

DEVELOPMENT OF HUMAN CAPITAL AND THE ECONOMY IN AZERBAIJAN IN THE CONTEXT OF RUSSIAN INVASION OF UKRAINE

Huseyngulu S. Baghirov

Western Caspian University (WCU), Azerbaijan

Yusif A. Humbatov

Azerbaijan University of Technology (UTECA), Azerbaijan

Samira Abdullayeva

Azerbaijan State University of Economics (UNEC), Azerbaijan

Musluma M. Aslanova

Azerbaijan State University of Economics (UNEC), Azerbaijan

Sevda Seyidova

Institute of Economics of Azerbaijan National Academy of Sciences, Azerbaijan

ABSTRACT

This paper aimed to empirically substantiate strategies for developing human capital (HC) and the economy in Azerbaijan during the Russian-Ukrainian war. Using an expert assessments method, key indicators reflecting the development trends of the national economy and human capital are substantiated. Based on the construction of regression models and the elasticity index, the nature and consequences of the RUMC on the national economy and the HC of Azerbaijan have been analyzed. By hierarchical classification, we have determined the effective economic development strategies and HC in Azerbaijan during and after Russian invasion of Ukraine: increasing economic diversification, reducing part of the oil and gas sector in GDP, the development of the agro-industrial complex, the geographical diversification of imports and exports, and the strategy for IT development, providing comfortable conditions and tax preferences for IT businesses, legislative settlement of issues investment and activities of venture funds to attract IT-specialists for different countries.

Keywords: Azerbaijan, economy, human capital, Russian invasion of Ukraine, development strategy

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INTRODUCTION

The military conflict between Russia and Ukraine has become a transformational moment in developing global security, established

economic and political development views, and world energy architecture (Musavi, 2022). In the context of globalization, it is impossible to analyze the consequences of the war on the socio-economic development within a specific

regional level or the geographical boundaries of a particular country. A new type of hybrid war generated by the conflict between the countries subsequently brings many economic obstacles to effective cooperation in the world, a humanitarian crisis, and tensions in the geopolitics of energy conservation accompanied by threats of nuclear war. Azerbaijan is no exception. Even though the 1st quarter 2022, the Azerbaijani economy showed a significant growth trend: GDP grew by 6.8%, the non-oil sector showed an increase of 10.3%, and the non-oil industry - grew by 18.1% (The State Statistical Committee of the Republic of Azerbaijan, 2022), the country is experiencing difficulties balancing the need to maintain economic ties with Russia and humanitarian assistance to Ukraine (which corresponds to an independent and balanced political course of the country). Nevertheless, failures in the supply chain of goods and services and a significant increase in prices for raw materials on the world market, the tightening of financial sanctions against Russia had adverse side effects on the economy in Azerbaijan as a close economic partner of Ukraine and Russia (Musavi, 2022).

More than 50% of foreign transfers into the country are from Russia, and due to the blocking of the SWIFT system, most of the money flow into the country was interrupted. In addition, with a significant weakening of the Russian economy, there is an increased demand for the US currency in Russia, which provoked a sharp outflow of cash from Azerbaijan (Musavi, 2022). Ukraine is also one of Azerbaijan's most crucial strategic partners in cross-border trade in agricultural products. The destroyed infrastructure in Ukraine and the need to repel military attacks from the Russian side disrupted food supplies globally, which caused an increase in food prices in Azerbaijan (The State Statistical Committee of the Republic of Azerbaijan, 2022). And the ban on the import of Russian oil further aggravated the market tension and strengthened the resource orientation of the national economy in Azerbaijan. Against the background of unstable oil supplies, OPEC countries increased oil production to 432,000 barrels per day, and China's coronavirus lockdowns threatened the outlook for oil demand (El Dahan, Ghaddar & Lawler, 2022). According to IMF forecasts, the current conditions provoke the risk of high inflation in developing countries, up to 8.7% in 2022 (Kutlu, 2022).

