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Albania: A Closer Look at Scientific Research Challenges

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Abstract: Scientific research is very important for the development of every country and, moreover, for the progress of a developing country with long delays in its development that also aspires to be a member of the European Union. The intensity of scientific research is a valuable indicator of how much knowledge a country generates and how to ensure the further distribution of this knowledge in society with the help of universities, organizations, and institutions. So, it is an undeniable fact that at times of crisis, especially in the ambit of globalization, science has regained many times the status of "the savior" of the globe. But what about Albania? What are the main challenges of scientific research in Albania? Is the researcher considering a valuable asset for moderating and transferring scientific outcomes in society? Are Albanian researchers' needs and difficulties considered? In this way, the purpose of the following paragraphs is not to summarize the history of science but to evoke the importance of this irreversible scientific journey of mankind, address the main challenges facing Albanian researchers, and question the future of science in Albania.

Keywords: developing country; Albanian scientific research; researchers' challenges; higher education institutions; National Strategy of Science; academic salaries; research and development statistics

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1. Introduction

In the history of science, there are great developments and discoveries that are public goods because they have provided humanity with indisputable benefits ranging from

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the discovery of penicillin to the discovery of the structure of DNA, the development of vaccines, or even the battles of Galileo and the early followers of the heliocentric system with the church, generating collective benefits (George, 2019). So, scientific knowledge comes from the contributions of many scientists around the world, and science is also based on prior knowledge. Therefore, radical paradigm shifts can occur, but scientists are usually expected to show how new results fit into existing models ("ScienceOrNot", 2012, para. 1). In fact, regarding the history of science, Aristotle is considered by many to be the first scientist, but the term dates back more than 2,000 years. He was the pioneer of logic, observation, investigation, and demonstration. These would shape western philosophical and scientific culture from the Middle Ages to the early modern period and influence several aspects of the natural sciences until the 18th century (Lo Presti, 2014, para. 1). Despite scientific terminology and complexity, Schafersman (1994, p. 1) highlights that science is not just a collection of facts, concepts, and practical theories about nature or even the methodical study of nature, despite the fact that these are two of the most prevalent definitions of science. Science is a way of learning about nature and investigating it that yields trustworthy information about it. In other words, science is a process for obtaining trustworthy knowledge about the natural world. Although there are various ways to discover and learn more about nature, only science can lead to the acquisition of accurate knowledge (as cited in Lipi, Lipi, & Leskaj, 2018, p. 939).

2. History of Science in Albania

In the latest challenge and critical period for all humanity, such as the COVID-19 pandemic, it has been agreed by all that science is the cure, which reaffirms once again that scientific findings and benefits know no boundaries. But at present, funds are considered an essential resource and obstacle for obtaining the right research group or co-authors, as well as for conducting good research in any scientific field with a valuable influence, contribution, and productivity for the benefit of all. Theoretically, in the era of globalization, scientists and scholars have no homeland. Their contribution is not limited by physical boundaries; thus, their study approach can and should be both global and local. Despite the fact that the globalization of science, scientific achievements, and democratization of knowledge make science a global public good in terms of non-exclusion and non-rivalry of scientific utility, science has a history and traces of origin, as well as its initiators and first contributors to the world of science, which undoubtedly refer to ancient scientific cultures.

