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Dissertation Summary

**Financing sources for the development of digitisation of local government
in the years 2007-2020 in Wielkopolska**

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Justification of the choice of topic

The subject of the digitisation of the state sector is a very topical issue, as it reflects the activities of the Polish internal policy aimed at levelling out the civilisational differences caused by the transformation process, and striving to ensure sustainable social development based on the operation of the national economy in the conditions of global competition¹. Poland's accession to the European Union made it possible to implement these measures within the framework of the cohesion policy which the Union has been pursuing for many years², which is the basis for the security and development of nations. Global processes are significantly modifying the basic parameters of the international order, and the fundamental opportunity for societies in the 21st century as a result of increasing globalisation is access to information and the free movement of people and capital³.

The very notion of digitisation was defined in the Digital Poland programme⁴, it identifies 3 basic elements that make up digitisation. These are:

- increasing access to high-speed Internet,
- development of e-services in the network,
- development of the competences of citizens in terms of using the Internet, and the creation of solutions and projects that will encourage them to do so.

¹ E. Stiglitz, *Globalizacja*, Wydawnictwo Naukowe PWN, Warszawa 2004, s. 22-25.

² M. Sikora-Gaca, M. Piechowicz, M. Kleinowski, *Zarządzanie Funduszami Europejskimi*, Wydawnictwo Difin, Warszawa 2018, s. 17-61.

³ R. Kuźniar, *Niebezpieczeństwa nowego paradygmatu bezpieczeństwa*, [w:] R. Kuźniar, Z. Lachowski (red.), *Bezpieczeństwo międzynarodowe czasu przemian: zagrożenia – koncepcje – instytucje*, Warszawa 2003, s. 210.

⁴ Program Operacyjny Polska Cyfrowa, [online] <https://cppc.gov.pl/po-polska-cyfrowa> (dostęp 27.07.2019 r.).

To sum up, digitisation is a series of solutions and activities aimed at extending access to the Internet, and activities aimed at implementing electronic mechanisms in public administration. In Poland, such activities began in the 1990s in the form of numerous investments, strengthening the potential of the state, financed from individual EU programmes.

The motivation to take up the topic was the desire to conduct a synthetic evaluation of the activities carried out between Poland and the European Union in the context of changes in the development of public administration. This is an important topic, as at present the situation of the EU and the community's mutual relations with member states differs from that prevailing during the last decade. It is therefore a good moment to trace Poland's almost twenty years of membership in EU structures in the face of dynamic socio-political and economic transformation. This analysis has been carried out in the context of long-term investment strategies implemented for the development of digitisation in Local Government Units, as well as the current political and socio-economic situation.

At present, it is clearly visible that the local administration in Poland is lagging behind the sector of small and large enterprises and the needs of the citizens in terms of using IT solutions. This hampers the development of the information society, and delays in the development of e-government are hindering the country's integration with European Union countries and limiting the possibility of full integration into the system of the globalised economy and the Digital Single Market.

The enormous increase in the importance of information translates into a growing demand for electronic services and, thus, the use of information technology in the economy, public administration (government and local government), and in the everyday lives of citizens. Despite huge expenditures on the development of ICT infrastructure, aimed at expanding the access to broadband Internet, the main reason for its lack in households in local communities is still the lack of the need to use it and the poorer ability to use it in the "field".

The question arises as to whether the non-use of the Internet is not sometimes caused by the unavailability of services enabling the execution of specific civic issues electronically. As research indicates ⁵, the growth in the number of people using public administration services in recent years (2015-2020) has been modest. In the time of the ongoing digital revolution, where the Internet provides opportunities to earn, buy, manage a bank account, etc., the 15% increase in the number of people using online public administration services in the last 6 years

⁵ Główny Urząd Statystyczny, *Spółeczeństwo informacyjne w Polsce w 2020 r.*, https://stat.gov.pl/download/gfx/portalinformacyjny/pl/defaultaktualnosci/5497/1/14/1/spoleczenstwo_informacyjne_w_polsce_w_2020_r..pdf.

seems to indicate even a **stagnation of the process of development and provision of digital services in public administration**. In the author's opinion it was worth analysing the factors and activities that influence the development of digital services in the public administration, and in particular in local government administrations, which is the "closest" sphere of contact for the average citizen.

Another important reason for taking up the subject was the shortage of scientific studies on digitisation processes in which the authors concentrate mainly on the issues of EU subsidies in general or digitisation in offices; there are no studies making a complex analysis of those activities for the whole programming period of state informatisation and Poland's participation in the European Union.

