



CALCULATING SHARE OF FACTORS OF INTENSIVE ECONOMIC GROWTH IN UZBEKISTAN

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ABSTRACT

In 2015, UN member states adopted the Sustainable Development Program until 2030. Clause 8.2 of this program defines the task of "achieving growth in efficiency in the economy." The aim of the study is to group all the factors that affect intensive growth in the country and to determine their level of impact. The study used panel and Pearson correlation methods using IBM SPSS. As a result of the analysis, the quality of public administration was the most intensive factor in the growth of GNPs in the country. What are the sub-factors in the composition of the factors grouped as a discussion? Is it possible to create a regression model to determine the forecast values for the next period in Uzbekistan using these factors? In conclusion, on the basis of systematization and analysis of the factors influencing the rapid economic growth in the country, the level of correlation impact was determined and proposals for its improvement were developed.

CCS CONCEPTS

• intensive economic growth; • innovation; • level of corruption; • rule of law; • alternative and cheap energy sources; • quality of public administration; • favorable conditions for a market economy; • infrastructure; • labor skills;

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1 INTRODUCTION

In 2015, UN member states adopted the 2030 Agenda for Sustainable Development. Clause 8.2 of this program defines the task of "achieving growth in efficiency in the economy" [13].

In developed countries, the contribution of intensive factors in economic growth prevails, while in developing countries, the contribution of extensive factors prevails. Developing countries are developing government programs to develop and stimulate more intensive factors than economic growth factors. In order to further

develop the economy of Uzbekistan, we need to analyze the structure of economic growth in terms of intensive and extensive factors, identify their mutually significant share by dividing intensive factors into appropriate groups and further improve the mechanisms of state development and incentives.

Despite the fact that the direction of intensive growth is very relevant for the UN and Uzbekistan, there is still a lack of scientific work on the analysis of intensive growth in our country.

2 LITERATURE REVIEW

The concept of "quality of economic growth" was originally used in research conducted by the World Bank [3, 4]. In the world practice, the concept of inclusive growth, which interprets the quality of economic growth in harmony with social issues, has been applied in the last decade. In particular, the foreign scientist M. Amponsah rejects the notion that inclusive growth will increase if financial investments increase [5].

3 RESEARCH MATERIALS

We used macroeconomic data from the World Bank and the State Statistics Committee of the Republic of Uzbekistan to measure economic growth. In particular, the current indicators of innovation, the level of corruption in Uzbekistan, the rule of law, alternative and cheap energy sources, the quality of public administration, favorable conditions for a market economy, infrastructure, labor skills, cultural and other factors affecting intensive economic growth were used. Indicators necessary for the study, but not available in the resources, were calculated independently by the author using auxiliary indicators.

4 DATA AND METHODOLOGY

The study used panel and Pearson correlation methods using IBM SPSS program.

5 ANALYSIS

There are certain international methods and macroeconomic indicators for measuring intensive growth factors [6–8]. Based on data from the World Bank and the State Statistics Committee of the Republic of Uzbekistan, we calculated macroeconomic indicators [9, 10]. (See Table 1).

In order to compare the units of measurement and the result, we indexed them in the range of negative result (minimum) "0" and high positive result (maximum) "100" (see Table 1).

The ratio at which international indices should be increased was calculated. And using this indicator, the weight of intensive growth factors for Uzbekistan was calculated using econometric methods.

We have summarized the situation of intensive growth factors in Uzbekistan in 2010–2020 (see Table 2 and Figure 1). We then performed statistical analyzes based on these analytical data.

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Table 1: Analysis of intensive economic growth factors in Uzbekistan (average for 2010-2020)

	Intensive growth factors	International indices and their unit of measurement	The situation in Uzbekistan	Unification of international indices (min 0-max 100)	Correlation index	Mutual share (for pie chart) in%	Standard Beta coefficient
1	Innovations	Research & Development (share in GDP)	2,10	2	0,91	14.17	0,41
2	Health	Health (min 1, max0)	0,26	74	0,90	14.01	0,219
3	Infrastructure	Infrastructure (min 0, max1)	0,27	27	0,95	14.79	0,431
4	The rule of law	ROL (min 0, max5)	1,37	27			
5	Alternative and cheap energy sources	Energy efficiency (GDP per unit of energy consumption; U.S. dollars)	3,57	31	0,72	11.26	0,404
6	Quality of public administration	Government Efficiency (min 0, max5)	1,9	38	0,98	15.26	-0,488
7	Favorable conditions for a market economy	Effectiveness of anti-monopoly policy (1-7 best)	2,7	39	0,98	15.26	-1,333
8	Cultural and other factors	Cultural and other (min 0, max100)	48	48	-0,97	-15.10	-0,3
9	Labor skills	Human Development Index (min 0, max 1)	0,701	70	0,97	15.10	0,94
10	Corruption	Control Corruption Rate (min 0- no corruption, max 100)	25	25	0,98	15.26	1.58
	Total			3,81	5,71	100,00	1.863

On the basis of the analytical indicators of intensive economic growth in Uzbekistan for 2010-2020 (Table 2), the correlation analysis of the indicators of intensive factors with 10 groups of indicators was carried out, identifying the Gross Productivity as a dependent variable (see Table 3).

