IMPACT OF EXPORT DIVERSIFICATION ON ECONOMIC GROWTH OF UZBEKISTAN

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ABSTRACT

This article determines the economy of export diversification and the degree of its impact on economic growth of Uzbekistan. Results of the research show that there is a positive correlation between export diversification and dynamics of the national economy growth. Moreover, the article proves that tendency to raising the share of non-resource technological sectors in the export promotes development of the economy of Uzbekistan. We used OLS for analysis in our research. The data was a secondary and in quarterly period for 95-04. Recommendation for further implementation of the innovative direction of export diversification in the article assumes a targeted and sustainable modernization of the export range in accordance with the trends of the scientific and technological potential of the country.

Key words: export diversification, economic growth, Uzbekistan, export structure.

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1. INTRODUCTION

During recent years, the volume of foreign trade turnover of Uzbekistan has increased and this factor has been providing a positive effect on the development of the national economy for several years. The volume of export has increased significantly (from 3.3 billion USD in 2000 to 13.5 billion USD in 2014 – for detailed information see Annex 1). This indicator reflects not only the growth in export, but also a qualitative improvement of the structure of the economy (for detailed information see Annex 2). Uzbek economy demonstrates annual growth of at least 8% in the last 11 years (for detailed information see Annex 3). We think, in addition to these results, there were a positive impact of good price in the world market to cotton fiver and non-ferrous metal. Besides, for the last years of economic development we can observe declining the share of unprocessed and raw material resources and raising industries, where production is based on high innovative technologies in export structure (for detailed information see Annex 4). In general, measures aimed at increasing the international competitiveness of manufacturing technology or in general machinery and equipment, as well as high technology innovative products and services are being implemented. And, Uzbek export, to a certain extent, beginning to comply with the situation prevailing in structural changes, occurring in the world trade. So, the problem of increasing international competitiveness of products and diversification of export to Uzbekistan is a prior target for the country.

The President of Uzbekistan Karimov (2016) has noted that «In conditions of more a toughening competition in the world markets, we need to raise competitiveness of the national economy, promote support of exporting enterprises, comprehensive encourage of participation of farms in export, small businesses and private entrepreneurship. … production growth of modern ready-made produces with high added cost, required in the foreign markets, will facilitate high rates of a sustainable economic growth». This means that the problem of diversification of exported goods and services of Uzbekistan in connection with the diversification of the national economy in the framework of structural changes happening in the world economy has become particularly important.

Issues about structural improvement of the national economy and export diversification have been studied by many foreign economists. However, aspects of the diversification of Uzbekistan

export haven't been comprehensively investigated yet. Therefore, in this research we chose the diversification of Uzbekistan export as the main factor of influence on economic growth of the country and identified main directions of export diversification.

2. LITERATURE REVIEW

Diversification is usually considered as the distribution of risks, however, in our research this term is defined as change of the structure of industries. Main focus in this article is made on the diversification of export by industries of the economy.

In economic researches, the issue of economy diversification is traditionally considered on the microlevel in the meaning of reducing earnings volatility through risk sharing (Heston and Rouwenhorst, 1994; Griffin and Karolyi 1998). Diversification as a reduction in the concentration of industry or export was analyzed at the level of regional economy in scientific papers of Attaran (1986), Malizia and Ke (1993), Siegel et. al (1995), Wagner and Deller (1998), Frenken et. al (2007). Diversification on macrolevel has presented with more interest in scientific papers of Imbs and Wacziarg (2003). These researches present non-linear connection between diversification of the country's economy against level of its' GDP per capita.

Relevance of this research to diversifying the economy of Uzbekistan is connected with the raw material orientation of export. As the experience of developed countries shows that any change in the structure of export towards primary commodities is ensured not only by means of the development of economic diversification strategy (Guriev et. al, 2010). However, the industries which are developed in the result of diversification are mainly depended on such kind of industries which help their initial specialization. It explains the necessity of accounting an industrial structuration of the economy.

In macroeconomic literature, diversification of the economy is not often considered as an independent factor that can influence the rate of economic growth. Frequently the problem of diversification occurs in the context of studying the problem of volatility growth. These problems have been considered in details as the case study of developed countries in scientific papers of Hesse (2008), Mejia (2011), Carrere et. al (2013). Here, diversification is considered

by researches as the synonym of volatility of the economy growth (Mobarak, 2005) or one of the factors making an impact on it (Koren and Tenreyro, 2007; Cuberes and Jerzmanowski, 2009; Haddad et. al, 2012). In addition, as the scientific paper of Carrere et. al (2013) states, diversification is often considered by economists as a variable which depends on the level of per capita income of the country.

