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AUTHOR(S)	Rahib Imamguluyev, Elvin Balakishiyev, Nihad Agakishiev
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IMPROVING THE MECHANISM OF USING THE PRICE FACTOR IN THE EFFECTIVE REGULATION OF AGRICULTURAL PRODUCTION ON THE BASIS OF FUZZY LOGIC

Rahib Imamguluyev, *PhD candidate, Odlar Yurdu University, Baku, Azerbaijan,*
ORCID ID: https://orcid.org/0000-0002-3998-7901
Elvin Balakishiyev, *PhD candidate, Odlar Yurdu University, Baku, Azerbaijan*
Nihad Agakishiev, *PhD candidate, Odlar Yurdu University, Baku, Azerbaijan*

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ABSTRACT

When studying the role of the price mechanism in the sustainable development of the economy, in accordance with the requirements of the modern economic mechanism, first of all, attention should be paid to the issue of state regulation of prices. The attitude to state regulation of prices is ambiguous. Existing control over the implementation of state regulation of the prices of a group of products based on the social protection of the population and the economic interests of the state, and economic legitimacy is sometimes perceived as a violation of economic democracy. However, the analysis of the role of the price factor in economic development proves that this idea has no basis. Thus, it is not possible to make accurate calculations so that the price of the product can change at any time for various reasons. Therefore, it is advisable to approach these calculations on the basis of fuzzy logic.

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Introduction. One of the most important issues in the formation and development of entrepreneurship in the country, as well as the national economy as a whole, is the correct establishment of the pricing mechanism and the pricing policy of the state. Price policy is a key component of the overall economic policy of the state and is one of the most important factors of economic and social development. Through price, economic and social development in the country is constantly regulated, interests are reconciled and the necessary conditions are created for the regional and sectoral development of productive forces.

The price must be based on the objective factors that make it up and be based on concrete reality. Prices formed only on this basis have a positive impact on socio-economic development [1, 2].

In this regard, the pricing mechanism must be constantly monitored, while each state must have its own pricing policy. Price policy should become the most important component of economic policy as a strategic factor in the coordination of interests in the country, the formation, distribution and balance of financial resources, economic coordination of sectors and entities and the integrated development of the country's economy as a whole.

One of the first steps taken by Azerbaijan in building its economic policy after gaining independence was the adoption of certain laws on prices and the preparation of legal acts. Resolution on “Liberalization of prices and tariffs”, “On economic protection of the domestic market in the Republic”, “On state regulation of prices and tariffs of products of monopolistic unions and

enterprises", Regulations adopted by the Cabinet of Ministers of the Republic of Azerbaijan "On regulation of natural monopolies in the Republic of Azerbaijan" The law "On regulated prices" adopted by the Milli Majlis in 2003 is similar.

Along with all this, other state-important decisions and legal normative acts have been adopted. The adopted laws, decisions and normative acts, of course, must first of all be based on objective realities, correspond to the nature of the republic's economy and, on the other hand, meet international standards. We must not forget that the modern Azerbaijani economy has become an important part of the world economy due to its specificity [3].

Sometimes it is said in the press and economic literature that everything in the national economy should be regulated by supply and demand, and this principle should be the basis of economic development. In our opinion, it is wrong to think of the market economy model as an economy developed on the basis of spontaneous development, pure market laws, as well as the principle of indirect supply and demand. In a market economy, it is advisable to apply a fuzzy logic model for valuation.

Evaluation of Market Economy. A market economy is an economy regulated by society as a general development model. In each country of the world, socio-economic development is regulated by the state and society in accordance with the general principles of development. As mentioned earlier, one of the most important attributes of regulation is the pricing mechanism. Each country, along with other economic levers, regulates and develops the overall socio-economic situation through a price mechanism.

Table 1. State regulation of prices in some countries.

