economic processes in a market economy. Solving these problems and further implementing the NBU with effective and adequate monetary policy conditions will be important prerequisites for ensuring the socio-economic development of Ukraine. Therefore, we will continue to explore the peculiarities of monetary policy, in particular, using the system dynamics method.

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MODELLING WAGES AND PRICE BY USING SYSTEM DYNAMICS

Wages as an indicator is not only an indicator that determines the overall standard of living of employees. From this status and forms of realization, the shares in GDP largely depend on the possibilities of economic development in general. In a modern market mechanism, wages are becoming an increasingly important factor in the reproduction of social production. This indicator acts as one of the main regulators of the labor market. However, the analysis and assessment of the impact of wages on the labor market and, above all, the employment in Ukraine is not given due attention, which leads to negative consequences - accelerated growth of unemployment, the destruction of motives and incentives to work, etc.

The dynamics of real wages in the country characterize the dynamics of the real standard of living of the living wage population. Real wage indices make it possible to relate it to other economic indicators, such as employment, income and consumption, and production. The wage calculation is usually related to the total number of hours worked and the average wage in the country:

$$\textit{Average Wage} * \textit{Total Hours}$$

The average wage is a drain in our model because the initial nominal hourly wage is the average wage that changes all the time.

The average wage increase is calculated by multiplying the average wage by delaying the rate of wage growth:

*Average Wage * Delayed Wage Growth Rate,*

where *Delayed Wage Growth Rate = DELAY1 (Indicated Wage Growth Rate; Wage Adjustment Delay)*

Consider now the price index, which characterizes the change in the overall price level of goods and services purchased by the population for non-productive consumption. Inflation processes in the country's economy are characterized by the consumer price index, which is the most important indicator and is used to solve many questions of public policy, review the size of household income, analysis and forecast of price processes in the economy, conversion of national accounts to constant prices.

Consumer price index depends on the combination of two information flows: - data on changes in prices obtained through registration of prices and tariffs on the consumer market;

- data on the structure of actual consumer monetary expenditures of households living in urban settlements.

Δ price index is calculated by dividing the difference between the desired price index and the actual price index by the price adjustment time:

$$\frac{(Desired\ Price\ Index - Price\ Index)}{Price\ Adjustment\ Time}$$

Thus, to perform a more accurate analysis of the monthly wage dependence on the dynamics of the consumer price index (in percentage), annual statistical information for the period from 2006 to 2017 was used, and the model was constructed using Stella Architect (Figure 1).

Labor market conditions, supply and demand operate at national and local levels and determine wage rates. When there is a shortage of workers who have the skills, experience and education needed to perform certain tasks, the employer may offer higher pay to those who meet certain requirements. That is, if the demand for a particular type of skilled workforce is higher than the supply, then wages will be higher, and vice versa. Also, wages are affected by the cost of living, according to which the size is adjusted. This approach tends to vary wages depending on changes in the cost of living index after rising or falling overall prices and the consumer price index.

