

Theoretical Analysis Of Factors That Influence For Localization Development

Sobinova Rano Solijonova

Abstract— In this paper, the impact of localization on the development of regional industry is econometrically modeled. In this study, we performed an econometric analysis of the factors that directly affect localization. According to him, the analysis of the forecast model of the share of localized production in the total industrial output of the country and the factors influencing it shows that the obtained MAPE (average absolute percentage error of the forecast) is 0.32% and Tayl coefficient is 0.001. the accuracy of the forecast on the formed model is very high. It is based on the need to pay more attention to attracting investments in the wider introduction of localization processes in the country and increasing its share in the country's GDP. According to the analysis, investment and localization are mutually encouraging.

Index Terms— regression, test, correlation, localization, influencing factors

1 INTRODUCTION

THERE are various directions of development of the world economy, one of which is the organization and localization of localization in the field of production or services. In this regard, it should be noted that among the countries with sustainable economic growth, the United States, China, Germany, South Korea, Canada, Nigeria and Brazil are rapidly implementing the process of localization in various sectors of the economy. China, Germany, South Korea in the field of automotive; Brazil in the field of healthcare and pharmaceuticals; Canada in the field of energy; In the oil and gas sector, Nigeria has successfully implemented localization processes..[1] In the research of foreign scholars, the implementation of localization policy in the world, ensuring the balance of exports and imports of the country in the past, increasing employment, reducing the impact of external and internal negative factors on the economy.[11] Today, localization is being studied as a means of increasing the country's investment attractiveness. In this context, it is necessary for each state to organize the localization process, taking into account its internal capabilities and strengths, to develop and forecast optimal ways to assess efficiency indicators, and thus to choose the right strategy. It is important to conduct scientific research in the above-mentioned areas.. [12]

2 LITERATURE REVIEW

The issues of global economic development and international migration of production resources, "localization of production", "local products" were discussed by foreign scientists V.Kondratyev [1], Thünen Johann [2], Granberg A.G. [3], Blaug M.[4], Lesh A. [5], A.M. Vazyansky [6], Kovalev P.A. [7], Y.Nikolov [8], N.X.Khaydarov [9], Egamberdiyev S.S.[10]. Bandurin and others have separately studied the macroeconomic aspects of globalization and scientifically approached localization as a factor in import substitution, investment attraction, modernization of production.

- Sobinova Rano Solijonova, Senior teacher at "Economics and management", Termez state university, Termez city, Republic of Uzbekistan

3 ANALYSIS AND RESULTS

In order to determine the effectiveness of localization processes in the country, the factors affecting the share of localized products in the total industrial output of the country were studied econometrically, and as a result, regression values of factors affecting this share were determined.

We know that a number of factors for the development of production have an impact on the production process. Such factors include investment, the volume of exports of manufacturing enterprises, customs duties, raw materials, labor, the level of provision of the country's economy with material resources, transportation costs and others.

Initially, in order to econometrically study the share of localized products in the total industrial output of the country, the following function was created:

$$VIP = f(IC, LVIP, LPEV) \quad (1)$$

At the same time, VIP - the share of localized production in the total industrial output of the country (billion soums), IC - the volume of investments in fixed assets from all sources of financing in industries (at current prices, billion soums), LVIP - included in the localization program import volume of enterprises, LPEV - export volume of enterprises included in the localization program.[10]

The following reflects the share of localized production in the total industrial output of the country and the development trends of the above factors affecting it (Table 1).

Before performing the first, econometric analysis, we logarithm the given statistical indicators. This is because the logarithmic values reduce the periodic fluctuations of economic indicators, which reflect values close to the linear view.

Table 1
The share of localized production in the total industrial output of the country and the dynamics of the

factors affecting it [10]

Years	Volume of industrial production (billion soums)	Investments in fixed assets from all sources of financing by industry (in current prices, billion soums)	The volume of enterprises included in the localization program is import	The volume of enterprises included in the localization program is exports
	VIP	IC	LVIP	LPEV
2005	11028,6	1032,4	1524880,42	1201675,1
2006	14640,3	1384,6	1523787,17	1932773,72
2007	18447,6	2223,2	2456694,83	2772002,859
2008	23848	3293,8	3214912,497	2892848,488
2009	28387,3	3556,9	2895657,953	1973136,643
2010	34499,1	4659,9	3727177,181	2536842,248
2011	42158,8	6070,3	4253175,421	3252926,227
2012	51059,3	7794,0	4809555,461	3093463,211
2013	64354,7	9813,4	5504238,216	2651784,472
2014	75194,2	13164,5	5209895,482	2370900,612
2015	97598,2	18795,5	4328122,3	1732598,945
2016	111869,4	20537,3	3410925,138	1944299,108
2017	148816,0	32047,1	4246960,088	2343055,603
2018	154749,5	34899,1	4365999,980	2387070,807

The logarithmic values of the initial economic indicators given below are reflected, in which sharp economic fluctuations are not clearly visible and initial informal stationary cases are observed in the dynamic series.

