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MEASURING DOMESTIC AGRICULTURAL SUPPORT IN DEVELOPED COUNTRIES IN THE LIGHT OF THE WTO REGULATIONS[2]

Abstract. This paper deals with an issue of measuring and reducing the level of agricultural domestic support within the provisions of the WTO in developed countries. The emphasis is put on the analysis of the implementation process of the Uruguay Round Agreement on Agriculture in the field of domestic support, as well as on explaining its impact on the agricultural policy in chosen countries. It also presents an alternative way of measuring the domestic support using popular PSE index compiled by the OECD. Finally, it suggests some improvements in the way the trade distorting programmes might be assessed, which might increase the efficiency of the future agricultural agreements within the Doha Round.

Key words: agricultural policy liberalisation, domestic support, World Trade Organization (WTO), Aggregate Measurement of Support (*AMS*), Producer Support Estimate (*PSE*), agricultural support measures, amber box, green box, blue box, Uruguay Round, Doha Round

INTRODUCTION[3]

Current agricultural negotiations at the World Trade Organization (WTO) within the Doha Round are focused on three main "pillars" defined during the Uruguay Round (UR). These pillars are: domestic support, market access and export subsidies. Among these three fields of negotiations, domestic support issues seem to be the most challenging. There is not only a question of how to reduce the level of

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agricultural support, but first of all how to measure it. The vast range of domestic support tools, their diversity and the dynamics of their evolution are a real challenge facing agricultural negotiators during Doha Round. Implementation of the Uruguay Round Agreement on Agriculture (URAA) proved that commitments with regard to domestic support appeared not to be very demanding for most of the developed countries and that the Aggregate Measurement of Support (AMS) used by WTO to define these commitments was not a very effective measure.

The aim of this paper is to present and evaluate current rules of measuring and reducing domestic support defined by the URAA, particularly the "amber box" programmes, as well as to suggest some potentially useful changes in the AMS definition. The first part of this paper analyses the implementation process of the URAA in the field of domestic support and presents changes in its level and structure during current negotiation round. The second part tries to explain the weak effectiveness of the URAA provision in reducing the actual level of agricultural domestic support which might prove useful for negotiating new reduction rules and formulas during the current round. The third part of this paper, presents an alternative approach to measure domestic support, using the well known OECD's PSE set of indicies, to prove whether the URAA provisions have really been as ineffective in reducing agricultural domestic support. The conclusion, since the current Doha Round negotiations, are based on the same policy areas as the URAA[4], the author formulates some recommendations on how the domestic support provisions and AMS might be improved.

THE URAA PROVISIONS IN THE FIELD OF DOMESTIC SUPPORT

The GATT[5] aims to liberalise international trade flows. Negotiations take place in the form of so-called negotiations rounds. The Uruguay Round was the eighth round[6]. Although the United States of America (USA) tried to initiate a new round of GATT negotiations already in 1982. this, in spite of the advanced preparatory work, for the next four years the new round failed to start. It was only in September 1986, during a meeting in Punta del Esta in Uruguay, when a decision to start a new round − the Uruguay Round – was finally made.

One of the most important reasons to start the new round were strong distortions in the international trade of agricultural products. Due to a perfunctory treatment of this topic during previous rounds, the agricultural sector in developed countries had been protected by an almost unlimited range of policy measures. However, countries managed to finally reach an agreement also on these agricultural issues. As a result, negotiators decided to divide the Uruguay Round Agreement on Agriculture (URAA) into three main "pillars": market access, export subsidies and domestic support and

[4] The work plan was adopted during the Ministerial Conference in Doha (9th–13th November 2001) [WTO 2001].
[5] The General Agreement on Tariffs and Trade (GATT) was signed in Geneva on the 30th October, 1947.
[6] GATT negotiations round: Geneva, Annecy, Torquay, Geneva II, Dillon, Kennedy, Tokyo and Uruguay.

TABLE 1. The most important Uruguay Round agricultural support reduction commitments
TABELA 1. Najważniejsze zobowiązania do redukcji wsparcia w sektorze rolnym wynikające z ustaleń Rundy Urugwajskiej

Group of countries	Developed countries	Developing countries[a]
Implementation period	6 years (1995–2000)	10 years (1995–2004)
Market access:		
– average tariff reduction for all agricultural products	36%	24%
– minimal tariff reduction for a single product	15%	10%
Domestic support[b]:		
"amber box" support reduction measured with *AMS*	20%	13%
Export subsidies:		
– value reduction	36%	24%
– volume reduction	21%	14%

[a] LDCs have been fully exempted from reductions.
[b] Years 1986–1988 were agreed as a base level.
Source: Own elaboration based on WTO [1994] and the WTO webpage [www.wto.org].

also to differentiate commitments for the developed and developing countries. The main commitments of the URAA are presented in Table 1.