A consequence of the above is also the lack of cross-sectional analyses of the process of introducing and developing e-government in Local Government Units taking into account the two financial perspectives (2007-2020).

Aims, hypotheses and research questions of the thesis

The research problem of the dissertation was the insufficient recognition of the economic and financial aspects of the digitisation of with the use of EU funds. This general problem was translated into the following research questions:

- PB1: In what legal and economic context can the acquisition of EU funds for financing digitisation be placed?
- PB2: Which factors stimulate and which limit the absorption of EU funds for digitisation?
- PB3: To what extent do Local Government Units finance digitisation with EU funds, to what extent do they support themselves with their own funds?
- PB4: What are the perspectives of financing further digitisation processes of the Local Government Units in Poland from EU funds in the context of the current political reality?
- PB5: What is the economic sense of digitisation?

The main objective of the dissertation is to assess the development and dynamics of digitisation processes in territorial self-governing units of Wielkopolska in the years 2007-2020 together with the evaluation of the scale of financing.

The main goal of the dissertation is accompanied by **specific goals**, assigned to answer particular research questions:

CS_1a (PB_1): Characterisation of legislative regulations in terms of the development of digitisation of Local Government Units.

CS_1b (PB_1): Recognition of the economic context of the use of EU funds.

CS_2 (PB_2): Identification of barriers to obtaining financial support from EU funds and barriers to the development of digitisation of Local Government Units.

CS_3 (PB_3): Estimation of the scale of own and EU funds spent by Local Government Units in Wielkopolska on digitisation development.

CS_4 (PB_4): Evaluation of the dynamics and further development of digitisation in Local Government Units based on the experience of two financial perspectives in the context of current political realities.

The following **hypotheses of the dissertation** were accepted:

HG_1: The use of external funding sources determines the dynamisation of the development of the digitisation process of Local Government Units.

HG_2: Experience in the use of funds from the 2007-2013 perspective determined the level of absorption of funds from the 2014-2020 perspective.

Subject, object, time and territorial range of the study

The object of the study was the process of digitisation development of Local Government Units, while the research subjects were selected Local Government Units from Wielkopolskie Region. The time scope of the study concerns the two programming periods in which Poland was, and still is involved: 2007-2013 and 2014-2020. The period before 2007 was not taken into account due to a real lack of ICT solutions possible to implement in Local Government Units.

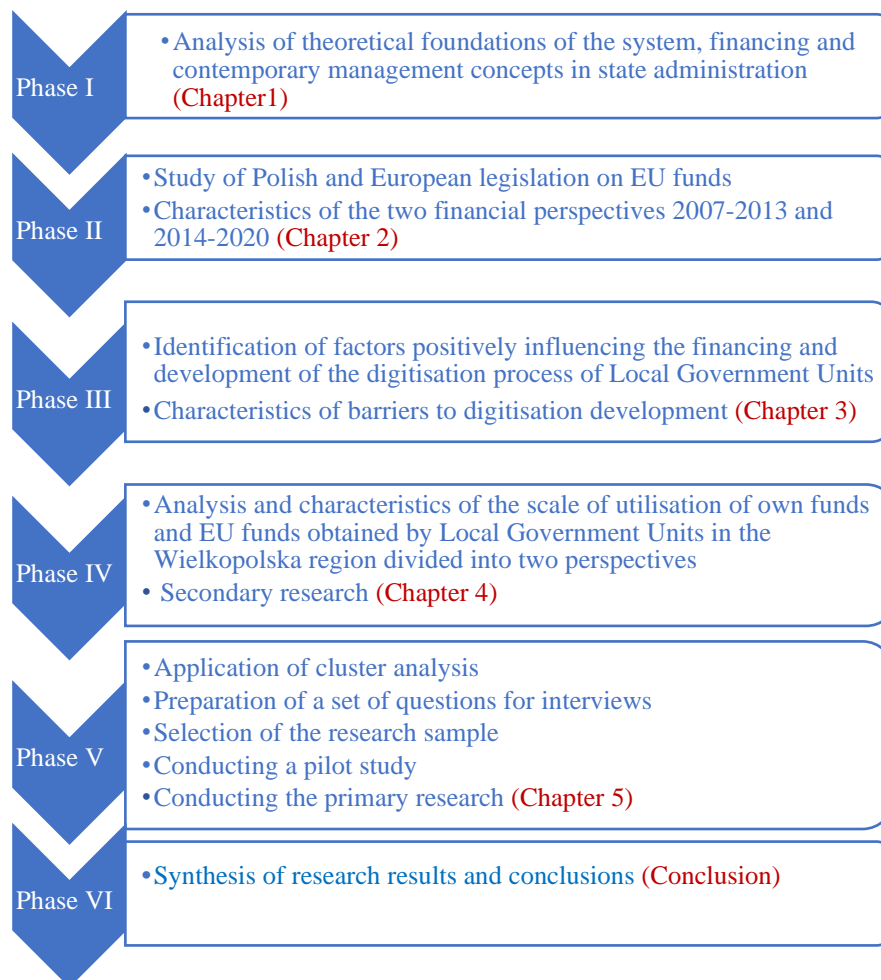
Research methods and structure of the dissertation

