



# THE ACTUALITY OF CORRUPTION PERCEPTIONS INDEX IN THE FORMATION AND IMPLEMENTATION OF PUBLIC INVESTMENT POLICY

IKBOLJON ODASHEV MASHRABJONOVICH

*Ikboljon is currently working as a leading specialist at the Institute of Forecasting and Macroeconomic Research under the Ministry of Economic Development and Poverty Reduction of Republik of Uzbekistan, Uzbekistan, Tashkent.*

*E-mail: [Ikboljon.odashev@gmail.com](mailto:Ikboljon.odashev@gmail.com); [Iqbol.odashev@mail.ru](mailto:Iqbol.odashev@mail.ru).  
Mobile: +99897-764-91-01; +99890-903-21-05*

## KeyWords

Corruption perception index, investment policy, world economy, global investment, attractiveness, regression, correlation, shadow economy.

## ABSTRACT

This study investigated the actuality of the correlation between The Corruption Perception Index and The Foreign Direct Investment's attractiveness index at the formation and implementation of public investment policy and influence of development projects of the countries by means of multiple regression analytical formulas. In addition, find some important drivers and factors of modeling issues of the foreign direct investment, which is associated with attracting into the economy, increasing its development attractiveness. Because, foreign investment provides an opportunity to saturate the sectors of the economy that are highly profitable, but at the same time need the necessary material and financial resources.

*COVID-19 is not just a health and economic crisis.  
It is a corruption crisis. And one that  
We are currently failing to manage*

**Delia Ferreira Rubio**  
Chair, Transparency International<sup>1</sup>

## INTRODUCTION

Corruption is a pervasive global problem. Christiane Taubira, the former French Justice Minister, when launching the Foreign Bribery Report in 2014, outlined many of the issues and concluded that corruption is **"stealing the future of the world's children"**. This is no exaggeration<sup>2</sup>.

Today, territorial attractiveness has become an important component of economic policies and seducing potential investors is now a major objective for all states, seen the positive impact of FDI inflows on the host countries (Krugman & Obstfeld, 1999).

<sup>1</sup> Corruption Perceptions Index 2020, World Economic Forum/Benedikt von Loebell / CC BY-NC-SA 2.0

<sup>2</sup> OECD Working Papers on International Investment 2017/01, Foreign direct investment, corruption and the OECD Anti-Bribery Convention, Adrian Blundell-Wignall, Caroline Roulet

Why do we focus on FDI? The answer is very simple – FDI has become an increasingly more important factor of economic growth. This is reflected in the trend over the last several years as countries have increased reliance on FDI. Between 1986-1989 and in 1995 the rate of FDI grew more rapidly than world trade in goods. Between 1973 and 1995 the value of FDI multiplied by more than 12 times, from \$25 billion to \$315 billion, while the value of commodity exports multiplied by about eight and a half times, from \$575 billion to \$4900 billion.<sup>3</sup> In many cases, the value of FDI flowing into a country exceeds the level of official government aid to that country.<sup>4</sup> In brief, while the value of international trade in goods is still far greater than the value of FDI, FDI plays an increasingly important role.

Developing and transition nations have a particularly strong interest in attracting foreign capital. Domestic savings are often insufficient in these countries to finance their investment needs. This capital shortage affects both public and private investment. The Asian Development Bank predicts that the demand for infrastructure investment in Asia alone will reach \$150 billion annually by 2010.<sup>5</sup> The World Bank forecasts the need for investment between \$1.2 and \$1.5 trillion in infrastructure development in developing East Asian countries.<sup>6</sup> Foreign investment is also a key component of privatization schemes in transition economies in Central and Eastern Europe. The privatization process in the Czech Republic, Hungary, and Poland as well as in countries like Slovakia, Bulgaria, and Romania, has actively pursued foreign capital.<sup>7</sup>

In addition, studying of territorial attractiveness as a concept entails two approaches that can be taken into consideration: A theoretical approach based on Foreign Direct Investment (FDI) determinants and a strategic one based on territory promotion policies. The central issue for the economy of any country is that of increasing its rate of economic growth, a reliable driver of which is the formation and development of a strategy for the sustainable development of territories based on the intensification of investment activities. The development of any country is determined by solving the problems associated with the formation of effective regional strategies aimed at accelerating economic growth, which is a necessary condition for attracting active foreign investment. In the process of innovation, investment projects in the formation of production capacity of the regions on a new scientific and technical basis predetermine the competitiveness of the country's regions. Along with solving global problems related to economic and social development, the development of important aspects of the concept of innovation and investment in regional development is an integral part of the modern economy.

