Transformation of Domestic Agricultural Support System of Ukraine in WTO Conditions

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Abstract

Last years Ukraine allocated considerably finance resources for agriculture support according to their loading on the budget. However, amount increase of domestic support does not subst counselling influence on the effectiveness indices of agricultural yields. Such information testifies about imperfect nature of the internal support mechanism of Ukrainian agriculture. As the result, domestic support did not become effective stimulus for production quality increase and rise amount of stock-breed production. In 2008 Ukraine gathered the biggest grain harvest. Increase production did not improve finance results of agriculture and did not reduce stable and dynamic branch development because of negative influence of world finance crises. Unbalanced supply and demand of agricultural production, low buying ability of inhabitants, lack of branch effective mechanism of domestic support caused to complication of price situation in the domestic food market.

Also there have been grounded possible economic consequences of influence of duty-tariff protection of agriindustrial market change on the prosperity of such economic agents as agricultural producers, consumers and state on the basis of the Agricultural Trade Policy Simulation Model (ATPSM).

Keywords: agrarian policy, domestic support, WTO.
1. Introduction. An impartial necessity of the state support of agriculture in the conditions of the market economy is caused, from the point of view of economic theory, by unique peculiarities which are immanent for this brunch, its place and importance in providing of the state food security and in life of society. According to foreign and national experience, negative consequences of volatility of internal and external environment have a significant influence on the parameters agricultural production development. The existing problems are significantly becoming complicated by the crisis phenomena which periodically emerge in the development of the domestic and the world economy. It is really true: the global food crisis has been changed by the financial crisis. It needs deepening of scientific researches concerning the increase of the role and the place of the State in the area of the regulation of economic processes in order to avoid the possibility of appearing of crisis phenomena and in order to provide sustainable agricultural development for the long-term prospect (DIBROVA A., DIBROVA L. 2009).

The complexity of the present situation is that for the years of the reforms Ukraine hasn’t substantially been able to increase the effectiveness of agricultural production, to fulfil technological re-equipping and to provide the innovation model of the development of the brunch. According to national practice managerial decisions of the State in the area of agricultural production are not consistent and effective, which, as a result, doesn’t allow to achieve eligible financial and economic results of the development of the brunch and also it doesn’t allow to meet the requirements of society to the full extent. This situation, on our point of view, is caused by the fast change of the external environment, by the absence of practical experience of decision-making in market conditions, by insufficient level of its scientific support, and it shows that the integrated system of state regulation of agricultural production in Ukraine hasn’t been formulated yet.

Ukraine, as the competent member of the World Trade Organization, is making only the first steps, that’s why it can’t be affirmed that the degree of its integration into the world markets isn’t high enough and that external crises have something lesser influence on the branch rather than its internal problems. In further situation, in the conditions of strengthening of the world price conjecture on the domestic agricultural market, one of the important tasks of state regulation will be to provide of the notification of the possibility of crisis phenomena appearing and to provide minimization of the influence of negative consequences on the Economy of Ukraine. Otherwise, for domestic agriculture there arises a real menace which is linked with the possibility of gaining the status of resource-based country for the developed countries.

So there is a requirement in implementation of weighed and system approach concerning the development and realization of the state agricultural policy, which is directed into the protection of the domestic market with the help of the mechanisms which correspond to the international principles and norms; and there is a requirement in formation of competitive, export oriented agricultural production through effective usage of land, labor, intellectual, material and financial resources, through implementation of innovation, increase of labor efficiency and products’ quality and also through the creation of favorable conditions for attraction of state and private investment into agriculture of Ukraine. The accomplishment of the previous issues will depend on the effectiveness of the state support of the brunch on various hierarchical levels of the Governance.
Theoretical reinterpretation and methodological support of improvement of the governmental support of agricultural production in the conditions of global changes of external environment are caused, first of all, by the need of quick adaptation of the agricultural brunch to the new conditions of economical activities and formation of the preconditions for sustainable development of agriculture for long-term prospect. That’s why the search of new theoretic-methodological and practical approaches concerning the improvement of State support of agricultural production (also taking into account the knowledge which is accumulated by economic science and also taking account advanced foreign and national experience) is exceptionally actual task (DIBROVA A., DIBROVA L. 2009).

2. Material and methods. The given research is based on general scientific methodology. During the process of research there were used a system analysis and synthesis, monographic, abstract, logical, economically-mathematic, computational and balance methods of scientific researches.

In order to evaluate the effectiveness of agricultural policy and the level of domestic support of agriculture there was used the methodology which is applied in the country-members of OECD. The methodology of the quantitative estimation of the state support is substantiated in the works of such famous scientists as JOSLING (1973), TSAKOK (1990), WEBB (1990), LOPES (1990), PENN (1990).

