Analysis of Economic Growth in the Juglyar Cycle in World Countries

Ph.D, Mansur Bustonov

Associate professor at Namangan engineering-technological institute, Namangan, Uzbekistan

Abstract: An imitation model of economic growth has been developed based on indicators of extensive, intensive growth and digital economy factors in the Juglar cycle, taking into account quality indicators. A crisis is always the most difficult part of the business cycle. But it inevitably changes the growth phase, since by the end of it overheating sets in, and significant tension is created in the economic system.

Key words: juglar cycles, growth cycle, business cycle, world countries, Japan, Sweden, technological crisis, space crisis, demand crisis.

Introduction

In the current scientific and technological development of the world economy, the "digital" economy is at the forefront of increasing efficiency, increasing the number of customers, which in turn allows to attract new customers to the production process, as well as offer better service. The advantages of a "digital" economy are many, and most importantly, it prevents the shadow economy and helps eliminate corruption. According to BCG: Internet products could generate an additional revenue of $ 1.9 to $ 14.4 trillion in 2020, and could add about $ 6 trillion to the global economy by 2025. [1]

According to United Nations estimates, global growth in 2019 slowed to a 10-year low of 2.3 percent. The average growth of world GDP in 2020 will be 2.5 percent and 2.7 percent, and a moderate acceleration is expected in the future, while per capita income growth in 2021 will average only 1.5 percent in 2020 and 1.7 percent in 2021. is projected to form. [2] According to the draft concept of e-government development of the Republic of Uzbekistan, the share of ICT in GDP will increase to 5.0% by 2025. requires more work on

Literature review

The study of the question of the relationship between the directions of economic growth and development is peculiar to economists of different schools and individual researchers. J. Schumpeter considered the connection between the dynamics of the economy and the growth rate, and F. List considered the problem of public policy to stimulate national development. Institutional economists have developed J. Schumpeter's approach, noting the important role of the technological factor in economic growth, describing the relationship between key technologies and the nature of the economic development of a society. The study of technical and economic aspects of economic development in the framework of the "mainstream" is described in the works of T. Veblen, J. K. Gelbright, J. Dosi, N. Clark, S. Perez-Perez, J. Hodgson, K. Eyres, K. Yuma . Theoretical and practical aspects of economic growth were studied by JM Keynes, E. Domar, R. Harrod, R. Solow, J. Tobin, E. Phelps.

Ўтиш даври иқтисодиёти шароитида иқтисодий ўсиш ва унинг сифати муаммосини L.Abalkin, V.Bokov, M.Bunkin, S.Glazyev, T.Koychuev, A.Koshanov, V.Kushlin, K.Mikulskiy, R.Rahimov, O.Sabden, A.Spitsina, A.Tatarkina, E The works of Yasina et al.

Improving the scientific methodology for assessing the impact of economic growth factors in the transition to a digital economy Many foreign scientists, including: D. Tapscott [3], N. Lane, T. Mesenbourg [4], M. Castells [5], B. Panshin [6] , N.Negroponte [7], A.Sokolov, A.Kuntsman [8], R.Buxt [9], R.Xiks, M.Polojixina [10], I.Strelkova [11], M.Kalujskiy, S. Researched by Plugotarenko [12], R.A.Solou [13] and others.

Important Topical issues of improving and using the methodology for effective assessment of the impact of economic growth factors in the economy of Uzbekistan, the introduction of the digital economy II Iskandarov, SS Gulyamov, KH Abdurahmonov, T.Sh.Shodiev, AF Rasulev, N.M.Makhmudov, A.Qodirov, G.K.Saidova, S.V.Chepel, I.S.Tuxliev, A.M.Usmanov, U.G'ofurov, A.S.Usmanov, D.V. Trostyansky, U.A. Madrakhimov, I.Yu. Usmanov, I.O. Kayumova [14], Umarkhodjaeva, M. [28], Bustonov M.M. [26;27;29], Tursunov B. [30] and many other leading economists. Of particular note is their research on the digital environment, which has a set of features that enable direct communication to meet the needs of consumers and manufacturers in their research work.

In our view, there is insufficient research to study the qualitative impact of the digital economy as a single system on the country's economic development, the development of the regions as a whole and the impact on GDP growth per capita. These aspects served as a basis for choosing the topic of the dissertation, defining its goals and objectives.

It is noteworthy that the models proposed by scientists do not take into account the positive aspects of improving the quality of economic growth, the digitalization of the economy. In addition to the above, the research work proposed by the author is of scientific and practical importance, taking into account the current state and prospects of the national economy, the assessment of the impact of economic growth factors.

Analysis and results

In modern realities, economic cycles, which have remained virtually unchanged since the beginning of the capitalist era, are undergoing some changes.

The stages of business cycles follow each other much faster. This is especially true for the phase of depression. Accordingly, the duration of the stages is reduced. For comparison: in the 19th century, the cycles lasted about 10-12 years, now their average duration is 5-7 years.

The modern economy is characterized by such a property as globalization. Accordingly, crises are no longer local. Even in the last century, the economic depression that set in in a single European country remained only within its limits. Today, such a crisis is rapidly assuming global proportions and affecting the global economy.

Today, the state has more convenient and influential levers for regulating economic processes. As a result, the phases of the cycles lose their clear boundaries. Some stages may fall out of rhythm altogether. For example, situations are now not uncommon when the phase of decline is replaced by the phase of growth, bypassing the crisis period.

The depression has acquired a new character - now stagflationary crises often occur. Unemployment, once a characteristic of the dip and bottom stages, is now an ever-present problem. Inflation, which in the past also gravitated towards certain phases of the cycle, becomes stable.

