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REVIEW OF DOCTORAL DISSERTATION

by Emirgena Nikolli, MSc, entitled: "Human Capital and Economic Growth: Comparative Panel Evidence of Balkan Region and European Union Countries"

prepared under the scientific supervision of dr hab. Przemysław Borkowski, prof. UG

at the University of Gdańsk in the field of Social Sciences, in the scientific discipline of Economics and Finance

I. Formal and legal bases of the review

The review is based on Article 187 of the Act of 20 July 2018 Law on Higher Education and Science (consolidated text: the "Dziennik Ustaw" journal of laws of 2022, item 574, as amended). The formal basis of the review is the letter from dr hab. Anna Zamojska, prof. UG, Vice Chair of the Economics and finance Discipline Council of the University of Gdańsk dated 26.10.2023 (no. E001.6110.96.2023) informing about my appointment by the Economics and finance Discipline Council as a reviewer in the procedure of awarding the doctoral degree to Ms. Emirgena Nikolli, MSc.

The detailed comments are arranged as follows: evaluation of the research problem undertaken in the dissertation, the hypotheses and objectives of the study (II), substantive assessment of the dissertation (III), assessment of the research methodology (IV), evaluation of the structure and literature of the dissertation (V), assessment of the formal and editorial side of the dissertation (VI), conclusions (VII).

II. Assessment of the research problem undertaken in the dissertation, the hypotheses and objectives of the study

Human capital is now perceived as one of the key factors in economic growth (Grzybowska, 2015). The issue of the importance of human capital for the development of the economy is the subject of numerous studies conducted not only in the field of economics, but also in the field of management and quality



sciences. With the development of a knowledge-based economy, the role of human capital is continuously increasing, as it is people who create and develop knowledge. The fundamental problem in a knowledge-based economy is to identify and understand the factors that enhance economic transformation and development (Skrzypek, 2011). The topic of the dissertation falls within this key area of these studies. At the same time, it should be noted that human capital and its impact on economic growth is not only an important research area for contemporary economic or management theories but it is also of increasing interest to managers, entrepreneurs, and economic policy makers at the national and international level. In the Introduction to the thesis, Ms. Emirgena Nikolli, MSc, states that she focusses her research efforts on the problem of determining the impact of human capital on economic growth in the European Union and the Balkan countries, taking into account the specificities of different European subregions, as there is a visible difference between the EU countries and the non-EU Balkan countries (pp. 13-14). The objectives of the study were therefore defined as follows (p. 16):

1. To examine the impact of human capital on economic growth in Balkan countries;
2. To identify the predominant determinants within the human capital variable of economic development;
3. To examine the behavior of predominant determinants to answer whether a visible difference exists between Balkan EU and Balkan Non-European countries.

Although I am positive about the formulated goals, it is important to note that in social sciences, relationships are rarely deterministic, and perhaps a more appropriate word would be “factor”, especially since a determinant is a factor that influences something in a fundamental way (Drabik, Kubiak-Sokół, Sobol, 2021), thus the phrase “predominant determinant” is unclear. Similar doubts are raised by the phrase “behaviour of predominant determinants”, by which should be understood the mechanisms of influence of the factors examined in the study. Furthermore, with regard to the third objective cited, it is to be presumed that Ms. Emirgena Nikolli, MSc, had in mind Balkan countries not belonging to the European Union, since the Balkan Peninsula is located in Europe and only Turkey, which can also be considered a Balkan country, is partly located in Asia.

The following research hypotheses were formulated in order to achieve the stated objectives (p. 16):

H1: Human capital is positively associated with economic growth in the Balkan Region;



H2: Government expenditure on education is positively associated with economic growth in the Balkan Region;

H3: Life expectancy is positively associated with economic growth in the Balkan Region;

H4: Level of education is positively associated with economic growth in the Balkan Region;

H5: The impact of human capital on economic growth is stronger in Non-EU Balkan Region than EU Balkan Region;

H6: The impact of government expenditure on education is stronger in Non-EU Balkan Region than EU-Balkan Region;

H7: The impact of life expectancy on economic growth is stronger in Non-EU Balkan Region than EU-Balkan Region;

H8: Quality of education (no. of students enrolled in primary, secondary and tertiary) is positively associated with economic growth in a stronger way in Non-EU Balkan Region than EU-Balkan Region.

