dynamical and Control Systems 11(11 Special Issue): 116-124. https://doi.org/10.5373/JARDCS/V11SP11/20192937
- Zhigir, Anatolii. 2020. "Calculation of the economic effect of environmental measures". IOP Conference Series: Earth and Environmental Science 421(7): 072002. <u>https://doi.org/10.1088/1755-1315/421/7/072002</u>
- Zhukovskyy, Viktor, Nataliya Zhukovska, Anatoliy Vlasyuk and Andrii Safonyk. 2019. "Method of forensic analysis for compromising carrier-lock algorithm on 3G modem firmware". Pp. 1179-1182 in 2019 IEEE 2nd Ukraine Conference on Electrical and Computer Engineering, UKRCON 2019 – Proceedings. Lviv: UKRCON. https://doi.org/10.1109/UKRCON.2019.8879941
- Zykova, Svetlana, Grihorii Tsaplin, Vladymyr Talismanov, Ilya Bulatov, Sergey Popkov and Olga Karmanova. 2021. "Antioxidant activity and acute toxicity of new n4substituted5-(1,2,4-triazole-1-ylmethyl)-1,2,4-triazole-3thiones and s-derivatives". International Journal of Pharmaceutical Research 13(1): 309-313. https://doi.org/10.31838/ijpr/2021.13.01.056