#### LITERATURA REVIEW

Previous studies have mainly reported a negative association between corruption level and country wealth [18, 19, 20, 21], i.e., on average richer countries are less corrupt. There is ongoing debate concerning the relation between corruption and economic growth [22]. Some earlier studies suggested that corruption may even help the most efficient firms bypass bureaucratic obstacles and rigid laws [23], while recent papers do not find a significant negative association between growth and corruption [18,19]. The majority of studies have found an insignificant negative association between the corruption level and foreign investments [19, 24, 25], without reporting a specific functional dependence.

Mathematical models have been actively used during the selection of appropriate development schemes. In the process of the digitalization of the economy, the problems of applying mathematical modelling methods to solving problems of sustainable development are becoming increasingly important. Mathematical modelling of the world economy in terms of foreign direct investment, influences of corruption perception has been given attention by researchers such as Makhov [13]. The directions, which the sustainable development of territories based on innovation by means of foreign direct investment, have taken, as well as the application of intellectual decision support methods, are studied in the scientific works of Zakharova [14] and Kolosova & KHavin [15]. According to Badulescu, Bungau & Badulescu [16], the task of introducing a sustainable development model is effectively that of promoting it as the main driving force for sustainability-oriented enterprises, that is, firms that meet profitability, environmental and social requirements. Despite the importance of approaches, methods, models and technologies designed to support decision-making in the field of sustainable development, it is important to take into account the factors of countries' propensity to corruption, and to adequately study the problems associated with mathematical modeling in this area. Because correlation of such kinds of factors such as The Foreign Investment Attractiveness Index and The Corruption Perceptions Index would have helped to make affective decisions and attracted the attention of foreign investors and partners. In this context, an economic analysis of the relationship between countries these global indexes are the requirement of today's global economic development.

Woo (2010) applied panel regression to evaluate the impact of corruption on FDI inflows in 90 countries from 1984 to 2004 and the result indicated that corruption had a negative influence on FDI inflows. Samimi and Monfared (2011) used panel regression to evaluate the effect of corruption on foreign direct investment inflows in 16 Organizations of Islamic Cooperation countries from 2002 to 2008; the findings indicated that corruption has negative correlation with FDI inflows.

#### THE MAIN PART OF THE INVESTIGATION

**Foreign direct investment (FDI)** is a category of international investment involving a long-term relationship and reflecting a lasting interest in and control by a resident entity in one economy (foreign direct investor or parent enterprise) of an enterprise resident in a different economy (FDI enterprise or affiliate enterprise or foreign affiliate)<sup>8</sup>. Capital transferred from the parent firms add to local stock and contribute to increase the host country's production base and productivity through a more efficient use of existing resources. Foreign investments promote the diffusion of new technologies, expertise and managerial and

<sup>3</sup>All data come from Drake (1998)

<sup>4</sup> Ibid.

<sup>5</sup> Quoted in Kamata (1997§).

<sup>6</sup> Ibid.

<sup>7</sup> This topic has been discussed in a number of publications. For a more recent piece see, for example, Weimer (1997).

<sup>8</sup> This definition is based on the FDI concept as presented in the IMF Balance of Payments Manual (BPM 5, 1993)

marketing skills through direct linkages or spillovers to domestic firms. Finally, FDI may also contribute to improve external imbalances due to their greater propensity to export with respect to domestic firms. The main aspects of the benefits that FDI confers on the recipient country can be summarised to the following points<sup>9</sup>:

- FDI brings in financial resources;
- FDI can attract and support the transfer of managerial skills and advanced technical expertise (know-how);
- FDI introduces improved and adaptable skills and new organisational techniques and management practices in the host economy;
- FDI bring in modern technologies, which could contribute in raising the efficiency;
- FDI trans-national activities may provide improved access to export markets;
- FDI cause spillovers of technologies, management experience and skills.