The “Market Price Support” (MPS) is calculated and determined by the cash value of transfers to producers from consumers and taxpayers for a period of one year, which appeared as a result of action of state policy instruments, which create a gap between prices on particular kind of agricultural production on local and foreign market in accordance with „Methodology for the measurement of support and use in policy evaluation” (Figure 1).

![Market Price Support](Figure 1. Market Price Support (MPS) and transfers from consumers (TCPabfg) and from taxpayers (TTPfged) to producers in the conditions of export)

Source: OECD.

MPS indicator is determined in producer’s prices and is calculated by the instrumentality of the next formula:

\[ MPS = (P_p - P_w) * S_2 \] (1)
where \( P_p \) – local price per unit of product; \( P_w \) – world price per unit of product; \( S_2 \) – local market supply; \( D_2 \) – local market demand; \( S_1 \) – local market supply at world prices; \( D_1 \) – local market demand at world prices.

Transfers from consumers to producers (TCP\(_{abfg}\)) are calculated by the formula:
\[
TCP_{abfg} = (P_p - P_w) \times D_2 \tag{2}
\]

Transfers from taxpayers to producers (TTP\(_{gcd}\)) are calculated by the formula:
\[
TTP_{gcd} = (P_p - P_w) \times (S_2 - D_2) \tag{3}
\]

Nominal Protection Coefficient Producer (NPC\(_p\)) = \( \frac{P_p}{P_w} \) \tag{4}

This approach is based on the fact, that every deflection of local prices from world prices can be treated as indicator of state intervention into the open market mechanism. The size of price deviation determines the level of this intervention, and, accordingly gives a quantitative characteristic of state agrarian policy.

In order to studying the economic consequences of influence of duty-tariff protection of agroindustrial market change on the prosperity of such economic agents as agricultural producers, consumers and state on the basis of the Agricultural Trade Policy Simulation Model (ATPSM), which is developed by Ralph Peters and David Vanzetti.

ATPSM is a deterministic, partial equilibrium, comparative static model, which analyses influence of price changes and trade policy on demand and supply, using the system of equalizations, developed for the recreation of the real world (Vanzetti D., Peters R. 2003):
\[
\begin{align*}
\dot{D}_{i,r} & = \eta_{i,i,r} [\hat{P}_{w,i} + (1 + \hat{i}_{c,i,r})] + \sum_{j=1} \eta_{i,j,r} [\hat{P}_{w,j} + (1 + \hat{i}_{c,j,r})] \tag{5} \\
\dot{S}_{i,r} & = \epsilon_{i,i,r} [\hat{P}_{w,i} + (1 + \hat{i}_{p,i,r})] + \sum_{j=1} \epsilon_{i,j,r} [\hat{P}_{w,j} + (1 + \hat{i}_{p,j,r})] \tag{6} \\
\Delta X_{i,r} & = \lambda_{i,r} \Delta S_{i,r} \tag{7} \\
\Delta M_{i,r} & = D_{i,r} \Delta \hat{D}_{i,r} - S_{i,r} \Delta \hat{S}_{i,r} + \Delta X_{i,r} \tag{8}
\end{align*}
\]

where \( D, S, X, \) and \( M \) denote demand, supply, exports and imports, respectively;
\( ^{\wedge} \) denotes relative changes and \( \Delta \) absolute changes;
\( P_w \) denotes world price;
\( t_c \) denotes the domestic consumption tariff;
\( t_p \) denotes the domestic production tariff;
\( \Sigma \) denotes supply elasticity, \( \eta \) denotes demand elasticity, and \( \gamma \) denotes the ratio of exports to production;
i and \( j \) are commodities indexes;
r is a country index.
3. Results. Integration of Ukraine into the world community causes the necessity of the system approach to the analysis of the modern processes of the agricultural production development with the aim of elaboration of the appropriate mechanisms of regulation which are able to provide fast adaptation of the agricultural brunch into the new conditions of economical activity. Amongst them a special place belongs to the argumentation of theoretical and methodological principles of state support of agriculture. The important point for the further research is the statement that state support can’t be associated with state regulation, because the latter point can be directed not only on stimulation of the development of economic processes, but also on their restriction. In agriculture the examples of production restriction are the programs which are applied in the EU Countries and The USA. Thus, realizing the function of restriction, the state can at the same time fulfill an incentive influence through the system of governmental support (DIBROVA A., DIBROVA L. 2009).