Clement Juglar, a native of France, was fond of medicine and statistics. He discovered economic cycles with an average period - repeating every 7-11 years. In terms of duration, these rhythms come immediately after the short cycles of Kitchin, which last for 2-4 years. And in fact, they are similar to them, but supplemented by taking into account fluctuations in investment volumes. Kitchin cycles arise due to the presence of a time lag, which is formed due to the delay in the transfer of information about a fait accompli of economic activity to the company's management apparatus. Juglar cycles also take into account fluctuations caused by the delay in investment processes. After all, injections into fixed capital also do not occur instantly: it takes time to make a decision in the field of investment policy, create production capacities and put them into practice, etc. It turns out that there is a delay between an accomplished event and a response to it (as in cycles Kitchin) adds a delay associated with the adoption and implementation of an investment decision. As a result, the cycle becomes longer. Among the rhythms of Juglar, two varieties of it can be distinguished - cycles of innovation and cycles of growth. In addition, there are the so-called two abstract schemes of Juglar cycles, which differ depending on which stage is taken as the center of the wave:

Scheme of a cycle with a central phase-crisis;

Diagram of a cycle beginning with a crisis.

Although the world economy has seen significant growth in the economies of developed and developing countries by the year 2000, the economies of a number of developing countries have faced domestic and international crises. Nevertheless, with the future in mind, there has been an unusual shift in the economic outcomes of many developing countries. They have reaped great benefits by making proper use of the extremely favorable conditions provided by the long-term good performance of the world economy, the increase in the relative price of goods, and the attraction of capital inflows.

If we look at the experience of the world economy, we will see that the last quarter of the twentieth century was marked by the intensification of liberalization of international trade, investment and financial markets. This contributed to progressive international economic integration and gave rise to new technologies, as well as forms of organization of production and political hegemony. Developed countries have experienced various difficulties in the interval up to this period.

Of course, such unexpected difficulties and crises in the economy force us to develop measures against it. In particular, the emergence of a period of strong inflation has frightened domestic and foreign investment and destroyed opportunities for economic growth. As a countermeasure, inflation management has become almost obsessive, and the sensitivity of international financial markets has prompted their governments to adopt limited macroeconomic policies that have a negative impact on the economy and employment.

Most countries have shifted to market-based approaches as a way to control hyperinflation, attract foreign direct investment, and stimulate economic development. However, this in turn has led to the ineffective or incorrect implementation and implementation of economic reforms, which has led to a decline in economic performance and additional challenges instead of improving the socio-economic conditions of these countries.

This, in turn, means that developing countries need to have experience and develop measures to counteract any unforeseen effects that may occur over time. Developed countries in the allocation of budget funds prefer to invest in human resources rather than fixed assets, while achieving a high level of economic development and quality of life. In this regard, the study of the impact of the components of human capital on the economic growth of the country is of particular interest. In conclusion, in this study, we carry out a correlation-regression analysis of the impact of

qualitative factors of economic growth of the Republic of Uzbekistan on the economies of other developed and developing countries.

Table 1. Correlation coefficient of selected factors on changes in the economic quality of the Japanese state

	Y_{iYa}	KQ	UXI	KACh	MAS	O'UK
Y_{iYa}	1					
KQ	0,801308	1				
UXI	0,984743	0,7205062	1			
KACh	-0,01486	0,0187372	0,060042	1		
MAS	0,167644	-0,1255893	0,273506	0,463261	1	
O'UK	0,348401	0,007446	0,360851	-0,33696	-0,24692	1

To do this, using the World Statistics data of all selected countries for 1999-2019, GDP per capita (in US dollars) - YiYa capital investment (in US dollars) - KQ, household consumption (in US dollars) - UXI , carbon dioxide emissions (thousand tons) - KACh, country population (million) - MAS and life expectancy in the country (years) - we will try to estimate by determining the impact of OUK factors. First, we perform an econometric analysis of changes in the economic quality of the Japanese state based on the knowledge economy (Table 1).

If we look at the values Y_i in the table, the GDP per capita of Japan is very strongly linked to capital investment - KQ($r_{Y_{iYa},KQ}$=0,8013) and household consumption - UXI($r_{Y_{iYa},UXI}$=0,9847). The development of relatively new scientific and technological advances is not in vain, ie how much investment is made and household consumption is important not only for the livelihood of the population, but also for active participation in production, which ultimately contributes to GDP growth. indicates the high impact.

The population of the next selected country - MAS($r_{Y_{iYa},MAS}$=0,1676) and life expectancy - O'UK($r_{Y_{iYa},O'UK}$=0,3484) were found to be weakly and correctly correlated with the GDP per capita. This, in turn, means that despite the current decline in the population in Japan (the average number of household members fell to 2.33 in 2015), the current adequacy (population of working age (15-64 years)) is 74.49 million, which is less than the total population. 59.3 per cent) however, the next factor to note is that given that life expectancy in Japan will be 87.5 years for women and 81.4 years for men in 2019, it poses a problem for future aging.

The final carbon dioxide emissions - KACh ($r_{Y_{iYa},KACh}$=-0,0149), the factor of which is inversely and weakly related to the factor of GDP per capita (the Japanese government in the relocation of domestic manufacturing bases abroad, reducing production costs, in the production of consumer goods and in avoiding exchange rate fluctuations), and since there is no multicoloniality between the selected factors under the condition rx1, $r_{x1,x2}$<0,8, it is possible to continue to determine the regression equation between EViews using the natural logarithm of all factors.

Table 2. Coefficients of selected factors and examination criteria for changes in the economic quality of the Japanese state

Dependent Variable: LnY$_{iYa}$				
Method: Least Squares				
Date: 08/07/21 Time: 08:58				
Sample: 1999 2019				
Included observations: 21				
Variable	Coefficient	Std. Error	t-Statistic	Prob.