Countries	**Specific gravity of regulated prices**	**Regulatory sphere**	**State regulatory bodies.**
United States of America	5-10%	Wheat, corn, tobacco, cotton, dairy products	Agriculture
Austria	10%	Tobacco, salt, communication services, railway services. State monopoly over alcohol	Ministry, Federal Trade Company, Antitrust Office
Japan	20%	Wheat, rice, meat, milk, electricity, gas and water supply, repair, education and health services	Parliament, Natural Resources Agency, Price Bureau of the Economic Development Department
Switzerland	50%	Cereals, potatoes, meat, beets. Limited regulation of prices for textiles, musical instruments and toys.	Ministry of Economy, Ministry of Agriculture, Ministry of Health

Source: The table is compiled by the author on the basis of theoretical materials.

As can be seen, among the products subject to price regulation in different countries, agricultural products have a high share. This is primarily due to the need to ensure employment in the country, to regulate consumption, the optimal intersectoral distribution of income.

In the United States, the most developed country in the market economy, the price mechanism is constantly monitored. Prices are regulated directly (administratively) in certain areas and indirectly (economically) in certain areas, and interests in the country as a whole are balanced. By directly controlling the prices of state monopolies, by setting prices for the products of state-owned enterprises, by imposing certain restrictions on unfair competition and market monopolies, by constantly controlling the prices of some products, especially agricultural products, and setting low thresholds, fiscal and monetary policy regulates and balances economic and social development in the country by influencing the level of prices.

Since the early 1990s, the US government has restricted public funding and direct regulation of prices for certain commodity groups. At that time, for the general development of the country's economy, the use of indirect methods of price regulation was widely used. Direct state regulation of prices is applied only in highly monopolized areas under the influence of antitrust legislation.

As for agricultural products, it should be noted that for nearly fifty years, parity prices have been applied in the United States to ensure that farmers' purchasing power and income are maintained at the required level. The state undertakes to purchase agricultural products at prices not lower than parity prices. As a result, parity prices become minimum guaranteed prices. If the market price is lower than the parity price, the state buys the product and spends it for the necessary purposes. As can be seen, the application of this method of regulation within the existing opportunities can be important as an important means of stimulating agricultural production, sustainable and sustainable development in any country [4].

In Japan, about 20% of prices are directly regulated by the state.

The minimum price level for most products is set and regularly analyzed by the state. Monopoly prices are always under state control. There are restrictions on a one-time rise in prices. These measures will increase production to 30 billion. It is applied in areas with more than one needle. If the three enterprises in the field increase their prices by the same amount within three months, the Fair Deals Commission has the authority to request an explanation of the reasons for this process and, if necessary, to conduct an investigation. The exception is the bankruptcy of enterprises in the sector due to falling prices for production costs due to the deterioration of the business environment. In such cases, the commission authorizes the producers to coordinate production and sales, capital investment, equipment loading and prices. To summarize, one of the main directions of price regulation in Japan is to limit the use of artificially raised or lowered prices. This practice is very effective in the interests of both the state and citizens.

It should be noted that France was once one of the countries with a fairly strict state regulation of prices. This regime is partially maintained in modern times. Despite the operation of the principle of free pricing, the prices (tariffs) of agricultural products, natural gas, electricity and transport services are still directly regulated by the state. All economic parameters of the activities of monopolistic sectors, including the amount of investment, wages and prices for finished products are determined by the state. About 20% of prices are dictated by the state, and the remaining 80% are freely formed.

In Norway, agreements on high monopoly prices are prohibited by law. The state has the right to apply rules and laws that set maximum and minimum prices and are mandatory for all. Sweden imposes a number of bans on economic monopolies and regulates prices to some extent. For example, prices for agricultural products are considered at the level of profitability if we ensure their reproduction. For some agricultural products (for example, milk and dairy products), along with the volume of production, fixed prices are predetermined. The situation is similar in other European countries. That is, no matter how much market relations develop and the principle of supply and demand is widespread, the price mechanism as a part of macroeconomic policy is always under the control of the state.