Instability in the conditions of the Russian-Ukrainian conflict requires Azerbaijan to provide a solid foundation for the sustainable development of HC. Under the current conditions, human resources are a necessary ingredient for the country's economic well-being and a key element in countering the long-term consequences of a war conflict.

LITERATURE REVIEW

The fundamental importance of HC during information economy development, achieving Sustainable Development Goals developed by the UN General Assembly, and the decarbonization of socio-economic development has been widely reflected in the works of economists over the 20th and 21st centuries. Most scientists and economists agree that developed HC is necessary for the country's economic well-being (Ismayilzade et al., 2021; Eppelsheimer, Jahn & Rust, 2022; Absalyamova et al., 2015; Managi, Jimichi & Saka, 2021; Gulaliyev et al., 2019). Such research in the scientific community is considered promising and relevant to the research topic "human capital." Scientific results empirically confirm a significant relationship between economic growth, innovation, and the quality of human capital (HC). HC carriers of valuable intangible assets that underlie job creation, asset management, production organization, and innovation processes in various branches of the economy (Tarasenko, Korolko & Belyavska, 2009).

Modern scientific researchers studying the impact of crisis manifestations in the economy on HC deserve special attention. Crisis manifestations in economic development caused by a decline in production in the country, as a rule, provoke significant losses in HC. With a long-term decline in production transforming into stagnation, there is a cumulative accumulation of damage and an even greater loss of HC, which require significant financial, innovative investments and a lot of time to compensate (Absalyamova et al., 2015).

In the current conditions spreading the COVID-19 pandemic, many scientific papers showed the results of the impact of its consequences (forced social distancing, high mortality, morbidity, etc.) on the development of global, regional, local economies, and HC (Megits, Neskorođieva & Schuster, 2020; Vasiljeva et al., 2020; Sahiti et al.,

2022; Ismayilzade et al., 2021). One of the most pronounced consequences of the economic crisis on HC is a significant shortage of labor resources and a decrease in labor productivity due to poor health, loss of education, exacerbation of gender-based violence and social inequality in society, depletion of human skills, degradation of the potential for mastering professional skills, increasing the risk of cognitive disorders, physical disabilities, and poverty, increasing vulnerability to various kinds of shocks, etc. (Vasiljeva et al., 2020; Megits, Neskorođieva & Schuster, 2020; Ismayilzade et al., 2021). As a rule, any economic crisis bears a degree of severity of the indicated system of consequences for human capital, depending on the current climate and technological transformations, global demographic changes, and political tensions.

Scientists have long come to the general conclusion that the most effective strategy for eliminating the destructive impact of the crisis on HC in an economic crisis is investing:

- in the quality of education (it is assumed that already at universities, students should be prepared for the ability to conduct the competencies associated with their future profession);
- to the healthcare system;
- structural reforms that ensure the sustainability of long-term productivity growth prospects (Absalyamova et al., 2015).

In the context of the recent economic crisis caused by the COVID-19 pandemic, the extreme importance of such a factor in restoring HC as a healthy lifestyle has been determined. It is not enough to be fed or survive in modern conditions of the informatization of the economy and artificial intelligence. You must be active, energetic, healthy, stress-resistant, and ready to learn all your life, mastering increasingly complex skills and changing against rapid technological development (Ismayilzade et al., 2021).

Earlier work has considered HC development strategies as a rule influenced by the classical causes of the economic crisis. Our study is aimed at consideration in the context of a military conflict, when the nature of the consequences of an economic crisis is almost the same as, for example, in the case of a pandemic. But there are

conditions for the course of the crisis that are significantly different from those considered earlier: an increase in political confrontation, a high level of emigration from the war zone, and the speed and ability of people to adapt to labor markets, mentality and linguistic environment in another country, increase sanctions against Russia and energy, food crisis, the elimination of many trade supply chains, etc. (Musavi, 2022; Deutsche Welle, 2022). Because other factors of economic destruction prevail in the conditions of a war conflict, the strategy for developing and maintaining the potential of HC is characterized by a significant level of uncertainty. This topic is entirely new and undeveloped. The reasons are that this military conflict takes place between two large European countries for only three months. Also, they are strategic partners with many countries of the world to ensure global energy and food security. Each country is different and feels the effects on the economy to varying degrees. Therefore, this study aimed to assess the impact of the Russian invasion of Ukraine on the economy of Azerbaijan and substantiate the critical factors in the development of the HR under challenging conditions of political tension and the threat of nuclear war.