The URAA changed fundamentally the way in which domestic support is regulated. The regulations sought to reduce the level of domestic support and impose greater discipline on the use of domestic support. Countries, however, were still able to use a wide range of tools due to the specific regulations and apply numerous exemptions.

Domestic support programmes were divided into three categories named "boxes". The programme was classified into an "amber", "blue" or "green box" − depending on its impact on trade, agricultural sector and various reduction commitments. The URAA is quite specific about the programmes that can be classified as "blue" or "green box" [Hart and Beghin 2004]. "Blue box" programmes cause moderate distortions to trade and market mechanism. These are direct payments for farmers tied to production – limiting policies, e.g. EU compensatory payments introduced during the MacSharry's Reform or US deficiency payments before 1996. "Blue box" payments do not have to be limited, unless they exceed their base level from the year 1992.

"Green box" programmes have no or minimal trade impact. These kind of payments must be derived from the public budget and cannot involve transfers from consumers or support prices. These can be [WTO 1994]: general services, public stockholding for food security, domestic food aid, direct payments to producer, decoupled income support, government participation in income insurance and income safety net programmes, payments for relief from natural disasters, adjustments assistance provided through producer or resource retirement programmes, adjustment assistance provided through investment aids, payments under environmental programmes and payments under regional assistance programmes.

The "amber box" contains programmes which have a direct impact on production and which distort trade. These are all the measures which cannot be classified as a "blue" or "green box" payments, e.g. intervention prices, input and output subsidies, etc. Level of support provided by the "amber box" programmes measured with the *AMS* was supposed to be reduced by 20% from 1986−1988 base level during the

first six years of implementation period[7]. Value of support from base period and the reduction commitments were defined in the countries' concession lists (see Table 2 for chosen countries).

TABLE 2. Domestic support reduction commitments in chosen developed countries measured by the *AMS* at the end of implementation period

TABELA 2. Zobowiązania do redukcji wsparcia wewnętrznego mierzone wskaźnikiem *AMS* dla wybranych krajów rozwiniętych na koniec okresu implementacji

Country	Currency	*AMS* in base period 1986–1988	Reduction commitment – *AMS* in 2000
USA	USD million	23 875	19 103
EU	EURO million	76 505	61 204
Japan	Yen billion	4 966	3 973
Australia	AUS $ million	590	472
New Zealand	NZ $ million	360	288

Source: Own elaboration based on OECD [1995].

The AMA is a measure of the annual level of support provided to agricultural producers in monetary terms. The accounting method uses either government expenditures or price gaps between a fixed external reference price and the applied administered price [De Gorter and Ingco 2002]. It is calculated as the sum of commodity specific and non-commodity specific support. The so called *de minimis* rule applies to "amber box" programmes. Under this rule a product specific support is excluded from reduction, as long as it is not higher than 5% of commodities' value of production. A non-product specific support is excluded from reduction, if it is not higher than 5% of the total value of agricultural production. Table 3 presents a simple example of the *AMS* calculation for the sample developed country. More information about calculating the *AMS* and analysis of possible related difficulties can be found further in the paper.

IMPLEMENTATION OF THE URAA DOMESTIC SUPPORT PROVISIONS AND THE CURRENT LEVEL OF DOMESTIC SUPPORT IN DEVELOPED COUNTRIES

In order to assess the effectiveness of the URAA in the field of domestic support, it is necessary to analyse the changes of its level and the structure. The geographical structure of domestic agricultural support before Uruguay Round was dominated by the OECD countries[8], especially by the member states of the EU, the USA and Japan (85% of total support). The first years of the URAA implementation process did not change significantly the geographical structure of this support. This could be explained by the fact that from the beginning of the implementation period most of the developed countries had no problems with fulfilling the WTO "amber box" commitments and

[7] Developing countries had to reduce "amber box" payments by 13% in 10 years.

[8] Among the 142 WTO member countries, only 30 most developed ones had the reduction commitments in their concession lists which means that only these countries had actually supported their agriculture.