The research subject addressed in the dissertation and its objectives are valid and up to date. Hypotheses have been correctly formulated. The choice of the dissertation topic has been exhaustively and properly justified by Ms. Emirgena Nikolli, MSc.

III. Substantive assessment of the dissertation

The content of the dissertation is consistent with its theme, and similarly, the chapter titles generally correspond to their content. Chapter 1 of the dissertation, entitled "Theories of Economic Development", is theoretical in nature and provides a starting point for further discussion. The first subchapter entitled "The Economic Concept of Growth" details the origins of the concept of economic growth that have been presented: from Adam Smith to relatively contemporary concepts of Acemoglu and Robinson, who, like Adam Smith, saw in democracy and institutions supporting competition between independent actors the driving force of socioeconomic development (Kaminski, Kaminski, 2015). In this context, Ms. Emirgena Nikolli, MSc refers to the role of human capital in the concepts discussed. She presents empirical studies that indicate the impact of human capital on economic growth. She also mentions the importance of "new factors" in economic development, such as information technology (p. 27). However, this important theme is



discussed rather marginally; hence my request for an indication of *how does the development of the knowledge economy affect the role of human capital in economic growth?*

In the next subsection entitled “Selected Factors of Economic Growth”, the author discusses the links between financial development, industry, international tourism, infrastructure, information and ICT, trade, and economic growth. Citing various theories, from the classical to the most recent, and numerous empirical studies, she consistently and logically demonstrates the relationships between the factors discussed and economic growth. An interesting and particularly valuable for the purposes of the dissertation is the discussion of the importance of the development of international tourism as an important determinant of economic growth. Building on the findings of previous studies, Ms. Emirgena Nikolli, MSc, convincingly demonstrates that the development of international tourism, although dependent on a variety of factors, has become an important driver of economic growth in many countries. She rightly points out that international tourism is now a driver of not only economic change but also a sociocultural one. Unfortunately, these considerations overlook the impact of COVID-19 on tourism and, consequently, on other sectors as well, which painfully affected the economies of many countries during the pandemic period. Therefore, it is appropriate to ask: *what effects did the COVID-19 pandemic have on the economic growth of the Balkan countries and the European Union and are these effects still being felt?*

In the context of the fast development of the knowledge economy, the value of the subchapter on the relationship between infrastructure, information, ICT, and economic growth (subchapter 1.2.4) should also be emphasised. This subchapter aptly highlights the role of information technology for knowledge diffusion processes in economic and social development. Simultaneously, the author cites the results of interesting empirical research indicating that the impact of ICT is not unequivocal but dependent on the level of economic development of a country (p. 36). In this context, it is reasonable to ask: *what are the reasons for the different impact of ICTs on economic growth in developing countries than in economically developed countries?*

The second chapter of the Dissertation, entitled “Human Capital and Economic Development”, includes two subchapters, entitled “The Role of Human Capital in Economic Development” and “Measures of Human Capital”. The first presents a definition of human capital as “the collection of innate abilities, education, experiences, and a continuous process of learning and growth that people go through their lifetime



(Laroche and Merette, 1999)” (p. 41). However, accepting this rather simplistic definition begs the question: *what is the difference between human capital and human resources in this view?* In the further discussion, referring to human capital theory, its importance is presented. A wide range of economic theories, from classical to contemporary growth theories, are discussed in detail, showing the relationships between human capital and economic growth, as well as the factors that influence human capital, such as health and education (p. 42). Ms. Emirgena Nikolli, MSc, rightly points out that state spending on education and health care not only contributes significantly to the development of human capital but also, in the long-time perspective, leads to increased sustainable and social well-being. In this context, she highlights the importance of higher education in the contemporary world for the development of human capital, providing the economy with highly skilled workforce whose competencies are an important source of competitive advantage in the economies of developed countries. The difficulties in applying this strategy by developing countries, where spending on education and health is at a relatively low level, are also exhaustively discussed (p. 43). At the same time, the bidirectional nature of the relationship between human capital and economic growth is rightly pointed out (pp. 44-45).