METHODOLOGY

This study, according to the methodology for calculation of the Human Development Index, assumed an assessment of the development of HC in Azerbaijan in three components: 1) health, life expectancy, and population; 2) knowledge; 3) life standard (Human Development Index, 2022). Estimated changes in economic development through GDP per capita.

We assessed the impact of the war conflict on economic development and HC in Azerbaijan using the method of linear and non-linear regression analysis in the program STATISTICA 12.0. For dependent variables, we used annual values of GDP per capita, US dollars at constant prices in 2015 (GDP), and the Human Development Index (*HD*) (Human Development Index, 2022; The World Bank Group, 2022). As independent variables, we used indicators of the availability of HC, the health of the population, the level of education, and economic development in Azerbaijan, which was most affected by the war in Ukraine (Table 1) (The World Bank Group, 2022; The State Statistical

Committee of the Republic of Azerbaijan, 2022).

Table 1: Indicators of the economic development and the HC in Azerbaijan for 1998-2021

Indicators	Sign
Brent oil price, USD/barrel	<i>Pr.o</i>
Gas price, USD / MMBtu	<i>Pr.g</i>
Russia's GDP per capita (constant 2015 US\$)	<i>GDP.R</i>
Ukraine's GDP per capita (constant 2015 US\$)	<i>GDP.U</i>
Imports of goods and services from Russia (current US\$)	<i>Imp.R</i>
Imports of goods and services from Ukraine (current US\$)	<i>Imp.U</i>
Agricultural Producer Price Index	<i>Pr.a</i>
Azerbaijan's tourism industry profit has gotten from Russia (current US\$)	<i>Tour.R</i>
Azerbaijan's tourism industry profit has gotten from Ukraine (current US\$)	<i>Tour.U</i>
Number of IT specialists in the country, thousand people	<i>IT.sp</i>
Number of immigrants in Azerbaijan, thousand people	<i>Im</i>
Number of emigrants from Azerbaijan, thousand people	<i>Em</i>
Number of Azerbaijani students studying in Ukraine, thousand people	<i>Stud</i>

Source: Authors' finding

Due to different units of measurement and dimensions of indicators, we used standardized values for modeling (Wiebe et al., 2006):

$$X_{st} = \frac{X_i - X_{min}}{X_{max} - X_{min}}, \quad (1)$$

where X_{st} – standardized indicator value;

X_i – the actual value for the i -th period;

X_{min} , X_{max} – the minimum and maximum value of the indicator for 1998-202, respectively

The modeling time range (1998-2021) does not include 2022 due to the lack of official data on monthly/quarterly values of variables for this year. We confirmed the adequacy of the constructed regression models and the statistical significance of the variables by F-statistic, t-statistic, and Durbin-Watson statistic.

We used independent variables without a time lag and a lag of 1-5 years to assess the change in economic development and human capital in Azerbaijan in the short and long term in the context of the war. The use of linear and non-linear models became possible due to the standard type of data distribution.

Correlation coefficients were calculated between independent variables to avoid duplication of the influence of factors on economic development and the development of human capital. We assessed the statistical significance of the correlation coefficients by calculating the empirical value of the t-statistic

and its confidence interval.

Based on regression models, built a matrix of strategies for economic development and the development of the HC in Azerbaijan during the war and the post-war period. As criteria for identifying strategies, the values of indicators standardized according to formula (1) were used:

1) Time lag (*Lag*) of the response of dependent variables of regression models to changes in independent ones;

2) Elasticity of change (*Elast*) of GDP per capita and human development index in Azerbaijan relative to 2021 under independent variables of regression models.

The hierarchical clustering method in the STATISTICA 12.0 program was used to determine the quantitative boundaries of the strategy's classification criteria. Clustering objects are indicators (Table 1), and variables for clustering are *Lag* and *Elast* values. F-statistic and p-value were used to evaluate the statistical significance of cluster analysis results.