TABLE 3. An example of an *AMS* calculation
TABELA 3. Przykład kalkulacji wskaźnika *AMS*

Product		Wheat	Barley	Rape	Non-specific
Form of intervention	Intervention price/ world price	225 $ per tonne / 110 $ per tonne	–	–	–
	Direct payments- not excluded from reduction	–	$3,000,000	$14,000,000	–
	Other subsidies	–	–	–	$4,000,000
Level of production		2,000,000 tonnes	–	–	–
Value of production		$510,000,000	$100,000,000	$250,000,000	$860,000,000
De minimis value		0.05·510,000,000 = $2,5000,000	0.05·100,000,000 = $5,000,000	0.05·250,000,000 = $12,500,000	0.05·860,000,000 = $43,000,000
AMS		($225 – $110)·2,000,000 = = $290,000,000	$3,000,000 (AMS < *de minimis)*	$14 ,000,000	$4,000,000 (AMS < *de minimis*)
Total *AMS*		$290,000,000 + $14,000,000 = $304,000,000			

Source: Own elaboration based on http://www.wto.org/english/tratop_e/agric_e/ag_intro03_domestic_e.htm#reduction.

as a result the *AMS* limits were not binding. It also meant that a gap appeared which theoretically provided the possibility to rise again the level of support classified in the "amber box". The three biggest suppliers of domestic support, namely the USA, the EU member states and Japan, reduced the current *AMS* level stronger than their commitments (compare Table 2 and 4).

TABLE 4. Domestic support categories in the US., the EU and Japan during the URAA implementation period and the latest available notification

TABELA 4. Wsparcie wewnętrzne według poszczególnych kategorii w USA, UE i Japonii w okresie implementacji Porozumienia w sprawie rolnictwa oraz ostatnia dostępna notyfikacja

Country	Year	"Amber box" – AMS	*De minimis*	"Blue box"	"Green box"	Total
USA (in billion $)	1995	6.2	1.5	7.0	46.0	60.7
	2000	16.8	7.3	0.0	50.1	74.2
	2005	12.9	6.0	0.0	71.2	90.1
	2009	4.3	7.2	0.0	103.2	114.8
EU (in billion euro)	1995	64.4	1.1	26.9	24.2	116.6
	2000	38.9	0.5	19.8	19.5	78.7
	2005	28.4	1.0	13.5	40.3	83.2
	2009	11.8	1.1	5.3	62.8	81.0
Japan (in billion Yen)	1995	3329.7	373.4	0.0	2818.1	6521.2
	2000	708.5	31.7	92.7	2595.3	3428.2
	2005	593.3	41.3	65.3	1916.3	2616.2
	2009	564.8	173.1	21.8	1848.4	2608.1

Source: Own elaboration based on Koo and Kennedy [2006] and countries notification from WTO available at: http://www.wto.org/english/tratop_e/agric_e/ag_work_e.htm.

The end of the implementation process did not stop this trend and according to the countries' recent WTO notifications, the EU's current total AMS in 2009 amounted to 11.8 billion euro (with the commitment at the level of 72.2 billion), the USA's current total *AMS* dropped to 4.3 billion of US $ (with the commitment at the level of 19.1 billion) and Japan's current total AMS amounted to 564.8 billion Yen (with the commitment at the level of 3973 billion). Japan is an example of a country, in which the *AMS* proved to be a completely misleading measurement of domestic support level. Due to the Yen purchasing power parity, the level of domestic support in Japan measured with the *AMS* rarely presents the real value of support. These differences are discussed in the next part of this paper using a different calculating method, in which the *AMS* value is calculated as the difference between the fixed reference world price and the domestic administered price. The world market prices' decline (in Yen) enabled Japan to raise the real value of domestic support to the level of the mid-1980's and simultaneously to fulfil its obligations under the Agreement on Agriculture.

It is worth noticing that the total level of agricultural support is still relatively high and in some countries (particularly in the USA) is still rising, mainly due to the "green box" measures. Observations show, however, an important shift in the domestic support structure. "Amber" and "blue box" support has been declining in favour of "green box". In case of the EU this was mainly due to the 2003 Reform in Luxemburg, when the new decoupled direct payments system called Single Payment

Scheme (SPS) was introduced. In the USA the total level of support classified to "green box" was rising because of an emphasis put on national food aid (almost 79 billion of US $ in 2009).