Among the research methods used in the dissertation, two main groups can be distinguished:

- **in the theoretical part of the dissertation** - literature studies on the system, financing and contemporary management concepts in state administration,
- **in the empirical part of the dissertation** - **secondary analysis of documentation in order to determine the nature and intensity of associations between phenomena**

- the size of EU subsidies, the size of own contribution, the size of municipality/city, the degree of digitisation development, cluster analysis using Ward's method, primary research in the form of interviews with officials and IT specialists employed in Local Government Units.

The thesis is theoretical and empirical in nature. The **research procedure** of the thesis is illustrated in Scheme 1.



Scheme 1. Research procedure of the thesis

Source: Own study.

Particular research stages were realised in **five chapters of the work**. The first chapter contains the theoretical basis of the local government system, its financing and management concepts in public administration. The evolution of management concepts is also presented together with their advantages and disadvantages.

The second chapter presents the **evolution of activities for digitisation of public institutions in Poland**. Institutional and legal aspects of state informatisation on the basis of Polish legislation were presented. Then, the characteristics of national and regional operational

programmes from the two main funding perspectives (2007-2013 and 2014-2020) were presented in terms of spending EU funds for co-financing the digitisation development process.

The third chapter was devoted **to the identification and systematisation of the factors affecting the development of the digitisation of Local Government Units**. The stimulants and destimulants of TSU digitisation processes were characterised from the point of view of legal (e.g. national and European legislation), macroeconomic (e.g. socio-economic situation of Poland, EU absorption, national development policies), microeconomic (e.g. financial situation of offices), institutional, as well as demographic, social and psychological factors.

The fourth chapter contains a **statistical diagnosis and evaluation of the scale of use of financial resources** earmarked for digitisation development by Local Government Units of Wielkopolska divided into two EU financial perspectives.

In the fifth chapter of the **paper a qualitative study** of digitisation processes was conducted. For this purpose a Ward's cluster analysis was used, which, by separating homogeneous groups of Local Government Units, made it possible to define the research sample for the primary research. The primary study was then described and presented. On the basis of the qualitative analysis of the interviews, conclusions were drawn concerning the process of applying for EU funds for digitisation and the future activities of local government offices in this area.

Results of the thesis and final conclusions

Taking into account the results of the conducted research and its preliminary assumptions, it can be stated that the aim of the dissertation, i.e. an assessment of the **development and dynamics of digitisation processes** in the Local Government Units of the Wielkopolska Region in the 2007-2020 perspective has been achieved. As a result of the analysis carried out in this study, answers to all the research questions were obtained. The veracity of the answers was adequately justified and supported by scientific sources and research results. In particular, the secondary research carried out showed that, in most of the projects examined, the median percentage of co-financing exceeds 80% of the value of the entire project. Also the survey conducted among the respondents shows a subjective, high evaluation of the amount of co-financing of the implemented projects. All the respondents stressed the importance of EU support in the IT development of Local Government Units, without which these units would not "bear the burden" of financing digitisation projects.

It can be unequivocally stated that the topic undertaken in the dissertation is of great importance from the point of view of managing the limited financial resources of Local Government Units, as well as economising the funds for digitisation received from the EU. For the conducted primary research has shown the **existence of irregularities on the part of Local Government Units** in the long-term planning of changes in their digitisation. There is a lack of internal policy leading to the improvement of standards in informatisation of services to the inhabitants and of the work of officials themselves, as well as the phenomenon of negative selection of staff employed in Local Government Units. The employees of territorial self-governing units participating in the survey indicated problems with project documentation being considered too extensive and difficult to manage as a significant barrier. This problem could probably be minimised by introducing a dedicated IT system which would enable easier management of the documentation and of the project course processes. Deficiencies in the analysis of needs or usefulness of the project revealed in the qualitative study could be minimised by introducing an electronic system of questionnaires among Local Government Units employees or citizens themselves. The authorities are probably not aware how many tasks in their units could be modernised by means of computerisation.

