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Gutium Mircea Pavel,
Ph.D. Student,
State University of Moldova,
Republic of Moldova, Chisinau
E-mail: gutium.mircea@rambler.ru
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THE ROLE OF DIGITALIZATION, TOURISM AND HUMAN CAPITAL DEVELOPMENT IN THE ECONOMIC GROWTH OF THE REPUBLIC OF MOLDOVA

A B S T R A C T

The purpose of the research is to examine the impact of digitalization, tourism, and human capital on the economic growth of the Republic of Moldova. The study aims to explore the relationship between the country's economy and the level of digital development, which offers ample opportunity for investigation.

The methodology of the research - various analytical methods, including comparative analysis, expert evaluation, and statistical methods, were employed during the research process.

The results of the research is to highlight the need to identify the type and intensity of the connection between tourism and the economy and the link between tourism, human capital, and the country's economic power. The study also analyzes data from different countries to explore the impact of human capital on digitalization levels, tourism, and economic development.

The practical importance of the research - the research has practical significance as it examines the relationship between human capital, digitalization, tourism, and economic development in various countries, depending on the role of tourism in their economic structure.

The originality and scientific novelty of the research lies in its analysis of the connection between the level of human capital and the level of digitization in tourism and services. This research has verified the hypothesis that there is a correlation between the contribution of travel and tourism in GDP and Human Capital.

Keywords: tourism, digitalization, human capital, economy, Gross Domestic Product.

INTRODUCTION

The Republic of Moldova must be prepared for the next industrial revolution that will start according to the forecasts in 2030. That is why it is necessary to develop information technologies and harmonize them with the technologies of commercial partners. In addition, to obtain practical results from their use, it is required to implement them in different spheres of the national economy, such as tourism and service provision. Tourism represents a complex

AUDİT 2023, 3 (41), səh. 66-76.

AUDIT 2023, 3 (41), pp. 66-76.

АУДИТ 2023, 3 (41), стр. 66-76.

economic-social system that includes interconnected elements such as the tourist himself, the third parties who organize the travel, the relationships that appear during the travel process, and the tourist infrastructure. Tourism influences the country's economy because it creates added value, and tourism companies and companies that provide services and products to tourists pay taxes from the income.

The revenues positively affect the state's economy since they can be used for reinvestment in the company's activities, such as modernization. According to the World Tourism Organization, spending on tourism was USD 590.5 billion in 2021, which is still a low result compared to 2019, when spending reached USD 1466 billion [17].

The growth effect initiated by tourism is transmitted along the chain to other sectors of the economy. As there would be the positive effect on the sphere of investments, new jobs are created, the turnover is expanded, and as a result, the income sources of the majority of the population increase through wages, rental income, and profit from commercial activity.

The Part of the revenues, which also tend to increase, go to the budget through tax revenues and other mandatory contributions. In addition, the state treasury is supplemented by import customs duties. The financial resources collected in this way can be used again to finance the tourism sector by providing material assistance in organizing recreation infrastructure.

Literature analysis

Michael J. Clancy noted that the impact of global tourism on less developed economies has long been an area of interest for researchers and state governments [1]. S. T. Katircioglu explained that there is an essential question whether tourism determines economic growth or whether economic growth determines tourism development [3].

The influence of new digital systems on profitable processes is studied in the works of Kiel D., Arnold C, Muller J.M., and Kai-Ingo Voigt [5], where the authors specify the changes that had been introduced by the Industrial Revolution 4.0 in the process of creating and providing services and material goods. There is still space for research on the link between the level of the economy and the degree of development of the tourism industry in the country. Tourism is a fruitful source of jobs and financial resources, which has substantially affected the economies of countries that lack other sources of income in the state budget.