At the beginning of the implementation period, apart from the EU countries, only three other OECD countries had been using the "blue box" measures: USA, Norway and Iceland. This group of instruments includes direct payments linked to production limiting programmes based on constant yield or area, made in respect of a maximum of 85% of production base level or, in the case of animal payments, which were based on the fixed stock. Compensation payments in the USA or MacSharry's compensatory payments in the EU were examples of such payments. As a result of the 1996 Fair Act in the USA compensation payments were replaced with flex (flexible) payments, which have been moved into the "green box". At the end of the implementation period, "blue box" instruments played an important role mainly in the EU's domestic support structure. Notably compensatory payments for cereal producers and the beef and suckler cow premiums have been included during the Uruguay Round negotiations in the *AMS* calculation, but during the implementation period they were moved to the "blue box" leaving *AMS* limit unchanged. This has enabled the EU to meet the "amber box" reduction requirements without any effort.

Despite the agricultural reforms in developed countries and changes in general trends of agricultural domestic support policy in the direction of more direct support, most of these countries still use a full range of instruments, both the instruments included in the "amber box", such as production subsidies, input subsidies, income transfers or price support, as well as instruments included in the "green box", such as funding for research and development or infrastructure. Of note is that in the implementation period most of the developed countries did not use even half of the *AMS* limit which means that they still have the opportunity to increase the distorting support provided to farmers [Ingco 2002]. OECD countries, except Korea, had already in 1995 filled the *AMS* limits set for the end of the implementation period, i.e. in 2000. Some problems with maintaining an adequate level of support were experienced in Hungary within the period of 1998−2000 as a result of very high inflation rates. The high level of *AMS* index in Iceland and a very low in Poland resulted from these countries expressing their *AMS* limits in foreign currencies − Iceland in SDR[9] and Poland in US $. Some intermittent problems with fulfilling the reduction requirements as a result of exchange rate fluctuations occurred in Iceland, and the level of support in Poland during the implementation period was at a very low level.

THE WTO'S EFFECTIVENESS IN REDUCING AGRICULTURAL DOMESTIC SUPPORT

Most of the developed countries did not face any difficulties with fulfilling the URAA domestic support provisions and had reduced "amber box" support level below the year 2000 commitments before the implementation period (1995−2000) even started. This situation is believed to be a result of both, the construction of the

[9] Special Drawing Rights.

AMS as well as the selection of the base period. In order to define the limits of the domestic support and the reduction commitments, the WTO decided to exploit the *AMS* [Silvis and van der Hamsvoort 1996]. This measure consists of two components. The first is the product specific support and the second − general non-product support. The reduction commitment applies to the total *AMS* which is a sum of these two components. Under this situation, a given country has to reduce an average total support, although it still may increase support on the single strategic market.

Another issue with the *AMS* definition are the prices used for calculating this measurement. Price support in the *AMS* is calculated as a difference between a fixed external (world) price and a domestic administered price[10]. This difference is later multiplied by the volume of production which the administered price refers to. As the reference external price is fixed, calculation of the *AMS* usually does not correspond to the real *AMS* and as a result does not measure real support. Even it is assumed that the domestic prices are close to the administered ones (which is not always true), real world prices often deviate from a fixed reference average level based on years 1986–1988. Figure 1 presents the consequences of the world price volatility for the real value of the *AMS*. In the "A" situation when the real external price is higher than the fixed external price from the base period, the difference between an administered price and real external price is going to be lower. Consequently, the real *AMS* is going to be lower than the one calculated based on the WTO methodology. However, countries will have to reduce its support level according to the WTO calculation which overall may appeared to be harmful to some of them.

