STATISTICAL ESTIMATION AND ECONOMETRICS MODELLING OF INVESTMENT PROCESS IN REGION

Keywords: forecasting methods, inflation process in a worlds and national economies, index system, inflation volume, macroeconomic instability, inflation processes stages, anti-inflation program model, authenticity of the estimations of prices levels and its indexes, segments of economy, inflation in conditions of stable and non-stable economy, aggregated inflation index, inflation peculiarities, physical volume index, trend modeling of dynamic rows, central forecast variant, speeding-up coefficient, determination coefficient, adequacy of dynamic row model, investment climate, variant of social-and-economic growth.

The choice should be done on a method based on the dynamic rows from the all forecasting methods. The others forecasting methods reflect some specific aspects of research. The usage of abovementioned methods presume the study of inflation processes in Использование названных the методов предполагает и изучение Russian economy. The basis of economic modeling of physical volume of investments in Samara region is parabola with the following characteristics of the central variant: the speed of changing of investment growth temps is 10,2% per year; speeding-up the physical volume of investments index - 0,55%; inflection is appeared in 1999 year. The volume of investments in region according to central variant of forecast will reach in 2011 year the rates of 1990. It is late for two years.

Forecasting of the investment process is one the most important tools for development of optimal strategy of regional development. The main sense of forecasts are setting regularities of development of investments and development of hypothesis about most probable tempos of theirs change in perspective.

(R_2)

Investment process forecast is a statistical estimation of tempos and level of investments in the future based of the most preferable variant of social-and-economic development of region. Because non only one hypothesis exist, the forecasting is a result of activity targeted on analysis of most probable alternatives of future development.

Adequate forecast is possible for 5-7 years, middle - term perspective because of conditions of the extra risk and uncertainty.

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The usage of abovementioned methods presumes the study of inflation processes in Russian economy. The inflation processes highly influence on the world economy development. The inflation should be considered as a negative process in long-term period which leads to

decrease of purchasing power of money, appearance of problems of state regulation on a macroeconomic level and stable inflation expectations of economic subjects.

One of the most important step in building of dynamic rows models of investment process is check of theirs adequacy based of research of the rest, deviation of calculated value from real values.

The rest is characterized with:

♦ random character of extremely distinguished values;

♦ subjection of the rest to normal distribution law;

♦ absence of autocorrelation;

♦ dispersion of rest invariability.

As a result of considering the linear expressions of trend was picked parabola:

$$\hat{y}_t = 25,1 - 0,3t + 0,546t^2, \qquad (1)$$

According to determination coefficient

approximates to tendency of the dynamics of investment growth in capital in comparable estimation for the period of 1990-2006.

With parabola equation we could define the inflection in a process of development in 1999. If take into account the concept of rapid solving of crises problems of investment process, this process can be reflected with speed-up

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coefficient $a_2 = 0,546$ (central, or ultimate variant of forecast). Variation of the coefficient values provides the two other variants of forecast: the most optimistic (1), optimistic (2), central (3), pessimistic (4) and the most pessimistic (5). According to the most optimistic forecast it is possible for appear in 2010, central varient — in 2011, the most pessimistic — 2012. The others variants have a intermediate place between the first and third, third and fifth variants of forecast.

Considering the rests $(y - \widehat{y}_t)$ give a base to say that maximal volume of rests are in 1993г. and has random character. Taking into account the dispersion of values $J_{\text{ф.о.инвест.}}$, $\sigma_y^2 = 95$ determination coefficient of considering model of development:

$$R^2 = \frac{95 - \dfrac{169}{15}}{95} = 0,882. \quad (88,2\%).$$

Level of determination coefficient let to consider approximation of real dynamics of physical volume of investments with linen equation of trend with set parameters as statistical reliable. The variation is 88,2%.

Comparison of the values of indexes in Samara region with values of Russian Federation let to make a conclusion that the gap of region on level of investments in capital stipulated longer period of getting investment level of 1990 in accordance with central variant of forecast.

The basis of econometrics modeling of index of physical volume of investments in Samara region is parabola with the following characteristics of central variant: speed of change of tempo of investment growth is 10,2%; speeding-up the index of physical volume of 0,55%; the inflection appears in 1999 (3,4,5).

The level of 1990 of investments will be turned 2011, tempo of physical volume of investment in Samara region is gap in comparison with the corresponding value of Russian Federation on two years. More optimistic forecast for Samara region is in accordance with pessimistic variant for Russia what means the getting of real perspective of change of conditions in region in the better position if the investment climate will be better.

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