The Object, subject, and methods of research

The research object is the sphere of tourism and its interdependence with human capital and the country's economic development. The primary purpose of the research is to identify the presence or absence of the interdependence of tourism, human capital, and the economy. Scientific methods such as the deductive and inductive methods were used in this paper. The data was collected from UNWTO and STATISTA, and processed using EViews. Economic research was done to understand the financial bind between Human Capital, tourism, and economic growth. A study was conducted to understand the effects of Human Capital on tourism.

Interdependence between tourism and the economy

Every country tends towards a developed economy that can maintain a high standard and quality of life. A high level of tourism in the country provides additional resources to the state budget and local economic actors. Economic growth is not a spontaneous phenomenon

AUDIT 2023, 3 (41), səh. 66-76.

AUDIT 2023, 3 (41), pp. 66-76.

АУДИТ 2023, 3 (41), стр. 66-76.

that can start randomly, and it requires all possible measures to enhance the economic progress of a country.

In a developing country such as the Republic of Moldova, economic growth plays a significant role in the emergence and development of job opportunities, in increasing the level of education and gross domestic product (GDP) per capita, as well as in eradicating exclusion of social, and in many other fields. Job generation, foreign exchange, and community well-being are significant manifestations of the development of the tourism sector. However, these gains are often diminished due to the exogenous dominance of the tourism industry and regional inequalities [4]. Attracting foreign investment was one of the most popular policies of the least developed regions during the 1960s and 1970s.

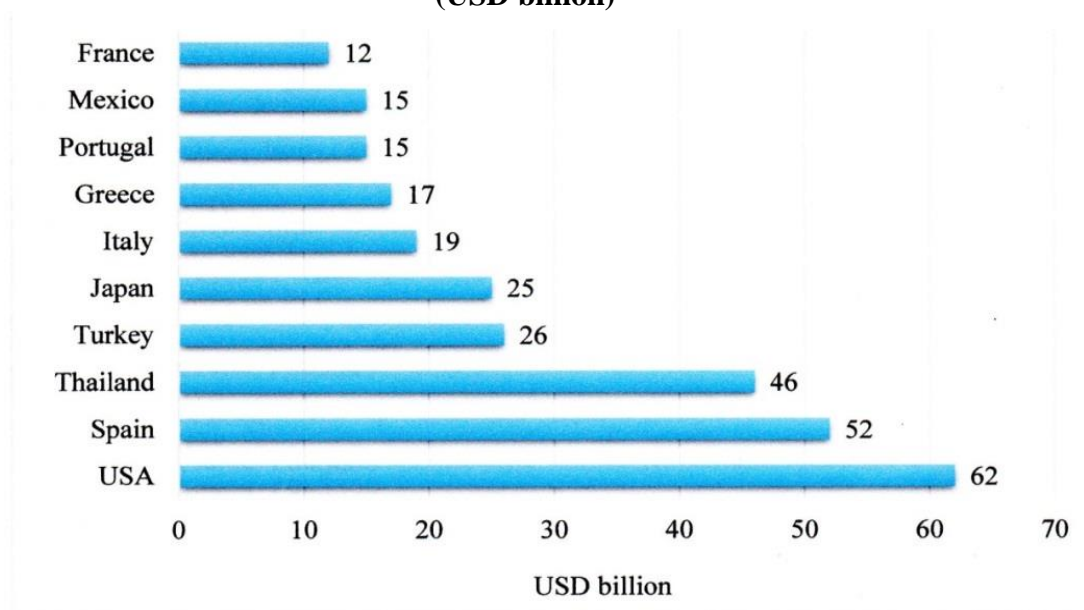
There was a popular theory that promoting the development of regional peripheries could be achieved through domestic investments in regional tourism. Even when developing countries prioritize local investment, mainly based on employment, the choice between local and external development may be available later [10].

Numerous studies have tried to show that tourism can stimulate regional development and produce regional imbalances [9]. Tourism is often limited to a few attractive regions that benefit significantly from all types of tourism investment and spending. In contrast, other areas need to be more addressed regarding domestic investment. In addition, tourism often results in weak cross-sectoral linkages (backward linkages), which show the inability of the tourism industry to play a leading or mobilizing role in regional development.