LnKQ	0.261409	0.069897	3.739888	0.0020
LnUXI	0.716132	0.052467	13.64928	0.0000
LnKACh	-0.147965	0.065632	-2.254450	0.0395
LnMAS	-0.067763	0.976103	-0.069422	0.0469
LnO'UK	0.192328	0.302511	0.635771	0.0345
C	4.634037	5.567890	0.832279	0.0183
R-squared	0.992468	Mean dependent var		10.55755
Adjusted R-squared	0.989957	S.D. dependent var		0.105948
S.E. of regression	0.010617	Akaike info criterion		-6.017703
Sum squared resid	0.001691	Schwarz criterion		-5.719268
Log likelihood	69.18588	Hannan-Quinn criter.		-5.952935
F-statistic	395.3065	Durbin-Watson stat		1.849439
Prob(F-statistic)	0.000000			

Based on the values of the coefficients given in the table, the following equation is formed:

$LnY_{iYa}=0.26LnKQ+0.716LnUXI-0.15-0.0677626LnMAS+0.19LnUK+4.63$ (1)

If we pay attention to the significance of the parameters of the regression equation 1 on the T-statistical criteria, then the carbon dioxide emissions selected for the model from the equation $t_{Жад}=2,13145$ to 2,13145, with $\alpha=0,55$ and df=15-KACh($t_{KACh}=-2.255$), the population of the country - MAS($t_{MAS}=-0.081$) and the average life expectancy in the importance of MAPE<10 and TIC <1 retrospektiv is required to be checked by quality criteria(1- fig.).
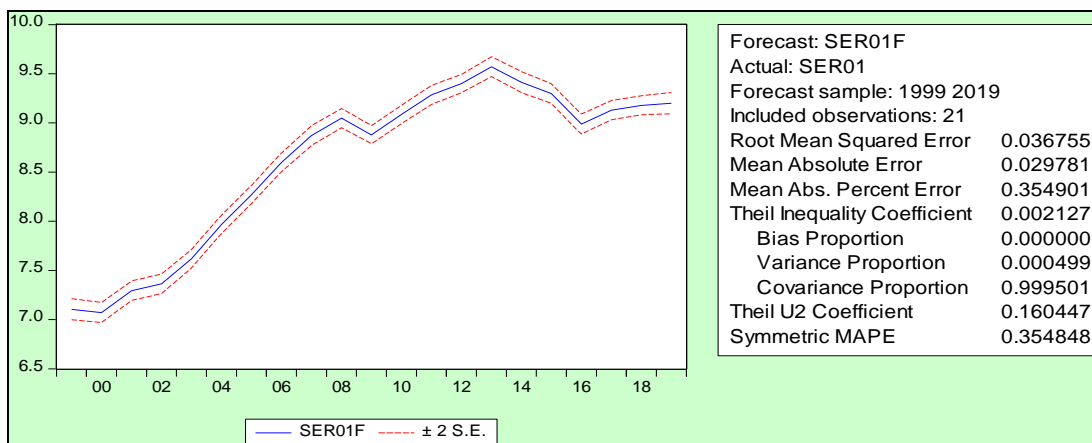

Fig.1. Regression parameters retrospektiv result of quality criteria

Based on the data presented in Figure 1, it can be noted that MAPE=0,355 and TIC=0,0021<1, which in turn is due to the importance of all of the parameters of the 4.1.1-regression equation above the forecast accuracy. In order to facilitate the rules of mathematics and computational processes, as well as to achieve the accuracy of the results, the above generated 4.1.1-regression equation is potentiated and according to which the following equation is generated:

$$Y_{iYa} = \frac{KQ^{0,26}*UXI^{0,716}*O'UK^{0,19}*e^{4,63}}{KACh^{0,15}*MAS^{0,0677626}}$$ (2)

Fisher value calculated taking into account the fact that the generated 4.1.1*-regression equation is equal to $\alpha=0,05$ and k1=15; when k2=5 is equal to $F_{Жад}=4,618759$ $F_{хис}=395.31$ from the equation FCAD<fhis according to the condition 4.1.1*-since the regression equation is equal to DW=1,85, the equation

Exactly 4.1.1 * - Regression of the equation of Economics if Japan is a capital-intensive state of economic development and household consumption eighteenth billion US dollars by the account of increased population of jon bashig yaim MS as kymcha 8.5 US dollars and 10.2 minimum US dollars. If now kunda carbonate anhydride chikindilarin is 1 tonnage telling the story of the bucklers, then now Japan is the state of the population of Jon bashig YAIM Hajim-hajj 0.56 AKSHARIGA and the country has a population of one-million. Chan kamaitrilsa, the country-the population of zhon-Zhani-Yaim-hajj is 21.8 AKSHARIGA-a clear reconciliation. A separate law requires that if the current country continues its life, a year ago, Japan state population can be Jo Jo Jo Jo Jo Jo Joao product eighteen 91,13 opinions accurate dollar reconciliation.

Switzerland, which now has the highest GDP per capita and living standards among the OECD countries, has a per capita GDP - capital investment affecting GDP (in billions of dollars) - KQ, household consumption (in billions of dollars) - We will consider the econometric analysis of UXI, carbon dioxide emissions (thousand tons) - KACh, country population (million) - MAS and life expectancy in the country (years) - O'UK factors. When conducting an econometric analysis of economic quality changes in the Swiss state, it is first necessary to determine the correlation coefficient between the selected factors (Table 3).

Table 3. Correlation coefficients of selected factors on changes in the economic quality of the Swiss state

	Y_{iSh}	KQ	UXI	KACh	MAS	O'UK
Y_{iSh}	1					
KQ	0,917381	1				
UXI	0,992619	0,786782	1			
KACh	-0,03148	-0,19508	-0,00907	1		
MAS	0,778366	0,671064	0,760205	0,134111	1	
O'UK	0,427373	0,232664	0,437502	0,340689	0,834139	1

According to the table, the factors of GDP per capita of the Swiss state - capital investment in relation to GDP - KQ($r_{Y_{iSh},KQ}$=0,9174) and household consumption - UXI($r_{Y_{iSh},UXI}$=0,9174) are strongly correlated.