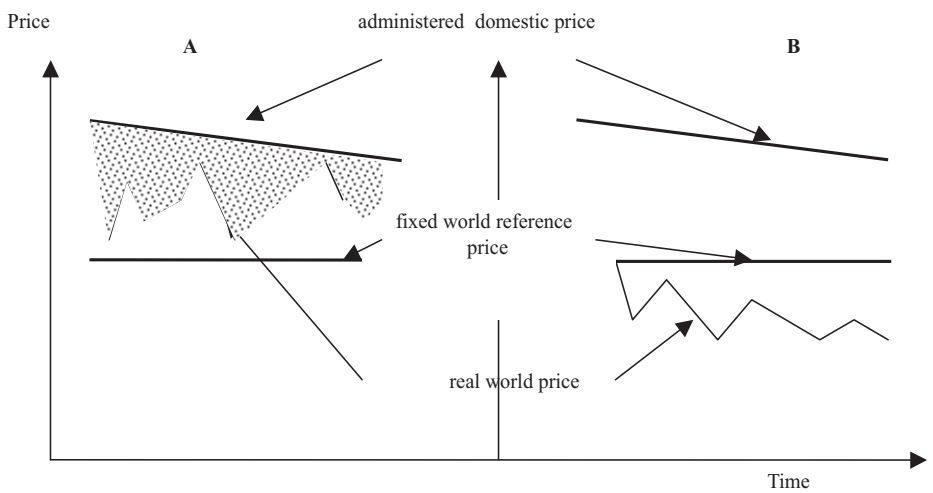

FIGURE 1. Consequences of the world price volatility for the real value of the *AMS*
RYSUNEK 1. Konsekwencje wahań cen na rynkach światowych dla wartości wskaźnika *AMS*

Source: Own elaboration based on Roberts at al. [2001].

[10] An example of administered price might be an intervention price in the EU and LDP loan rates in the USA.

This looks quite different for the "B" case, where the actual world price is at a lower level than the fixed external reference price. In this situation, the actual level of support will therefore be higher than the one calculated by the official *AMS* which will favour the country[11]. So in both cases, the *AMS* rate will not reflect the real level of price support [Czyżewski and Poczta-Wajda 2011]. Another issue is that the difference between domestic and world price may not only result from the domestic support policy, but also from the border and trade policy. In such case the *AMS* is misleading, because it double counts support already provided by import barriers or export subsidies [De Gorter and Ingco 2002].

Consideration is necessary of the influence of inflation and exchange rate, which might reduce the *AMS* ability to measure real support value. A high inflation rate may provoke government to rise administered prices in nominal terms, this, in a country with a high rate of inflation could cause problems with the fulfilment of WTO commitments measured with the *AMS*. A similar problem could arise as a result of exchange rate volatility. Administered prices were usually expressed in national currency and the fixed world reference price was converted into domestic currency at a fixed exchange rate.[12]

Nevertheless, the definition of the *AMS* was not the only problem. A second major factor limiting the effectiveness of the URAA implementation was the choice of base period (1986−1988). During this period, world market prices were at their lowest level, hence the difference between world prices and domestic prices in the developed countries was exceptionally high. The level of domestic support was also very high. Due to a re-growth of prices on world agricultural markets in the early 90's, the level of domestic support collapsed in many countries without the interference of authorities.

The *De minimis* rule is believed to be another factor reducing effectiveness of the URAA domestic support provisions. The use of this instrument proved to be wider than expected. Hungary and Canada were the undisputed leaders in this area. The calculation of the AMS in the base period 1986−1988 included compensation payments. In the beginning of implementation period, some countries modified these payments in a way which enabled them to qualify compensation payments into "blue" or "green" boxes and thus they were not taken into account when calculating the current *AMS* level[13].

ALTERNATIVE WAYS OF MEASURING DOMESTIC SUPPORT

One of the alternative ways of measuring agricultural support is the use of the popular set of OECD's support indicators in the *PSE* and *CSE* databases. This set of indicators was developed and is published each year to assess the impact of agricultural policy instruments on producers and consumers. These indicators are the only, published annually, complete and widely available source of information about

[11] Japan is an example of a country in which the real level of price support had been increased and in the same time the *AMS* had been reduced in accordance with the Agreement on Agriculture rules. Such situation might have happened, because the real external prices in the late 90's expressed in fall of the Yen far below the external fixed reference prices.

[12] In order to avoid similar problems, some countries have expressed their *AMS* commitment in SDR (Iceland) or US $ (Poland).

[13] For example this was the case with compensatory payments to grains and oilseeds producers introduced within MacSharry's Reform [Burfisher at al. 2002].

the level of support to agriculture in developed countries which are internationally comparable [Gawron 1998, Legg 2004]. They are calculated for all member states (the EU member states are treated as one), as well as for individual agricultural products according to their importance in the agricultural sector of the country[14].