FDI is considered to be one of the most important elements of the strategy of national economies regarding growth and development<sup>10</sup>. Motives refer to economic advantages provided to foreign enterprises by a government, so that they are encouraged to locate in the specific potential host country<sup>11</sup>. A more general approach defines the provided motives as government owned energies or actions that have been planned aiming to affect the decision-making, to increase the rate of attribution of investment or to reduce the uncertainty of the potential investor<sup>12</sup>. The motives of location choice can be categorized in four general categories: motives related to the expected demand in a certain region, motives related to the factors of cost, motives related to the number the domestic and foreigner enterprises in the same region, and the motives related to the public policies of attracting investment capital<sup>13</sup>.

**The Corruption Perceptions Index (CPI)** is an index published annually by Berlin-based Transparency International since 1995 which ranks countries "by their perceived levels of public sector corruption, as determined by expert assessments and opinion surveys." The CPI generally defines corruption as an "abuse of entrusted power for private gain".

The World Bank estimates that over 1000 billion US dollars annually are lost due to corruption, representing 5% of the world GDP. The African Union estimates that due to corruption, the African continent loses 25% of GDP.

According to the investigation of a group of Transparency International experts and a public opinion poll, about one in four people have paid a bribe when applying to the civil service in the past 12 months, with most people in the world (57 per cent of those surveyed) saying governments do not fight corruption well. Fifty-eight per cent of people aged 24 and under said they were capable of making changes against corruption. Fifty per cent of those over the age of 55 also expressed an interest in it. When the Corruption Perceptions Index of the 180 countries surveyed was calculated on a 100-point scale, the index of 2/3 of the selected countries was found to be lower than the overall average index.

The Decision of the Cabinet of Ministers of the Republic of Uzbekistan No. 169 of March 30, 2021 "On the organization of the activities of the Agency for International Cooperation and Development under the Ministry of Investments and Foreign Trade of the Republic of Uzbekistan" and to take measures to prevent other offences, as well as to identify and analyse such adverse events through the development and implementation of measures to improve law enforcement practices and legislation, to eliminate the causes and conditions of their occurrence, and assignments were assigned.

Just as corruption hurts all sectors and industries of the government and society, it is one of the main factors that reduce its attractiveness for economic development, in particular, the attraction of foreign Direct Investment in the economy. Therefore, the index of corruption of the state has a special role in further increasing the investment attractiveness and the formation of public investment policy, an objective assessment of investment flows, increasing the interest of all interested investors in the world. This is because the level of corruption in government agencies is completely contrary to the interests of foreign investors.

The strategic criterion for providing the necessary targeted funding to the state projects, increasing its mutual interest for both foreign investors and the state, as well as the study of the Foreign Investment Attractiveness Index and the State Corruption Perceptions Index, is an important factor of economic development.

#### **PROJECT OBJECTIVE**

The main objective of the study is to prove the existence of a direct correlation between the Corruption Perceptions Index and the Foreign Investment Attraction Index based on regression analysis, correlation coefficients and regression equations.

#### **WAYS AND METHODS OF THE PROJECT IMPLEMENTATION**

A Global Foreign Direct Investment Country Attractiveness Index, Corruption a summary table is formed based on the statistical indicators presented in the official reports of the Perceptions Index and the Shadow Economy Index. It is then based on an assessment of the adequacy of the statistical series using a linear regression equation.

#### **PROJECT IMPLEMENTATION STEPS**

In the first stage, we construct the regression equation based on the tables compiled with the available indicators and shown in the appendix. It is carried out in the following sequence:

First, it is necessary to enter the appropriate designations.

In our example, the object of research is the International Corruption Perceptions Index of developed and pure developed countries (marked as **X**), the attractiveness of the foreign investment. Development of a regression equation based on such concepts as

<sup>9</sup> OECD, Official development assistance and FDI: Improving the synergies, by Vangelis Vitalis, Global forum on International Investment, Attracting FDI for development, Shanghai, December 2002

<sup>10</sup> Balasubramanyam et al (1996), Barrell and Pain (1997), Ramirez (2000), Buckley et al (2002)

<sup>11</sup> United Nations conference on Trade and Development, (1996), 'Incentives and foreign direct investment', United Nations series, A. N. 30, Geneva.

<sup>12</sup> O.E.C.D., 1989, Investment Incentives and Disincentives: Effects and International Direct Investment.

<sup>13</sup> Crozet et al. (2004).

the index (marked as  $Y$ ) and finally the Shadow Economy Index in these countries (marked as  $X_1$ ) and proving the relationship between these variables based on scientific evaluation of its corresponding parameters, foreign investment in the economy to make suggestions and conclusions for work on the international index of propensity to corruption in further enhancing its attractiveness.