The GDP per capita of the Swiss country is the population of the selected country - MAS($r_{Y_{iSh},MAS}$=0,7784) with a higher than average density, and the average life expectancy in the country - O'UK($r_{Y_{iSh},O'UK}$=0,7784). found to be bound at moderate densities. Switzerland benefits from high employment and productivity and avoids growing inequality based on the experiences observed in many advanced economies. [15] However, the employment rate of older workers will decline, and over time, pension replacement rates may decline, leading to increased income inequality. The burden of increasing costs associated with aging falls mainly on cantons and municipalities.

Table 4. Coefficients of selected factors and criteria for verification of changes in the economic quality of the Swiss state

Method: Least Squares				
Date: 08/07/21 Time: 09:21				
Sample: 1999 2019				
Included observations: 21				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
lnKQ	0.193598	0.101928	1.899351	0.0369
LnUXI	0.761483	0.049077	15.51622	0.0000

|				
lnKACh	0.027071	0.082750	0.327139	0.0481
LnMAS	1.401000	0.716082	1.956480	0.0493
lnO'UK	-0.286334	0.201195	-1.359957	0.0093
C	8.324375	0.807973	10.30278	0.0000
R-squared	0.993908	Mean dependent var		8.017545
Adjusted R-squared	0.991878	S.D. dependent var		0.378525
S.E. of regression	0.034114	Akaike info criterion		-3.683268
Sum squared resid	0.017456	Schwarz criterion		-3.384833
Log likelihood	44.67431	Hannan-Quinn criter.		-3.618500
F-statistic	489.4780	Durbin-Watson stat		1.921620
Prob(F-statistic)	0.000000			

In this regard, Switzerland plans to set the retirement age at 65, then gradually raise it to 67, and then link life expectancy. Making wage setting more flexible, easing the age-related progression of pension contributions and combating age discrimination will help to see longevity. Based on the results of the study, it should be noted that in order to further ease the pension pressure, it is necessary to reduce the rate of retirement of accumulated assets, as the current level is too redistributed from young workers to retirees.

The regression equation can be determined by the correlation between the factors observed in the absence of multicoloniality under the condition $r_{x1,x2}<0,8$, which is inversely related to the country's carbon dioxide emissions per capita ($r_{YiSh,KACh}=-0,032$). To do this, we continue the process by logging all the factors on the basis of e (Table 4).

Based on the results of the calculations, we obtain the following linear logarithmic regression equation:

$$Y_{iSh} = 0.19LnKQ + 0.76LnUXI + 0.03Ln + 1.4LnMAS - 0.286334LnO'UK + 8.32 \tag{3}$$

According to the results of Table 4.1.4, if we check the parameters of the regression equation 4.1.2 according to the t-Statistic criteria, only a Swiss state from the factors selected for the model from tЖад=2,13145 with α=0,05 and df = 15. household consumption - UXI($t_{UXI}=15.516$) factor is important, we will try to determine the result of checking whether all other parameters are really significant or insignificant with the criteria MAPE <10 and TIC <1 (Figure 4.1.2).
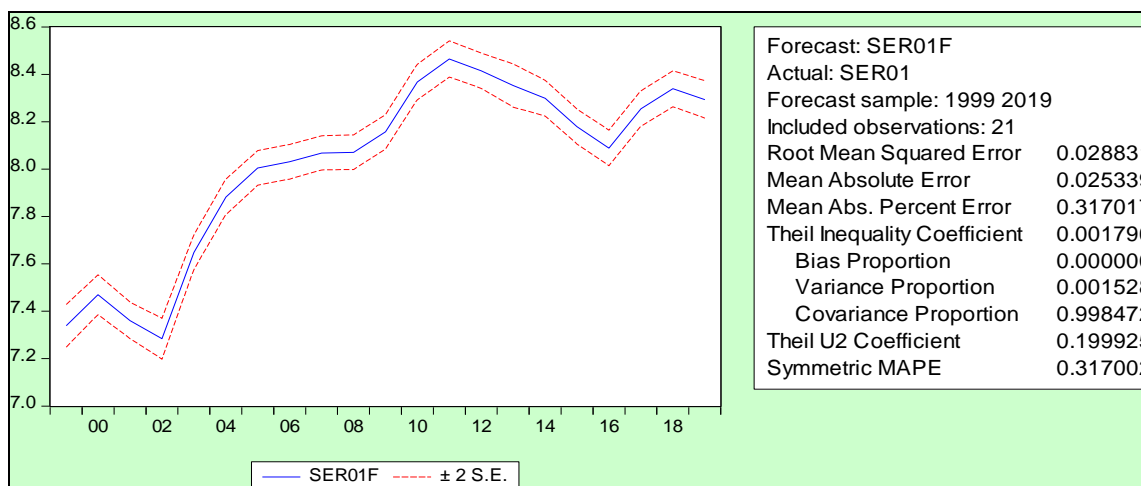
Figure 2. Results of examination of regression parameters with retrospective qualitative criteria

According to the data found in Figure 2, MAPE = 0.317 <10 and TIC = 0.002 <1, which in turn is due to the high accuracy of the forecast and the importance of all parameters of the regression

equation 4.1.2. The following regression equation is formed based on the rules of mathematics and the data given in Table 4.4 above to simplify the calculation process and achieve the accuracy of the results:

$$Y_{iYa} = \frac{KQ^{0,19} * UXI^{0,76} * KACh^{0,03} * MAS^{1,4} * e^{8,82}}{O'UK^{0,286334}}$$
(3)

The true significance of the generated 4.1.2 * -regression equation is a = 0.05 and k1 = 15; Given that $F_{Жад}$=4,618759 when k2 = 5, the Fisher value is calculated from $F_{хис}$=489.5.