The most important indicator is the Producer Support Estimate (*PSE*). It represents the annual monetary value of gross transfers from consumers and taxpayers to agricultural producers, measured at the farm gate level, arising from policies that support agriculture, regardless of their nature, objectives or impacts on farm production or income. *PSE* is calculated by adding the value of Market Price Support (*MPS*)[15] and the value of budgetary transfers to producers. The structure of *PSE* can be presented as:

PSE = $Q(P_p - P_w)$ + *Payments based on output + Payments based on input use + Payments based on current area/animal numbers, production required + Payments based on non-current area/animal numbers, production required + Payments based on non-current area/animal numbers, production not required + Payments based on non-commodity criteria + Miscellaneous payments*

where:
Q – production level,
P_p – producer price,
P_w – world price,
$Q(P_p - P_w)$ – *MPS*.

PSE is calculated in national currency. Thus in order to achieve comparability between different countries, *PSE* is also calculated as a percentage which expresses the share of financial support in the total income of agricultural producers. This allows it to assess how much of a farmer's gross receipts is achieved from the market without any support and which share is generated by state intervention [OECD 2010]. It is calculated according to the formula:

$$\%PSE = \frac{PSE}{Q \times P_P + \boldsymbol{P}} \times 100$$

where:
Q x P_p – value of production,
PP – budgetary transfers, calculated as a difference between *PSE* and *MPS*.

One of the main component of the *PSE* is the *MPS*. It is the only component of *PSE*, which is calculated separately for each product and based on the information from the market (price), since the other components are already included in the budgetary expenditure. The *MPS* is calculated only for a portion of agricultural products and then the

[14] *PSE* calculation methodology was modified in 2007. The changes concern the internal structure of the *PSE* index. However, it is still comparable to the *PSE* value estimated according to the old methodology. The methodology of other key indicators such as NAC, NPC, TSE, GSSE has not been changed [Wieliczko 2008].

[15] *MPS* is the annual monetary value of gross transfers from consumers and taxpayers to agricultural producers, arising from policy measures that create a gap between domestic market prices and border prices of a specific agricultural commodity, measured at the farm gate level.

average value of the *MPS* is attributed to other products. For this reason, it is important that the largest part of the production is covered by the *MPS* calculation. Otherwise it may lead to an underestimation or overestimation of its value. Most of the policy tools which make the difference between domestic and world price and thus affect the size of the *MPS*, can be classified to the WTO's "amber box". However, the difference in prices is however created also by tariffs and, therefore, *MPS* can not be identified with the *AMS*. However, analysis of the percentage *PSE* level and its structure, including share of *MPS*, can be helpful in assessing changes in agricultural support policies in developed countries.

The level of farmer support in developed countries during the implementation period of the URAA (1995−2000), measured by the % *PSE*, has not been markedly reduced (see Figure 2). Some decline was noticed in the years 1986−1989, within the first half of the Uruguay Round, but later it increased again. In 2003, the % *PSE* for OECD countries' average was at the same level as in 1989. The decrease in the level of support measured by % *PSE* did not begin until after 2003, three years after the completion of the implementation of the URAA. This provides different conclusions from those derived from tAMS analysis which indicated a decline in support.

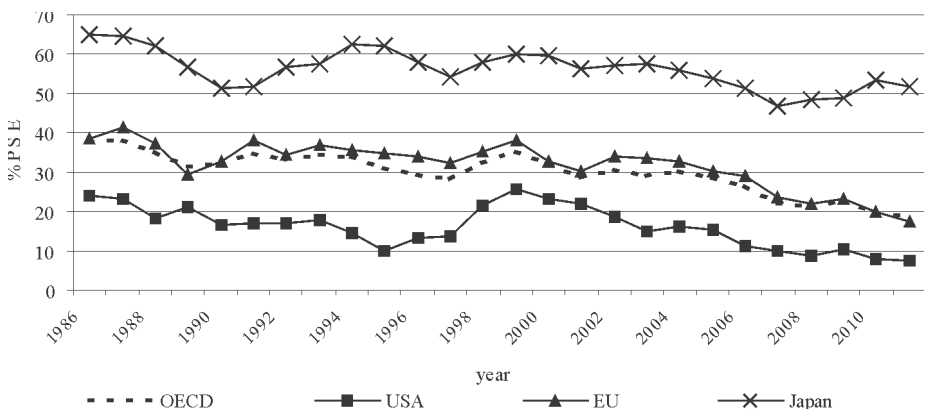

FIGURE 2. Share of financial support in farmer gross revenues (%*PSE*) in chosen OECD countries in the years 1986–2011

RYSUNEK 2. Udział wsparcia finansowego (w %*PSE*) w przychodach producentów rolnych w wybranych krajach OECD w latach 1986–2011

Source: Own elaboration based on OECD database *Producer and Consumer Support Estimates, 1986–2012.*

This was because the *PSE* also included the instruments classified by the WTO to the "green box", "blue box" and *de minimis* payments. Therefore, the conclusions of the discussion presented in the previous section of this paper should be supplemented by an analysis of the *PSE* structure.

