NOVATEUR PUBLICATIONS
JournalNX- A Multidisciplinary Peer Reviewed Journal
ISSN No: 2581 - 4230
VOLUME 9, ISSUE, Mar. -2023

ECONOMIC ANALYSIS OF THE PROBLEM OF PRODUCTION IN CONSTRUCTION

Sanjar Abdulahadovich Rahimov
Scientific leader, Samarkand State University
of Architecture and Construction, (PhD), senior teacher.

Abdivaitova Umida Azamat qizi
Student of SamDAQU 202nd Management Group

Annotation
The article theoretically and practically examines the impact of the production of construction products on the production of industrial products in the republic in 2000-2021. The role of the production of building materials in the production of industrial products is analyzed and a model of their interaction and connections between them is constructed.

Keywords: linear regression, time series, correlation coefficient, production, resultant factor, seasonality, random factors.

Annotatsiya
Maqolada Respublikada 2000-2021-yillarda sanoat mahsulotlari ishlab chiqarishda qurilish mahsulotlari ishlab chiqarishning ta’siri nazariy-amaliy jihatdan tadqiq qilingan. Qurilish mahsulotlari ishlab chiqarishining sanoat mahsulotlari ishlab chiqarishidagi o’rni tahlil qilingan va ularning o’zaro ta’siri hamda ular orasidagi bog’lanish modeli tuzilgan.

Аннотация. В статье теоретически и практически исследовано влияние производства строительной продукции на производство промышленной продукции в республике в 2000-2021 гг. Проанализирована роль производства стройматериалов в производстве промышленной продукции и построена модель их взаимодействия и связей между ними.

Kalit so’zlar: chiziqli regressiya, vaqtli qator, korrelyatsiya koeffitsiyenti, ishlab chiqarish, natijaviy omil, mavsumiylik, tasodifiy omillar.

Ключевые слова: линейная регрессия, временной ряд, коэффициент корреляции, производство, результирующий фактор, сезонность, случайные факторы.

Introduction

The main goal of the development of Uzbekistan's industry is not only to strive to increase the growth rate in this sector of the economy, but also to develop priority sectors and production by using the potential of rich natural resources, to form its modern structure, to increase the competitiveness and efficiency of the country's industry in the foreign and domestic markets. is to form a set of measures for Industrial production per capita in the Republic of Uzbekistan in 2021 amounted to 12935.2 thousand soums.

Research Methodology

It is based on scientific abstraction, observation, comparison, correlation-regression analysis and Koyk's method.

Analysis of Literature on the Topic

Scientific investigation and research work was carried out by local and foreign scientists on industry and construction, in particular on the production of construction structures and construction products. Foreign scientists Svi Grillix, I. Tinbergen, V.N. Afanasev, S.A. Ayvazyan, A.M. Gataulin, N.M. Goreyeva, T.A. Dubrova, Y. M. Bazhenov, A. A Baikov, N.A. Belebeysky, N. M. Belyayev, V.M. Scientific research works of Bondarenko and others are important. S.S. Gulomov, B.Yu. Khodiyev, B.A. Begalov, B. Berkinov, T.Sh. Shodiyev, M.Sh. Sharifkhojayev and others have been making a significant contribution to the development of new fields with their systematic scientific research on the issues of econometric and economic-mathematical modeling and forecasting of industrial and agricultural production.

Materials and Methods

Production of industrial and construction products in the republic in 2000-2021 is given in Table 1

Table1 Production of industrial and construction products in the Republic in 2000-2021[1]

Years	**Industry and construction, blrd. sums**	**Shu jumladan,**	
		Industry, blrd. sums	**Construction, blrd. sums**
2000	23,1	16,2	6,9
2001	22,6	15,4	7,2
2002	22,2	16,6	5,6
2003	23,7	18,9	4,8
2004	26,0	20,4	5,6
2005	29,1	24,7	4,4
2006	29,8	23,2	6,6
2007	29,9	21,5	8,4
2008	32,2	25,4	6,8
2009	33,6	25,3	8,3
2010	24,1	18,7	5,4
2011	22,3	17,4	4,9
2012	23,0	16,4	6,6
2013	23,8	18,5	5,3
2014	24,5	18,3	6,2
2015	24,8	20,1	4,7
2016	25,1	17,2	7,9
2017	26,5	21,1	5,4
2018	31,1	25,3	5,8
2019	34,4	28,1	6,3
2020	34,2	27,5	6,7
2021	34,5	27,8	6,7

[1] http://samstat.uz/uz/

Based on the data of Table 1, we will consider the production of construction products in the graph.