However, regardless of the progress in science throughout the course of history, global progress in science seems to be at its peak today. Considering the history of science in Albania, the Albanian Academy of Sciences (AKAD, n.d.) explains that the Albanians have been contributing culturally and scientifically for centuries, not only in Albania but also beyond, specifically in the fields of humanism, art, and science. So, during the 15th and 17th centuries Dhimitër Frëngu, Gjon Buzuku, Marin Barleti, Pjetër Budi, Frang Bardhi, Pjetër Bogdani, et al. contributed mainly to the development of philosophy, history, literature, theology, and folklore. In this sense, Jan Kukuzeli, Onufri, David Selenicasi, Konstandin Shpataraku, Gjon Gazulli, Leonik Tomeu, and others contributed to the development of art and science during the 11th and 16th centuries (AKAD, n.d.). Despite this, according to AKAD, the main formal institution for scientific activities, named the Institute of Sciences, was established in 1946 and reorganized in 1948. It was organized into three main divisions, including linguistics and literature, history and sociology, and natural and biological sciences. Referring to these important dates in the history of science in Albania, in 1957 was founded the first university in Albania, named the University of Tirana, which also included the Institute of Sciences and was even responsible for the preparation of a national scientific staff (AKAD, n.d.). Moreover, AKAD informs us that many other specialized scientific institutions were established in many other fields in the late 1960s, and their studies were presented in many scientific journals and non-periodical summaries. Also, before 1972, there were approximately 25 Albanian scientific research institutions, concluding with the establishment of the Academy of Sciences of Albania on October 10, 1972, thus constituting the highest national scientific research institution (AKAD, n.d.). Although today most of the Albanian scientific research outlets are higher education institutions, the efforts of Albanian researchers are still underused, referring in particular to the role of research in economic development. Though many Albanian research studies are published periodically in all fields, especially in the field of economics, which is also one of the pillars of the country's development, they are simply published and are not included or implemented in Albanian national strategies. Reynaud (2005) asserts that a challenge faced by researchers in developing countries is that they are excluded from the information flow that is the foundation of modern science. These researchers are cut off from current research because their limited resources prevent them from subscribing to journals, buying books, or attending conferences. Therefore, the open access movement was sparked by the Internet and its possibilities for inexpensive knowledge and information distribution (p. 104). In this sense, even for Albanian researchers, access to high-

quality scientific journals, whether electronic or paper-based, is also limited, so they have to buy the scientific papers they need for their future research and studies by themselves.

3. Research Context and Data

This study focuses on scientific research statistics and evidence from Albania, presenting the main challenges facing scientific researchers. The data used in the analyses are secondary data and come mainly from governmental institutions reports and statistics, which are published annually. Then these data were processed to calculate the presented statistics, on which all the discussions are based.

Scientific Research and Development in Albania

In every periodic National Strategy of Science, Technology, and Innovation published by the Ministry of Education, Sports, and Youth, scientific research is considered a strategic priority for Albanian development. The development of scientific research, technology, and innovation is considered a horizontal policy because its implementation directly affects the development of the social, economic, and cultural sectors of the country. The national strategy of science, technology, and innovation 2017-2022 is consistent with national and international strategic documents on science, technology, and innovation and is also based on data gathered from the National Scientific Research Census on the country's current scientific research capacity (Ministry of Education, Sports and Youth, 2017, p.4).

Research and Development Statistics

After so many decades of studies in all forms, fields, and countries, there is a ranking of the efforts and contributions of each country in science. A standardized, valid, and reliable index to assess science intensity and progress, by which countries have the opportunity to compare and guide their research policies. According to this scientific international index ranking (see Table 1), Albania is ranked 119th in the list of countries according to their scientific contribution, referring here to the number of documents published during 2020 (SCImago, n.d.). That is nothing to be proud of.

Table 1. Top Ten Countries and Albania Ranking, by Scientific Published Documents in 2020

Rank	Country	Region	Documents
1	China	Asiatic Region	788287
2	United States	Northern America	766789
3	United Kingdom	Western Europe	249408
4	India	Asiatic Region	217771
5	Germany	Western Europe	216474
6	Italy	Western Europe	155135
7	Japan	Asiatic Region	147341
8	France	Western Europe	139661
9	Canada	Northern America	131684
10	Russian Federation	Eastern Europe	129270
119	Albania	Eastern Europe	688

Source: SCImago (n.d.)

Also, some data reveal that the number of scientific publications per million inhabitants in Albania in 2019, according to UNESCO (2021), was 127 versus an average of 490 publications in G20 countries. Furthermore, referring to Albanian patent activity, an estimated 5,833 patents were in force in Albania in 2020, representing a decrease of 3.06% on 2019 figures. In 2020, Albanians got granted only four patents abroad, but zero patents were filed and applied, and also zero patents were granted or issued by office to resident and non-resident applicants (WIPO, 2021).

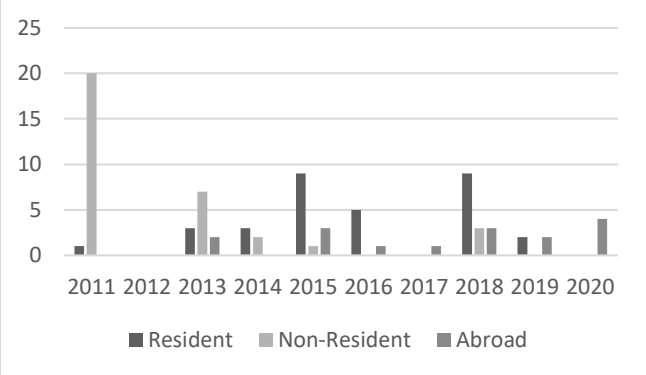

Figure 1. Number of Patent Grants in Albania
Source: WIPO, 2021.