**I. Multiple Linear Regression Calculator for the first example**

Values of the response variable  $Y$  vary according to a normal distribution with standard deviation  $\sigma$  for any values of the explanatory variables  $X_1, X_2, \dots, X_k$ . The quantity  $\sigma$  is an unknown parameter.

Repeated values of  $Y$  are independent of one another.

The relationship between the mean response of  $Y$  (denoted as  $\mu_y$ ) and explanatory variables  $X_1, X_2, \dots, X_k$  is linear and is given by  $\mu_y = \beta_0 + \beta_1 X_1 + \dots + \beta_k X_k$  where each  $\beta_i$  is an unknown parameter.

Sample data go here:

Countries	The Foreign Investment Attractiveness Index-2020-(Y)	The Corruption Perceptions Index 2020-( $X_1$ )	The Shadow economy index 2015-( $X_2$ )
Denmark	67.1	88.0	14.70
New Zealand	60.5	88.0	9.00
Finland	65.7	85.0	13.30
Singapore	68.2	85.0	9.20
Sweden	70.4	85.0	11.70
Switzerland	72.7	85.0	6.90
Norway	63.2	84.0	15.70
Netherlands	69.3	82.0	7.80
Germany	69.9	80.0	7.80
Luxembourg	0.00	80.0	10.38
Australia	62.7	77.0	8.10
Canada	63.5	77.0	9.40
Hong Kong	66.8	77.0	12.40
United Kingdom	70.1	77.0	8.32
Austria	62.7	76.0	8.10
Belgium	64.6	76.0	17.80
Estonia	58.2	75.0	18.50
Iceland	0.00	75.0	12.45
Japan	66.0	74.0	8.20
Ireland	61.4	72.0	9.60
United Arab Emirates	59.1	71.0	24.30
Uruguay	44.5	71.0	20.40
France	67.2	69.0	11.70
Bhutan	0.00	68.0	20.28
Chile	50.6	67.0	13.16
United States	75.9	67.0	7.00

**Table 1. Analysis of the impact of the Corruption Perceptions Index on the Foreign Investment Attractiveness Index and the shadow economy index in developed countries (2020)**

Model:  $Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2$ , and using <https://stats.blue/index.html>, we can get these results of this model.

Model: The Foreign Investment Attractiveness Index = 24.4 + 0.62 · The Corruption Perceptions Index - 1.27 · The Shadow economy index

Predictor	Coefficient	Estimate	Standard Error	t-statistic	p-value
-----------	-------------	----------	----------------	-------------	---------

Constant	$\beta_0$	24.4	57.47	0.42	0.68
The Corruption Perceptions Index	$\beta_1$	0.62	0.69	0.91	0.37
The Shadow economy index	$\beta_2$	-1.27	0.93	-1.36	0.19

**Table 2. The paired correlation coefficients of the Multiple Linear Regression equation.**

We will find the paired correlation coefficients of this equation one to another:

$$r_{xy} = \frac{\bar{x} \cdot \bar{y} - \bar{x} \cdot \bar{y}}{s(x) \cdot s(y)} \quad r_{yx_1} = \frac{4439.554 - 77.346 \cdot 56.935}{6.348 \cdot 21.521} = 0.263$$

The values of the pairwise correlation coefficient indicate a low linear relationship between  $X_1$  and  $Y$ . An increase in  $X_1$  by 1 unit of measure leads to an increase in  $Y$  by an average of **0.263** units;

$$r_{yx_2} = \frac{659.393 - 12.161 \cdot 56.935}{4.669 \cdot 21.521} = -0.328$$

The values of the pair correlation coefficient indicate a weak linear relationship between  $X_2$  and  $Y$ . An increase in  $X_2$  by 1 unit of measure leads to an increase in  $Y$  by an average of **-0.328** units;

$$r_{x_1x_2} = \frac{932.048 - 12.161 \cdot 77.346}{4.669 \cdot 6.348} = -0.289$$

The values of the pairwise correlation coefficient indicate a low linear relationship between  $X_2$  and  $X_1$ . An increase in  $X_1$  by 1 unit of measure leads to an increase in  $X_2$  by an average of **-0.289** units;