Now, if we economically interpret the multivariate 4.1.2 * -regression equation determined by the economic quality of the Swiss state, we can see that if the capital investment in the country's economy and household consumption is 1 billion. In the case of Switzerland, the GDP per capita will increase by 67.0 and 103.03 US dollars, respectively. In addition, it should be noted that given the great attention paid to the environment in the country and the low level of environmental damage in production, even an increase in carbon dioxide emissions into the environment leads to an increase in GDP per capita.

In particular, if the volume of carbon dioxide emissions is increased by 1 ton, the gross domestic product could increase by an additional $ 0.12. If the population of a country is 1 million. The per capita GDP in Switzerland will increase by an additional $ 48.9, and if the average life expectancy in the country is extended by one year, the GDP per capita may decrease by an additional $ 18.8.

The data obtained confirm our assumptions that the development of both material resources and human capital will affect the quality of economic growth. The above results show that per capita GDP has a positive impact on capital investment, household consumption and population, but the higher the level of carbon dioxide emissions, the negative impact on economic growth, resulting in lower life expectancy, health and well-being. the quality of economic growth declines, leading to a deterioration.

Thus, taking into account all of the above, we can conclude that the competitive advantages of the economy today and the possibility of modernization are largely determined by the accumulated and realized human capital. In Uzbekistan, more attention should have been paid to achieving high economic growth compared to developed countries with human capital.

The formation and accumulation of human capital at the expense of investments, includes all their costs in cash or in some other form. Before investing in human capital, it is necessary to evaluate the effectiveness of this type of investment. Table 6 shows the socio-economic aspects of human capital investment.

It should be noted that investing in human capital has long-term benefits: the average investment in education is 12-20 years, and investing in health capital over a lifetime.

Table 5. SWOT-analysis of human capital investment

Strengths	Weaknesses
1. The high share of human capital in the country's assets is a key factor in its economic growth;	1. Significant costs of education during the period of study and to improve the health of the individual throughout his life;
2. Accumulated and developed human capital is a key factor in employment success;	2. Lack of funding for people from low-income families;
3. Return on investment - high income for the country's economy in the future;	3. The effect of investing in human capital will increase over time;
4. Competitive advantage in the form of highly qualified specialists;	4. Continuity in investing in human capital as their knowledge, skills and competencies become obsolete over time;
5. Implementation in various fields of activity;	

6. Long-term economic and social benefits. 7. Good health helps increase life expectancy.	5. Free movement of labor reduces the willingness of employers to invest in its development; 6. Long wait for the results of investing in human capital.
Opportunities	**Dangers**
1. Introduction to new trade markets; 2. Ability to produce competitive, high quality products in the market; 3. Continuing education as a permanent investment in the development of human capital; 4. Production of innovative products; 5. Ensuring the quality of sustainable economic growth.	1.Human capital suffers from physical and mental deterioration over time; 2. Dismissal of highly qualified specialists and departure to other countries; 3. Depreciation of human capital over time.

In addition, human capital is inseparable from an individual and differs from physical capital in terms of liquidity. Also, the functioning of human capital and its rate of return depends on the decisions of the person, determined by his entrepreneurial spirit and aspirations, material and spiritual interests, the general level of education and culture. [16]

At present, the competitiveness of the country's economy is largely determined by the economy's ability to produce and produce innovative products, which is not possible without a high level of concentrated human capital. It is therefore important to invest in human capital and natural capital to ensure long-term economic growth in order to improve the qualitative factors of economic growth.

An important disadvantage of the process of investing in human resources is its continuity, as the knowledge, skills and abilities of employees become obsolete over time and require updating.

It should be noted that the effect of investing in human capital can be obtained not now, but in the near future, however, the investment must be made now. Freedom of labor movement reduces the willingness of employers to invest in its development.

Also, a negative feature of human capital is its spiritual and physical deterioration over time, which is characterized by additional costs for health and education.

Thus, we have considered the process of investing in human capital both from the point of view of the individual and from the point of view of the costs to the country's GDP, and in both cases we have identified the strengths and weaknesses of this process. Despite the disadvantages of investment, human capital is a key factor in increasing the competitiveness of the country's economy, bringing high returns on investment in the future. The shortcomings of this process need to be addressed through the improvement of the institutional environment, as well as the implementation of priority programs of the Government of Uzbekistan.

The central role of growth in increasing the rate of poverty reduction has been confirmed by studies by individual countries and groups of countries. For example, the most important study conducted in 14 countries in the 1990s showed that over a decade, poverty declined in 11 countries that experienced significant growth, and increased in three countries where growth rates were low or stable. An average increase in per capita income of one percent reduced poverty by 1.7 percent. [17]

Among these 14 countries, poverty reduction has been particularly remarkable in Vietnam, where from 1993 to 2002, poverty fell by 7.8 percent per year, while the poverty rate fell from 58 percent

to 29 percent. El Salvador, Ghana, India, Tunisia and Uganda are among the other countries that have seen a dramatic decline during this period, with poverty rates falling by 3-6 per cent per year.

China alone has lifted more than 450 million people out of poverty since 1979. Evidence suggests that rapid economic growth between 1985 and 2001 was crucial in reducing poverty to this level. [18]

India has seen a significant decline in poverty since the 1980s, which accelerated by the 1990s. This was strongly associated with India's impressive growth record during this period. [19]

Mozambique shows a rapid decline in growth-related poverty in the short term. Between 1996 and 2002, the economy grew by 62 percent and the proportion of people living in poverty fell from 69 percent to 54 percent. [20]

The positive link between growth and poverty reduction is clear. It is unclear whether the impact of income distribution on these relationships, in particular, will reduce the reduction in poverty resulting from high inequality.