In this sense, to reflect the extent of a country's scientific progress despite its number of articles, publications, and patents, other data and statistics must also be considered, such as the amount of the research and development budget or even the national expenditures. Research and development budgets are important data both at

the national and institutional levels. For example, the strategy, the expertise, the knowledge, and the competitive position of a university are definitely related to the budget it spends and allocates in these domains, regardless of the way it is financed: by the government, by its own funds, or by international collaborators. Also, despite the budget constraints at the national or organizational level in terms of research and development as well as technology and innovation, the quality of the allocation of these funds to the right projects is of great importance; therefore, the statistics and indicators about these budgets should be carefully observed. Another important fact and concern revealed in some institutional reviews of higher education institutions in Albania is that they have low research activity (ASCAL, n.d.).

Of particular importance for the future of Albanian scientific development are also issues such as:

- the scientific intensity of different subjects and fields of Albanian research;
- the impact of the current Albanian research and its contribution to economic development issues;
- The systematic organization of Albanian research: how does it link the university with business, society, or even other organizations?
- The practicability and usability of Albanian research results, and how are they related to the future of the country?

Research and Development Expenditure

Regarding the progress of science[1] in Albania, Monitor (2018) asserts that the exclusion of experts and the lack of sufficient funds for scientific research and innovation will have irreparable consequences for the country's sustainable development. Over the years, Albania has not explicitly aspired to an economic model that would at least bring its economy closer to the economic standards of other Eastern Bloc countries and toward professional thinking. Also, a series of government reforms since the 1990s have destroyed scientific research centers and related institutions that functioned before the 1990s, on which the communist economy was based (para.2). Moreover, Monitor (2018) argues that progress in science and scientific research seems to be the most difficult condition for integration in the European Union (EU) and that Albania must definitely align itself with the objectives of the EU for the chapter ‘Science and Scientific Research’. So, in a

[1] Despite the definitions and distinct peculiarities of the term’s science, scientific research, and research and development, these terms are often used interchangeably throughout this article.

snapshot, according to the World Bank (n.d.-a), the Albanian total debt service as a percent of gross national income (GNI) accounted for 7.7% in 2020, which seems to be a non-negligible statistic, and that means that the debt has its opportunity cost of financing scientific research at the national level. Also, according to the World Bank (n.d.-b), Albania's gross domestic product (GDP) per capita is estimated at $5,332.2 in 2020 and $6,494.4 in 2021, which doesn't look very promising for Albanian economic well-being. Additionally, it has been demonstrated that the proportion of EU research and development expenditure to GDP increased from 2.23% in 2019 to 2.32% in 2020. The EU spent €311 billion on research and development in 2020, and research and development expenditure as a proportion of GDP increased from 1.97% in 2010 to 2.32% in 2020 (Eurostat, 2022). Therefore, gross domestic expenditure on research and development (GERD) is considered a good indicator to analyze the research and development expenses as well as GERD as a percentage of GDP. Thus, referring to the importance of this indicator, an approximate indicator of it is presented through the ratio of government expenditures on science to gross domestic product (see Table 2). In contrast to GERD, the data about government expenditures on science were extracted and used from the state budget. However, it is an indicator that makes the comparison between countries more unequal compared with GERD as a percentage of GDP. So, to calculate GERD by using the data from the Albanian Institute of Statistics (INSTAT) tables considering the value of GDP according to 'professional, scientific, and technical activities' classified based on the Nomenclature of Economic Activities (NACE codes, Rev. 2), the data must be reclassified according to the Frascati Manual referring to the recommendations of this manual regarding the importance of activity classification and definitions for the consistency of statistical accordance and comparison. Also, despite the fact that updating the NACE codes has become a legal obligation for Albanian enterprises according to Law No.9920, date 19.05.2008 "On Tax Procedures in the Republic of Albania" (amended), there are still some problems because it is a self-reporting procedure, which means that many enterprises can make an approximate or wrong classification of their activities due to negligence or lack of knowledge. Another concern regarding GERD calculation is the classification of GDP according to the activities published by INSTAT, because activities of private or public units that are not totally scientific could have been reported as scientific activities. Considering the data regarding public expenditures for scientific research in recent years (see Table 2), it seems that during 2020, Albania spent almost 0.053% of GDP on scientific research, higher than the previous years compared to 2018 and 2019, but lower than 2021. However, it seems like a very small percentage compared to the