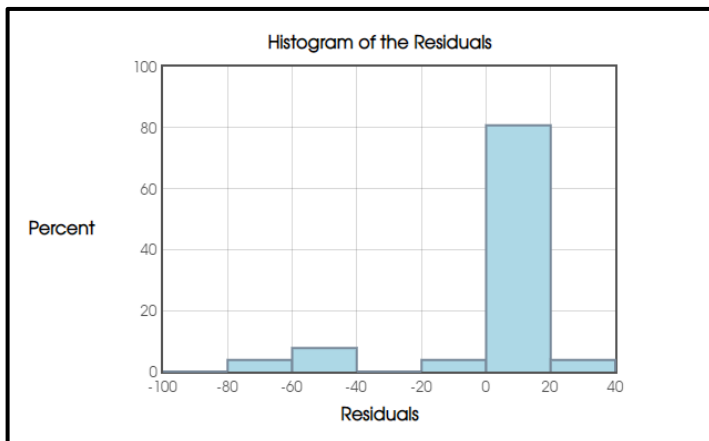
**Summary of Overall Fit:**

R-Squared:	$r^2=0.14$
Adjusted R-Squared:	$r^2_{adj}=0.06$
Residual Standard Error:	21.24 on 23 degrees of freedom.
Overall F-statistic:	1.85 on 2 and 23 degrees of freedom.
Overall p-value:	0.18

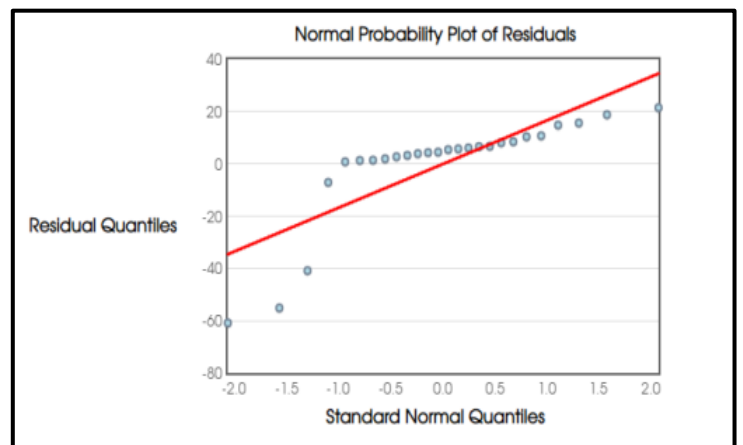
Source	df	SS	MS	F-statistic	p-value
Regression	2	1667.96	833.98	1.85	0.18
Residual Error	23	10373.81	451.04		

Total	25	12041.78	481.67		
-------	----	----------	--------	--	--

**Table 3. Analysis of Variance table of the Multiple Linear Regression equation.**



**Figure 1. Histogram of the Residuals of the Multiple Linear Regression equation**



**Figure 2. Normal Probability Plot of Residuals of the Multiple Linear Regression equation**

**Five Number Summary of Residuals:**

<b>Minimum:</b>	<b>Min = -60.84</b>
<b>1st Quartile:</b>	<b>Q1 = 1.44</b>
<b>Median:</b>	<b>M = 5</b>
<b>3rd Quartile:</b>	<b>Q3 = 8.5</b>
<b>Maximum:</b>	<b>Max = 21.51</b>

**Results of the the MultipleLinear Regression equation:**

Because of calculations, the multiple regression equation was obtained:

$$Y = 24.4007 + 0.6203X_1 - 1.2697X_2$$

An economic interpretation of the model parameters is possible: an increase in  $X_1$  by 1 unit of measure leads to an increase in  $Y$  by an average of 0.62 units; an increase in  $X_2$  by 1 unit leads to a decrease in  $Y$  by an average of 1.27 units. The statistical significance of the equation was tested using the coefficient of determination and Fisher's test. It was found that in the studied situation, 13.85% of the total variability in  $Y$  is explained by changes in the factors  $X_j$ .

**II. Multiple Linear Regression Calculator for the second example**

Values of the response variable  $Y$  vary according to a normal distribution with standard deviation  $\sigma$  for any values of the explanatory variables  $X_1, X_2, \dots, X_k$ . The quantity  $\sigma$  is an unknown parameter.

**Repeated values of  $y$  are independent of one another.**

The relationship between the mean response of  $Y$  (denoted as  $\mu_y$ ) and explanatory variables  $X_1, X_2, \dots, X_k$  is linear and is given by  $\mu_y = \beta_0 + \beta_1 X_1 + \dots + \beta_k X_k$  where each  $\beta_i$  is an unknown parameter.