And the result of these authors found an empirical regularity which coincides with basic principles of economics: when GDP per capita is growing firstly, the export concentration easily reduces, but afterwards, when it achieves a certain degree the concentration grows back up. First, this regularity sets technical restrictions for considering diversification as an independent variable, impacting GDP per capita or its growth rates. Nevertheless, such kind of analysis shows some inaccuracy. According to the data of such countries as Qatar or Norway the trend on specialization at a high per capita rate were detected, however, the influence of the overall volume of the GDP were not taken into account.

In generally, economists showed that there is a positive correlation between economic growth and export diversification by empirical analyzing diversification of export as an independent variable, and estimating its impact on the dependent variable – growth of economics (Al-Marhubi, 2000; Lederman and Maloney, 2003; Agosin, 2007; Feenstra and Kee, 2008). However, an industrial aspect of export diversification is not usually considered. Diversification is calculated either as a formal indicator of the reverse concentration or as a variety of exported goods.

Here, they tried to explain that countries should try to approach in various variants to develop high-tech industries or to expand the geography of exporting raw materials. When Stanley and Bunnag (2001) studied Central American countries found that the level innovativeness of exported goods were not so important as receiving stable profits from the sale of these goods, or if we say in other words, they had a negative correlation with a consolidated export incomes by the economy. Moreover, it is acquired that the pursuit of exporting high-tech goods sometimes can lead to much more financial losses because work force may not have a

sufficient quality of skills and capital investments for the production of innovative products may not always be sufficient enough to the required volume (Love, 1982).

Scientific literary sources provide different indexes measuring export diversification, for example, indexes of Herfindahl-Hirschman, Theil, Hoover and others. However, using these indicators for analyzing diversification of industry structure of the economy is not correct because industries are not equal due to the peculiarities of their classification and not only due to the presence of inequality.

Thus, main objective of this article is to consider the dynamic aspect of export diversification. The hypothesis of our research is increase of the share of high-tech industries will positively impact on the growth of economy. Importance of evaluating diversification of export on economic growth is that it enables to make a conclusion how strategically correct way the economy of Uzbekistan is following and presents the overview about the nearest future.

3. METHODOLOGY

We used regression analysis to assess the degree of export diversification on GDP growth. Regression analysis method represents the Ordinary Least Squares Time-series Analysis. We chose the share of cotton fiber (cotton), the share of food products (food), the share of chemical production (chemprod), the share of energy resources and petroleum products (oilgas), the share of ferrous and non-ferrous metals (metal), the share of machinery and equipment (machinery), the share of service sector (service) as the main factors making an impact on dependent variable (gdpgrowth). With the aim of performing unit-root-test before regression analysis, we have checked variables using Dickey-Fuller test and p-value of all variables were in marginal rates. Correlation dependences between all variables are normally significant. We obtained results by using EVIEWS 8.1.

Due to the fact that practical significance of this research is important for Uzbekistan, all data for the analysis were chosen as case study of this country. The data were obtained from State Statistic Committee of the Republic of Uzbekistan. All data are secondary and were presented as the quarterly time series for the period of 95-14. There are shown graphical values of all the data

on the dynamics of diversification of Uzbekistan export and its economic growth in Annex 5. All variables are measured in percentage indicators.

4. RESULTS OF EMPIRICAL ANALYSIS

Results of the regression analysis of the impact of the level of diversification level on economic growth accomplished using EVIEWS 8.1 illustrates the following results:

Model OLS	**Coefficients**
COTTON	-0.119 (0.034*)
FOOD	0.077 (0.090*)
CHEMPROD	0.193 (0.391**)
MACHINERY	0.555 (0.179**)
METALL	-0.212 (0.195*)
OILGAS	0.053 (0.040**)
SERVICE	0.050 (0.035**)
R-squared	0.938
Adjusted R-squared	0.901
S.D. dependent var	2.748
Akaike info criterion	2.832
Schwarz criterion	3.230
Hannan-Quinn criter.	2.910
Durbin-Watson stat	1.910