As mentioned above, we carry out a multifactor regression analysis of the logarithmic values of the factors influencing the share of localized production in the total industrial output of the country.

The results obtained are reflected in the following table (Table 3).

The results of multidimensional regression analysis of the factors influencing the share of localized production in the total industrial output of the country show that the values of this econometric analysis were obtained using the "smallest squares" method, which at current prices included in fixed assets from all sources of financing by industry. investment (lnIC) has a very strong impact on the localization process.

The results of the econometric analysis show that for this variable Prob (0.0000) <0.05 and the coefficient of

determination (R^2) 0.997173, Fisher's statistic (F-statistic) 1058.125 and its probability Prob (F-statistic) <0.05 with the above parameter. the quality of this equation is high.

However, the null hypothesis (H_0) is accepted for the regression coefficient of the import volume of the enterprises included in the localization program and the regression coefficients of the export volume of the enterprises included in the localization program, which are independent variables.

The F-statistic also confirms that the two independent variables selected by us when tested in the null hypothesis have an effect on the dependent variable. However, their sphere of influence is less than 90 percent.

In our econometric analysis, R^2 indicates that they are close together. This is explained by the fact that investments in fixed assets from all sources of financing in the canoat industries, which are independent variables, and enterprises included in the localization program can form a 95% dynamics of the share of localized products in the volume of canoat production.

The results of the econometric analysis show that a 1% increase in fixed capital investment from all sources of financing in the localized canoat industry could lead to an additional 7.8% increase in the volume of localized canoat products.

We know that expanding production is effective until the amount of additional revenue equals the amount of additional costs.[10]

We will now perform diagnostic tests on the results obtained to verify the robustness of the econometric model above. Therefore, in order to check the autocorrelation for model residues, we conduct a "Broysha - Godfrey diagnostic test."

Test results show that there is no autocorrelation in the residues. This is because, based on the zero hypothesis (H_0), the P-value is greater than a coefficient of 0.05, which confirms that there is no autocorrelation in the obtained analyzes (Table 4).

A diagnostic test was performed to check for residual members of the model for heteroskedasticity problems. The test results indicate that there is no heteroskedasticity problem in the model remains. This is because, based on the zero hypothesis (H_0), the P - value is greater than a coefficient of 0.05, which indicates that there is homoskedasticity in the residues.

The presence of residual homoskedasticity also makes it possible to predict the formed multifactor regression model. The problem of heteroskedasticity in the econometric model given below is solved using the Broysh-Pagan-Godfrey test (Table 5).

To check the normal distribution of residues, we conduct a "Jarkua - Bera diagnostic test." The test result shows that the problem of the absence of a normal distribution in the distribution of the model residues is clearly visible. This is because, according to the zero hypothesis (H_0), the P-value is greater than a coefficient of 0.05, which may be the basis for accepting the hypothesis that the residues are normally distributed.

Figure 1 below shows the results of the Jarkua-Bera diagnostic test and its graph, where the probability of the following value for a normal distribution is greater than Prob (0.788) > 0.05.

Now, based on the results of the above econometric analysis, it can be said that the share of localized production in the total industrial output of the country is very high (in current prices, billions of soums). as long as it has a strong effect.

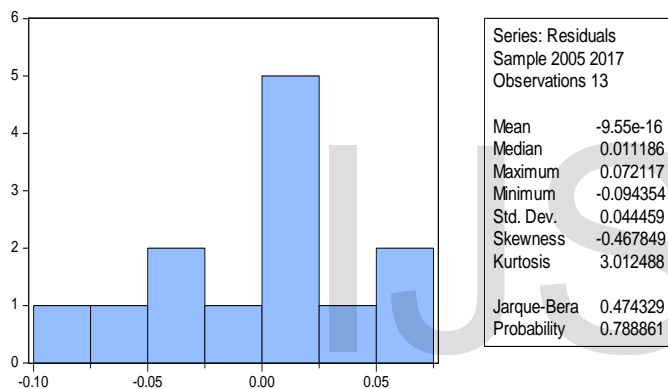


Figure 1. Results of "Jarkua - Bera diagnostic test" [10]

However, economic forecasts confirm that the country's import and export operations also have a strong impact on the development of the localization process. However, based on our econometric analysis, it can be said that the impact of these operations on localization processes is less than 90 percent according to the results obtained. This requires further study of the results of the study and the use of Engel-Grenger's "cointegration" test in this analysis.

