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FOREIGN DIRECT INVESTMENT, ECONOMIC GROWTH AND EMPLOYMENT:VAR METHOD FOR UZBEKISTAN

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Abstract:
This paper examines the annual data series from 2000 to 2020 and analyses the interaction among foreign direct investment, economic growth and employment through VAR model.Augmented Dickey-Fuller test, Grangercausality test and variance decompositionresults show that the foreign directinvestment has a positive effect on economic growth and employment, and the economic growth has a positiveeffect on foreign direct investment and employment. There is a bi-directional causality between employment and economic growth.Meanwhile, theforeign direct investment can also result in an increase in the employment.Simultaneously, the high speed economicgrowth can improve the employment in Uzbekistan.More importantly, this paper providesrecommendationsfor Uzbekistan's government to settle social problems such as employment and economic growth.Specifically, at present, Uzbekistan's government should encourage foreign investors to invest in Uzbekistan because itcan be beneficial to employment and economic growth in Uzbekistan. Of course, the structure of employment alsoshould be optimized so as to keep high speed economic growth.

Key words: Economic growth,foreign direct investment, gross domestic product, labour force, VAR model, unit root test, Granger Causality Test

JEL Codes: E27, F43, C32

INRTODUCTION

Sustainable economic growth and employment are among the most pressing issues for the governments of all countries, and foreign investment is used to address these challenges for developing countries.Investment is essential to growth and sustainable development. It contributes to the expansion of the productive potential of the economy, the creationjobs and increased income. Domestic investment is usuallyprevail, but FDI can provide additional benefitsin addition to direct contributions to fixed assets. Under appropriate conditionsforeign investment can increase overall labor productivity inrecipient countries and ultimately lead to improved living standardsthe population of these countries. Foreign direct investment plays an important role in the development of the world economy, as it leads to the strengthening of foreign economic and political ties, increases their foreign trade turnover, accelerates economic development, increases production, increases the competitiveness of manufactured goods in the world market, increases the level of employment.

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The main problem us not yet fully explored aspect of the influence of foreign direct growth investment in developing countries is linked to a country's ability and speed adaptation of foreign investment. Due to the fact that FDI is not only an inflow capital to the country, but also the corresponding influx of technology and know-how, as well as standards corporate governance, the question arises about the country's willingness to accept data innovation, which is associated with the level of its development. In addition, there are positive externalities (externalities) that are transferred from industries with FDI to the rest economies that enhance the impact of FDI on economic growth.

Many international institutions, politicians and economists often see foreign direct investment as a factor in ensuring economic growth, as well as solving the economic problems of developing countries. According to existing research, when foreign investment is effectively placed, it creates economic growth for countries and regions. In some scientific sources, FDI is considered the most effective way to achieve economic growth. For this reason, many governments, especially in developing countries, have a special approach to foreign capital. Most developing countries have ministries, committees, and government agencies that deal with foreign investment, with a special approach to foreign investors through tax incentives, exemption from import duties, housing and land, and various government subsidies. .

It is difficult to assess the real impact of FDI on the economic growth of the host country. At first glance, the above factors of FDI may have a positive impact on economic growth, but in the real cases, negative levels of impact are also observed.Therefore, it is worthwhile to study separately the impact of the possible consequences of FDI on economic growth.

As a developing transition country, Uzbekistan continues to go unnoticed as a destination for investment, the volume of FDI is significantly lowerthan in comparable countries. However, FDI inflows to Uzbekistan are mainly concentrated in the oil and gasindustry - in recent 20 years it accounted for more than 60% of the total FDI. Investments in other industriesare critical to modernization industrial base and increase its productivity.

Until recently, Uzbekistan was not on the map of investors due to the closed economy and adverse investmentclimate. Before 2017, foreign investors faced such kind of barriers to doing business in the country: (i) restrictionson currency conversion and repatriation of profits, (ii) regulatory complexity and opacity and non-compliance withthe principles of supremacy law, (iii) low reliability and complexity connect electricity, gas supply, and water supply, (iv) preferential customs conditions for some market participants and complex customs clearanceprocedures, (v) high tax burden and complexity of the tax regime.