Early levels of income inequality are important in determining how strongly growth will have an impact on poverty reduction. For example, a one percent increase in income is estimated to lead to a 4.3 percent reduction in poverty in countries with very low inequality, or a 0.6 percent reduction in poverty in countries with very inequality. [21]

Such calculations should be interpreted with caution, given the large number of variables. Even if inequality increases with growth, poor people do not have to benefit - they benefit less from growth than other households. [22]

But contrary to popular belief, growth does not have to lead to increased inequality. Although some theoretical studies see a causal link between growth and inequality (and vice versa), there is no consistent link between inequality and income change, according to the consensus of recent empirical research.

The experience of developing countries in the 1980s and 1990s shows that there is approximately equal potential for growth as inequality increases or decreases. [22] In many developing countries, the level of inequality is similar to or lower than that of developed countries. A number of studies using cross-border data show that growth has neither positive nor negative effects on inequality.

This does not mean that the increase in growth has not led to an increase in inequality in some countries. Both China and India observed an increase in inequality in the 1990s as growth rates increased. If neither Bangladesh nor Uganda had expanded their income distribution from 1992 to 2002, they would have observed high rates of poverty reduction.

Because of the complex, two-way relationship between growth and inequality, it is impossible to say whether such proportional growth is possible. If so, it may have come at the expense of higher growth. If the growth rate had been sufficiently reduced, the poverty reduction could have been less than each country's high but relatively unequal growth experience.

Controlling the initial inequality of assets, such as land and education, income inequality no longer plays a role in expanding or reducing growth opportunities. [23] However, asset inequality itself may be important, as owning an asset that can be used as collateral can expand access to financial markets.

Such an introduction will boost growth if it allows more households to invest - this is especially important in economies where the average firm size is small.

It is difficult to reduce asset inequality because it belongs to the wealth reserve, not to the income stream. The redistribution of assets may have a negative impact on savings and investment

incentives, which may be more than counteracting the positive consequences of fair ownership of assets. In addition, it can often lead to political controversy and instability.

Economic growth creates jobs and therefore the demand for labor, which is the main and often the only asset of the poor, increases. In turn, increasing employment has been crucial in ensuring high growth. Strong growth in the world economy over the last 10 years means that the majority of the world's able-bodied population is now employed.

At the same time, youth unemployment is a major problem in every region of the world, especially in Africa. This is reflected in above-average unemployment rates: young people make up 25 per cent of the world's working-age population, but 47 per cent of the unemployed.

Nevertheless, global employment has increased by more than 400 million people since the early 1990s. Although much of this growth came from China and India, almost all new jobs were created in developing countries. [24]

Real wages for low-skilled jobs have increased with GDP growth around the world, indicating that the poorest workers have benefited from global trade growth and development. [25]

Fears that greater global integration and increasingly more international investors will lower wages have proved unfounded. Indeed, evidence on foreign direct investment suggests that firms are attracted to countries with higher labor standards rather than lower ones.[26]

Macroeconomic factors such as low inflation, export orientation, and low labor taxes help determine how much employment will be created as a result of growth. Structural factors such as the balance of the economy between agriculture, manufacturing and services are also important.

In the formulation of the strategy of ensuring the quality of economic growth, the analysis of individual countries of mandatory restrictions on growth and political actions that can overcome them is important. Recent research shows that the different opportunities and current growth conditions in different countries (developed and developing) and the creation of their own growth strategies is primarily a country-specific task. In terms of policy, there are important broad agreements that can underpin successful growth strategies in low-income countries. Although the diversity of conditions and history excludes a broad strategy that applies to all low-income countries, recent research in low-income regions suggests that the scope of the search process for the most mandatory constraints can be narrowed in deciding what to do for their prospects.

There are some areas that need to be addressed, even if the ways to address them depend on individual circumstances. Economic growth will ultimately be linked to increasing the productivity of these factors of production through investment in capital and labor, innovation, and technological integration processes. Technology that is important to physical capital is usually concentrated in capital goods such as factories and machines that support the country's ascent to the technological ladder. Limited or expensive access to finance, especially for small businesses and private entrepreneurs and the informal sector, discourages such investments. A well-functioning financial sector will boost economic growth by ensuring that capital is not left idle, that it is directed to the most profitable location, and that it undertakes to reduce risks.

Their improvement could increase investment in education, along with an increase in education income (wages of skilled workers). To accelerate and support economic growth, a wide range of work skills are needed, including education at all levels, from primary school to university, including technical and vocational education and "learning in practice". Unfortunately, progress in addressing the shortage of qualified personnel in the world's poorest countries has been very slow.

Although basic education is considered critical to poverty reduction, there is evidence that secondary and higher education are more important in long-term growth rates and income levels

as they play an important role in creating new knowledge and applying technology. This impact occurs primarily by improving people's ability to absorb technological advances.[31]

Of course, for this, it is desirable to ensure the rule of law in the country, and to pay attention to the level of crime and security. Studies show that crime and security levels are high in low-income areas. Recent surveys of the investment climate in low-income countries have found that the cost of legally enforcing contracts and adhering to regulations has the greatest negative impact on business profitability.

It is also often important to strengthen the capacity of relevant government institutions to protect property rights. Similarly, the evidence from the study suggests that special attention should be paid to the prevention of corruption. In addition to reducing domestic investment, poor property rights can divert foreign investment elsewhere. This, in turn, can significantly reduce the scale of technology transfer, which increases productivity and ultimately growth.

In the field of competition, some industries (e.g. utilities), if they are large, are not easily given to competition due to the large cost savings they have, but this is not the case in most cases. Governments need to make sure that they do not knowingly or unknowingly reduce open and fair competition. This can occur as a result of the pursuit of specific interests, or it can result from institutional barriers such as costly and time-consuming procedures to regulate the business. It is important to ensure that businesses have easy access to markets and that there are opportunities for business innovation. It is in this way that firms and industries can increase their productivity, which in turn provides long-term growth. A stable macroeconomic environment includes monetary policy that ensures low and stable inflation, effective management of public taxes, and spending on public services.