In the Republic of Moldova, the tourism sector has a significant potential due to the existence of space for the extensive development of the given sector. The Republic of Moldova has many natural and anthropogenic tourist objects. The most significant percentage of foreign tourists visiting the Republic of Moldova are from Romania due to the geographical proximity and the lack of linguistic and cultural barriers. According to Figure 1, The United States of America has the largest surplus in the trade balance, yet the US does not depend on tourism largely.

Figure 1.

Countries with the largest surplus in the travel balance in 2019
(USD billion)



AUDIT 2023, 3 (41), səh. 66-76.

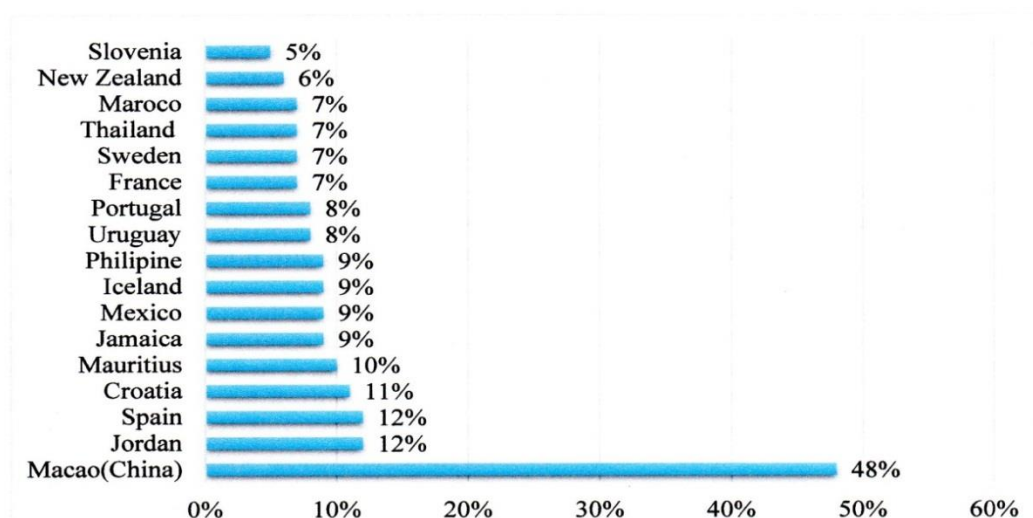
AUDIT 2023, 3 (41), pp. 66-76.

АУДИТ 2023, 3 (41), стр. 66-76.

According to Figure 2, the contribution of tourism revenues to the country's GDP is higher for countries that do not have large export capacities, especially for products with an increased benefit. Macao (a special administrative region of China) is in the first place, followed by Jordan, Spain, Croatia, and other countries. These regions are not necessarily the most popular in the world because France, a beautiful tourist center, is also an exporter of automobiles, airplanes, and pharmaceutical products.

Figure 2.

Contribution of travel and tourism in GDP, 2018



Source: World Tourism Organization (UNWTO) [17].

The effect of the pandemic on the sphere of tourism

The pandemic of 2020 accelerated the wave of the global economic crisis. The most significant damage had been done to the tourism sector and small and medium-sized enterprises in all countries of the world. Still, at the same time, it showed the enormous contribution of entrepreneurial activity in the tourism sphere on the GDP. The World Travel and Tourism Council produces reports on the impact of travel and tourism on world economies and employment for 185 countries and 25 geographic regions of the world. These reports, together with Oxford Economics, are a fruitful source of important data that provides evidence of the value that travel and tourism bring to the economy so that their policies and investment decisions support the given sector. Before the pandemic, travel and tourism accounted for 1 in 4 of new jobs created globally, 10.6% of all jobs.