The next subchapter, entitled “Measures of Human Capital” focusses mainly on discussing the role of two key factors in the development of human capital, education and health, what to some extent is a repetition of the previous subchapter. However, the specific measures used in relation to education (e.g., enrolment index, the share of the population educated at a given level of education, government spending on education, its share in GDP, etc.) are not characterised in detail. Also, in relation to the health factor, the discussion of the specific measures used is rather laconic (p. 61).

Chapter 3 of the thesis, entitled “Balkan Countries”, also includes two subchapters entitled “EU and non-EU Balkan Countries” (3.1) and “Economic Growth and Its Factors in Balkan Region” (3.2). The first is devoted to an exhaustive discussion on the specificities of the Balkan countries and the differences that exist between the EU and non-EU Balkan countries. The reflections presented highlight the fact that EU membership of some of the Balkan countries has forced a number of changes in these countries and provided an important stimulus for economic development (pp. 63-64). It is rightly stated that the aspiration of the non-EU Balkan countries to join the European Union is an important policy objective in these countries aimed at economic growth (p. 64). In turn, the second subchapter, on the other hand, presents in an



interesting way the relationship between economic growth and its specific conditions found in the Balkan countries. Particularly noteworthy are the illustrative comparisons between the Balkan countries and the European Union countries drawn up independently by the candidate in the form of graphs (Figures no. 1-12). Unfortunately, the source of the data on which they are based is not made clear - under the figures, only "based on data from WDI & IMF" is stated as the data source (e.g. p. 70), but this abbreviation is not explained and this item is missing from the bibliography (Figures no. 1-12).

The fourth chapter entitled "Model and Data Analysis" is methodological. It includes three subchapters entitled "Conceptual Model and the Operationalization of Model Variables" (4.1), "Sample Details" (4.2), and "Data Analysis Techniques" (4.3). In the first subchapter, the choice of model variables and how they are measured are logically justified. The proposed conceptual model is logical and is strongly justified by the cited literature (p. 76). In the next subchapter entitled "Sample Details" it is specified that the study covered 33 European countries, which were divided into specific subgroups. This is followed by a sensible explanation of the criteria used for this division, also drawing on the relevant literature (pp. 77-78). A major weakness of this subsection is the lack of a precise data source used (p. 76). Ms. Emirgena Nikolli, MSc, only states that "The complete details related to full samples and subsamples are provided in the Appendix" (p. 79). However, the Appendix also does not specify the source of the data, with a laconic "Author's work" under the attached tables (pp. 171-180). The next subchapter comprehensively describes the statistical techniques used for data analysis and justifies their choice, which is undoubtedly a particularly valuable part of the work that demonstrates Ms. Emirgena Nikolli's research skills and statistical knowledge.

The results of the research conducted are discussed in the fifth and final chapter entitled "Results". In the subchapter entitled "Descriptive Statistics" (5.1), descriptive statistics of the variables studied in the sample are presented. Unfortunately, as in the previous chapter, the source of the data used and a description of the abbreviations used in the tables are not provided below the tables (e.g., Tables no. 1-4). A strength of this subchapter is the analysis of the variables studied, as well as a thorough description of the statistical methods used based on the literature. The next subchapter entitled "Empirical Analysis of Results" (5.2) provides much of the value of the dissertation. It details the results of the analysis of the impact of human capital on economic growth, which used panel estimation models. The analysis covered both the entire sample and the developed countries of the European Union, the countries of the Balkan region of the



European Union, and the non-EU Balkan countries. Furthermore, the results obtained were clearly interpreted in the context of human capital theory and previous research (pp. 100-102). The empirical chapter ends with a brief summary. On the basis of the analyses conducted, interesting comparisons of the impact of human capital on economic growth in the country groups studied are made, providing an important synthesis of the results obtained (pp. 128-131).