In addition to the general mandatory restrictions and important conditions for ensuring the quality of economic growth mentioned above, it is possible to include the country's infrastructure. Investors need good access to knowledge, capital, labor and raw materials, and markets. This requires regular provision of transport infrastructure, as well as electricity and other utilities. Transport and energy account for the largest share of indirect costs for businesses, which has a major impact on the competitiveness of firms in most countries. In addition to transport infrastructure, communication infrastructure is critical in disseminating information about prices and markets on a large scale. In this context, the proliferation of mobile communications has manifested itself in a revolutionary tone in the economy. In recent years, limited banking services in many countries of the developing world have even made it possible to use mobile phones.

In recent times, no country has developed sustainably without successful integration into world markets. There are two aspects to this: integration into commodity markets and integration into access markets, in particular integration into financial capital. The openness of the country's commodity markets will enable growth, facilitate technology transfer, increase competition and benefit consumers. Experience has shown that in the past, some countries have pursued a policy of "import substitution" by deliberately protecting their industries from international markets and allowing them to develop. The success of such policies was mixed: governments often defended unsustainable industries without protection. Such a policy was detrimental because the defense had costs in terms of lost growth.

The relationship between open capital markets and growth is less clear. Capital market integration allows for a reduction in living standards, risk sharing between countries, and the transfer of technology from the developed world. This is a way to achieve transparency in both areas. For local producers, the right sequence and pace of reforms are needed to mitigate the risk. This is especially important for capital market integration. The hasty liberalization of capital markets has led to many financial crises over the past decade, which have significantly limited growth.

Low-income countries typically have large agricultural sectors. Productivity growth in agriculture often serves as a catalyst for growth and also has a strong impact on poverty reduction due to the large number of people employed in these sectors. Adaptation or development of technologies, improvement of agricultural markets for seeds, fertilizers and agricultural products will help in this process. For many poor countries, agriculture will achieve growth, reduce poverty and ensure food security in the near future.

In our opinion, it is expedient to establish a National Growth Center to develop the country's economy and ensure sustainable economic growth. The center can rely on high-quality experience from the academy, the private sector and the government. As a network, it should be considered as a physical presence. We look for an academic base or alternatively a business environment (or a mix of the two, such as a business school) to manage a competitively established center. Country-level Growth Commissions comprised of government, the private sector and civil society, as well as the world's leading academics and the international private sector, can enhance country participation. The work focuses on future growth, the opportunities and challenges that arise as a result of globalization, and perhaps new environmental issues, such as the traditional agenda. Exclusion issues will also be given priority.

Key research issues include the importance of preconditions in influencing growth on poverty reduction; Whether growth in the 1990s led to a steady increase in inequality, or whether the relationship reflects specific preconditions such as low levels of initial inequality or rapid structural change, and factors influencing the relationship between economic growth and the broader outcomes of human development need to be determined.

Conclusions

The model of the Juglar cycle is somewhat different from models of other types of rhythms. We are talking about the presence of so-called subphases. Let us consider the stages of these waves in more detail.1. Revival. At this stage, a slow increase in production capacity begins. It is divided into two sub-phases:

Start is the initial push, realized through the adoption of a volitional decision;

Acceleration - production capacity is expanding, investment inflows are increasing at an ever-increasing rate.

2. Prosperity. Investment infusions are gaining momentum and are already at a very high level. The scale of industrial activity continues to grow. The stage consists of two sub-phases:

Growth - production increases to such volumes that it completely covers the existing demand;

Overheating – demand has already been covered, but production and investment volumes continue to grow.

3. Recession. Investments made in the expansion of production become unjustified. Starts a catastrophic drop in demand. The stage has two sub-phases:

Collapse - the period in which the costs incurred cease to pay off;

Recession - a significant reduction in investment infusions, curtailment of production volumes.

4. Depression. At this stage, the economy freezes at its lowest point. The fall stops, the system finds balance. The production level is minimal, there is a consumption of stocks stored in the warehouse. Investment injections into production capacities during this period are almost at zero. The following sub-phases are typical for the stage:

Stabilization - complete overlapping of demand with stocks and the low production volume that takes place at this stage;

Shift - the supply of resources in warehouses is melting, and the production level is not yet high enough to cover the existing demand. There is a need for new investment injections.

References:

1. UK Government Office for Science. The Internet of Things: making the most of the Second Digital Revolution. – URL:https://www.gov.uk/government/uploads/system/uploads/attachment_dat a/file/409774/14–1230-internet-of-things-review.pdf (02.05.2022).

2. The World Economic Situation and Prospects 2020 is United Nations New York, 2020. https://www.un.org/development/desa/dpad/wp-content/uploads/sites/45/WESP2020_FullReport.pdf. ISBN: 978-92-1-109181-6 eISBN: 978-92-1-004616-9 Print ISSN: 1995-2074 Online ISSN: 2411-8370 United Nations publication Sales No. E.20.II.C.1 Copyright © United Nations, 2020 All rights reserved

3. Tapscott Don. The Digital Economy: Promise and Peril in the Age of Networked Intelligence, 1996; Lane Neal. Advancing the Digital Economy into the 21st Century (Assistant to the US President for Science and Technology), 1999;

4. Mesenbourg Thomas. Measuring the Digital Economy (US Bureau of the Census), 2001;

5. Castells M. Internet Galaxy: Reflections on the Internet, business and society. Yekaterinburg: U - Factoria, 2004 .;

6. Panshin, B. Digital economy: features and development trends / B. Panshin // Science and innovations. - 2016. - T. 3. - No. 157. - P. 17-20 .;

7. Negroponte N. Being Digital / N. Negroponte. – NY: Knopf, 1995. – 256 p.;

8. Kuntsman A.A. Transformation of the internal and external business environment in the digital economy // Management of economic systems: electronic scientific journal. - 2016. - No. 11(93). – c. one.;