RESULTS

The impact of the Russian invasion of Ukraine on the economic development and HC in Azerbaijan

Even though the 2022 war is directly between two countries: Ukraine and Russia, it had a significant impact on other countries. This influence lies in the manifestation of the actions

of sanctions against Russia on other countries, in a possible food crisis in the world, in external migration, and in an all-encompassing crisis in Ukraine.

Among the sanctions imposed against Russia, the most significant for it and several other countries are sanctions on the oil and gas industry and, as one of the consequences, an increase in energy prices. Since the beginning of the war in Ukraine (from February 24, 2022, to May 21, 2022), Brent oil prices have increased by 1.2 times compared to the pre-war period in 2022, and gas - by 1.8 times (Trading Economics, 2022). The strengthening of Western sanctions against Russia, which relate to restrictions on the consumption of Russian energy carriers and the upward dynamics of oil and gas prices, created the prerequisites for the economic development of oil and gas-oriented countries, one of which is Azerbaijan. Azerbaijan is a country with a GDP of which the share of the oil and gas sector in GDP is about 40% (The State Statistical Committee of the Republic of Azerbaijan, 2022). But these development opportunities, according to experts, are not significant and long-term due to the limited technical capabilities of Azerbaijan, which do not allow a substantial increase in energy exports (Musavi, 2022). In addition, rising prices for natural resources do not always positively affect the economic development of the exporting country, which has been confirmed by research (Pellegrini, Tasciotti & Spartaco, 2021).

The second direction of the sanctions' impact on the economic development and HC in Azerbaijan is decreasing the solvency of Russians. According to European Union forecasts, Russia's GDP in 2022 will reduce by 7-15% (Borrell, 2022). The main share of non-oil export of Azerbaijan is directed to Russia (28% in 2021) (The State Statistical Committee of the Republic of Azerbaijan, 2022). The decreasing solvency of Ukrainians and Russians, combined with administrative restrictions, would decrease Azerbaijan's export earnings and living standards as a sub-indicator of HC development. According to the IMF forecasts, the World Bank's GDP in Ukraine by the end of 2022 will decrease by 35-45% (Financial Club, 2022).

A decrease in imports from Russia and Ukraine is also predicted due to the decline in the GDP of these countries, a reorientation of the economy towards the defense complex and domestic

consumption, and sanctions. For Ukraine, the decline in exports is also the destruction of enterprises, and farms, the reduction of suitable agricultural land due to the destruction of animals, and the blocking of ports through which carried out exports (Lister & Fylyppov, 2022). Suppose for industrial products, a possible way to solve the problem for Azerbaijan is to change the geographical structure of the trade. In that case, the agricultural sector creates more significant threats to the HC in Azerbaijan. As a result of the war conflict, world prices for farm products in March 2022 increased by 15.1% compared to the previous month and by 34.7% compared to the same month of the last year, which is a record increase since 1961 (Statistisches Bundesamt, 2022). Rising prices lead to a decrease in the standard of living and a deterioration in the population's health due to reduced financial opportunities to buy food.

In connection with the war in Ukraine, there is a threat of famine in the world, which will adversely affect the development of the HC. But this applies primarily to Afghanistan, Somalia, South Sudan, and Yemen (Deutsche Welle, 2022). For Azerbaijan, threats in the food sector are associated with rising prices for agricultural products.

Azerbaijan's tourism sector also suffered from the war conflict. A possible way to level the negative consequences is to attract Arab tourists who travel to Ukraine (Musavi, 2022). It facilitated a sharp decrease in the number of cases of COVID-19 infection in Azerbaijan and the world since March 2022, an increase in the percentage of vaccinated people, which partially made it possible to remove quarantine restrictions (Worldometer, 2022).