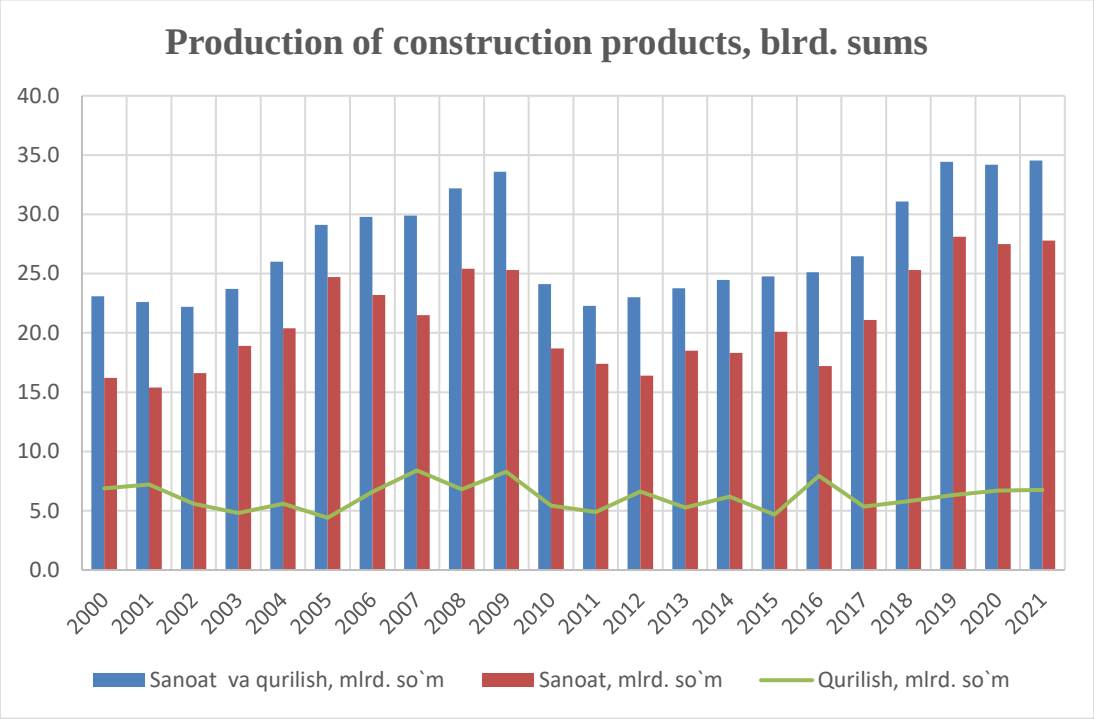

Chart 1. Production of construction products

According to the data of industrial production in the republic in 2000-2021, in 2021 compared to 2020, it increased by 53164.4 billion soms, including the production of construction products increased by 24893.3 billion soms.

Based on the data of Table 1, we will create an econometric model of production of construction products in a graph (Chart 1).

We will consider Koyek distribution (Koyek, 1954) where the coefficients are distributed according to decreasing lag and geometric progression. A univariate model looks like this:

$y_t = \alpha(1-\lambda) + bx_t + \lambda y_{t-1} + \varepsilon_t - \lambda\varepsilon_{t-1}$ (1) the equation is selected.

Here y_t is the amount of production of industrial and construction products, billion soums;

X_t - amount of production of industrial products, billion soums. (1) in equation $c = \alpha \cdot (1-\lambda)$, $b_0 = b$, $b_1 = \lambda$ if we enter designations, $\tilde{y} = c + b_0 x_1 + b_1 x_2$ (2) we get.