* p-value of coefficients>0.10 (insignificant)

** p-value of coefficients<0.10 (significant)

Obtained results show that R^2 equals to 0.94. It proves presence of high-level relation between economic variables. To have an opportunity to compare the models with different number of factors and to make a number of factors not influence on the R^2 statistics, adjusted coefficient of determination is usually used. In our case this adjusted coefficient of determination accounts for 0.90. In the result of regression analysis we determined that the value of such variables as cotton fiver, food products, ferrous and non-ferrous metals probability value exceeds 10% and these

factors found as insignificant in this model. Such factors as chemical production, machinery and equipment, energy resources and petroleum, service sector can be considered as significant.

Basing on the results of the regression analysis of the data of Uzbekistan, we revealed that there is a positive impact of export diversification on dynamics of economic growth. Results indicate that the tendency of increasing the share of non-primary hi-tech based industries in export leads to the development of the economy. Most of all, it is necessary to develop the export of products of machinery and equipment industries as well as processed chemical products. Export of oil and gas products and service sector has a positive effect on economic growth, but the level of its influence on economic growth is relatively small.

In the regression, the smallest value among the models of Sum of squared residuals has been obtained. The standard error of regression or scatter observations of the simulated values has been chosen as the closest to 0. The fact that probability of F-statistics model is equal to 0 is considered to be the most important factor determining accuracy and reliability of the regression. OLS model has been chosen as the smallest value of the model according to three criteria: Akaike info criterion, Schwarz criterion, and Hannan-Quinn criterion. Durbin-Watson stat criterion of the model has shown an ideal indicator of 1.91. The regression performed on the basis of the OLS has been examined by Gaus-Markov assumptions.

5. Conclusion

Summarizing the findings of the analysis, it should be noted that export diversification is not only the physical expansion of the range of goods and services, traded in the international trade. We designate it as the growth in the number of different combinations of factors of competitiveness, operating both in and out of the country. These effective combinations of factors of competitiveness enable to open, to master and to develop new directions and new forms of export activities.

In general, literary analysis enables to make a conclusion that export diversification facilitates equal distribution of income among the industries of economy and improve the directions of interindustrial flow of capital. This assures risk avoidance and the economy becomes more

predictable. Thus, the diversification of export enables to neutralize the negative demonstrations of globalization.

Regression analysis showed that development of high-tech production and export of products manufactured in these industries has a positive impact on the economy. On the basis of this thesis, it is proposed to apply the innovative direction of export diversification. In the framework of this direction, a targeted and consistent upgrading of the export product range is being implemented in line with the trends of developing scientific and technological potential of the country, and changing requirements of the global market. The entire system of national competitive advantages is being developed. New clusters of competitive industries, mainly focused primarily on high-tech processing and production are being established.

The article does not consider main factors of the influence on diversification of export, such as the impact of tax incentives on export, banking policy in lending, the government regulation of prices for goods, existence of customs tariff barriers to export, national currency rate and for future researches it is offered to explore these aspects of analysis.

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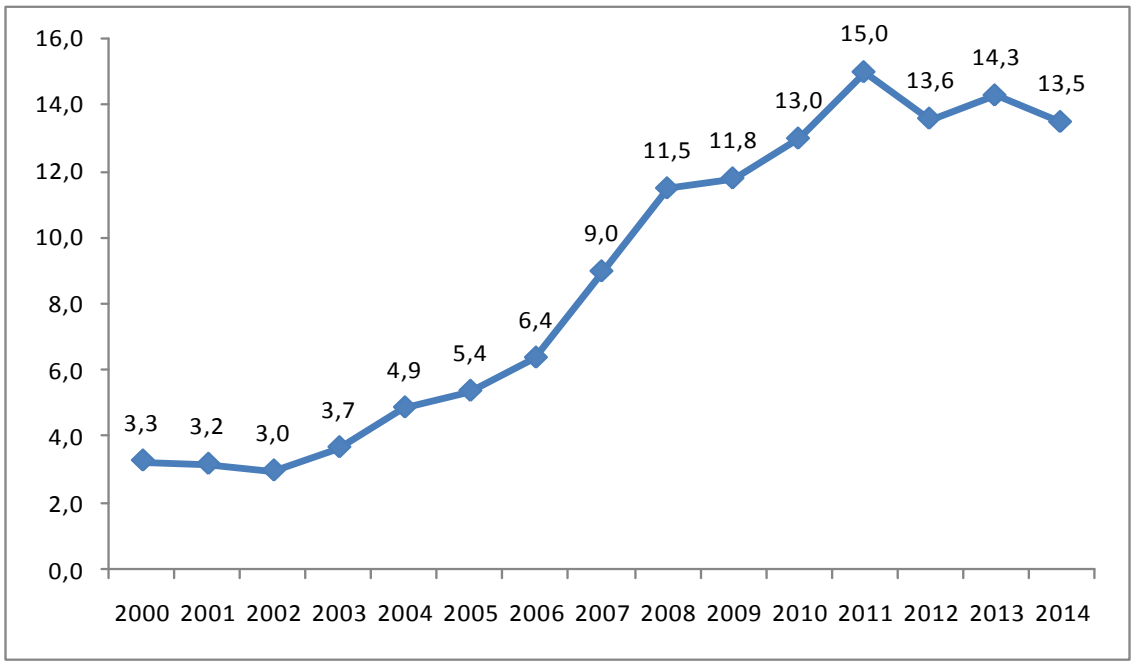
Annex 1