As of January 1, 2022, more than two million Azerbaijanis lived in the Russian Federation, and there were 600 thousand labor migrants from Azerbaijan. More than 50% of all money transfers, as already noted, came to the country from Russia. As of 01.01.2022, almost 3,000 legal entities and individuals - entrepreneurs, who are citizens of Azerbaijan, were registered in Ukraine (Musavi, 2022). Therefore, the decline in living standards in Russia and Ukraine and unsafe living and working conditions in Ukraine will decrease remittances to Azerbaijan, the return of Azerbaijanis to their homeland, and, as a result, an increase in unemployment. These factors are constraining the economic development and

development of the HC in the country. Still, in the long run, the opposite effect is also possible in the event of an influx of highly qualified personnel. Also, an influx of Ukrainian migrants to Azerbaijan exists, which, as of the beginning of May 2022, amounted to 4,200 people (The State Statistical Committee of the Republic of Azerbaijan, 2022).

A decline in the solvency of Russians and Ukrainians, reduction in agricultural production, rising world prices, and sanctions negatively affect the economy and the development of the HC in Azerbaijan. An increase in the outflow of funds from the country determines the provision of humanitarian assistance to Ukraine: from the state, which at the end of April 2022 amounted to 15 million euros, and from the Azerbaijani State Oil Company, which provided 100 tons of fuel for ambulances and cars Ukraine's State Emergency Service (Sanchez, 2022).

Among the opportunities to improve the life standard in Azerbaijan during the war in Ukraine, experts highlighted the development of the IT sector (The New York Times, 2022). Export of IT products of Ukraine for 2021 amounted to \$7 billion, Russia - \$1-2 billion. While Azerbaijan - \$5-10 million (The State Statistical Committee of the Republic of Azerbaijan, 2022). Developing the IT-sphere of Azerbaijan during the war and the post-war period is to attract IT specialists who migrated from Ukraine and Russia and international companies that left these countries.

Advantages are the flexibility of the industry and the ability to work remotely and without offices destroyed during the war. Due to the rapid development of the IT sector in Ukraine in the pre-war period, in March 2022, the Ukrainian IT sector retained 96% of the export value for the same period of the previous year (IT Ukraine, 2022). More opportunities for the IT industry in Azerbaijan due to the outflow of specialists from Russia. According to the Russian Association for Electronic Communications, in February-March 2022, 50-70 thousand IT specialists left Russia, and their further emigration from Russia was expected (The New York Times, 2022).

As sub-indicators of the development of the HC, Azerbaijan's healthcare and education systems did not suffer so much from the destructive impact of the military conflict. As of January 1, 2021, 4,628 Azerbaijani citizens studied in Ukraine (Report, 2021). The education of students in Ukraine can be regarded as a

source of development for the HC because Ukraine places a higher rank in the world ranking the education quality compared to Azerbaijan. In 2020, Ukraine ranked 38th, and Azerbaijan - 61st. In 2021 Ukraine - was 40th, and Azerbaijan - was 65th (World Population Review, 2022).

The war in Ukraine provoked the departure of Azerbaijani students to their homeland. But at the same time, education at universities in most regions of Ukraine continues remotely (Levine, 2022). The most problematic are the universities of the Luhansk and Donetsk regions, not all of whose teachers have the opportunity to work remotely. But since the beginning of the war in 2014, Ukrainian universities have been relocated to other Ukrainian regions outside of the Lugansk and Donetsk regions.

Distance education is of lower quality than classroom education (Levine, 2022). But these working conditions in Ukraine are due not only to the war but to the previous COVID-19 pandemic, which led to the effective organization of remote work in other countries of the world, including Azerbaijan. In this regard, the study conditions for Azerbaijani students in Ukraine during the war did not change significantly.

The impact of the war in the long term will be more significant due to the refusal of international students to continue their studies in Ukraine and a decrease in the number of applicants due to the lack of a personal security guarantee.

Azerbaijan and Ukraine, Azerbaijan, and Russia have not concluded joint programs in healthcare, which would have a decisive influence on the development of this industry in the country. Medicine also does not belong to the priority specialties for the education of Azerbaijani students in Ukraine. Therefore, the impact of the Russian invasion of Ukraine on the healthcare sector is expressed only through the economic indicators described above.