Regarding of positive reforms carried out in recent years to improve the investment climate, Uzbekistan is becoming one of the leading countries in Central Asia in attracting foreign investment. In particular, according to the United Nations Conference on Trade and Development (UNCTAD), in 2019 the economy of Uzbekistan attracted foreign direct investment in the amount of 2286.3 million US dollars. and ranked second for the first time since 1998 among Central Asian countries in terms of attracting foreign investment.

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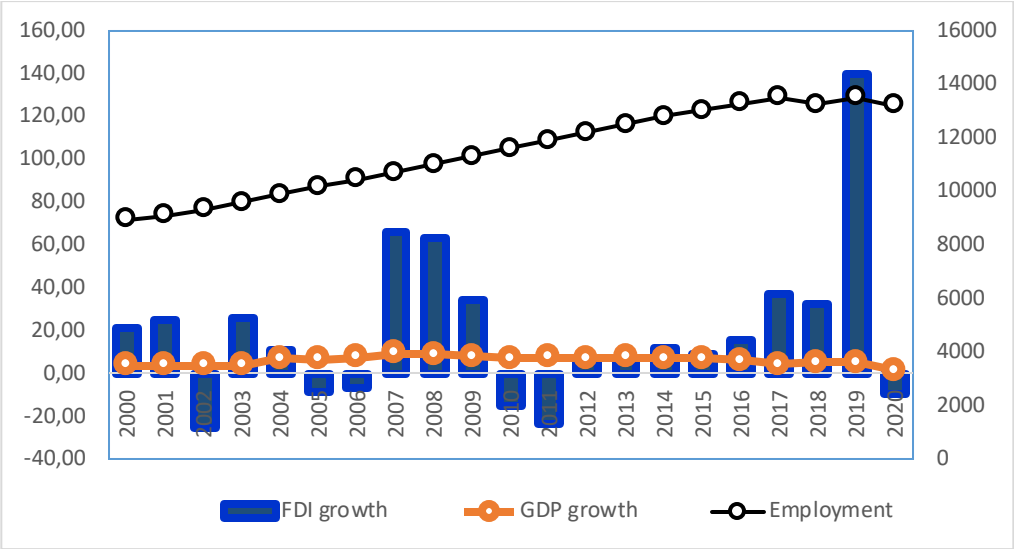

Fig.1: FDI, GDP and Employment change dynamics

The analysis shows that Uzbekistan achieved positive results of GDP growth in the selected years. In 2007, the country's GDP reached its peak, growing by 9.5 percent. Despite the pandemic, Uzbekistan's GDP growth rate in 2020 was positive (1.6 percent).

In terms of growth of FDI, the country experienced a sharp instability in 2000-2011. In particular, in some years, the growth rate of FDI has been positive, in some cases is negative.From 2012 to 2019, positive growth rates were observed, and in 2019 the volume of FDI in the country increased by 140.2% compared to the previous year. As a result of the pandemic, the volume of FDI decreased by 9.7% in 2020.

The inconsistency between the flows of FDI and the GDP growth rate experiencedby the Uzbekistan shows that there is a need to explore empirically theFDI-economic growth nexus. Theoretically, it is widely acknowledged that FDIcontributes to economic growth; however, empirical findings on this issue arerather inconclusive. Therefore, the present study intends to examine empiricallythe relationship between FDI and economic growth for the Uzbekistan. Thisto verify whether the empirical finding is in line with the current trend of FDIand economic growth observed in the Uzbekistan.

The pandemic has had a serious impact on employment in Uzbekistan, as in other countries around the world. By 2020, the employment rate (66.1%) decreased by 1.5 percentage points from the average for 2010-2019 years (67.6%). Although the number of employed people has continued to grow steadily until 2019, by 2020 this trend was broken. In 2020, the number of employed persons accounted for 97.8% compared to 2019. The pandemic has not only led to job losses, but also a decline in the level of economic activity of the population. In 2019, the level of economic activity was 75.0%, while in 2020 the figure was 73.9%.