Meanwhile, foreign visitor spending in 2019 was US\$1.7 trillion (6.8% of total exports, 27.4% of global service exports). The WTTC's latest annual research shows that the travel and tourism sector has suffered a loss of almost \$4.5 trillion and will reach \$4.7 trillion in 2020, with a major drop of 49.1% in its contribution to GDP compared to 2019, compared to a 3.7% decline in global GDP in 2020. In 2019, the travel and tourism sector's share of global GDP was 10.4%, which dropped to 5.5% in 2020 due to restrictions on mobility dictated by the pandemic. In 2020, 62 million jobs were lost, a drop of 18.5%, leaving just 272 million jobs in the global sector, compared to 334 million in 2019. Government co-financing schemes and reduced working hours supported many jobs. Many jobs could be lost without a full recovery

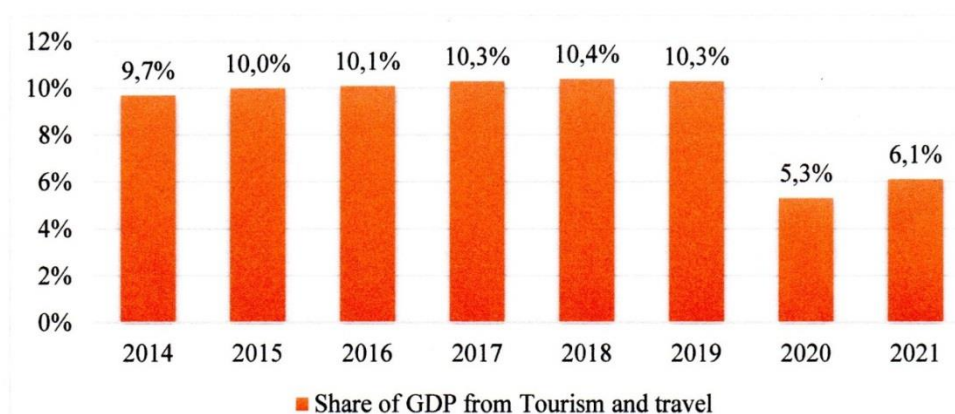
AUDIT 2023, 3 (41), səh. 66-76.
 AUDIT 2023, 3 (41), pp. 66-76.
 АУДИТ 2023, 3 (41), стр. 66-76.

in Travel and Tourism. Spending by domestic tourists fell by 45% while spending by foreign tourists fell by 69.4% [12].

According to Figure 3, in 2020, a minimum of tourism's contribution to GDP was recorded due to the pandemic situation and the restrictions on traveling long distances for the population and the quarantine on the national level in most countries.

Figure 3.

Share of GDP from Tourism and travel in the world, 2014-2021



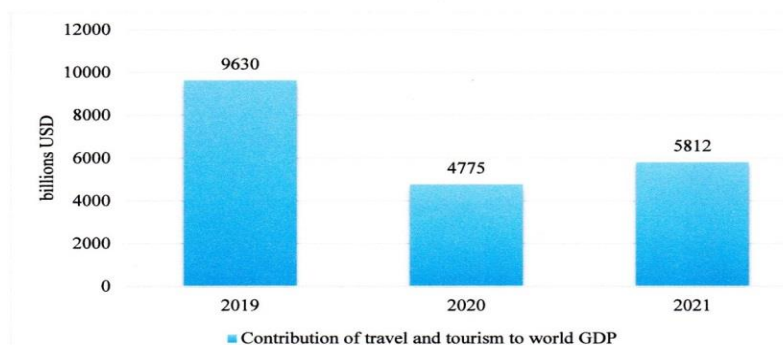
Source: [15]

Tourism is becoming one of the most profitable growth engines for the world economy. Global tourism receipts are a key source of foreign currency, especially euros and dollars, which offset trade balance deficits. In addition, because global tourism contributes to every sector of the economy, budget deficits can be reduced from tax revenues generated through travel and tourism-related activities.