Sample data go here:

Countries	The Foreign Investment Attractiveness Index 2020 – (Y)	The Corruption Perceptions Index 2020 - (X <sub>1</sub> )	The shadow economy index 2015 - (X <sub>2</sub> )
Angola	26.8	27.0	35.25
Madagascar	25.9	25.0	45.29

<b>Ethiopia</b>	24.8	38.0	25.10
<b>Mauritania</b>	24.8	29.0	25.75
<b>Sudan</b>	19.0	16.0	0.00
<b>Venezuela</b>	23.9	15.0	33.63
<b>Yemen</b>	17.7	15.0	28.81
<b>Iraq</b>	23.7	21.0	0.00
<b>Cameroon</b>	27.3	25.0	28.93
<b>Togo</b>	28.3	29.0	31.49

**Table 4. Analysis of the impact of the Corruption Perceptions Index on the Investment Attraction Index and the Index of the Shadow Economy in Developed Countries (2020)**

**Model:**  $Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2$ , and using <https://stats.blue/index.html>, we can get these results of this model.

**The Foreign Investment Attractiveness Index 2020** = 15.9551+0.2621·The Corruption Perceptions Index 2020 + 0.0777·The shadow economy index 2015

Predictor	Coefficient	Estimate	Standard Error	t-statistic	p-value
Constant	$\beta_0$	15.9551	3.1437	5.0753	0.0014
The Corruption Perceptions Index 2020	$\beta_1$	0.2621	0.1258	2.0842	0.0756
The shadow economy index 2015	$\beta_2$	0.0777	0.0638	1.2176	0.2628

**Table 5. The paired correlation coefficients of the Multiple Linear Regression equation.**

We will find the paired correlation coefficients.

$$r_{xy} = \frac{\overline{x \cdot y} - \bar{x} \cdot \bar{y}}{s(x) \cdot s(y)} \quad r_{yx_1} = \frac{596.16 - 24 \cdot 24.22}{7.014 \cdot 3.262} = 0.65$$

The values of the pairwise correlation coefficient indicate a moderate linear relationship between  $X_1$  and  $Y$ .

An economic interpretation of the model parameters is possible: an increase in  $X_1$  by 1 unit of measure leads to an increase in  $Y$  by an average of **0.65** units;

$$r_{yx_2} = \frac{637.344 - 25.425 \cdot 24.22}{13.828 \cdot 3.262} = 0.478$$

The values of the pair correlation coefficient indicate a weak linear relationship between  $X_2$  and  $Y$ . An increase in  $X_2$  by 1 unit of measure leads to an increase in  $Y$  by an average of **0.478** units;

$$r_{x_1 x_2} = \frac{635.761 - 25.425 \cdot 24}{13.828 \cdot 7.014} = 0.264$$

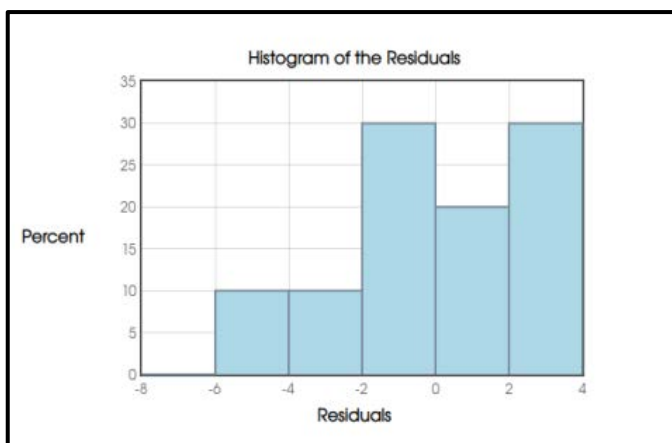
The values of the pairwise correlation coefficient indicate a low linear relationship between  $X_2$  and  $X_1$ . An increase in  $X_1$  by 1 unit of measure leads to an increase in  $X_2$  by an average of **0.264** units;