Strategies for economic development and HC in Azerbaijan in the context of the Russian invasion of Ukraine

For an analytical assessment of the impact of the war on the economic development and development of HC in Azerbaijan, we constructed regression models (Table 2).

Table 2: Regression models for assessing the state of the economy and the HC development in Azerbaijan in the context of Russian invasion of Ukraine

Model	Statistical Significance Indicators		
	F-statistic	t-statistic	Durbin-Watson statistic
Dependent variable: <i>GDP</i>			
$GDP = -1.76 \times Pr.o + 2.43 \times Pr.o - 0.16$	11.32* / 3.44**	2.15 / 2.07	1.73 / 1.54
$GDP = 0.76 \times GDP.R + 0.19$	9.52 / 4.28	2.61 / 2.07	1.80 / 1.44
$GDP = 0.52 \times GDP.U + 0.24$	27.24 / 4.28	2.50 / 2.07	1.79 / 1.44
$GDP = 0.33 \times Imp.R + 0.66$	30.11 / 4.28	2.29 / 2.07	1.81 / 1.44
$GDP = 0.30 \times Imp.U + 0.71$	15.72 / 4.28	2.23 / 2.07	1.79 / 1.44
$GDP = -0.88 \times Pr.a^2 + 0.01 \times Pr.a - 0.88 \times Pr.a(-1) + 2.28$	8.72 / 3.10	3.05 / 2.09	1.72 / 1.68
$GDP = 1.12 \times IT.sp(-1)^2 + 0.63 \times IT.sp(-1) + 0.96 \times IT.sp(-2) - 1.42$	35.24 / 3.13	3.21 / 2.09	1.72 / 1.69
Dependent variable: <i>HD</i>			
$HD = 0.57 \times GDP.R + 0.18$	22.52 / 4.32	2.60 / 2.08	1.74 / 1.42
$HD = 0.43 \times GDP.U + 0.21$	11.67 / 4.32	2.51 / 2.08	1.75 / 1.42
$HD = -1.14 \times Pr.a^2 + 0.12 \times Pr.a - 0.61 \times Pr.a(-1) + 2.11$	13.80 / 3.16	3.08 / 2.1	1.77 / 1.70
$HD = 0.73 \times IT.sp(-1)^2 - 0.21 \times IT.sp(-1) + 0.83 \times IT.sp(-2) - 0.51$	9.17 / 3.20	3.13 / 2.11	1.76 / 1.71

* - empirical values of modulo, ** - critical values of the criteria at a significance level of 0.05

Source: Authors' finding

We confirmed the statistical significance of the models by F-statistic and t-statistic, the empirical values of which modulo exceed the critical importance at a significance level of 0.05. The empirical value of the Durbin-Watson criterion (1.72-1.81) is greater than the critical level of 1.42-1.71 (Cunningham, Weathington & Pittenger, 2013).

The correlation coefficients calculated between the independent variables of the

models (Table 3) were statistically insignificant. Empirical t-statistic values ($|0.09|$ - $|1.58|$) belong to the confidence interval (-2.07; 2.07) at a significance level of 0.05, which indicates the absence of significant correlations (Cunningham, Weathington & Pittenger, 2013). The lack of correlation allowed the use of all variables to assess impact.

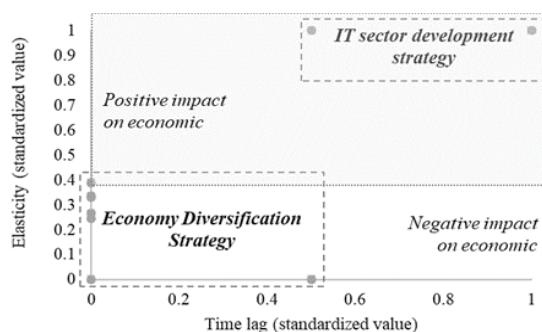
Table 3: Correlation coefficients of indicators impact on the economy and the HC in Azerbaijan during and after the Russian invasion of Ukraine