Figure 3 presents the structure of the *PSE*. Significant declines in the share of market price support instruments and payments based on output are shown. These instruments are mostly classified as "amber box" and considered to be the most trade and market distorting. However, the culmination of this decline falls after the end of

the URAA implementation process. Since 1992 there has been an increased use of payments based on current area/animal numbers by which production is required and which can be classified into "blue box". This phenomenon resulted from the introduction of compensatory payments in the EU during MacSharrys' Reform, and because since 1994, payments based on non-current area/animal numbers, by which production is not required have been steadily increasing. These payments can be classified to "green box", because this category includes decoupled payments. The strongest increase in the share of these instruments followed after 2003, after the Common Agricultural Policy Reform in 2003, when the compensation payments was replaced by a new system of direct decoupled payments.

FIGURE 3. *PSE* structure in OECD countries in the years 1986–2011
RYSUNEK 3. Struktura wskaźnika *PSE* w krajach OECD w latach 1986–2011

Source: Own elaboration based on OECD database *Producer and Consumer Support Estimates, 1986–2011.*

Changes in the structure of agricultural support proceeded differently in different countries. Table 5 presents the structure of support for agricultural producers in the USA, the EU and Japan. Special attention should be paid to Japan, as the conclusions of the *PSE* structure analysis and *AMS* analysis are quite different. The data in Table 5 shows that in Japan there is still a very high level of market support which is considered to be strongly trade and market distorting. However, according to Table 4 and the *AMS*, support considered to be harmful for trade and included in the "amber box" fall. This discrepancy is due to the methodology used and it confirms that the use of fixed reference prices in the *AMS* calculation might not be the best solution and in some cases helps a country to keep the actual support at a high level while completing the WTO commitments and *AMS* at low level.

Detailed PSE analysis confirms that significant changes have occurred in the structure of support in the EU and the USA. There is a strong decline in production-based support share suggesting that support is evolving away from supporting farmers through the market. In both cases the share of payments based on non-current area/animal numbers, by which production is not required, have increased. Such changes

TABLE 5. *PSE* structure in the USA, the EU and Japan in the years 1986–2010 [%]
TABELA 5. Struktura wskaźnika *PSE* w USA, UE i Japonii w latach 1986–2010 [%]

Country	Year	*MPS/PSE*	*A/PSE*	*B/PSE*	*C/PSE*	*D/PSE*	*E/PSE*	*F/PSE*
USA	1986–1988	36	9	19	34	0	1	2
	1995	44	0	32	15	0	0	9
	2000	33	20	14	10	0	20	4
	2005	22	15	23	7	0	27	6
	2010	12	1	35	21	0	21	10
EU	1986–1988	85	6	5	4	0	0	0
	1995	58	4	6	31	0	0	1
	2000	53	5	7	34	0	0	0
	2005	44	5	10	24	0	16	1
	2010	16	1	15	18	0	48	2
Japan	1986–1988	90	3	4	0	0	3	0
	1995	91	3	5	0	0	1	0
	2000	89	5	4	0	0	3	0
	2005	88	5	3	1	0	5	0
	2010	80	3	4	6	0	7	0

Notice: *A* – payments based on output; *B* – payments based on input use; *C* – payments based on current area/animal numbers, production required; *D* – payments based on non-current area/animal numbers, production required; *E* – payments based on non-current area/animal numbers, production not required; *F* – payments based on non-commodity criteria + miscellaneous payments.
Source: Own elaboration based on OECD database *Producer and Consumer Support Estimates, 1986–2011.*

are required from the WTO point of view, since these kind of payments are classified as "green box" instruments. However they have occurred however already during Doha Round and they should not be identified as the URAA results. However, *PSE* represents only the support transferred to farmers and not to the agricultural sector as a whole. These kinds of instruments are estimated with the use of General Service Support Estimate (GSSE) and are mostly classified to the "green box"[16].