According to Figure 4, in the pre-pandemic period of 2019, the contribution of tourism to the GDP of the countries of the world was 9630 billion US dollars. With the emergence of SARS-CoV-19 and the establishment of the emergency regime, the contribution of tourism to the GDP was substantially reduced to 4775 billion. US dollars in 2020, increasing to 5812 billion. US dollars in the year 2021.

Figure 4.

Contribution of travel and tourism to world GDP, billion USD



Source: [15]

AUDİT 2023, 3 (41), səh. 66-76.

AUDIT 2023, 3 (41), pp. 66-76.

АУДИТ 2023, 3 (41), стр. 66-76.

Human capital

Any country aspires to have an economy based on innovation and technology must first look at the quality of its human capital, which absorbs and produces technological advances. Improving this fundamental component of the economy has broad positive effects. Still, as the OECD notes, since the late 1990s, it has been recognized that high-income economies "are more heavily dependent on the production, distribution, and use of knowledge than ever before." [14] A wide diffusion of skills and knowledge in the economy is the starting point for modern economic competitiveness and is essential for achieving sustainable and inclusive growth.

This common-sense statement was proved by years of economic studies. A recent article found a "positive, statistically significant relationship between GDP per capita and the innovative capacity of human capital (as evidenced by the number of patents) and employee qualification (secondary education) as expected by economic theory." [6] An International Monetary Fund (IMF) study indicated that although the macroeconomic impact of patents is currently understudied, average growth rates correlate with patents, primarily through their impact on research and development. All of this points to the clear value of a well-developed human capital base.

The quality of education, rather than access to education, correlates more strongly with economic growth because the quality of education is a greater determinant of potential individual earnings. Access to education alone can be a misleading indicator. In Ghana and Kenya, for example, even university graduates have lower literacy levels than OECD residents who have completed a primary school. Translating access to quality education requires institutional changes, but adding technological resources can be a necessary impetus and driver of change.

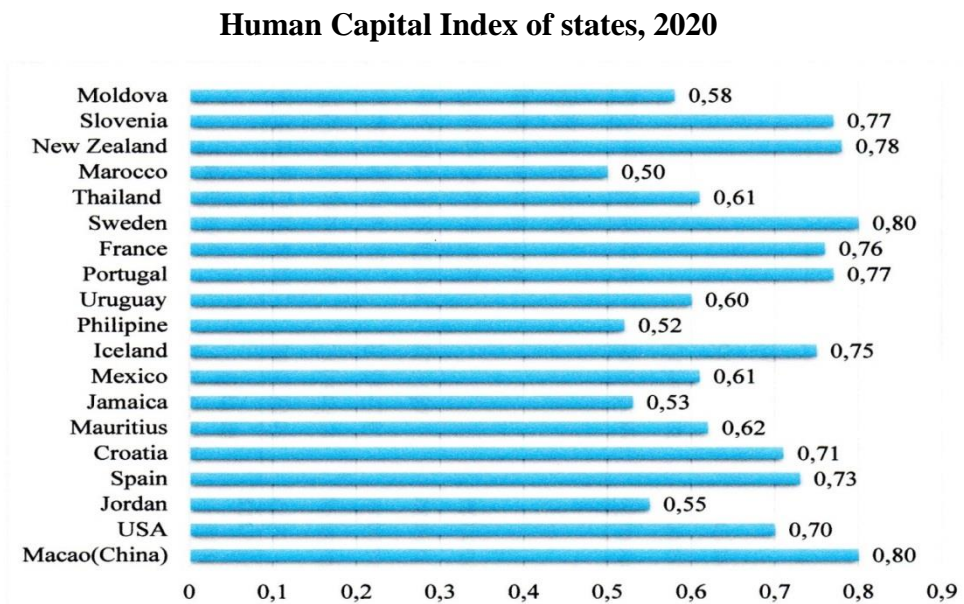
Human capital also influences tourism; considering that there is a large number of tourists who are willing to spend their money traveling, the municipalities of the tourist destinations, together with their tourism organizations, travel agencies, hotels, and other relevant bodies, decided to compete for a share of these total tourism expenditures. This is a vital funding source given the global economic downturn and strong competition in the real sector, which created more multinational companies and left little space for SMEs. Almost every company is exposed to international competition, even operating exclusively within its own region.