For significance testing of the result of the correlation analysis Student, Durbin Watson and Sig. (2-tailed) methods (see Table 3) are used.

According to the results of the examination of the importance of correlation indicators, the correlation was considered insignificant, as the significance of the indicator "Rule of Law" is higher than 0.01.

6 RESULTS AND DISCUSSION

As a result of the analysis, the quality of public administration was the most intensive factor in the growth of GNPs in the country. Adding the percentage of all factors gave a 100% result (see Table 1 and Figure 1). Based on the degree of correlation of intensive growth factors to TFP, we calculated their mutual share (see Table 2, Figure 1).

In Uzbekistan, health factors are relatively positive. This can be explained by the effectiveness of free medical services and the health care system in the country. Cultural factors, on the other hand, have been found to have an adverse effect on intensive economic growth. But how does the composition of the factors consist of what sub-factors? We will consider this in our next scientific work.

Table 2: Indicators of intensive economic growth in Uzbekistan

Year	Total factor productivity	Innovations	Health	Infrastructure	The rule of law	Alternative and cheap energy sources	Quality of public administration	Favorable conditions for a market economy	cultural and other factors	Labor skills	Corruption	author's index of intensive growth
2010	33,00	0,06	65	18	17	28	42	31	56	57	17	21,7
2011	34,00	0,8	68	19	17	27	43	30	56	58	17	22,5
2012	34,00	1,2	69	21	18	27	43	32	55	60	18	24,2
2013	35,00	1,6	69	22	18	26	43	32	55	59	19	25,0
2014	35,00	1,6	72	22	19	26	45	33	54	60	20	25,6
2015	36,00	1,8	70	23	19	31	45	34	53	61	20	26,5
2016	37,00	2,1	74	23	21	32	46	35	52	63	21	27,7
2017	37,00	2,1	75	23	22	32	46	35	53	65	21	28,0
2018	40,00	2,6	76	32	27	31	50	39	48	70	26	31,3
2019	39,00	2,30	74	27	27	31	49	38	48	70	25	30,1
2020	27,01	3	1	5	91	17	3	1	5	46	88	8,3

Table 3: Analysis of the correlation between the indicators of GDP and intensive economic growth in Uzbekistan (2010-2020)

		Total factor productivity
Total factor productivity	Pearson Correlation	1
	Sig. (2-tailed)	
Innovations	Pearson Correlation	,913**
	Sig. (2-tailed)	0
Health	Pearson Correlation	,899**
	Sig. (2-tailed)	0
Infrastructure	Pearson Correlation	,946**
	Sig. (2-tailed)	0
The rule of law	Pearson Correlation	,963**
	Sig. (2-tailed)	0,06
Alternative and cheap energy sources	Pearson Correlation	,723*
	Sig. (2-tailed)	0,018
Quality of public administration	Pearson Correlation	,980**
	Sig. (2-tailed)	0
Favorable conditions for a market economy	Pearson Correlation	,975**

** . Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

7 CONCLUSION AND SUGGESTIONS

The scientific research and analysis led to the formation of the following conclusions and recommendations for our research work:

1. The level of correlation was determined on the basis of systematization and analysis of factors influencing rapid economic growth in the country;
2. Another factor hindering the transition to an innovative economy is the lack of development of impartial, non-governmental institutions and insufficient funding of science and new technologies in the country.

3. Proposals have been developed to further encourage and support the state in improving the level and quality of sustainable economic growth, in particular, we propose to exempt from corporate income tax the part of profits directed to intensive growth (modernization of the enterprise, training of workers, productivity).
4. Increased productivity can lead to job losses. As a solution to this risk, we propose to reduce working hours and create new jobs in the cultural sphere. This is evidenced by the example of the Scandinavian countries - a constant leader in the index of the most livable cities.
5. In order to reduce corruption, it is necessary to increase the ratio of funds spent on the development of face-to-face