LITETARUTE REVIEW

Based on the purpose of the study, the literature review examined the linkages between FDI and GDP, FDI and employment, as well as employment and GDP.Despite a large amount of literature on the subject, the role of FDI in economic growth remains highlycontroversial. In most studies, the mechanisms of positive impact of foreign direct investment on the economic growth of the host country have studied in 2 main groups: the transfer of new technologies and

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know-how, the formation of human resources.Many scientific sources acknowledge that as a source of foreign direct investment transnational companies (TNCs) are technologically advanced (Borensztein E et al.,1998). TNCs play a leading role in the cost of research and development worldwide. In addition, through their activities in different countries of the world, TNCs lead to the widespread spread of advanced and modern technologies (Ford T et al, 2008).

The level of sustainable economic growth of the host country depends in many respects on the state of the technologies used in the production system. Many studies have noted that the rate of economic growth in developing countries depends on the level of advanced technologies introduced by TNCs. The transfer of technology from developed to developing countries is the most important positive aspect of FDI (Lim E, 2001).Additionally, technology transfer externalities are a major driver of long-term economic growth (Clark P et al.,2011). The external effect of FDI depends on the nature of the incoming investment. Labor-intensive and market-driven FDI create more significant externalities for home-based firms than for equity-driven firms sector. Smaller, non-export-oriented, foreign-owned firms receive more effect compared to home firms. Increased competition is forcing home firms to use more efficiently use resources and improve technology. Firms benefit from foreign presence, but do not create the conditions for the external effect. The government of host country should pursue a policy of encouraging the inflow of foreign capital, stimulate competition and use external effects.

The second mechanism that can affect the economic growth of a country attracted by foreign investment is related to the formation of human resources. This mechanism can also have positive or negative consequences for economic growth. FDI affects economic development by increasing production efficiency by improving the skills and abilities of the host countries workforce (Ozturk I, 2007). Some authors highlight the effect of wealth as a determining factor in foreign investment in the developing countries. They argue that cost of labour is less important in assessing FDI outflows from a country (Klein M and Rosengren E, 1992)

Poverty reduction in developing and underdeveloped countries also plays an important role through the positive impact of foreign direct investment on labor resources. As a result of the use of advanced technologies introduced by TNCs and the work done to improve human capital, the material well-being of local workers will increase. In particular, higher wages in enterprises with foreign investment than in domestic enterprises will help households out of poverty.

Although there is few specific research on the impact of foreign investment on economic growth in Uzbekistan, the impact of foreign investment as a developing and transition country has been studied, including some group of countries.According to Pasvan (2003), the lack of direct land access in Uzbekistan has weakened the impact of foreign investment on economic growth.It was also noted that the establishment of openness and transparency in the public administration system, compliance with the law can increase the inflow of foreign investment into the country.Arazmuradov's (2015) research is based on the fact that Uzbekistan, with its rich natural resources and large population, has a large market and is able to maintain a stable economic growth rate by increasing the volume of foreign investment.

According to Metaxas and Kechagia (2016), despite the rich natural resources and large market presence, the volume of FDI has remained low among the Central Asian countries as a result of the failure of reforms in Uzbekistan during the transition period.

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As a result of foreign investment, the increase in the number of enterprises with foreign capital in the host country will contribute to the creation of new and productive jobs. According to Craigwell (2006) a highly desired outcome of attracting FDI is the potential for creating employment opportunities in the host country.By the opinion of Fu and Balasubramanyam (2005) a 1 per cent increase in FDI raises employment growth by about 3 per cent,and this is strong linkage between FDI and employment.Syed Zia Abbas Rizvi and Muhammad Nishat (2009) research is devoted to the impact of FDI on employment opportunities and they found the long run relationship between FDI and employment.