Based on the results of the above econometric analysis, the impact of investments in fixed assets from all sources of financing on the share of localized production in the total industrial output of the country can be described on the basis of the following regression line and correlation area. This will provide an additional 7.7% increase in the share of localized production in the total industrial output of the country (Figure 1).

According to the analysis of the forecast model of the share of localized production in the total industrial output of the country and the factors influencing it, the values of MAPE (average absolute percentage error of the forecast) are 0.32% and Tayl coefficient is 0.001. the forecast accuracy on the mod-

el formed on the basis of these factors is very high. MAPE \leq 8-10 percent and, respectively

Based on the results of our econometric analysis, we can say that special attention should be paid to the wider introduction of localization processes in the country and attracting investment to increase its share in the country's GDP. The results of the analysis show that investment and localization encourage each other. That is, if the investment is made, the volume of production of localized products will increase, the widespread implementation of localization projects will create investment opportunities. Through the positive interaction between them, the basis for increasing the level of socio-economic development of the regions and the country will be created.[10]

4 CONCLUSION

The establishment of clusters in industry is recognized as a key factor in ensuring the competitiveness of the national economy in the world market. In particular, we have considered that one of the main ways to improve the quality and reduce the cost of cars produced through the establishment of a cluster in the automotive industry. Automobile clusters established in many countries of the world are based on their high efficiency and competitiveness, which in turn play a worthy role in the sustainable development of their economies.

In this regard, our research has taken a special approach to the establishment of a cluster in the automotive industry of Uzbekistan and what aspects to pay attention to. At the same time, 33 large enterprises (manufacturers, suppliers) that are part of Uzavtosanoat JSC were selected, and the idea of creating a cluster with the participation of local authorities and higher education institutions was put forward. As a result, a model of innovative corporate cooperation and infrastructure of Uzavtosanoat JSC with universities was developed and substantiated. In this cluster model, innovative corporate partnerships with universities are demonstrated in accordance with the activities of manufacturers and suppliers. Another advantage of this model is that it provides opportunities for "developed infrastructure" in order to eliminate employee dissatisfaction in enterprises.

With this in mind, we can see that this cluster model has the potential to be applied in every industry. The localization program also includes the conditions for accepting projects and formulas for calculating its effectiveness.

We know that a number of factors for the development of production have an impact on the production process. Such factors include investment, the volume of exports of manufacturing enterprises, customs duties, raw materials, labor, the level of provision of the country's economy with material resources, transportation costs and others. Therefore, we con-

ducted an econometric analysis of the factors that directly affect localization in the course of our study. According to the analysis of the forecast model of the share of localized production in the total industrial output of the country and the factors influencing it, the obtained MAPE (average absolute percentage error of the forecast) is 0.32% and Taylor coefficient is 0.001. The forecast accuracy on the found model is very high. $MAPE \leq 8-10$ percent and, respectively

As $TIC \rightarrow 0$ is close, the future effects of these factors are also preserved. Particular attention should be paid to the wider introduction of localization processes in the territory of our country and the attraction of investments in increasing its share in the country's GDP. The results of the analysis show that investment and localization encourage each other. That is, if the investment is made, the volume of production of localized products will increase, the widespread implementation of localization projects will create investment opportunities.

The following practical suggestions and recommendations have been made for the study of this article:

1. Cluster organization should be widely introduced in the automotive industry. This includes in-depth study of the activities of clusters established in the world's leading countries and the establishment of partnerships with them.
2. Establishment of venture enterprises in the automotive industry, increase their role and attach to it the leading scientific and educational institutions of the republic and potential professors, researchers, master's and bachelor's degree students of their departments.
3. Improving the method and methodology for determining the level of localization. Extensive study of existing methodologies in Uzbekistan and the world's leading countries.
4. Broad investment is one of the main tools in the implementation of localization. Therefore, it is necessary to widely implement ways to increase the investment attractiveness of localization programs.

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