The future results and motivation of employees are determined by the extent to which their expectations are met in terms of the value of remuneration for the results obtained. If employees expect continuously improved service quality, it is necessary to determine the award for quality improvement in advance. Rewards can be financial or non-financial and based on individual or team achievements. Traditional compensation systems are based on material remuneration and the like. However, these practices do not constitute a solid platform for continuous quality improvement and innovation, because they are not based on team achievements. As the strongest motivating force, such systems do not encourage teamwork, which is so important for exchanging information and ideas and expanding knowledge.

According to Figure 5, The Human Capital Index is one of the highest in Macau (China), whose source of income is mainly tourism. The US also has a high human capital ratio, but tourism is not the main source of GDP growth, as this state has many other highly developed industries.

AUDIT 2023, 3 (41), səh. 66-76.
AUDIT 2023, 3 (41), pp. 66-76.
АУДИТ 2023, 3 (41), стр. 66-76.

Figure 5.



Source: [11]

The Granger test was applied to verify the hypothesis that there is a correlation between the contribution of travel and tourism in GDP and Human Capital and to detect the these causal link. The results obtained using the software EViews for the available statistical data series (2010-2021) are presented in Table 1.

Table 1.

Results of the Granger test for causation

Null hypothesis:	F-Statistic	Probability
Contribution of travel and tourism in GDP does not Granger Cause Human Capital	0.5674	0.6421
Human Capital does not Granger Cause Contribution of travel and tourism in GDP	0.6482	0.4923

Source: author's calculations.

The authors use lag = 2 for the Granger causality test and at a standard error of 5%. The test results showed no causal relationship between the contribution of travel and tourism in GDP and Human Capital.

Tourism in the Republic of Moldova

According to the International Tourism Highlights Report, tourism generates more than US\$5 billion daily. Therefore, total global tourism receipts, including passenger transport, were US\$1.7 trillion in 2018, with more than 1.4 billion international arrivals recorded worldwide [13]. Globally, approximately 20% of the jobs that have been created in the last five years have been directly related to tourism [16]. According to the discussion above on the significance of tourism in terms of economic growth, the primary purpose. The purpose of

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AUDIT 2023, 3 (41), pp. 66-76.

АУДИТ 2023, 3 (41), стр. 66-76.

this study is to examine the impact of tourism on the economic growth of the Republic of Moldova. The role of tourism in developed countries such as Australia, New Zealand, Japan, Singapore, France, and many other nations has been studied extensively. However, there needs to be more literature on the role of tourism in economic growth in developing countries such as the Republic of Moldova. In addition, this study also explores the effect of several noteworthy variables such as human capital, official development assistance, and investment in the region.

New technologies have irreversibly revolutionized the way management activity takes place. Classical management was based on managing industries, and the new management is now based on managing information and the IT sector. This trend has also revolutionized the service market, including the tourist market. At the current stage, information technology is a "synthesis of electronic, computational technologies in the field of telecommunications," which allows the effective processing and communication of data in time and space.

Tourism could be promoted in Moldova by using loyalty programs based on cryptographic loyalty tokens, booking systems with near zero percent fees, and a voting system based on blockchain to vote for the best hotel or tourist destination, using blockchain technology to make votes immutable, public, and transparent. The tourist destinations in Moldova undoubtedly have a lot of potential [7].