A linear relationship between the type of connection y and x_2, x_3, factors is sought in this form:

$\tilde{y} = c + b_0 x_1 + b_1 x_2$, (3)

Analysis and Results

We will use an Excel spreadsheet to find a solution to the problem. The results were as follows:

$c = \alpha \cdot (1-\lambda)$, $b_0 = b$, $b_1 = \lambda$ according to the formula

$c = \alpha \cdot (1-\lambda) = 3{,}49$, $b_0 = b = 0{,}4$, $\beta_2 = \lambda = 0{,}8$ the fact that $\alpha = \frac{c}{1-\lambda} = \frac{3{,}49}{0{,}2} = 17{,}29$

came out.

The boat model was as follows:

$$y_t = 3{,}48 + 0{,}4 \cdot x_t + 0{,}8 \cdot y_{t-1}$$

The distributed econometric model of industrial production was as follows:

$$\tilde{y} = 17{,}29 + 0{,}4 \cdot x_t + 0{,}32 \cdot x_{t-1} + 0{,}25 \cdot x_{t-2} + 0{,}2 \cdot x_{t-3}$$

Median lag is a time interval during which half of the total effect of the change of factor x has an effect on the outcome variable y. The median lag is determined by the following formula:

$$Lmediana = \frac{\ln 0{,}5}{\ln 0{,}2} = \frac{-0{,}69}{-1{,}61} = 0{,}4$$

The average lag is determined by the following formula:

$$\bar{L} = \frac{\lambda}{1-\lambda} = \frac{0{,}8}{1-0{,}8} = \frac{0{,}8}{0{,}2} = 4$$

If the bank's regulatory capital becomes 1 billion soums, the bank's profit will increase by 50 million soums.

According to Fisher's criterion $F_{his} = \frac{MS_{омил}}{MS_{qoldiq}} = \frac{185{,}9}{1{,}18}$, $F_{his} = 157{,}8$ value is more than the value found in the table Fjad= 4.95.

So, the coefficient of determination shows that 97% of the variation of production is related to the amount of feed, and 3% of the variation is related to other factors.

Conclusions and Suggestions:

We present conclusions and suggestions on the efficient operation of banks:

1) if construction products (billion soums) increase by 1 unit - agricultural products production will increase by 0.5 units.

To assess the significance and adequacy of the model, it is evaluated using the F-Fisher test.

Fisher's test is used to evaluate the density and adequacy of the model.

2) The following statistical hypothesis is put forward:

If it turns out that the calculated $F_{хис} > F_{жад}$ is, it will be possible to predict the future values of the y-factor through the regression equation. In this: $F_{his} = 157{,}8 >$ Fjad= 4,95.

The multifactor correlation coefficient determines the density of the relationship between the factors x_1, x_2,..., x_p and the resulting indicator y.

After using the analysis of variance and calculating the multifactor correlation coefficient formula:

R=0.97 the significance of the regression equation came from the fact that.

Recourses:

1. Б.Б.Беркинов. Эконометрика. Ўқув қўлланма. Тошкент.: “Фан ва технология”, 2015,164 бет.
2. Rahimov Abdulahad Ne’matovich. Econometric analysis of production by german method. May.31.2022. European Journal of Interdisciplinary Research and Development, 3, 153–157. Retrieved from http://ejird.journalspark.org/index.php/ejird/article/view/47

3. Rahimov Sanjar Abdulahadovich. ISSUES ON ANALYSING PRODUCTION PROCESSES BY USING PRACTICAL ECONOMETRIC MODEL. International journal of trends in commerce and economics ISSN: 2349-543X VOL. 11. Issue 1 http://academicjournalonline.org/index.php/ijtce/issue/archive. 2021 y.
4. Rahimov Abdulahad Ne'matovich. Iqtisodiyotda ayrim qishloq xo'jalik mahsulotlar ishlab chiqarishning ekonometrik tahlili. Iqtisodiyot, Moliya va Innovatsiyalar Jurnali. № 2. 27-12- 2022 ISSN 2181–3299 www.sbtsue.efin.uz. 23-29 bet./ http://eprints.umsida.ac.id/10979/.