The dissertation closes with "Conclusion", which presents a concise recapitulation of the study. The final conclusions, resulting from the research presented, have been formulated and they are correct and logical. The limitations of the research carried out are discussed, especially taking into account certain weaknesses of the statistic models used, the impossibility of generalising the results, as well as the fragmentary nature of the analyses carried out (p. 133, pp. 138-139). A comprehensive summary of the results of hypothesis testing is presented in a clear form (p. 136). Numerous practical recommendations have been formulated regarding the development of human capital and its importance for economic growth, which can be used by policy makers at the national and international level in the EU and non-EU Balkan countries. Potential directions for future research are also clearly identified (pp. 137-138, pp. 140-141).

IV. Assessment of the research methodology

The research methods and techniques used in the dissertation are considered to be appropriately selected and properly used, which demonstrates the good level of the Candidate's research competencies. This does not mean, however, that the evaluation of the methodology is completely free from some critical remarks. In the first three chapters of the thesis, Ms. Emirgena Nikolli, MSc presented the theoretical content using literature studies. This is mainly a traditional narrative literature review with the use of elements of critical analysis and the scoping review method, which consists of a kind of mapping of the literature on a given, usually extensive, topic, which enables the identification of main concepts, types of evidence, gaps in the study, etc. (Colquhoun et al., 2014). However, this is a method that is used rather in the initial stages of a study or when the research area is not yet specified (Ćwiklicki, 2020). Regarding the analysis of the concept of human capital, the doctoral thesis would undoubtedly be enriched by a systematic review of the subject, which is characterised by greater methodological rigour and the use of quantitative analysis of the literature.



The methodology of the empirical research carried out is extensively described in chapter four of the dissertation, entitled "Model and Data Analysis". Following the logic of quantitative research, it presents an interesting research model, which is a summary of deductive reasoning. Its weakness is the lack of labelling of hypotheses in the proposed model. The designation of the description of the measures used in the study (e.g. in relation to human capital) as their operationalization is somewhat questionable (subchapter 4.1: "Conceptual Model and the Operationalization of Model Variables"). However, it is important to emphasise the comprehensive nature of the study that covered as many as 33 countries, including 27 EU countries and six non-EU Balkan countries.

Appropriate methods of statistical data analysis, i.e. descriptive statistics, multiple regression analysis, and various statistical tests, were used to test the formulated hypotheses, indicating the adequate level of statistical knowledge of Ms. Emirgena Nikolli, MSc. The analysis was carried out in different groups of countries, and the results obtained provided the basis for interesting and unconventional comparisons. Based on the obtained results, correct and original conclusions were formulated, allowing the verification of the set research hypotheses and, as a result, the achievement of the goals of the dissertation. In conclusion, the dissertation presents a high value in terms of the research methods applied.

V. Evaluation of the structure and literature of the dissertation

The construction of the dissertation, i.e. its structure, the content of particular chapters, and their sequence, is correct. The methodological perspective adopted by Ms. Emirgena Nikolli, MSc, results in a classical structure of the dissertation (arrangement: theoretical part - empirical part). The presented dissertation is very compact in terms of its volume, as it encompasses 180 pages, of which 140 pages is the actual text (without bibliography, lists of tables and figures, and the appendix). The volume of the reviewed dissertation, which is slightly below the average volume typical of doctoral theses in the discipline of economics and finance, is justified and in this case shows rather the ability to select and synthesise the content, which is one of desirable researcher's competencies.