On our view, state support is the constituent of the system of state regulation of agriculture and it is an aggregate of law, financial, economic, organizational and other measures of the state (government) in relation to incentive influence on the development of both agricultural production and rural territories in the required direction for society. Nevertheless, treating of state support only from the position financial and budgetary support is incomplete, because it can include information support, the development of extension, the system of insurance and exchange market.

Together with it, modern agroeconomic science requires further researches concerning the estimation of the effectiveness of state support of agriculture. Investigation of foreign experience shows that in the developed countries the changes in producers’ and consumers’ surpluses are widely broadened means for measuring (in monetary equivalent) of profit and expenses which appear as a result of the change in agricultural policy of the country. It’s necessary to highlight that in the countries of Organization of Economic Cooperation and Development (OECD) there has been accumulated significant experience and there have been developed the methodology and the indexes of estimation of the effectiveness of state support of agriculture. That’s why in the conditions of WTO the fulfilment of constructive indexes of the estimation of state support of agriculture of Ukraine is an urgent task of adaptation of the national regulation system to international requirements.

WTO requirements according to the need of decreasing of domestic support in that part, which makes defacing influence on trade, displaced accents from production support to support of agricultural producers through so called unconnected actions. However, the level of agricultural support in the countries with developed market economy keeps high position.

On the average for 2002-2007 in Ukraine the relative index “Producer Support Equivalent” (PSE) was 4,2%, what is more less than in other developed countries of the world (Figure 2). PSE index shows the share of transfers to agricultural producers in the general volume of earnings of agricultural enterprises, or the share of its earnings, connected with state agrarian policy. It attests, that on the average for 2002-2007 95,8% of gross volume of earnings of agricultural enterprises were received from the market without any state support.
However, from the other side, there is a question, how is it possible, when for the last years state has significantly increased the volumes of financial resources in support to domestic agriculture. Nevertheless from 2000 to 2008 the volumes of state assignments on financing of agriculture from state budget increased more than in 8,7 times – from 1,2 to 10,4 billion hryvnas. The share of budget assignments in general expenses of state budget on agriculture increased during the analyzed period from 3,5% to 4,3%, and GDP – increased from 0,7% to 0,8%. First of all, such inconsistency is connected with a situation, when parallel with the increase of volumes of state support took place the significant decrease in purchase price on agricultural production.

During 2000-2008 budgetary subsidies on the agricultural goods production, that behave to the measures of «yellow small box» continue to prevail in budgetary charges and grew from 699 to 5170,7 million UAH or 7,4 times. It is possible to affirm that the considerable increase of growth rates of budgetary support range during 2000–2008 are not correspond with the proper increase of gross goods production in a calculation on 1 hectare of agricultural lands both on the whole for industries and among agrarian enterprises. Thus, producing about 40% gross products agrarian enterprises get mainly greater part of all budgetary subsidies.

The capacity of support due to the measures of „yellow small box” currently regulated significantly inferior to 3.043 billion UAH (the average value of the index „Aggregate Measure of Support” (AMS) for 2004-2006) as not grocery (3051 million UAH) and grocery support (1000 million UAH), which was given for this period, but did not exceed a 5% level of de minimis, was not taken to AMS and there can be no reduction. Thus, on this time the settled limit of internal support exceeds it actual range. However, in future it is necessary to spare more attention to budgetary services support. Such programs of support must stimulate development of market mechanisms and competition, be directed on the decision of structural problems through the grant of public services in industry, to provide scientific and technical progress and mastering of modern intensive technologies.
In Ukraine apart from the budgetary programs of agriculture support there is also agricultural commodity producers support due to the special modes and mechanisms of taxation. Due to the mechanism of grants payment due to the action of the special modes of VAT taxation by processing enterprises for the handed over milk and meat in living weight agricultural commodity producers get annually near 1,5 milliards of UAH. However, without regard to marked, the meat and milk production in Ukraine stay unprofitable, and industry of stock-raising did not succeed to be take out from crisis.

An analysis is witnessed that next to diminishing of tax pressure in the agrarian sphere substantially it was not succeeded to promote efficiency of agricultural production, declined financial possibilities for development of rural locality and decision of social problems on a village. It is marked that after the requirements of WTO privilege from payment of VAT for agriculture must be abolished, that is why at these conditions coming to a head necessity them partly to revise in behalf of introduction of the additional budgetary support programs.

Thus, the substantial increase of volumes of financial resources of foreseen in support an agricultural production on this time does not turn around the desired productive return and necessary financial providing of commodity producers.