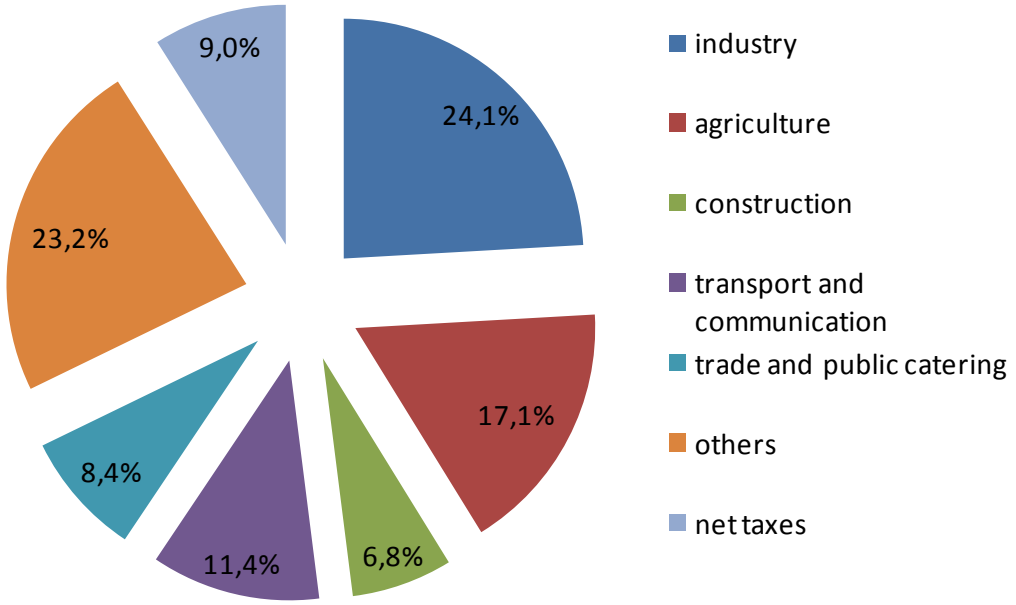
Volume of export of Uzbekistan, in billion USD