	<i>Pr.o</i>	<i>GDP.R</i>	<i>GDP.U</i>	<i>Imp.R</i>	<i>Imp.U</i>	<i>Pr.a</i>	<i>IT-sp</i>
<i>Pr.o</i>	1	0.32	-0.12	0.11	0.09	0.12	0.02
<i>GDP.R</i>	0.32	1	0.16	0.28	0.19	-0.19	0.18
<i>GDP.U</i>	-0.12	0.16	1	-0.07	0.21	-0.28	0.26
<i>Imp.R</i>	0.11	0.28	-0.07	1	-0.08	-0.09	0.04
<i>Imp.U</i>	0.09	0.19	0.21	-0.08	1	-0.05	0.07
<i>Pr.a</i>	0.12	-0.19	-0.28	-0.09	-0.05	1	0.02
<i>IT-sp</i>	0.02	0.18	0.26	0.04	0.07	0.02	1

Source: Authors' finding

The most significant impact of the Russian invasion of Ukraine on the economy and HC in Azerbaijan is manifested through the dynamics of oil prices, prices for agricultural products, the dynamics of the GDP of Russia and Ukraine, and the dynamics of Azerbaijan's imports from Russia and Ukraine, migration of IT specialists.

Based on the study's empirical results, we



- positioning of indicators that showed affect the economic development and HC

Figure 1a: Economic development

proposed several strategies that ensure the effective functioning of the economy and HC development in Azerbaijan during Russian invasion of Ukraine (Fig. 1). Development strategies have been identified using cluster analysis.

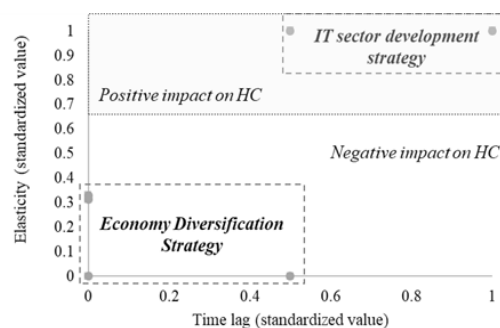


Figure 1b: HC development

Figure 1: Matrices of development strategies for the HC and the economy in Azerbaijan

Source: Authors' finding

F-statistic confirmed the statistical significance of the clustering results, the empirical values of which (18.84 - 41.73) were higher than the critical ones (5.59 for the matrix of economic development strategies and 7.71 for the matrix of development strategies of the HC) at a significance level of 0.05; $p\text{-value} > 0.05$ (Cunningham, Weathington & Pittenger, 2013).

DISCUSSION AND CONCLUSION

Even though Azerbaijan focused on oil exports, the growth of world oil prices did not consistently positively impact the country's economic development. Findings that correlate with studies of Pellegrini, Tasciotti, and Spartaco (2021) are explained by the resource curse phenomenon. The rise in oil prices up to a certain point contributes to the country's economic development. Further price growth forces the government to focus on increasing oil production and exports, investing in this industry to maximize income. It leads to an increase in opportunity costs associated with a shortfall in revenue from the manufacturing industries, which are more knowledge-intensive,

technological, and the development of which contributes to economic growth in the future. With a price increase of 1% compared to 2021, the annual value of GDP per capita increases by 0.04%. The rise in oil prices does not have a statistically significant impact on the development of HC.

The GDP and imports from Ukraine and Russia directly impact the economy and the development of HC of Azerbaijan. Therefore, the decline in these indicators during military conflict and post-war reconstruction threatens the national economy.

Statistically confirmed by the results of the constructed models, the threat to development is the rise in prices for agricultural products. With a price increase of 1% relative to 2021, the annual value of GDP per capita decreases by 2.13%, and the human development index - by 2.27%. A more significant drop in the HC development index is because the increase in prices for agricultural products leads to a decrease in the solvency of the population and saving on food, which negatively affects health, a component of human development. The inflation impacts the

economic growth and development of the HC without a time lag and with a lag of 1 year.