The relationship between economic growth and employment has been reflected in many studies. World Bank's (WB) JoGG methodology (2009) divides GDP growth per capita into two components through Shapley Decomposition: output per worker employed and employment-related growth. WB (2018) analyzed the decomposition of GDP growth per capita in Uzbekistan for the 21-year period (1996–2016).

Kapsos (2005) investigated world and regional trends in employment elasticity. He found out that, every 1-percentage point reduction in value-added output in both the agriculture and industry sectors was associated with a reduction of around 0.4 percentage points in employment between 1991 and 2003. Khan (2007) explores the role of employment growth in determining the effect of a given rate of economic growth on the rate of change in poverty. According to his research findings employment elasticity of GDP growth in developing countries is 0.7 .

The review clearly shows that, though, there are many studies on the issue of FDI, economic growth and employment, butvery few studies have considered Uzbekistan. Thus, this necessitates further work to be done in order to identify how FDI and employment might affect growth of recipient countries, especially Uzbekistan.

METHODOLOGY

Nowadays, one of the main models for time series analysis in the economic sphere is the vector autoregression (VAR) model and many studies have noted the advantages of this model (Hamilton, J.:1994, Lutkepohl,H:1991, Runkle, D:1987, Stock, J and Watson M:2001).

VAR consists of a set of *K*endogenous variablesy_t=(y_{1t},…,y_{kt},…,y_{Kt}) fork = 1,…*K*. After includingplags of the endogenous variables, the VAR(p) model may be defined as a special case of multivariate time-series:

$$y_t = a + \beta_1 y_{t-1} + \cdots + \beta_p y_{t-p} + \varepsilon_t \quad (1)$$

In this study we constructed VAR(2) model with three variables (Y_1, Y_2 and Y_3). In our simulations we assume that Y_{1t} depends on Y_{2t} andY_{3t}, Y_{2t} depends on Y_{1t} andY_{3t}, and Y_{3t} depends on Y_{1t} andY_{3t}. VAR(2) modelwith three variables may be defined as:

$$Y_{1t} = a_1 + \beta_{11,1}Y_{1,t-1} + \beta_{12,1}Y_{2,t-1} + \beta_{13,1}Y_{3,t-1} + \beta_{11,2}Y_{1,t-2} + \beta_{12,2}Y_{2,t-2} + \beta_{13,2}Y_{3,t-2} + \varepsilon_{1t,} \quad (2)$$

$$Y_{2t} = a_2 + \beta_{21,1}Y_{1,t-1} + \beta_{22,1}Y_{2,t-1} + \beta_{23,1}Y_{3,t-1} + \beta_{21,2}Y_{1,t-2} + \beta_{22,2}Y_{2,t-2} + \beta_{23,2}Y_{3,t-2} + \varepsilon_{2t,} \quad (3)$$

$$Y_{3t} = a_3 + \beta_{31,1}Y_{1,t-1} + \beta_{32,1}Y_{2,t-1} + \beta_{33,1}Y_{3,t-1} + \beta_{31,2}Y_{1,t-2} + \beta_{32,2}Y_{2,t-2} + \beta_{33,2}Y_{3,t-2} + \varepsilon_{3t.} \quad (4)$$

Variables Definition

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As for the empirical analysis, the VAR is established to analyze the linkage between foreign direct investment and economic growth and employment. And in order to remove the impact of heteroscedasticity, all variables are taken as the logarithm form. logFDI stands for the foreign direct investment; logGDPstands for the economic growth; log EMP stands for the employment. All data-sets are obtained from the State Committee of the Republic of Uzbekistan on Statistics.

Foreign Direct Investment (FDI)

FDI is believed by many policy makers particularly in developing countries to be a catalyst that stimulates economic growth in the regions. Empirical reviews have been showing positive relationship between FDI and economic growth (Campos and Kinoshita: 2002, Weisskopf: 1972a, 1972b, Borenzetein et al: 1998, Noorbakhsh et al:2001). Our previous research also noted the causality relationship of foreign investment with economic growth in Uzbekistan in the long run term (Kobilov A et al: 2020).