As we see from the data on Figure 3, MPS index for wheat producers in Ukraine for a period from 1996 to 2007 has as positive as negative values, which suggests about some inconsistency of the state support system. Because when this value is positive, agrarian policy is directed on consumers support with the help of consumers of production and state. When this value is negative – producers incomes are reallocated to consumers and other economic groups good.

![Figure 3. "Nominal Protection Coefficient" (NPC) and "Market Price Support" (MPS) for wheat producers in Ukraine per 1 ton of grain](image)

Source: based on data of OECD.

The received values of NPC index of wheat (as a ratio of average price, which producer receives on the local market, to the price on the world market in producer’s prices) confirms price instability and low effectiveness of the mechanism of state regulation of grain market in Ukraine.

An analysis is witnessed that beginning from 2005 there is a proof tendency in relation to the increasing of negative index of MPS. Thus, if in 2006 on 1 ton of grain...
MPS was amount to minus 94,4 UAH, in 2007 - minus 311,8 UAH. Such downswing of MPS index of producers of wheat in Ukraine in 2007 was caused above all things through introduction of licensing and quota of grain export which was abolished in 2008. Calculations, witnessed that during 2005-2007 the MPS index of wheat producers had negative value, both due to transfers from consumers and due to transfers from taxpayers (Figure 4).

On the base of conducted analysis, we can make a conclusion, that capabilities for improvement of the state regulation mechanism are strongly restricted. The need in changing approaches to the mechanism of state regulation is caused by a need in improving of socio-economic parameters of agriculture development, and formation the whole system of state regulation with the aim of prevention of a possibility of crisis phenomena appearance and minimization of influence of negative results for the economy of Ukraine.

So far as, in the situation of current level of agricultural production productivity indexes retention, the possibilities for its development will be insufficient for improving the standards of living of population, guaranteed satisfaction of food demand, balanced resumption of branch resource potential. That’s why only at the expense of state support volumes increasing without structural reforms, improvement of pricing system, it will be incredibly difficult to solve this problem. The received domestic experience is the confirmation, when substantial increasing of the volumes of financial resources earnings into agriculture doesn’t give the desirable productive return and needed financial provision of commodity producers.

![Figure 4. Gross transfers to producers for wheat from consumers and taxpayers in Ukraine per 1 ton of grain, hrv.](image)

Source: based on data of OECD.
Taking into account it, by the effective enough lever of state influence, there can be introduction of the program of direct payments for support of profits to the agricultural commodity producers. The lines of payment show by itself payments, the size of which does not depend on the standard of prices which was folded on a certain moment on the proper agricultural product, are fixed. To advantages of introduction of direct payments it is possible to take an attempt to provide stability of profits of agricultural commodity producers regardless of the market state of affairs or legal forms of management. Transparency and sequence of public agrarian policy and expense of budgetary facilities, and also harmonization of the system of state support, is thus provided agrarian the sector of economy of Ukraine to the proper system which is used in countries with the developed market economy. However, introduction of this program foresees acceptance of row of other measures also, in particular, forming of the unique system of the indicative planning of determination of requirement in state support on national, regional and district levels, and also at the level of subjects of management.

The entry of Ukraine to WTO imposes the proper limits on an agrarian policy, in part of fulfilling a commitment in relation to access of imported Agricultural production to the national agrarian market. Yes, in particular, during entry to WTO operated average arithmetical rate on the products of agriculture (external economic nomenclature of commodity groups 1-24) presently is 19,69%, and after the borne offered changes it will go down to 10,54%, in particular on the import of living animals, products of animal origin – from 20,88% to 9,04%, products of phytophagous – from 16,49% to 8,16%, this rate in fat and butter of vegetable and animal origin will grow – from 16,67% to 9,54%; prepared food products – from 24,73% to 15,42%. Among the terms of entry of our country to WTO is limitation of duty at level from 0% to 50%, and some rates must be stage-by-stage brief to 2013 year. The greatest tariffs which let to set in Ukraine, are tariffs on sugar (50%) and sunflower-seed oil (30%).

For research of economic consequences in influence of change to the custom-tariff securing for welfare of such economic agents as agricultural commodity producers, users and state we use the Agricultural Trade Policy Simulation Model (ATPSM) which is created by RALF PETERS and DAVID VANZETTI and is used by FAO.

In ATPSM changes in demand and supply are estimated in accordance with percent changes in internal prices. For the influence estimation of internal price changes from a foreign trade policy all tariffs are shown in a percentage ratio to the prices in the world market. In a model used only advalorem duty and it is foreseen that tariff changes are determined as a percent from an initial tariff. Influence of custom-tariff changes to securing of Ukraine agroindustrial market for prosperity of such economic agents as agricultural commodity producers, consumers and state, certainly on the basis of scenarios which foresee a decline on the average of rates of import duty accordingly on 5, 10, 15, 20 and 24%.