EU, but it should not be forgotten that these Albanian statistics refer only to the public expenditures part, while EU research and development expenditure relative to GDP refers to the gross domestic expenditures on research and development.

Table 2. Albania, Ratio of Government Expenditures on Science to Gross Domestic Product

Year	Percent
2018	0.029%
2019	0.043%
2020	0.053%
2021	0.045%

Source: "The Budget in Years" and "Economy in Focus", Ministry of Finance and Economy.

Then, referring to the data regarding public expenditure on scientific research as a percentage of the governmental budget in recent years (see Table 3), it seems that during 2020, Albania has spent almost 0.181% of the government budget on scientific research, higher than the previous years compared to 2018 and 2019, but lower than 2021 and 2022.

Table 3. Albania, Ratio of Government Expenditures on Science to Total Government Budget

Year	Percent
2018	0.097%
2019	0.146%
2020	0.181%
2021	0.126%
2022	0.139%

Source: "The Budget in Years", Ministry of Finance and Economy.

Regarding this approximate indicator, referring to the statistics as shown in Table 3, the calculation was made using government budget statistics specifically referring to the scientific research funds of the budget of the Ministry of Education and the Academy of Sciences. Despite what this indicator highlights, the comparison of Albania with other countries by using this indicator may be difficult because other countries may have allocated and administered public or governmental funds for scientific research differently, so obviously this indicator should be published by a reliable institution, for example, INSTAT. In addition, according to INSTAT data about gross domestic product, it seems that in the first six months of 2022, professional, scientific, technical, administrative, and support service activities will represent 5.54% of Albania's GDP (INSTAT, n.d.-a). However, one must be careful because these activities are aggregated not only by professional, scientific, and

technical activities but also by administrative and support service activities[1]. Thus, referring to the Nomenclature of Economic Activities (NACE Rev.2), in the "professional, scientific, and technical activities", are included "legal and accounting activities, activities of head offices; management consultancy activities; architectural and engineering activities; technical testing and analysis; scientific research and development; advertising and market research; other professional, scientific, and technical activities; and veterinary activities" (Eurostat, 2008, p. 81). Based also on INSTAT (n.d.-b) data, considering the annual percentage change of real growth rates in GDP components, it is shown that professional, scientific, technical, administrative, and support service activities decreased by 9.86% in 2020, but on the contrary, in 2021, referring to these activities, the annual percentage change of real growth rates increased by 3.92% compared to 2020 (see Table 4).

Table 4. Albania Real Growth Rate of GDP and its Scientific Component from 2018 to 2021

Year	Real growth rates of Professional, scientific and technical activities; administrative and support service activities as Components of GDP	Real Growth rates of GDP
2018	6.59	4.02
2019	6.13	2.09
2020*	-9.86	-3.48
2021**	3.92	8.52

Source: "Quarterly Gross Domestic Product by production approach Q2 - 2022", INSTAT (n.d.-b).

Migration, Brain Drain, and Academic Researcher Challenges in Albania

Migration is one of the most common phenomena that occurs in poor countries with social and political problems, often accompanied by brain drain, another massive phenomenon happening especially in recent years in Albania, which certainly requires attention and a well-suited policy considering its costs and consequences.