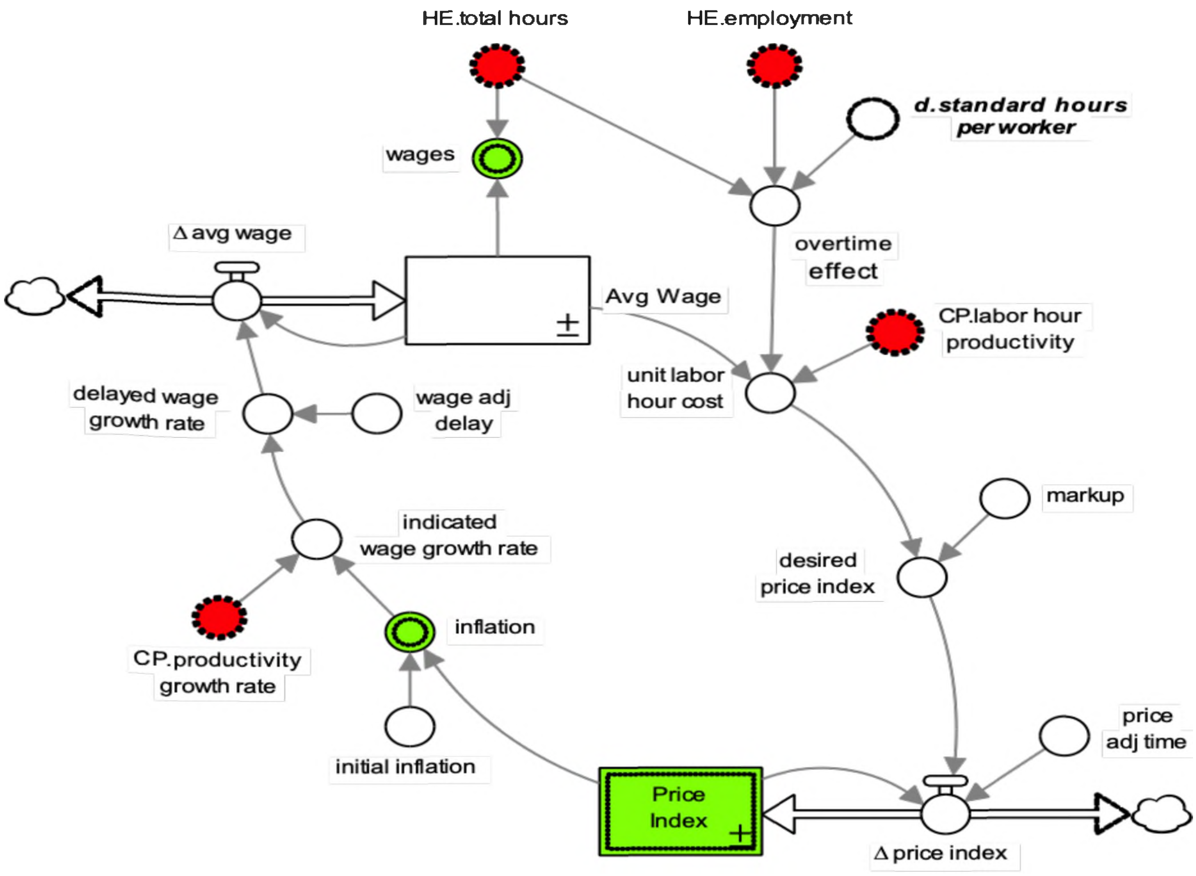

Figure 1. Wages and price index model

Therefore, slow wage growth leads to a link between wages and prices. The analysis reveals that wages and prices tend to move together, complicating efforts to separate cause and effect.

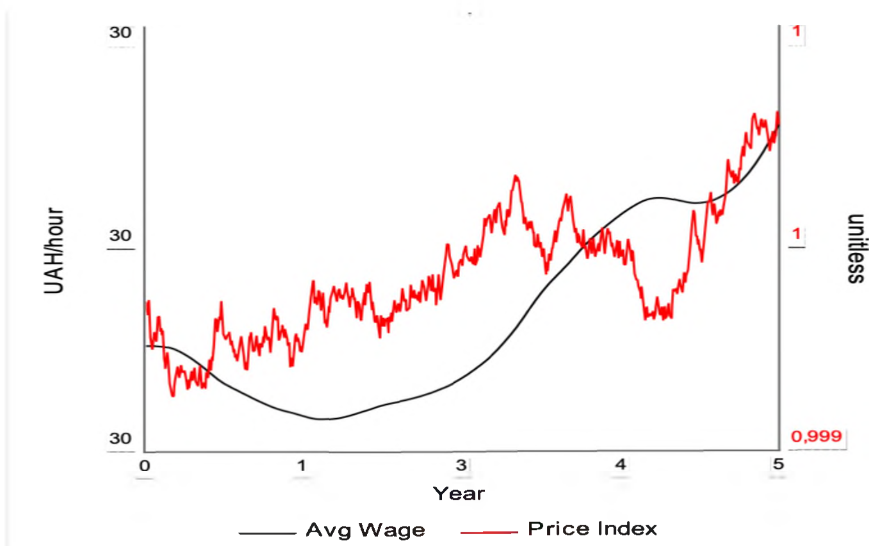

Figure 2. Behavior the average wages and price index

Payment (price) for labor is in the form of monetary compensation, which the employee receives in exchange for his labor for his personal professional characteristics, working conditions. Instead, the cost of labor reflects the cost of human resources used to produce any product or service. Factors such as quality of labor, child labor and labor of migrants, labor productivity, new needs, the rise in prices of various services are most evident in the increase or decrease in real wages as a monetary expression of labor cost and labor cost and productivity.

Having analyzed the situation on the Ukrainian labor market in 2006-2017 years, it is proved that GDP per 1 worker, ie productivity, does not correspond to the size of the average monthly wage, but there is a correlation between them.

Proper stimulation of work in the enterprise, in turn, will lead to increased productivity, which will increase the real product and income. And an increase in GDP per capita means an increase in consumption and, consequently, in the standard of living of the country's population.

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MODELING THE MECHANISM OF INTEREST RATE FORMATION ON BANK LOAN USING SYSTEM DYNAMICS METHODS

Features of modern development of Ukrainian banks are intensification of banking business, actualization of competition in banking and, at the same time, increase of threats to credit security. Such processes create challenges for banks to maintain financial sustainability and to obtain a market level of profit. Unauthorized pricing decisions for banking products and services may impair the bank's position in the market. As a result, there is a need for the organization and effective management of the bank's pricing policy.

To date, the main characteristic of pricing in commercial banks of Ukraine is the lack of a clear correlation between the consumer value of the banking service and its price. In these circumstances, the bank has the ability to maneuver prices across wide limits, pursuing different pricing policies for different clients, using prices as an important means of attracting customers and promoting services. Pricing is one of the most important aspects of a bank's marketing activities, a management lever that allows it to shape the bank's profit.