The dissertation encompasses the Polish abstract with keywords, table of contents, the English abstract with keywords, acknowledgements, and list of Ms. Emirgena Nikolli's publications, introduction, three theoretical chapters, methodological chapter, empirical chapter, conclusion, bibliography, lists of tables and



figures, appendix. In Chapter 1, entitled “Theories of Economic Development”, the basic theories of economic development are discussed. An overview of the key concepts of economic development and the empirical evidence supporting them is presented. In Chapter 2, entitled “Human Capital and Economic Development”, the relationship between human capital and economic development is discussed. The role of education, skills, and health in supporting economic growth is explained. To identify the existing knowledge gap, an analysis of existing theoretical and empirical research in this area is presented. Chapter 3, entitled “Balkan Countries” focusses on showing the specificities of the Balkan countries. The economic context of human capital development specific to these countries, the challenges and opportunities in the region are discussed. A comparison is made between the Balkan countries and the countries of the European Union. The next Chapter 4 entitled “Model and Data Analysis” is a description of the empirical research methodology adopted by Ms. Emirgena Nikolli, MSc. The chapter presents the conceptual research model for analysing the relationship between human capital and economic development and operationalises the variables of the model. The research sample is characterised, and the data analysis techniques used are discussed. Chapter 5, entitled “Results” presents the results of the conducted research. Descriptive statistics of the variables examined, the results of the nonparametric tests carried out, and, above all, the results of the regression analysis used to test the research hypotheses set in relation to the non-EU Balkan countries and the EU countries are presented. These results are discussed in the context of human capital theory and a general comparison of the impact of human capital on economic growth in the Balkan and EU countries is made and the conclusions drawn. The entire dissertation closes with a “Conclusion”, which synthesises the results of the research and testing of the hypotheses. On this basis, practical implications for managers and socioeconomic policy makers are formulated. Limitations of the completed research and directions for future research are also discussed.

The analysis of the dissertation allows me to conclude that its content corresponds to the topic specified in the title. The layout of the dissertation, the division of content between individual chapters is logical and coherent, subordinated to the achievement of the dissertation's goals, and the adopted research methodology. I also positively assess the demonstrated ability of Ms. Emirgena Nikolli, MSc, to use literature sources. More than 400 items of English-language literature were used in the thesis. Most of them are published in recognised publishers and journals, which are appropriately selected for the content of the



dissertation discussed. Many of them are the most recent literature. At the same time, it should be mentioned that the use of non-English sources would certainly have enriched the work. Analysis of the content of the dissertation, together with references to the cited source items, confirms sufficient literature knowledge on the subject of the study.

VI. Assessment of the formal and editorial side of the dissertation

Although it can generally be said that the thesis is written correctly, there are also some linguistic and stylistic errors. For example, in the Polish "Summary", Ms. Emirgena Nikolli, MSc, states that: „Niniejsza praca bada związek między kapitałem ludzkim a rozwojem gospodarczym w Europie (...)” (p. 2). I think that the dissertation should rather present the results of the research, and the dissertation itself does not examine the relationships, but only presents the results of the research carried out. Similarly, in the "Introduction" the candidate writes: "This chapter explores the relationship between human capital and economic development" (p. 17), instead of using the passive voice generally accepted in English scientific texts. Unfortunately, in the rest of the "Introduction", this way of describing the content of each chapter continues. Attention should also be paid to the lack of precision and vagueness of some wordings, e.g. "The findings reveal that less-developed regions, such as the Balkan region, benefit more from human capital and require investments in education to achieve long-term economic growth" (p. 6). Unfortunately, the text does not explain what "more" refers to. The thesis, moreover, contains self-assessing statements such as, e.g., „Badanie ma na celu dostarczenie cennych spostrzeżeń" (p. 2), „The study provides valuable insights" (p. 7) what should be avoided in a doctoral thesis (p. 7). There is a lack of consistency in the method of description adopted in some parts of the thesis, e.g. in the summary in Polish the author uses both singular and plural when referring to her research (p. 2). Although the dissertation has generally been written in accordance with accepted editorial standards, it is the editorial shortcomings that reduce its undoubted value. These include errors such as, for example:

- inconsistency in the way the text is formatted (e.g., different font types are used in the table of contents, pp. 4-5),
- missing dots after the numbers of the figures and tables before their titles (e.g., figures no. 1-12, pp. 66- 73, no. tables 1-28, while the title of figure no. 13 is preceded by a colon, p. 76),





- lack of spaces (e.g., „jak iw” instead of „jak i w”, p. 3),
- use of different font types in tables (some use Times New Roman font, e.g. tables no. 2-22, others use Calibri font, e.g. tables no. 22-27),
- different line widths in tables (e.g. tables no. 9-21, pp. 171-176),
- undefined source of data used in calculations below tables presenting research results (e.g., tables no. 2-16, p. 89, etc.),
- additional “blank” spaces in the bibliography (e.g., p. 160),
- unnecessary ISSN number of a journal in the bibliography (p. 160),
- lack of indentation in the first line of a new paragraph (the text would be more readable),
- mistaken repetition of the same words in a sentence (e.g., “Wyniki podkreślają potrzebę inwestowania przez decydentów w edukację, zdrowie i edukację”, p. 3),
- punctuation errors (e.g. missing dots at some points in the table of contents, p. 4, unnecessary commas after a name: “Rodrik, (2000)”, p. 24, brackets in the wrong places in notes in the text, p. 24, semicolons instead of commas, e.g., “Simon Johnson; James A Robinson; Acemoglu”, p. 24),
- use of the capital letter “Hab.” and no space in the promoter’s scientific title (i.e., “Dr.Hab” (title page),
- careless bibliographic description of some items in the Candidate’s list of publications: missing pages and spaces, etc. (e.g., “Nikolli, E. “Economic growth and Unemployment Rate. Case of Albania. (2014). European Journal of Social Sciences Education and Research Articles. European Center for Science Education and Research, vol. 1.”, “Nikolli,E. “Economic growth and Unemployment Rate. Case of Albania. (2014), European Journal of Social Sciences Education and Research Articles. European Center for Science Education and Research, vol. 1.”, p. 10),
- typos (e.g., “Associate Professor”, title page, “territory” education, p. 16),
- omission of the “Appendix” in the table of contents (p. 5),
- different size of spaces in some items in the bibliography (e.g., in a note “Agénor, P.-R., & Aizenman, J. (2004). Savings and the terms of trade under borrowing constraints. Journal of





international economics, 63(2), 321-340” on p. 142 a space of 1.5 is used, while other notes on the same page use a space of 1),

- no spaces before brackets in the notes under tables (e.g., “The study used gross domestic product(GDP).The study used three proxies to human capital development such as human capital(HC), government expenditure on education(GOV_EE) and life expectancy(LIFE_EXP)”, table no. 9, p. 112),
- different font size and spacing in the description under the tables (e.g., Table no. 9, p. 112, Table no. 10, p. 114, etc.),
- inconsistent use of the names of authors of cited items - for some authors cited, a first name and surname are given and for others only the surname is given (e.g., “Rodrik, (2000)”, “Simon Johnson; James A Robinson; Acemoglu”, p. 24).

In addition, the dissertation contains numerous errors in the bibliography, e.g.:

- incomplete bibliographic descriptions of some items (e.g., “Odior, E. S. O. (2011). Government expenditure on health, economic growth and long waves in A CGE micro-simulation analysis: the case of Nigeria”, p. 160),
- not all items are listed alphabetically (e.g., “Wang, Y., & Yao, Y. (2003)”, p. 167),
- failure to include items cited in the text of the dissertation in its bibliography (e.g., WDI & IMF, i.e. source cited under Figures no. 1-12, “Rodrik (2000)”, p. 24),
- no access date for description of Internet sources (e.g., p. 163),
- no place of publication for many of books in the bibliography (e.g., p. 142, p. 145, pp. 148-151, etc.),
- not specifying the publisher for some books (e.g., “Greene, W. H. (2002). The behaviour of the fixed effects estimator in nonlinear models”, p. 151, etc.),
- inconsistent use of italics for journal titles – mostly it is used but in some cases it is not (e.g., p. 142, p. 147, p. 151, etc.),
- some authors' names and article titles are all written in capital letters (e.g., “DENG, J.-R., & LONG, R.-R. (2017)”, p. 147, “Azimjanovich, R. N. (2022). FACTORS AND THEORIES OF ECONOMIC GROWTH. Galaxy International Interdisciplinary Research Journal, 10(9), 256-259”, p. 144),