A Closer Look at Albanian Statistics

Referring to the dynamic of migration and human capital, the migration statistics reveal that Albania ranked 8th in terms of the emigration rate of high-skilled emigrants in 2015/2016. In these terms, Albania has a high-skilled or highly educated individual emigration rate of 38.1% (d'Aiglepierre et al., 2020), which

[1] M and N sections according NACE codes.

should be considered a significant emigration rate. In the same way, OECD statistics reveal that Albania is ranked 4th among "the top four countries with the largest increase in emigration rate of highly educated between 2000/01 and 2015/16", with an increase in the emigration rate of highly skilled people of approximately 15 percentage points (as cited in d'Aiglepierre et al., 2020, p. 26). In addition, referring to INSTAT (n.d.-c), it seems there was a considerable flow of Albanian immigrants from 2016 to 2019, which decreased in 2020, certainly influenced by the COVID-19 pandemic. In 2019 and 2020, the number of immigrants was 43,835 and 23,854, respectively (INSTAT, n.d.-c). In this sense considering some other domestic statistics referring academics and researchers, according to the Ministry of Education, Sports, and Youth (2021) "in the academic year 2018/19, full-time teaching staff in Albanian HEIs consisted of 4,844 pedagogues" (p. 58). Furthermore, the Ministry of Education, Sports, and Youth (2021) argues that the salaries of academic positions in higher education institutions (HEIs) do not encourage and motivate, while the teaching loads prevent the academics from finding time to do scientific research. Compared to European and regional HEIs, the level of scientific research at Albanian HEIs is lower, and it typically arises from individual initiatives taken by lecturers rather than institutional activities (p. 59). Considering the number of researchers in Albania, a big problem regarding this indicator is the vacuum and the lack of Albanian and international data and reports for science, research, and development. In addition, Albania faces a lack of classification, standardization, and statistics regarding the definition of a researcher. Thus, regardless of the many definitions about what the meaning of researcher is, a standard definition statistically comparable between countries is found in the Frascati Manual, OECD (2015):

Researchers are professionals engaged in the conception or creation of new knowledge. They conduct research and improve or develop concepts, theories, models, techniques instrumentation, software or operational methods. Master's students may in some cases be counted as researchers. This applies, in particular, to students following an ISCED level 7 research master's programs. Managers and administrators engaged in the planning and management of the scientific and technical aspects of a researcher's work are also classified as 'researchers'. For practical reasons, doctoral students engaged in R&D should be counted as 'researchers'. (p. 160, pp. 162-163)

Regarding the number of Albanian researchers referring to the data of the UNESCO Institute for Statistics (n.d.) about Science, Technology, and Innovation, it seems that

for Albania, the last standard data are from 2008, which revealed 467 Albanian researchers (full-time equivalent, or FTE) in total. At the same time, the number of researchers per million inhabitants (FTE) was 155.5, while the total Albanian population according to INSTAT (n.d.-d.) in 2008 was 2,958,266 inhabitants. Referring to these data, it seems that the national progress in this field is even more unmapped, considering even the lack of a national standard classification and definition of a researcher, as well as periodical statistical reports providing data and statistics regarding this issue. In this context, many countries, such as Italy, Switzerland, etc., periodically publish valid and qualitative official statistics regarding research and development, scientific research, or other themes that include science, research, and development. So, it is strongly recommended that the Albanian official statistical institution, such as INSTAT, do the same, regarding its role as a governmental statistical institute or a public research organization. In the past, INSTAT has organized only one survey on research and scientific development (INSTAT, n.d.–e), but there are no accessible publications of its findings, which seems to be because of the insufficient reliability and validity of the data reported by public and private entities. Also, the Ministry of Education, Sports, and Youth made another attempt through a national census of scientific research (Ministry of Education, Sports, and Youth, 2017). However, its findings about scientific research personnel are mainly relative since the results of this survey are expressed in percentages and the data has been collected through self-reporting. Moreover, this initiative has not been repeated either by INSTAT or any other national or international institution, making it even more difficult to compare Albania's progress over the years and scientific perspective with other countries. Regardless, the questionnaire of this census in terms of human capacities in the academic and scientific research domain has been completed by 3,209 academic staff of universities and other responsible institutions (Ministry of Education, Sports, and Youth, 2017). Thus, it has been reported that 73.9% of the academic staff that responded to the survey were employed at public universities, 23.9% in private universities, and 2.2% of them in agencies, ministries, or other institutions (Ministry of Education, Sports, and Youth, 2017), but there is no information if these members or academic staff are classified according to the Frascati Manual definitions of researcher. What are they considered: full-time equivalent (FTE), headcount (HC), master's students, or external research and development personnel? Referring also to some other open data (Ministry of Education, Sports, and Youth, 2019), during the period from 2018–2019, the teaching and research staff in public and private higher education institutions was 9,742, which was composed of 4,844 full-time staff and

4,898 part-time staff. Although these data are not collected and reported according to the Frascati Manual of researcher indicator FTE, they give an overview of the number of academic staff and an approximate number of HC. Therefore, it is necessary that public and private organizations, above all universities and other research institutions, compile and report statistics according to the Frascati Manual in order to create an effective network that meets the data collection standards, mostly for the UNESCO Science Report. Considering the academic career path in Albania according to Law No. 80/2015 "On Higher Education and Scientific Research in Higher Education Institutions in the Republic of Albania" and legal acts in force, the main Albanian academic positions are:

- professors;
- lecturers; and
- assistant lecturers.