9. Bukht R., Hicks R. (2018) Definition, concept and measurement of the digital economy // Bulletin of International Organizations. Vol. 13, No. 2, pp. 143–172 (in Russian and English). DOI: 10.17323/1996-7845-2018-02-07.;

10. Polozhikhina M.A. Digital economy as a socio-economic phenomenon. - https://cyberleninka.ru/article/n/tsifrovaya-ekonomika-kak-sotsialno-ekonomicheskiy-phenomen/viewer;

11. Strelkova Digital economy: new opportunities and threats for the development of the world economy. –https://cyberleninka.ru/article/n/tsifrovaya-ekonomika-novye-vozmozhnosti-i-ugrozy-dlya-razvitiya-mirovogo-hozyaystva/viewer;

12. Plugotarenko S.A. The development of the digital economy can become a powerful driver for the country's exit from the crisis. - https://tass.ru/interviews/4192130, 11/20/2018;

13. Castells M. Internet Galaxy: Reflections on the Internet, business and society. Yekaterinburg, 2004.; Solow R.A. Contribution to the Theory of Economic Growth/Quarterly Journal of Economics 1956. Vol.70. February. P. 65-94.

14. Muxammedov Yu. Factors and econometric models of sustainable socio-economic growth (on the example of the Republic of Uzbekistan): Iqt. fan. doc. diss: - T .: TDIU, 2006. -23-p .;

15. Switzerland: prepare for population ageing to maintain high living standards. / https://www.oecd.org/economy/switzerland-prepare-for-population-ageing-to-maintain-high-living-standards.htm

16. Romanova E.B. Investments in the development of human capital // Proceedings of the Russian State Pedagogical University. A.I. Herzen. 2010. No. 1. P. 436–438.

17. Operationalising Pro-Poor Growth (OPPG) Programme (2005), 'Pro-Poor Growth in the 1990s: lessons and insights from 14 countries'

18. Lin (2003), Economic Growth, Income Inequality, and Poverty Reduction in People's Republic of CHina, Asian Development Review, vol. 20, no. 2, 2003, pp. 105-24

19. H.Bhanumurthy and H.Mitra (2004), Economic Growth, Poverty, and Inequality in Indian States in the Pre-reform and Reform Periods, Asian Development Review, vol. 21, no. 2, 2004, pp. 79-99

20. Bustonov M.M. The Firm Aspects and conditions Providing the Qualities of Economic Growth in Uzbekistan. International Journal of Economic Theory and Application. 2017/ http:www.aascit.org/journal/I jeta

21. Bustonov M.M.Improving Economic Mechanisms to Encourage Efficient Use of Industrial Production Power in Kashkadarya Region. Annals of R.S.C.B., ISSN:1583-6258, Vol. 25, Issue 3, 2021, Pages. 8183 - 8196 Received 16 February 2021;

22. Bustonov M.M. Macroeconomic Trends and Patterns of Sustainable Economic Growth and its Quality. TEST ENGINEERING & MANAGEMENT Vol. 81: Nov/Dec 19 Publication Issue: Vol 81: Nov/Dec 19 Issue Publication Date: 31 December 2019 Published: 2019-11-22.http://www.testmagzine.biz/index.php/testmagzine/article/view/221

23. Mardonakulovich B. M., Abdurakhmanova M. F. Q. ORGANIZATION OF CREDIT OBLIGATIONS AND MONITORING OF COMMERCIAL BANKS //ACADEMICIA: An International Multidisciplinary Research Journal. – 2020. – Т. 10. – №. 5. – С. 1635-1641.

24. Juraevich M. B., Mardonakulovich B. M., Ibroximovich R. B. BASIC CONCEPTS OF THE THEORY OF UNCERTAIN SETS AND ACTIONS RELATED TO INVESTMENT PROCESSES //International Engineering Journal For Research & Development. – 2020. – Т. 5. – №. 5. – С. 7-7.

25. Mardonakulovich B. M., Ibroximovich R. B. ANALYSIS OF MONITORING AND FULFILLMENT OF CREDIT OBLIGATIONS IN COMMERCIAL BANKS //International Engineering Journal For Research & Development. – 2020. – Т. 5. – №. 4. – С. 7-7.

26. Tursunbaevich B. B., Mardonakulovich B. M. Econometric models of sectoral distribution of investments in the economy of Uzbekistan //South Asian Journal of Marketing & Management Research. – 2019. – Т. 9. – №. 8. – С. 89-98.

27. Bustonov M.M. THE FIRM ASPECTS AND CONDITIONS PROVIDING THE QUALITIES OF ECONOMIC GROWTH IN UZBEKISTAN. International Journal of Economic Theory and Application. 2017/ http:www.aascit.org/journal/I jeta

28. Juraevich M. B., Mardonakulovich B. M., Ibroximovich R. B. DIRECTIONS FOR IMPROVING THE EFFICIENCY OF THE MONITORING OF COMMERCIAL BANKS LOAN COMMITMENTS. A multidisciplinary peer reviewed journal, Vol. 6 Issue 5, May 2020 Page No.: 304-310

29. Mardonakulovich B. M., Abdurakhmanova M. F. Q. MAIN DIRECTIONS OF IMPROVEMENT OF THE PROCESS OF INVESTMENT. International Journal on Integrated Education, Volume 3, Issue VI, June 2020 |18. e-ISSN : 2620 3502. p-ISSN : 2615 3785//

30. Mardonakulovich B. M., Ibroximovich R. B. DETERMINATION OF THE LEVEL OF RISKS IN INVESTMENT PROJECTS USING ECONOMETRIC MODEL. International Journal of Innovations in Engineering Research and Technology [ijiert] issn: 2394-3696 website: ijiert.org volume 7, issue 8, aug.-2020.