As calculations, declines of the imported tariffs, testify will result in a decline in the internal production of goods. The decline of consumer prices on agriculture stimulates the increase of level in consumption which on condition of decline in an internal production will be compensated due to the imported deliveries. Yes, a decline
on the average of tariff shelter on 24% will result in the decline of consumer prices on 37,25% and will promote the level of consumption of agricultural products on 24,75% (table 1).

**Table 1: Economic consequences from the decline of import duty on agricultural products for the economy of Ukraine**

<table>
<thead>
<tr>
<th>Indexes</th>
<th>Decline of import duty on agricultural products on the average of:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5%</td>
</tr>
<tr>
<td>Changes in the production of goods %</td>
<td>-3,6</td>
</tr>
<tr>
<td>Changes in a consumption %</td>
<td>5,2</td>
</tr>
<tr>
<td>Changes are in the combined export, million of USD</td>
<td>-0,1</td>
</tr>
<tr>
<td>Changes in the combined import, million of USD</td>
<td>36,8</td>
</tr>
<tr>
<td>Changes in foreign trade balance, million of USD</td>
<td>-36,9</td>
</tr>
<tr>
<td>Consumer price change %</td>
<td>-7,8</td>
</tr>
<tr>
<td>Purchase price change %</td>
<td>-4,9</td>
</tr>
<tr>
<td>Change in surplus of producer, million USD</td>
<td>-31,0</td>
</tr>
<tr>
<td>Change in surplus of user, million USD</td>
<td>38,5</td>
</tr>
<tr>
<td>Change in surplus of profit of government, million USD</td>
<td>5,6</td>
</tr>
<tr>
<td>Changes in a commonwealth, million USD</td>
<td>13,1</td>
</tr>
</tbody>
</table>

Source: author’s calculations.

Thus, it is possible to assert that in domestic agroindustrial production export oriented industries (grain growing, production of sunflower-seed oil) of decline of import duty does not make a potential threat, as competitive products by price in comparison to foreign analogues. However, there is a certain threat for other industries, in particular, are sugar industry, chicken and beef production, apples, tomatoes.

Ukraine integration to WTO will lead to the system changes of agriculture development, related to simultaneous transformation custom-tariff to the mode of agro foodindustrial market and system of state support. At these conditions one of the major tasks of public agrarian policy there is forming of the state support system, which, from one side, there must be adapted to the WTO requirements, on the other hand – able to protect agricultural commodity producers from an external competition and stimulate market processes in industry.

The system of state support must be predictable, unchanged during 3-5 years, transparent and opened for society. The legislative providing of agricultural production adjusting needs improvement in part of removal of duplication and inconsistency in to normative legal field. The programs of agriculture support must be directed to the increasing of the labour and technical level of agrarian production productivity, and also growth of competitiveness and quality of products, due to introduction of innovations (DIBROVA A., DIBROVA L. 2008).
Consider that the decision of the improvement of the system of agriculture state support problem must be carried out in a complex with the improvement of the pricing system on an agricultural production. For this purpose it is necessary to implement the system of the state guaranteed prices on the agricultural production, which will enable to protect an agricultural commodity producer from market price decreasing, to guarantee profitable activity and provide economic interest of agricultural commodity producers. In addition, in the present context of economic importance will be extremely efficient use of budgetary funds in a highly limited and their rejection of those government programs that lead to inefficient expense.

4. Conclusion. In such a way, we can make a conclusion, that existing pricing system in AIC makes impossible the realization of expanded reproduction processes in the branch, and the system of state support only partly compensate not fully received money from market. It testifies that existing market price of realization doesn’t correspond to the objective needs of producer taking into account the needed level of equivalence of exchange and reproduction the invested into production assets. We should avoid the criteria, connected with a comparison of support on hectare, such as when pricing mechanism is imperfect, such support will compensate not fully received money from production realization, however commodity producers won’t be able to renew production potential in needed volumes for balanced development. We suppose, that improvement of state regulation of agricultural production should be made in complex. In particular, improvement as system of price regulation on agricultural production and the system of state support of the branch.

Thus, in the new terms of management for providing of stable development of agriculture of Ukraine one of primary tasks of the state consists in the correction of agrarian policy of the state in accordance with the requirements of WTO. Development of effective mechanism of adjusting of agricultural production, which would combine the instruments of government control and market self-regulation harmoniously, and also based on the balanced price, financially-credible, tax, investment policy of the state requires also.

References


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