- no name(s) of editor(s) of collective works (e.g., "Bartlett, W., & Uvalić, M. (2019). Higher education and the graduate labour market in the Western Balkans. In *Western Balkan Economies in Transition* (pp. 47-59). Springer", p. 142 – it is a monograph edited by R. Osbitt, W. Bartlett),
- titles of some journals in lower case (e.g. "The quarterly journal of economics", p. 143, "Industrial and corporate change", p. 142, "The quarterly journal of economics", p. 142, "Journal of international economics", p. 143),
- missing pages and/or number in the case of bibliographic description of some journal articles (e.g., "Abbas, A., Ekowati, D., Suhariadi, F., & Anwar, A. (2022). Human Capital Creation: A Collective Psychological, Social, Organizational and Religious Perspective. *Journal of Religion and Health*, 1-33", p. 142, "Abate, C. A. (2021). Ethiopian Higher Education and Economic Growth Nexus. *Ethiopian Journal of Science and Sustainable Development*, 8(2)", p. 142, "Akbar, M., & Ahsan, A. (2015). An empirical analysis of foreign direct investment in Pakistan. *Studies in Business and Economics*(10)", p. 143, "Benigno, P., Canofari, P., Di Bartolomeo, G., & Messori, M. (2022). The ECB's asset purchase programme: Theory, effects, and risks. *Journal of economic surveys*", p. 145, "Barwood, D. (2021). Supporting health literacy in adolescent populations: distinguishing pedagogies for sun safety education in schools. *Health Education*", p. 145, etc.),
- unclear and/or inaccurate bibliographic description (e.g., "Barro, R., & Sala-i-Martin, X. (2004). *Economic growth* second edition. In: Cambridge MA.: The MIT Press", p. 145, "Benos, N., & Karagiannis, S. (2009). Differential impact of education and health on growth: the Greek evidence. *Institutional and social dynamics of growth and distribution*", p. 145, "Carrington, S., Lassig, C., Maia-Pike, L., Mann, G., Mavropoulou, S., & Sagers, B. (2022). Societal, systemic, school and family drivers for and barriers to inclusive education. *Australian Journal of Education*, 00049441221125282", p. 146 instead of Carrington, S., Lassig, C., Maia-Pike, L., Mann, G., Mavropoulou, S., & Sagers, B. (2022). Societal, systemic, school and family drivers for and barriers to inclusive education. *Australian Journal of Education*, 66(3), 251-264. <https://doi.org/10.1177/00049441221125282>),
- no page address and/or DOI number for journals published online (e.g. "Bigerna, S., Micheli, S., & Polinori, P. (2021). New generation acceptability towards durability and repairability of products:



Circular economy in the era of the 4th industrial revolution. Technological Forecasting and Social Change, 165, 120558", p. 145).

VII. Conclusions

Despite some weaknesses, the reviewed doctoral dissertation is a valuable scientific study. The scientific problem addressed is important from a socioeconomic perspective, and it has been solved in an interesting way. The dissertation makes a creative and original contribution to the topic of the relationship between human capital and economic growth in the Balkan region and the countries of the European Union. The conducted study provided the basis for interesting and important conclusions, indicating Ms. Emirgena Nikolli's ability to solve scientific problems independently.

In conclusion, I find that the reviewed doctoral dissertation meets the requirements of Art. 187 of the Act of 20 July 2018 Law on Higher Education and Science (the "Dziennik Ustaw" journal of laws of 2022, item 574, as amended). Therefore, I request the Council of the Discipline of Economics and finance of the University of Gdańsk to accept it and allow it to be defended.

Izabela Marzec



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