Employment (Emp)

Employmentis believed to be one of the key factors that simulate growth. According to Solow, higher population will result in higher labor supply. However, he argued that labour can only stimulate growth in the short run. Empirical studies have also shown positive impact of labor force on economic growth (Tkachenko O.,and MosiychukT:2014). The proxy used for labour in this study was the number of people employed in the economy. It is expected to have a positive impact towards economic growth in the Uzbekistan.

RESULTS AND DISCUSSION

Unit Root Test

A time-series regression approach is used to study the relationship among time series. The first step should beconducted is that the stationary of the original sequence must be tested. The reason is that, even though thesequence is non-stationary, the result of regression test finds that the relationship among different sequences maybe notable. In fact, this kind of regression is spurious regression. Therefore, it is necessary to test the stationaryof the logarithm sequence of variables.

We employ the augmented Dickey-Fuller (ADF) test to test the stationaryof the three time series FDI, GDP and EMP. Indicators of thethree series appear to be non-stationary in level form. Therefore, we investigate thestationary of the first difference of the three series by testing for unit roots. The ADFtests are performed on both the level and first differenced observations by estimating thefollowing three models:

Model does not have trend and intercept:

$$\Delta y_t = \gamma y_{t-1} + \sum_{i=1}^{k} \beta_i \Delta y_{t-1} + \varepsilon_t \quad (5)$$

Model with intercept only:

$$\Delta y_t = \propto_0 + \gamma y_{t-1} + \sum_{i=1}^{k} \beta_i \Delta y_{t-1} + \varepsilon_t \quad (6)$$

Model with trend and intercept:

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$$\Delta y_t = \propto_0 + \propto_2 \gamma y_{t-1} + \sum_{i=1}^{k} \beta_i \Delta y_{t-1} + \varepsilon_t \quad (7)$$

where:

$\Delta y_t = y_t - y_{t-1}$ is the first difference of the series y*t ;*

$\Delta y_{t-1} = y_{t-1} - y_{t-2}$ is the first difference of y_{t-1}, etc.;

α, γ and β_i –are parameters to be estimated;

ε_t –is a stochastic disturbance term.

Table 1. Result of unit root test

Variable	ADF Test Statistic	P-Value	Test critical value
ADF test for unit root on the level series			
logFDI	-2.4905	0.3282	-3.6736
logGDP	-0.258	0.9860	-3.658
logEMP	-2.8139	0.0750	-3.040
ADF test for unit root on the first differenced series			
DlogFDI	-3.8439	0.0367	-3.6736
DlogGDP	-5.838	0.0011	-3.7104
DlogEMP	-4.58316	0.0003	-3.622

Table 1 shows the unit root test of the original sequence and its first difference. According to unit root test results, all variables are non-stationary under the 5% significance level. However, after first difference, allof them become stationary under the 5% significance level.

The choice of the optimum number of lags in order to estimate the VAR model was made using the Akaike (1974, 1976), Schwarz (1978) and Hannan-Quinn (1979) criteria and in all criteria we applied 2 lags.

After entering the GDP, FDI and employment data, the model take the following form:

$$\begin{aligned}\log\mathrm{GDP}_t = {} & 0.764\log GDP_{t-1} + 0.009\log\mathrm{FDI}_{t-1} + 0.178\ \log\mathrm{Emp}_{t-1} \\ & -0.333\ \log GDP_{t-2} - 0.004\log\mathrm{FDI}_{t-2} + 1.225\log\mathrm{Emp}_{t-2} + \varepsilon_t\end{aligned} \quad (8)$$

$$\begin{aligned}\log\mathrm{FDI}_t = {} & 1.606\log GDP_{t-1} + 0.817\log\mathrm{FDI}_{t-1} - 19.909\log\mathrm{Emp}_{t-1} - 5.485\log GDP_{t-2} \\ & - 0.383\log\mathrm{FDI}_{t-2} + 21.82\log\mathrm{Emp}_{t-2} + \varepsilon_{2t}\end{aligned} \quad (9)$$

$$\begin{aligned}\log\mathrm{Emp}_t = {} & 0.536\log GDP_{t-1} - 0.016\log\mathrm{FDI}_{t-1} + 0.043\ \log\mathrm{Emp}_{t-1} - 0.475\log GDP_{t-2} \\ & + 0.011\log\mathrm{FDI}_{t-2} + 0.626\log\mathrm{Emp}_{t-2} + \varepsilon_{3t}\end{aligned} \quad (10)$$

The evaluation results show that the model is significant. First, in all three equations, both the multiple and adjusted R-squared reached a value very close to 1. Second, in all equations, the p-aare less than 0.05.