In this sense, the average salaries at public universities for full-time academic positions depend on career advancements from the lecturer/researcher to the professor position and have varied for a long time between 607 euros and 1,000 euros per month[1] (Republic of Albania, Council of Ministers, Decision No. 268). As a result, in September 2022, an initiative of lecturers of public universities was taken, by which they claimed a protest mainly for salary increases (Gazeta Dita, 2022). This initiative was concluded by the government with a decision to increase the salaries of academic staff by 15%. But regardless of the government's response, public university lecturers seem dissatisfied and responded that this protest will continue by demanding a minimum salary increase of 50% not only for them but also for the academic support staff and the administration, as well as a funding increase on scientific research up to at least 0.3% of GDP, and also some other requests (Hashtag, 2022). So, the salaries have increased since October 1, 2022, as soon as the new Council of Ministers Decision (Republic of Albania, Council of Ministers, Decision No. 647) came into force, which increased the salaries of the academic positions by 7%–15%, imposing that the increase of 7% will be funded by the government and the other part by the HEIs income, and all public universities have reflected these increases immediately. Thus, according to the changes done lately, the salaries of academic positions, from the assistant lecturer to the professor position, actually vary

[1] Between 73,400 ALL and 121, 000 ALL, considering an exchange rate about 120.96.

minimally[1] between 649 and 1,071 euros per month and maximally between 698 and 1,151 euros per month, respectively. Also, it is well known that in Albania, there is no equality in the salaries of lecturers and researchers at public HEIs in comparison with private HEIs. While at public HEIs the salary is regulated according to the legislation, at private HEIs the employment contracts are negotiated individually based on the state minimum wage per month. The Albanian government has mandated for years a minimum monthly wage, and according to labor legislation, no one can be paid less than the minimum monthly wage. Although, until now, the private HEIs have not increased the salaries of academic staff because the latest government's decision for salary increases mandates only the public HEIs, furthermore, in December 2021, a data leak scandal referring to salaries and personal information leaks of Albanian citizens revealed that many lecturers and professors at private universities were paid the minimum wage per month (Gjediku). It can be argued that in Albania, this happens for some reasons:

- first, because of the informality;
- secondly, because of the power that employers in the private sector have, given that labor unions are not functional; and
- also because the minimum wage is the main regulation for private sector salaries, which is currently 40,000 ALL per month, or approximately 331 Euro per month (Republic of Albania, Council of Ministers, Decision No. 113).

In addition, the government of Albania, in November 2022, through a Council of Ministers Decision, legitimized opening the way for public and private universities to be able to transform into independent public higher education institutions (Republic of Albania, Council of Ministers Decision No.741). This government initiative apparently addresses to the universities not only the responsibility for quality education and scientific research but also for their own funding, probably in response to the requirements of the protest that started at the beginning of the academic year 2022-2023. However, the next few months will prove how these developments will increase the scientific research productivity or affect the mission of each HEI and how they will adapt in relation to their cost structure.

Main Issues for the Future of Albanian Scientific Research

[1] Between 78,500 ALL and 129,500 ALL minimally and between 84,400 and 139,200 ALL maximally, considering an exchange rate of about 120.96.

An important fact that really proves the status of the unfinished efforts of Albanian scientific research is the lack of presence of Albanian journals in the Scopus-indexed journals list (Scopus, 2023). Currently, there is only one journal indexed in Scopus in the field of English studies (Scopus, 2023), but none of the Albanian journals have a JCR impact factor in Journal Citation Reports (Clarivate, 2019). This increases even more the difficulties and challenges for Albanian researchers to publish in qualitative national journals, making their path for academic promotion even more difficult according to Albanian regulations and requirements. For example, referring to the Albanian academic advancement, considering the requirements for the promotion to associate professor, the academic staff must publish at least in two journals indexed in Scopus or JCR (Republic of Albania, Council of Ministers, Decision No. 112). So, Albanian academics are definitely looking to publish in journals indexed in Scopus and JCR, which seems like a paradox considering the national developments. Therefore, recently, the Ministry of Education and Sport has made some efforts through a regulation to standardize national scientific productivity and to create a national register of scientific journals published in the Republic of Albania (Republic of Albania, Ministry of Education and Sport, Order No. 36), which will increase the quality of Albanian scientific journals and their ambitions to be listed in cite score and impact factor indexed journals.