CONCLUSIONS

Analysis of OECD support estimates suggests that in developed countries there had been only a slight decrease in the level of support and it was reported even during the negotiations of the Uruguay Round. Stronger decline in the level of support was recorded after 2003. However, there has been a significant change in the structure of domestic support. In most developed countries there is an evolution of agricultural policies towards the use of direct support instruments, especially those decoupled[17]. However price support instruments, still constitute a very large portion of the total amount of financial support to the agricultural sector. This calls into question the effectiveness of the provisions under the URAA.

In summary, given these considerations on the implementation of the URAA and its effectiveness, particularly the *AMS* effectiveness, the following conclusions can be drawn:

[16] This is very important for the USA because food aid, which in this country amounts to 79 billion of US $, is included in the GSSE and not in the *PSE*.
[17] However, some empirical evidence proves that not all of these payments are non-trade distorting and does not affect farmers decisions [Sckokai and Anton 2005, Goodwin and Mishra 2006].

– the aggregated character of the *AMS* commitment reduces its effectiveness, because it allows to maintain or even to rise support level on the chosen markets,
– the *AMS* calculation method based on the official administered domestic price and – fixed reference world price, over − or underestimate the real level of support,
– choosing the years 1986−1988 as the base period, when the agricultural prices were very low, resulted in overstated level of support which was the basis for determining the reduction commitments,
– while they were included in the baseline, the exemption of the *de minimis* and the "blue box" payments from reduction commitments, resulted in an automatic decline of support without even reforming agricultural policy.

Although negotiations under the Doha Round are slowly progressing towards a new agreement and there are already some new and accepted proposals[18], there are still many details to be agreed. All the agreements, based on the draft modalities of December 2008, assume again the use of *AMS*. The only question is whether the URAA results justify the reintroduction of this measure. In order to overcome weaknesses in the existing definition of the *AMS* and the domestic support provision, the author suggests:

– setting the reduction commitments to individual products and not as it was previously to the total level of support which in practice allowed countries to maintain a high level of support to the strategic markets,
– revision or even total withdrawal of *de minimis* and "blue box" payments or putting limits on the sum of the *de minimis,* "blue" and "amber box" support,
– revision of "green box" policies is also required,
– calculating the real *AMS* level based on current world and domestic prices,
– choosing a longer base period (e.g. 10 years), which might eliminate short-term decrease or increase in prices.

The basic question remains whether in the face of rapidly rising demand for food and with food prices ever higher, it is reasonable to reduce the domestic agricultural support at all and whether the domestic support pillar is worth such attention in the WTO negotiations.

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[18] Hong Kong Ministerial Declaration and latest *Modalities* from 2008 assume that the total *AMS* will be reduced substantially, using a tiered approach and product-specific *AMS* will be capped.

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POMIAR WSPARCIA WEWNĘTRZNEGO W SEKTORZE ROLNYM W KRAJACH ROZWINIĘTYCH W ŚWIETLE REGULACJI WTO

Abstrakt. W artykule omówiono kwestie związane z pomiarem i redukcją poziomu wsparcia wewnętrznego rolnictwa w ramach WTO w krajach rozwiniętych. Skoncentrowano się na analizie procesu implementacji Porozumienia w sprawie rolnictwa w zakresie wsparcia wewnętrznego oraz na wyjaśnieniu jego wpływu na politykę rolną wybranych krajów. Zaprezentowano również wnioski płynące z użycia alternatywnego sposobu pomiaru wsparcia wewnętrznego, tj. zestawu mierników wsparcia (*PSE),* opracowywanych przez OECD. We wnioskach, biorąc pod uwagę przeprowadzoną analizę, zaproponowano możliwe zmiany w sposobie pomiaru wsparcia wewnętrznego w ramach WTO, które mogłyby zwiększyć efektywność kolejnego porozumienia w sprawie rolnictwa negocjowanego obecnie w trakcie Rundy z Doha.

Słowa kluczowe: liberalizacja polityki rolnej, wsparcie wewnętrzne, Światowa Organizacja Handlu (WTO), zagregowany miernik wsparcia (*AMS*), wskaźnik wsparcia producentów rolnych (*PSE*), mierniki wsparcia w sektorze rolnym, skrzynka żółta, skrzynka zielona, skrzynka niebieska, Runda Urugwajska, Runda z Doha