Unfortunately, the survey showed that digitisation projects do not constitute a large percentage of all projects implemented, although their number is increasing dynamically over time. This is probably related to EU policy, and the desire to meet other needs of the residents. Here, local needs are more important, related to the development of roads, education or health infrastructure. The computerisation of the activities of the actual government offices, as the institution with which the typical citizen has only occasional contact, is certainly not a priority. An important, and at the same time highly disturbing result of the qualitative study is the fact that all the respondents declared the lack of any checks on the usability of the implemented projects. Any eventual analysis of this issue is carried out only if it is required by the given project's provisions. Unfortunately, it is striking that in the case of EU funds it is all about getting them and spending them, and not about spending them wisely.

Considering the information emerging from the conducted research, it can be stated that both hypotheses adopted in the dissertation have been confirmed.

The first hypothesis assuming that the **use of external sources of financing determines the development and dynamics of the digitisation process of Local Government Units** has been confirmed in the conducted qualitative study in which the respondents strongly declared that without EU funds Local Government Units would not have their own resources for digitisation development.

The second hypothesis assuming that **experience in using funds from the 2007-2013 perspective determined the level of absorption of funds from the 2014-2020** perspective was also confirmed. The secondary research showed that, with experience gained over time (2007-2013 and 2014-2020), there was an increase in:

- the percentage of projects with a direct impact on digitisation,
- the percentage of the total value of projects with a direct impact on digitisation,
- percentage of EU funding for digitisation-related projects.

It should also be emphasised that the dissertation fills a research gap in the Polish literature due to a lack of publications in the field of digitisation of Local Government Units and of research connected with the real use of EU funds and their materialisation in the form of self-governing units development - both qualitative and systemic.

The work should be seen in the context of the following aspects of positive and normative economics. The first part of the empirical study answers the question: how are things? In this sense, new knowledge in the *know-what*⁶ category has been developed, i.e. a multidimensional diagnosis of financing the development of digitisation in Wielkopolska territorial Local Government Units from EU sources.

In the second part of the empirical research the answer to the question: why are they as they are? In this sense, new knowledge is created in the *know-why*⁷ category. The results of this part of the empirical research indicate, to a large extent, the barriers in the development of digitisation that result from socio-psychological factors and the lack of in-depth analysis, which, if implemented in the future, would translate into the effectiveness of implemented projects and, consequently, would increase the need for and awareness of the purpose of applying for funds for digitisation development.

The two sections described above point to the need to introduce solutions that could influence the quality and effectiveness of applications prepared. **A potential solution would be the in-depth analysis of needs both within Local Government Units and among potential recipients of services - inhabitants.** It should be noted that it is impossible to formulate an accurate solution without the creation of the above described diagnosis.

To sum up the results of the research - they may constitute the basis for the representatives of the Local Government Units to introduce changes in the management policy of the whole

⁶ B. Lundvall, B. Johnson, *The Learning Economy*, in: "Journal of industry studies", 1(2), 1994. <http://doi.org/10.1080/13662719400000002>, s. 27.

⁷ Ibidem, s. 27.

implementation of projects co-financed from EU funds so that the management of the limited resources of the community's own funds is effective and gives measurable benefits to the local structures, which the Local Government Units are, and to their citizens living in the community's areas.

The whole of the considerations undertaken in the thesis allows also for answering the fifth research question posed about **the sense of digitisation in Local Government Units**. The essence of digitisation itself is to improve the process of handling matters in Local Government Units. This modernisation helps both parties concerned, the citizens as well as the officials themselves. The breakthrough came with the outbreak of the COVID-19 pandemic, which exposed the backwardness of most Local Government Units in terms of electronic access to their duties. If the digitisation of Local Government Units had developed on a par with the IT development of everyday life, the failure to communicate with local government unit in the light of subsequent restrictions would not have happened. Therefore, digitisation makes sense, as we live in times when it has become a necessity and not only an opportunity, a necessity not only financially, but also in terms of management.