In this context, the most important questions about the future of scientific research that Albanian institutions and every policymaker have to answer are:

- Are there equal opportunities for all researchers to engage in scientific research?
- Are there reliable scientific practices, and in which disciplines?
- Is the talent and potential of scientific researchers being lost, underused, or misused?
- Do universities, governments, institutions, organizations, or businesses spend money to support science and researchers?
- Are sufficient funds allocated for research in the field of economics? Are more funds allocated for economic studies or for other fields as well, such as medicine, technology, etc.?
- Do researchers have needs? Is their dignity considered?
- Should researchers and academics do research using the money that they have to pay their monthly installment of their housing loan? Is this the researcher's reality elsewhere, in Italy, Switzerland, etc.?

- Are professors' salaries sufficient for organizing scientific research? Is science being neglected, and is that done on purpose?
- Are researchers motivated? Are they financially compensated?
- Will the research continue based on individual efforts, considering all the sacrifices made by the researcher?
- Do individuals and society have interest in and access to Albanian scientific knowledge and developments?
- What will be the future of Albanian scientific journals?

Challenges for Researchers in Albania

The following is a short bio and challenges of a woman in science in Albania:

Her name is:

- She is a keen observer, dedicated, smart, and talented.
- She is passionate about research, economic science, and interdisciplinary research.
- She has a Ph.D. and is well educated and capable of designing good research projects.
- She is skilled, creative, caring, sensitive, and able to work on many projects.
- She has shared all the years of her career between academia, consulting, vocational training, entrepreneurial education, and scientific research.
- She has always done multiple jobs at once because, despite her passion for science, she needs to work to survive. Considering also that in a developing country, it is difficult for her to get a full-time position in academia or earn a living wage, she has to work at several universities and initiatives that, despite exhausting her, don't leave enough time for scientific research advancement.
- But these are not sufficient; many more resources and conditions are needed to make progress and achieve her goals in science.

4. Conclusion

The most current example of the importance and contribution of scientific research has been the COVID-19 crisis, a global problem and phenomenon that no one has been excluded from. Even though the mitigation of its consequences is strongly related to the robustness of the economic structures and the quality of the health systems of any country, there would have been no cure for it if the policymakers had not involved both science and researchers to find a solution to these issues. In this sense, most of Albania's greatest challenges, such as economic, social, or even global ones, require immediately and absolutely an intense orientation toward science and research both at the local level and at the national level, not only for the country's development but also for the European integration that all claim. So, it is strongly recommended that the indicators of Albanian governmental expenditure on scientific research be published by a reliable institution. Therefore, it is recommended that INSTAT standardize the methodology of this indicators just like other countries and publish it every year. Similarly, this recommendation also applies to GERD as a percentage of GDP since it is a more complete indicator and, for this reason, must be published by INSTAT due to the importance of the methodology that must be used to be comparable between countries. For example, the last GERD as a percentage of GDP for Albania was published in 2008 (World Bank, n.d.-c). As a result, the lack of statistics about research and development, as well as their standards and comparable methodologies, should be considered a big obstacle to further analyzing their trends. Also, the scientific productivity of a country is certainly measured by the existence of high-profile national scientific journals, but unfortunately, it seems that Albania has no such presence. Therefore, it is definitely recommended that the Albanian government and the Ministry of Education and Sport consolidate as soon as possible their serious efforts for the inventory of the quality of national scientific journals. Another issue is that regardless of the periodic efforts of the Albanian government in formulating the education strategy and several publications about the issue of reform in higher education and scientific research, it seems that they are still lacking coherence and cohesion referring to periods of time and data collection, as well as to the research methodologies, study samples, and their findings and recommendations. Finally, this paper is intended to address and discuss the current problems of scientific research and development in Albania.

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