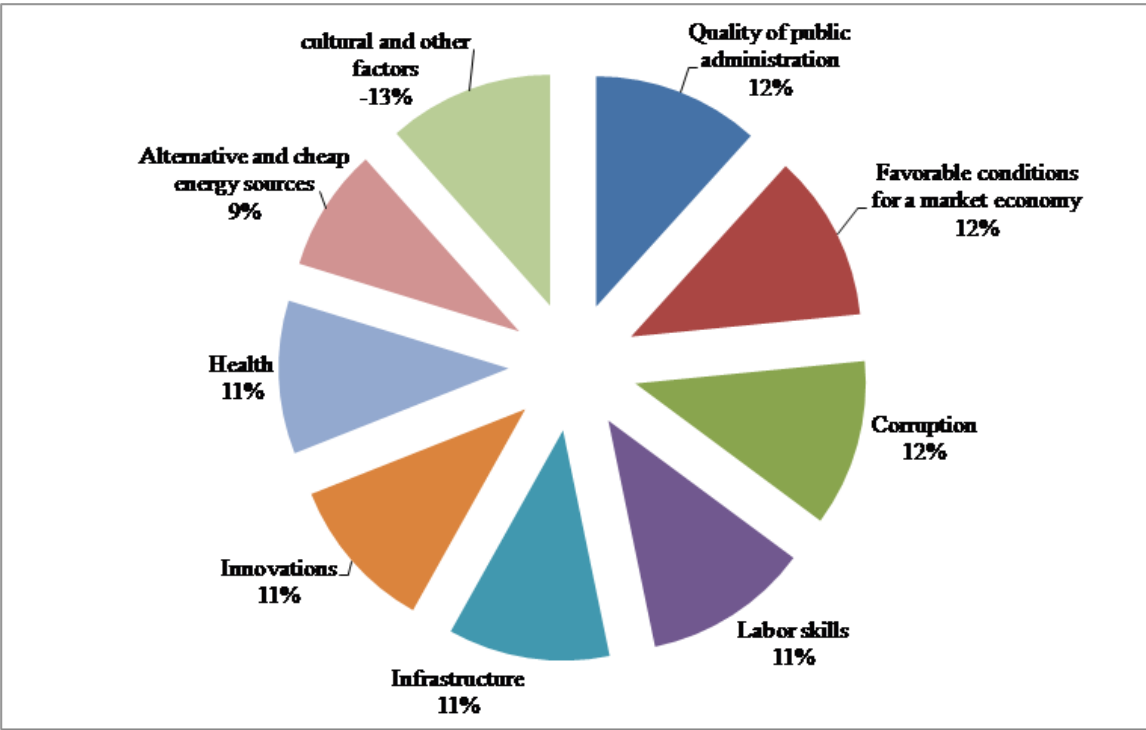


Figure 1: Mutual share of intensive growth factors in Uzbekistan

- communication, disconnection using the opportunities of the digital economy to 15.24% of total intensive investments and targeted spending. We propose to increase the income and level of the population, as well as to promote the prohibition (impurity) of corruption through religion through the media.
6. To strengthen public control and improve the system of financial incentives to further enhance the rule of law, in particular, to inform law enforcement agencies about violations of public order, violations of the law (theft, stabbing, drug addiction, gambling, etc.) (photo, video, phone ...) we offer an incentive of 1% of the fine levied on the offenders.
 7. In order to increase the use of alternative energy sources, including solar power plants, production in Uzbekistan, we propose to improve government incentives for businesses in this area, in particular, to provide a 50% discount on income tax.
 8. It is recommended to improve the quality of public administration. To do this, it is necessary to improve the quality of public administration by reducing the same functions in several government agencies and unifying responsibility in organizations. Public service agencies are proposing 100% digitalization in order to introduce the services of all government agencies and reduce corruption.
 9. We also propose to merge government agencies with similar activities (for example: the National Guard and the central office of the Ministry of Defense). This is explained by budget savings and improved quality of public administration.

10. In order to improve the favorable conditions for a market economy, it is recommended to develop competition, liberalize the economy, ie reduce government intervention in the economy (business). It is recommended to further increase the privatization (privatization) of state-owned enterprises, in particular, the privatization of all enterprises belonging to the Uzavtosanoat Association. Social networks: transport lines, excluding utilities.
11. Given the importance of skills in intensive economic growth, it is necessary to increase the coverage of students (applicants) in higher education institutions in Uzbekistan to 100%.
12. We propose to establish the distribution of investments into intensive and extensive, and thus gradually increase the ratio of intensive investments to the ratio of extensive investments.
13. Based on the experience of commercial banks in Uzbekistan, they are offered a 13-month system at the end of the year and an annual incentive of 10% of the annual salary for the length of service, in order to increase the willingness of employees to work in enterprises for many years.
14. In order to increase the sense of involvement of workers in the development of the enterprise, taking into account foreign experience in joint stock companies, we propose to introduce a system of selling a portion of the company's securities - shares to employees for preferential, interest-free term payments.
15. Given that economic growth is closely linked to the skills and abilities of the workforce, we recommend doubling the

number of scholarships of the “El-Yurt Umidi” Foundation and employing them in the country only after their return from abroad in order to increase the efficiency of their use.

16. We recommend that these proposals be taken into account in future government programs.

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