The formulation of effective policies for tourism development in the Republic of Moldova must have the development between government departments links in its structure. Where the Ministry of Economy and Infrastructure will establish the state policies for the development of the tourism industry, the Ministry of Finance will create fiscal opportunities through fiscal policy to stimulate the growth of this branch, the Ministry of Foreign Affairs and European Integration will contribute to attracting tourist flows by facilitating the visa regime [8],

As we see from Figure 5, investments in human capital represent an important interest in the development of national tourism because they represent the source for educating specialists in the field, who will be employed in the tourism sphere.

The service sector and digitalization influence

The level of digitization largely determines the quality of the services provided. The constant increase in labor productivity in various areas of service provision due to the introduction of new technologies and automation makes the sphere of services and tourism the major source of income. The development of the service sector is a universal process, which in the last two decades has been determined by a combination of the following key trends:

1. Changing social interactions;
2. New trends in service provision;
3. Development of the economy of shared consumption and the economy of cooperation.

The digital transformation of the economy is defined as a socio-economic transformation initiated by the mass adoption and assimilation of digital technologies that tend to change how information is transmitted.

AUDIT 2023, 3 (41), səh. 66-76.

AUDIT 2023, 3 (41), pp. 66-76.

АУДИТ 2023, 3 (41), стр. 66-76.

Despite the relative maturity of digital technologies and remote communications, the number of their users and the use volumes continue to grow. The number of users of remote communication technologies worldwide increased by 8.6% from April 2018 to April 2019, or more than 350 million people. The largest growth in internet users in 2018 was provided by such countries as India and China (44 and 29 million, respectively). The number of mobile internet connections (excluding IoT connections) is, as of April 2019, 7.787 billion or an average of 1.52 connections per unique internet user. According to the Ericsson Mobility Report in June 2019, the number of Internet connections is 8.6 billion. It shows that the volume of mobile Internet traffic increased by an average of 4 billion gigabytes per quarter.

The transformation of the digital economy is combined with several socio-economic changes, such as globalization, changes in market regulation, price pressure, and market volatility [2]. The digitization of the economy has led to the formation of a digital type of service provision and a digital type of consumption.

CONCLUSIONS

Therefore, in conclusion, the tourism sector and the digitalization of the services sector in the Republic of Moldova can significantly contribute to long-term economic growth. Therefore, the Republic of Moldova should focus on establishing tourist infrastructure, facilities sites, etc., which can enrich tourists' choice of destinations in the Republic of Moldova. Strengthening the tourist environment will increase the interest of investors in the tourism industry in the Republic of Moldova. Thus, a clear vision is needed for comprising prudent and effective policies to encourage the development of the tourism sector and, therefore, the country's economic growth. The Republic of Moldova is empowered with major opportunities that can attract international tourists.

Promoting the tourism sector will bring multidimensional benefits to society. Investment in the tourism sector would help in infrastructure development as it would lead to the construction of airports, highways, and other transport networks, the establishment of retail markets, the construction of hotels and restaurants, and the provision of other services relevant to the travel and tourism sector. Consequently, there would be more employment opportunities for natives and revenue from tourist arrivals that could be spent on providing health, education, housing, and other basic amenities. Therefore, there would be a direct impact on the standard of living and socio-economic status of the residents of the region/nation where tourism-related investments are injected. Similarly, international tourists would not only play their role in accelerating the host country's economic growth but also create a positive word of mouth to raise the country's image and enhance its reputation as a global tourism destination. Therefore, Human Capital does not directly affect the share of tourism in GDP, it may accelerate the economy by its impact upon other sectors of the economy.

AUDİT 2023, 3 (41), səh. 66-76.

AUDIT 2023, 3 (41), pp. 66-76.

АУДИТ 2023, 3 (41), стр. 66-76.