**Summary of Overall Fit:**

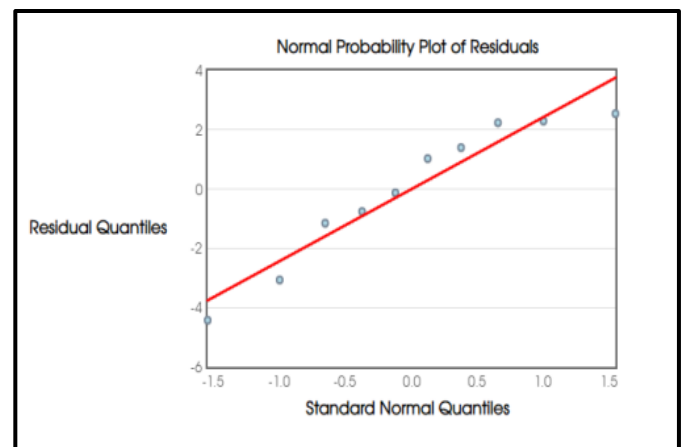
R-Squared:	$r^2 = 0.5238$
Adjusted R-Squared:	$r^2_{adj} = 0.3877$
Residual Standard Error:	2.6907 on 7 degrees of freedom.
Overall F-statistic:	3.8493 on 2 and 7 degrees of freedom.
Overall p-value:	0.0745

Source	df	SS	MS	F-statistic	p-value
Regression	2	55.7372	27.8686	3.8493	0.0745
Residual Error	7	50.6788	7.2398		
Total	9	106.416	11.824		

**Table 6. Analysis of Variance table of the Multiple Linear Regression equation.**



**Figure 3. Histogram of the Residuals of the Linear Regression equation**



**Figure 4. Normal Probability Plot of Residuals of the Multiple Linear Regression equation**



### Five Number Summar of Residuals:

<b>Minimum:</b>	<b>Min = -4.4241</b>
<b>1st Quartile:</b>	Q1 = -1.1485
<b>Median:</b>	M = 0.4528
<b>3rd Quartile:</b>	Q3 = 2.2411
<b>Maximum:</b>	Max = 2.5457

### Conclusion

The expected results of the project will involve researchers in more research in this area to study the impact of not only the Corruption Perceptions Index and the shadow economy index but also several other global indices on foreign investment attractiveness of the development of effective mechanisms based on the development of its main scientific and working evaluation criteria, the development of modern methods of attracting the attention of potential foreign investors to the economy of the republic.

**Based on the scientific results of Tables 1 and 2, which were used in this study, we can make the following conclusions and recommendations:**

- A Global Foreign Direct Investment Country Attractiveness Index. Corruption Perceptions Index and Shadow Economy Indexes are interrelated and change of one leads to change of the other in the right proportion;
- According to studies on developed and underdeveloped countries. The indices selected for these countries are economically significant. Especially in less developed countries. Has a strong interaction property of 65%;
- It is necessary to accelerate the transformation of the economy of the republic through an in-depth study of the most advanced forms of economic and financial management in all sectors of the economy;
- Identify the criteria for calculating these indices I propose to conduct research. Because to have a positive impact on the level of indices. It is necessary to identify the factors that form its basis;
- Distinguish outdated forms of economic and financial management. Show its negative aspects to operating entities. Citing cases of corruption it is necessary to re-examine in-depth the ways of transforming the economic processes that it can produce into new. Modern forms.
- A complex of economic and mathematical models of design and the investment analysis at the stage of environmental screening, as distinct from the existing application of the mathematical apparatus of fuzzy algebra and fuzzy logic. The advantage of the models is that one has the possibility of quantitative processing of qualitative information, as reflecting the semi-structured knowledge of specialists.

### Acknowledgment

I would like to express my deep gratitude to my research supervisors, and the professors of the Academy of Public Administration under The President of The Republic of Uzbekistan, for their patient guidance, enthusiastic encouragement and useful critiques of this research work. I would also like to thank specialists of the Departments of Management at the National University of Uzbekistan named after Mirzo Ulug'bek for their advice and assistance in keeping my progress on schedule. My grateful thanks are also extended to specialists of Institute of Forecasting and Macroeconomic Research for their help in doing the methodological data analysis. I would also like to extend my thanks to the technicians of the National Library of Uzbekistan named after Alisher Navoiy for their help in offering me the resources in running the program.

Finally, I wish to thank my parents and every members of my family for their support and encouragement throughout my study on this article.