Uncontrolled release of prices by the state, its formation and regulation only on the basis of market relations, of course, can lead to very serious consequences, creating an economic crisis. Therefore, in every society, this issue must be under public and state control and regulated. The scope and application of regulatory methods may vary depending on the level of development of each country, the national mentality in the nature of property relations and other specific aspects. In developed countries, as a rule, economic methods are preferred, and the scope of regulation by economic methods is wider.

With these methods, the state regulates the ratio between supply and demand and the public interest by directly influencing the price components. For example, the government has a direct impact on aggregate supply and demand and price levels by pursuing sound monetary and exchange rate policies, applying sound tax policies, public procurement, cost regulation, public capital investment policies, and sound depreciation rates. At the same time, in most market economy countries, land rent, wage system, customs duties, changes in conjuncture, advertising costs, etc. are also affected. The impact of economic factors such as the level of prices is taken into account and aimed at achieving economic equilibrium.

Thus, the price mechanism and the price policy of the state are directly related to all the attributes of socio-economic development and are an integral part of the overall economic development strategy of the state. In our country, special attention is paid to these issues and the regulation of the price mechanism by economic methods.

The direct method of price regulation also plays an important role in regulating socio-economic development and protecting social justice in the country. Thus, the state should protect small producers from large monopolies, create conditions for their reproduction and development, curb large monopolies to some extent and prevent the introduction of unjustified high monopoly prices, balance

the level of prices with the solvency of the population, set maximum and minimum prices for some products. carries out social regulation with.

In some European countries, this is very important, and in some areas this regulation of prices is widespread. This method is usually preferred in the areas of public consumption (transport, communications, energy, water supply), agriculture and natural monopolies. Of course, there is a great need for the application of this method in our country and it should be used [5-6].

One of the interesting aspects of the price mechanism is that if the price is regulated by the state on the one hand, on the other hand, it is an economic instrument that regulates itself. Through it, a fair and efficient distribution of income and resources in the country, socially just expectations among public groups, coordination of interests of regional, sectoral and micro-sectors, balancing economic relations between owners.

Of course, the influence of other economic instruments is taken into account in these processes, and price is taken as one of the main attributes. As can be seen, price is one of the most important elements that has a comprehensive impact and plays a special role in the development and regulation of the country's economy as a whole. It is both regulated and regulated. It should be noted that in connection with the formation and development of a market economy, the function of price regulation is further strengthened, and this should be taken into account in the economic policy of the country. The state, as in other areas of economic development, must fulfill its economic function in the field of price regulation. This, in turn, should be aimed at meeting domestic demand with local products in a country with a favorable natural climate, such as Azerbaijan, protecting the population from unjustified (artificial) increases in prices (tariffs), increasing the efficiency of foreign economic relations. Thus, changes in prices according to purchasing power require a fuzzy approach. Thus, the purchasing power is very low on days of the week, very little, medium, many, more, and so on. may change.

Application of Fuzzy Technologies. The first step in applying a fuzzy logic system is to define the inputs and outputs of the system.

Once the membership functions and the lower and upper limit values of the parameters required to build the model have been determined, 31 rules have been established to establish the necessary relationships between the parameters affecting the system.

This value is in the range [0-100]. When the process is complete, a list is created and can be used visually [7-12].

Each language variable has four fuzzy values with triangular or trapezoid mem- bership functions:

• For input variables - Figure 1: VVL –Very very low; VL –Very low; L-Low; ME - medium; MU -Mutch; MO - More

• For output variables -: VB – Veri Bad; B - Bad; A - Average; G - high; VG - very high.

```
[System]
Name='calculation'
Type='mamdani'
Version=2.0
NumInputs=2
NumOutputs=1
NumRules=31
AndMethod='min'
OrMethod='max'
ImpMethod='min'
AggMethod='max'
DefuzzMethod='centroid'
[Input1]
Name='Efficiency'
Range=[0 100]
NumMFs=6
MF1='VVL':'trimf',[-20 0 20]
MF2='VL':'trimf',[0 20 40]
MF3='L':'trimf',[20 40 60]
```