References:

1. Clancy, M.J. Tourism and development: evidence from Mexico. *Annals of Tourism Research*. 1999. 26, 1-20.
2. Gutium, M. The new step in digitalization of economy. *The Journal Contemporary Economy*, 2023, 8(2), 6-11.
3. Katircioglu, S.T. The tourism - led growth hypothesis: the case of Malta. *Acta Oeconomica*, 2009, 59(3), 331-343.
4. Khan, M.M. Tourism development and dependency theory: Mass tourism vs. ecotourism. *Annals of Tourism Research*, 1997, 24(4), 988-991.
5. Kiel, D., Arnold, C, Muller, J.M., Voigt, Kai-Ingo. Sustainable Industrial Value Creation: Benefits and Challenges of Industry 4.0. *International Journal of Innovation Management*, 2017, 21(08), 1740015.
6. Pelinescu, E. The Impact of Human Capital on Economic Growth. *Procedia Economics and Finance*, 2015, 22, 184-190.
7. Pilkington, M. *Tourism for Development in the Republic of Moldova: Empowering Individuals and Extending the Reach of Globalization*. IGI Global, 2017.
8. Platon. N. *Strategii Durabile cle Management in Dezvoltarea Turismului Intern si Receptor din Republica Moldova*. Chisinau, 2019.
9. Qian. W. Tourism in developing countries. *Asia Pacific Journal of Tourism Research*, 1999. 3(2). 64-69.
10. Wanhill, S. Small and medium tourism enterprises. *Annals of Tourism Research*, 2000, 27(1), 132-147.
11. <https://databank.worldbank.org/source/human-capital-index>
12. <https://wttc.org/research/economic-impact>
13. <https://www.e-unwto.org/doi/pdf/10.18111/9789284421152>
14. [https://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=OCDE/GD %2896%29102&doclanguage=En](https://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=OCDE/GD%2896%29102&doclanguage=En)
15. <https://vwww.statista.com/statistics/>
16. <https://vww'w.tourism-review.com/tourism-industry-is-the-pillar-of-economy-news1210>
17. <https://vwww.unwto.org/tourism-data/global-and-regional-tourism-performance>

AUDİT 2023, 3 (41), səh. 66-76.

AUDIT 2023, 3 (41), pp. 66-76.

АУДИТ 2023, 3 (41), стр. 66-76.

Гутюм Мирна Павлович,

докторант,

Молдавский Государственный Университет,

Республика Молдова, Кишинев

E-mail: gutium.mircea@rambler.ru

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РОЛЬ ЦИФРОВИЗАЦИИ, ТУРИЗМА И РАЗВИТИЯ ЧЕЛОВЕЧЕСКОГО КАПИТАЛА В ЭКОНОМИЧЕСКОМ РОСТЕ РЕСПУБЛИКИ МОЛДОВА

Р Е З Ю М Е

Цель исследования - изучить влияние цифровизации, туризма и человеческого капитала на экономический рост Республики Молдова. Исследование направлено на изучение взаимосвязи между экономикой страны и уровнем цифрового развития.

Методология исследования - в процессе исследования использовались различные аналитические методы, включая сравнительный анализ, экспертную оценку и статистические методы.

Результаты исследования подчеркивают необходимость выявления типа и интенсивности связи между туризмом и экономикой, а также связь между туризмом, человеческим капиталом и экономической мощью страны. В исследовании также анализируются данные из разных стран, чтобы изучить влияние человеческого капитала на уровень цифровизации, туризма и экономического развития.

Практическая значимость исследования - исследование имеет практическую значимость, поскольку рассматривает взаимосвязь между человеческим капиталом, цифровизацией, туризмом и экономическим развитием в различных странах в зависимости от роли туризма в их экономической структуре.

Оригинальность и научная новизна исследования заключаются в анализе связи между уровнем человеческого капитала и уровнем цифровизации в сфере туризма. В этом исследовании была проверена гипотеза о корреляция между долей туризма в ВВП и человеческим капиталом.

Ключевые слова: туризм, цифровизация, человеческий капитал, экономика, Валовой Внутренний Продукт.

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