### References

- [1] Altomonte, C. (2000) Economic determinants and institutional frameworks: FDI in economies in transition, *Transnational Corporations*, 9(2), 75-106.
- [2] Altomonte C. and Guagliano C. (2003) Comparative study of FDI in Central and Eastern Europe and the Mediterranean, *Economic Systems*, 27: 223-246
- [3] Altomonte, C., Resmini, L., (2002) Multinational corporations as a catalyst for industrial development: the case of Poland. *Scienze Regionali* 2, 29-58.
- [4] Bagchi-Sen, S., Wheeler, K.O. (1989) A spatial and temporal model of foreign direct investment in the United States. *Econom. Geogr.* 65, 113- 129.
- [5] Balasubramanyam, V.N., Salishu M., and Sapsford, D. (1996) "Foreign Direct Investment and Growth: New Hypotheses and Evidence", Discussion Paper Ec7-96, Dept. of Economics, Lancaster University.

- [6] Figlio D.N. and Blonigen B.A. (2000) The Effects of Foreign Direct Investment on Local Communities, *Journal of Urban Economics*, 48: 338-363.
- [7] Freidman, J., Gerlowski, D., Silberman, J., (1992) what attracts foreign multinational corporations? Evidence from branch plant location in the United States. *J. Reg. Sci.* 32, 403-418.
- [8] Fujita, M. and Thisse, J. F. (2002) *Economics of Agglomeration: Cities, Industrial Location and Regional Growth*, Cambridge Univ. Press, Cambridge
- [9] Fujita, M., Krugman, P. In addition, Venables, A.J. (1999) *the Spatial Economy: Cities, Regions, and International Trade*, MIT Press, Cambridge, MA.
- [10] LINNEMANN, H. (1966): *An Econometric Study of International Trade Flows*, North-Holland, Amsterdam.
- [11] OECD, (2001), *Global Forum on International Investment, New Horizons and Policy Challenges for Foreign Direct Investment in the 21st Century*.
- [12] UN, (2002), *Impact of international investment flows on development: The impact of FDI policies on industrialization, local entrepreneurship and the development of supply capacity of developing countries, in particular the least developed countries*, UN Conference on Trade and Development.
- [13] Makhov, S.A. Matematicheskoe modelirovanie mirovoy dinamiki i ustoychivogo razvitiya Na primere modeli Forrestera. Preprinty Instituta prikladnoy matematiki im. MV Keldysha RAN 2005, 1-6. (In Russian)
- [14] Zakharova, E.N. O kognitivnom modelirovanii ustoychivogo razvitiya sotsial'no-ekonomicheskikh sistem. *Vestnik Adygeyskogo gosudarstvennogo universiteta. Seriya 1 Regionovedenie Filosofiya Istoriya Sotsiologiya Yurisprudentsiya Politologiya Kul'turologiya* 2007, 1, 184-190.
- [15] Kolosova, T.; KHavin, D. Innovatsionnyy potentsial kak strategicheskii resurs povysheniya ustoychivosti razvitiya predpriyatiya. *Predprinimatel'stvo* 2011, 5, 49-56.
- [16] Badulescu, D.; Bungau, C.; Badulescu, A. Sustainable development through sustainable businesses. An empirical research among master students. *J. Environ. Prot. Ecol.* 2015, 16, 1101-1108.
- [17] Shaikh, A.A.; Karjaluoto, H. making the most of information technology & systems usage: A literature review, framework and future research agenda. *Comput. Hum. Behav.* 2015, 49, 541-566.
- [18] J. Svensson, *J. Economic Perspectives* 19, 19 (2005). 7.
- [19] P. Mauro, *Quarterly J. Economics* 110, 681 (1995).
- [20] V. Tanzi and H. R. Davoodi, *Corruption, Growth, and Public Finance Working Paper of the International Monetary Fund, Fiscal Affairs Department* (2000).
- [21] J. Shao, P.Ch. Ivanov, B. Podobnik, and H. E. Stanley, *Eur. Phys. J.* 56, 157 (2007).
- [22] J. G. Lambsdorf, *Corruption in Empirical Research - A review, Transparency International Working Paper*, (1999).
- [23] N. H. Leff, *American Behavioral Scientists* 82, 337 (1964).
- [24] D. Wheeler and A. Mody, *J. International Economics* 33, 57 (1992).
- [25] S. J. Wei, *Rev. Economics & Statistics* 82, 1 (2000).
- [26] <http://www.fdiattractiveness.com/>
- [27] [https://www.theglobaleconomy.com/rankings/shadow\\_economy/](https://www.theglobaleconomy.com/rankings/shadow_economy/)
- [28] <https://www.transparency.org/en/>