The number of IT specialists in the country directly impacts Azerbaijan's economy and HC development. The influence of this indicator manifested with a lag of 1 and 2 years. The growth in the number of IT specialists has a more significant impact on economic development - the value of the elasticity index is 3.47%. The annual value of the HC development indicator will increase by 2.70%, with an increase in the number of IT specialists by 1% compared to 2021. This effect is due to the growth in incomes of the population and an increase in the intellectual level because the work of IT specialists is highly paid and intelligent than extractive industries or most manufacturing industries.

In the conditions of the Russian invasion of Ukraine, the appropriate strategies for the HC development and the economy of Azerbaijan must be: priority development of the IT sector and strengthening the diversification of the economy.

The strategy of economic diversification helps reduce part of the oil and gas sector and develop the agro-industrial complex in Azerbaijan. The war in Ukraine has the most significant negative impact on the Azerbaijani economy through the agricultural industry: rising prices and reduced supply in the markets of agricultural products. The development of Azerbaijan's agriculture will partially solve issues and reduce import dependence on Ukraine and Russia. In favor of the economic diversification, the revealed regularity testifies that the growth of world oil prices does not have a stable positive impact on the economy of Azerbaijan: when the level of prices for oil of the brand Brent 131-138 USD/barrel further grows leads to a decrease in economic development. The decline in the GDP of Russia and Ukraine also hurts the economy of Azerbaijan and HC development. Therefore, the diversification strategy of the Azerbaijani economy provides not only sectoral diversification but also geographic diversification, aimed at reducing dependence on Russia and Ukraine. The effect of implementing this development strategy will be getting without a time lag - in the same year.

The IT development strategy's advantages have explained that the number of IT specialists in the country has a statistically significant positive impact on economic growth and the HC

development in Azerbaijan. This strategy provides the creation of conditions for work, the provision of benefits to IT business, the legislative regulation of investment issues, and the activities of venture funds. A strategy aims to attract IT specialists who will migrate from Ukraine and Russia in the conditions of war and after. The most significant positive effect on the economic development and HC in Azerbaijan implementing the strategy will manifest with a time lag of 1-2 years after the increase in the number of IT specialists.

Thus, we determined the strategies and development of the HC and the economy in Azerbaijan, which, unlike the investigations of Eppelsheimer, Jahn, and Rust (2022), Managi, Jimichi, and Saka (2021), are relevant not only to conditions of stability and certainty. Considering the threats and opportunities for development in the requirements of the Russian-Ukrainian conflict, the practical implementation of the proposed strategic approach makes it possible to quickly manage and reduce the risks of the destructive consequences of the war on the national economy. It should be noted that the use of elasticity indicators in determining development strategies limits their practical significance since it shows only a change in economic development indicators and HC when the independent variables change by 1%. Elasticity indicators do not show the cumulative change in economic development and HC development during the war. This limitation is associated with a high level of uncertainty about the course and results of the war in Ukraine, its duration, and the further reaction of other countries to the consequences of the military conflict. In addition, when analyzing the state of the Azerbaijani economy, the implications of the military conflict were assessed from the point of view of Ukraine and Russia as the country's strategic partners. At the same time, the Russian invasion of Ukraine had a destructive impact on many countries of the world and the growth rates of the global economy, which we did not consider in this study due to the fundamental nature of these questions. Therefore, our different scientific priority will be analyzing the development of the world economy and Azerbaijan in the ongoing military conflict between Ukraine and Russia.

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ABOUT THE AUTHORS

Huseyngulu S. Baghirov, email:

bagirov_h@wcu.edu.az

Huseyngulu S. Baghirov, PhD, professor of the Western Caspian University (WCU), Azerbaijan.

Yusif A. Humbatov, PhD, associate professor of Azerbaijan University of Technology (UTECA), Azerbaijan.

Samira Abdullayeva, PhD, senior lecturer of Azerbaijan State University of Economics (UNEC), Azerbaijan.

Musluma M. Aslanova, PhD, associate professor of Azerbaijan State University of Economics (UNEC), Azerbaijan.

Sevda Seyidova, PhD, leading researcher of the Institute of Economics of Azerbaijan National Academy of Sciences, Azerbaijan.