Granger Causality Test

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The Granger test is a statistical test designed to determine if one time series is useful in predicting another (Granger C:1969). The Granger causality teat will be conducted as to make the dynamic relationship among foreign directinvestment, economic growth and employment more clear. The results of the Granger causality test will beshown in Table 2.

Table 2. Pairwise Granger causality tests

lag	Null Hypothesis	Obs	F-statistic	Prob
2	logFDI does not Granger Cause logGDP	19	3.9121	0.003
2	logGDP does not Granger Cause logFDI	19	2.81935	0.009
2	logFDI does not Granger Cause logEMP	19	12.1711	0.0008
2	logEMP does not Granger Cause logFDI	19	0.27805	0.068
2	logEMP does not Granger Cause logGDP	19	18.5993	0.0001
2	logGDP does not Granger Cause logEMP	19	9.05251	0.0029

According to the pairwise Granger test results, FDI and GDP have a two-way causality relationshipunder 5% significantlevel. It meansthe growth of FDI provide economic growth in the long run, while sustainable economic growth stimulate the inflow of foreign investment.in the Republic of Uzbekistan.Therefore, the Government of Uzbekistan should intensify measures to ensure sustainable economic growth and encourage foreign investment.

Table 2 also implies that there is a long-run equilibrium relationship between foreign direct investment andemployment. A unidirectional causality from foreign direct investment to employment exists. The hypotheses that logFDI does not Granger Cause log EF is rejected and log EMPdoes not Granger Cause logFDI is one-rejected under 5% significant level. It notes that the FDI not only promotes the economic growth but also promotes the employment in Uzbekistan. Indeed, it is possible to increase the employment of the population of developing countries and regions by creating new production facilities based on foreign investment.

Taking the long-run relationship between the economic growth and employment into account, two-way causality between employment end economic growth exists under 5% significant level. Namely, the employment and theeconomic growth have mutual promoted effects.

Decomposition Variance

For applications of time series analysis, a variance decomposition is used to aid in theinterpretation of a vector error correction model once it has been fitted. The variance decomposition indicates the amount of information each variable contributes to the other variables. It determines how much of the forecasterror variance of each of the variables can be explained by exogenous shocks to the other variables. The resultsof variance decomposition show in Tables3-5.

Table 3. Decomposition variance of logGDP

Period	S.E	logGDP	logFDI	logEMP
1	0.007	100.000	0.000	0.000
2	0.009	94.142	1.771	4.087
3	0.015	56.257	41.962	1.781
4	0.022	33.728	56.183	10.089
5	0.034	18.268	63.744	17.988
6	0.048	12.069	64.526	23.405

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7	0.062	9.053	65.748	25.199
8	0.076	7.498	67.025	25.477
9	0.089	6.508	68.464	25.028
10	0.101	5.792	69.732	24.476

According to decomposition variance of logGDP shows that the economic growth is affected by itself in the first period.By the second period, the impact of FDI and employment on economic growth begin to increase. By the third period, the impact of FDI on economic growth increased sharply, and 41,96 percent of economic growth is due to the impact of FDI. In tenth period, all impulses of them trend to be steady (59.73%) from foreign direct investment, 5,79percent from itself, and 54.48% from employment. In sum, it demonstrates that the foreign direct investment has leading role in economic growth.