Source: Statistics of State Statistics Committee of the Republic of Uzbekistan

Annex 2

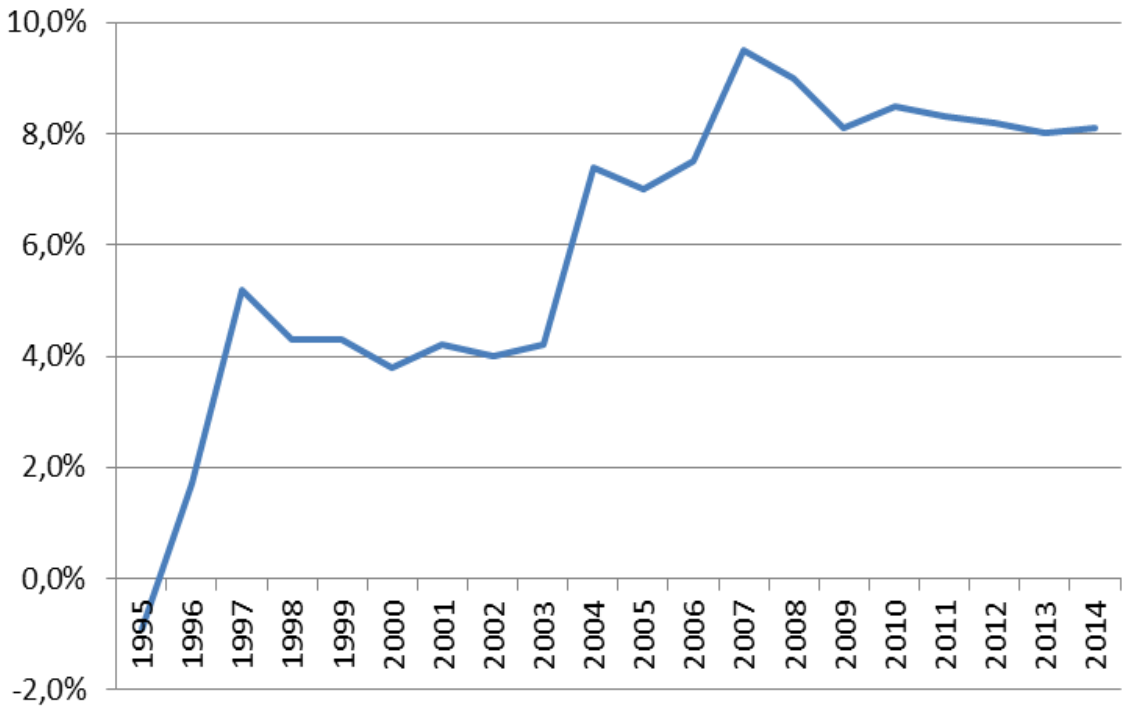
Structure of Uzbekistan GDP by industries in 2014, in %



Source: Statistics of State Statistics Committee of the Republic of Uzbekistan

Annex 3

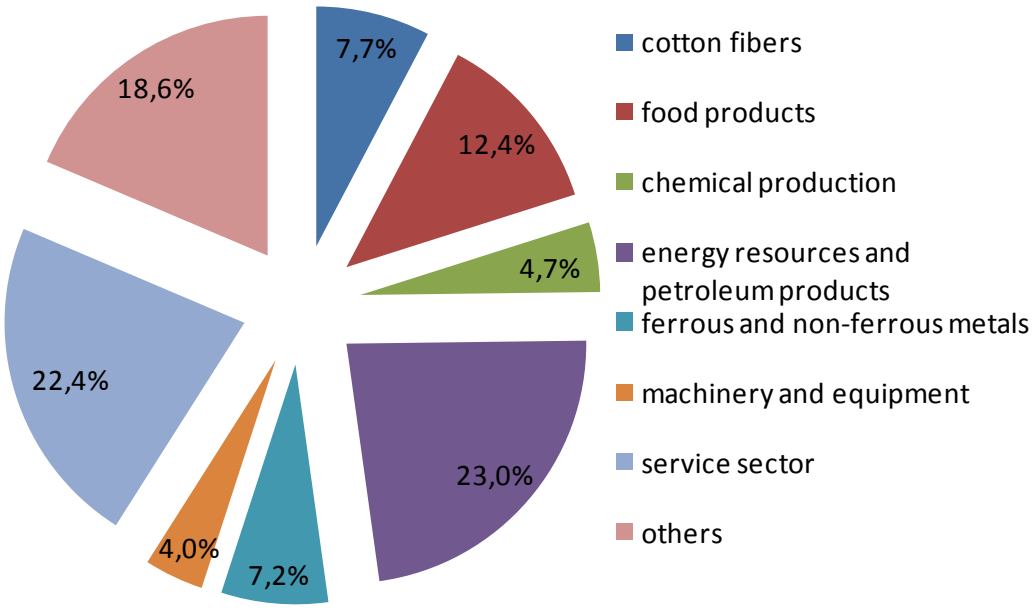
Economic growth rate of Uzbekistan for 1995-2004, in %



Source: Statistics of State Statistics Committee of the Republic of Uzbekistan

Annex 4

Export structure by industries of Uzbekistan in 2014, in %



Source: Statistics of State Statistics Committee of the Republic of Uzbekistan