MF4='ME':'trimf',[40 60 80]
MF5='MU':'trimf',[60 80 100]
MF6='MO':'trimf',[80 100 120]
[Input2]
Name='Optimality'
Range=[0 100]
NumMFs=6
MF1='VVL':'trimf',[-20 0 20]
MF2='VL':'trimf',[0 20 40]
MF3='L':'trimf',[20 40 60]
MF4='ME':'trimf',[40 60 80]
MF5='MU':'trimf',[60 80 100]
MF6='MO':'trimf',[80 100 120]
[Output1]
Name='output1'
Range=[0 100]
NumMFs=5
MF1='VB':'trimf',[-25 0 25]
MF2='B':'trimf',[0 25 50]
MF3='A':'trimf',[25 50 75]
MF4='G':'trimf',[50 75 100]
MF5='VG':'trimf',[75 100 125]

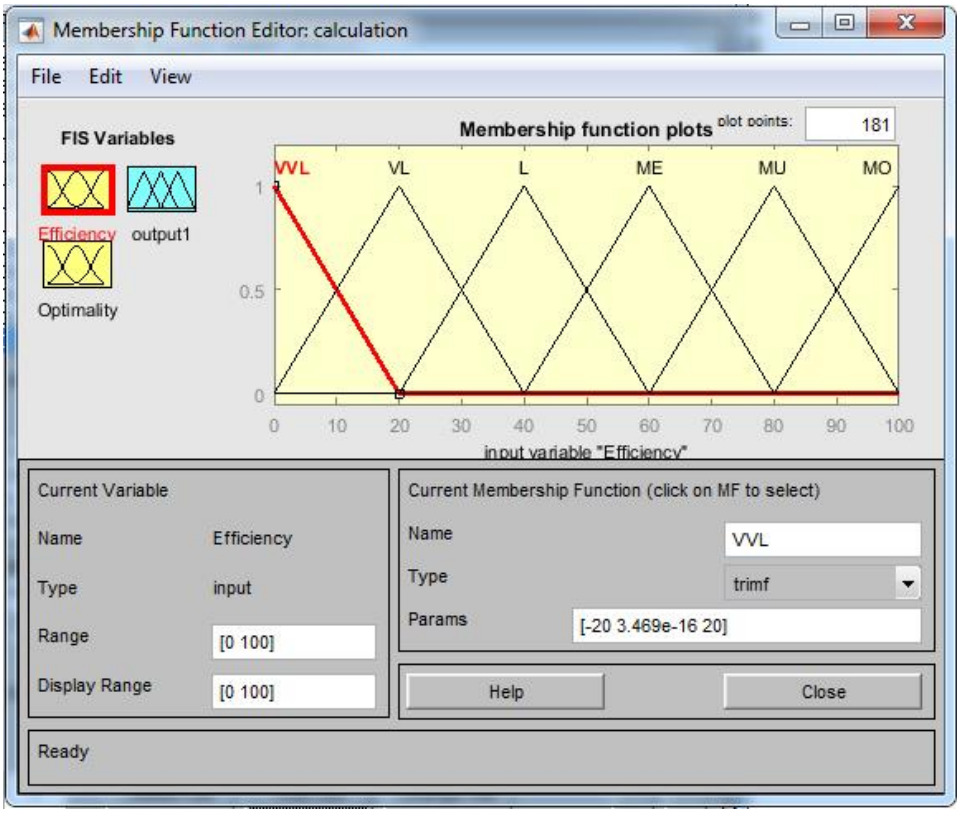

Fig 1. Input variables

Conclusions. The evaluation of the alternatives in Table 1 in the MATLAB \ Fuzzy Change Systems entry described above allowed the following results to be obtained: Alternatively, the evaluation values for purchasing power were very low, very low, medium, much more, and so on. was appointed.

The results are more rhetorical, showing the effectiveness of the purchasing power factor assessment based on fuzzy complementary theory. On the other hand, given other simple but vague and difficult form criteria, it is useful to use fuzzy set theory to assess purchasing power. and decisions based on them are reasonable and eco-nomically feasible.

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