Table 4. Decomposition variance of logFDI

Period	S.E	logGDP	logFDI	logEMP
1	0.201	6.509	93.491	0.000
2	0.325	7.145	71.485	21.370
3	0.405	8.258	75.214	16.528
4	0.409	9.178	73.547	17.275
5	0.416	11.241	72.541	16.218
6	0.435	12.345	71.894	15.761
7	0.451	14.321	70.694	14.985
8	0.459	14.298	68.275	17.427
9	0.463	16.798	65.547	17.664
10	0.467	17.407	64.274	19.319

Table 4 shows that the foreign direct investment is affected by itself and the Gross Domestic product in the first period. The impulse of economic growth on FDI start to intensify from the second period, and by the tenth period, its impact on FDI reach 17,41 percent.It should be noted that the impact of employment on FDI is high than GDP. In fact, Uzbekistan has a cheap and large labor force is one of the incentives for FDI, which suggests the adequacy of this empirical conclusion.

Table 5. Decomposition variance of logEMP

Period	S.E	logGDP	logFDI	logEMP
1	0.008	4,992	5,553	89,455
2	0.010	12,352	23,983	63,665
3	0.015	7,87	19,505	72,625
4	0.019	8,029	23,479	68,492
5	0.023	6,667	22,849	70,484
6	0.028	6,058	23,415	70,527
7	0.032	5,372	23,333	71,295
8	0.037	4,854	23,411	71,735
9	0.041	4,401	23,422	72,177
10	0.045	4,025	23,441	72,534

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According to Table 5, the employment is affected by itself, the foreign direct investment and the economicgrowth in the first period. But the biggest impulse is from itself. This maybe has a direct connection with humancapital structure in Uzbekistan. However, as time goes by, the current employment has a weak impact on its followingperiods. Results also reveal that the impulse of foreign direct investment is stronger than that of economicgrowth to the employment. Up to tenth period, all impulses to employment are relative steady (23.4412% fromforeign direct investment, 4.03% from economic growth, and 72.53 % from itself). Meanwhile it also explains thatthe foreign direct investment has a positive effect on the employment.

CONCLUSION

This paper concentrates much on the interaction between foreign direct investment and economic growth and employment based on VAR model. According to empirical analysis, the following conclusions can be drawn:

The growth of FDI inflow provide economic growth in the long run, while sustainable economic growth stimulate the inflow of foreign investmentin the Republic of Uzbekistan.Therefore, the Government of Uzbekistan should intensify measures to ensure sustainable economic growth and encourage foreign investment.Furthermore, FDI also can be beneficial to the employment. The employment and the economic growth have a mutual promoted-effect on each other.

Moreover, decomposition variance results show the FDI has leading role in economic growth. It indicates that in the long run period FDI contributes 59.7 % of economic growth.Impact of employment on FDI is higher than GDP. Cheap and large labor force of Uzbekistan is one of the incentives for FDI, which suggests the adequacy of this empirical findings. Also, impulse of foreign direct investment is stronger than that of economicgrowth to the employment. Up to tenth period, all impulses to employment are relative steady (23.4% fromforeign direct investment, 4.02 % from economic growth, and 72.5 % from itself). Meanwhile it also explains thatthe foreign direct investment has a positive effect on the employment.

In order to overcome the stagnation in economic growth caused by the pandemic, Uzbekistan needs to take favorable measures to attract foreign investment due to the fierce competition between countries for foreign investment.The reason is that it can not only promote the economic growth but also it is beneficial to the employment in Uzbekistan. Moreover, Uzbekistan's government also should try its best to adjust the structure of employment so as tokeep the high speed of economic growth. Additionally, government still should be regarded theeconomic growth as a most important task because it plays an important role in improving employment.

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Authors Contribution

First author (Ergashev Rakhmatillo) participated in the study and revised the manuscript. Second author (Kobilov Anvar) performed the analysis , interpretation and wrote the manuscript.Third author (Makhmudov Sukhrob) performed the analysis, contributed to conception, data design, analysis, interpretation and critically revised the manuscript.All the three authors have discussed the results and contributed to the final manuscript .

Conflicts of Interest

No.