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ECONOMIC EFFECTS OF MARKET SUPPORT TO AGRICULTURAL PRODUCERS: THE CASE OF OECD COUNTRIES

1. Introduction

In the early post-war period, agricultural policy in most OECD states was organized around a protected development policy paradigm [Coleman 1998]. With over a half-century of making policy in line with protected development principles, in the 1980s and 1990s market liberalism confronted them. However, it is in no way clear that market liberalism will become the dominant paradigm in agriculture. Governments in several OECD countries still intervene in agricultural markets to improve farm producers' income. Historically, market price support attributable to such interventions comprised the largest part of total financial support to producers in OECD countries. In recent years the share of producer support due to trade policy measures has declined, while that, due to payments made directly from government budgets has increased. Limiting trade-distorting domestic assistance for farmers and phasing out farm export subsidies are important disciplines in WTO negotiations. Why? World Bank research has shown that over 90% of the cost of global agricultural distortions is due to tariffs [Anderson, et al 2005, p. 1].

The main challenge in the assessing those distortions lies in quantifying the market price subsiding policies comprising measures working at the border and domestic price enhancing mechanisms. So, a crucial idea is that these policies can be quantified by looking at the difference that is "price-wedge" between the domestic price of the product being considered and the price of the same internationally-traded product. In other words, the price difference gives the amount of support which the domestic producer benefits assuming foreign prices remain unchanged.

In measuring the impact of any market policies, economists naturally think in terms of the comparative welfare effects of such policies on producers and consumers. However, this paper will focus generally on comparison of market support policies among OECD countries. In this context, the aim of the paper is to present historical market price support in the OECD over 1986-2003 period and its consequences.

2. Methodology for measuring assistance

What is meant by agricultural market support and how is it expressed? Terms such as support, subsidy, assistance, and aid to producers are often used interchangeably to speak about the transfers provided to farmers or the whole agricultural sector, which result from government policies that increase farmers' revenues or reduce costs. The OECD uses term "support" to estimate the monetary value of transfers resulting from agricultural policies, whatever the intended objectives of those policies. The OECD constructs several indicators of agricultural support. The most important is the Producer Support Estimate (PSE)[1]. It shows the annual monetary transfers to farmers from policy measures that:
- maintain domestic prices for farm goods at levels higher (and rarely lower) than those at the country's border (market price support);
- provide payments to farmers, based on criteria such as the quantity of a commodity produced, the amount of inputs used, the number of animals kept, the area farmed, or the revenue or income received by farmers (budgetary payments).

Market Price Support (MPS) reflects 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. Since this support is implemented through the market, at the same time raises prices paid by consumers. The MPS estimate is calculated by multiplying the gap between domestic market prices and border prices of like products by quantity of domestic production. This support belongs to coupled measures that encourage production domestically.

3. An analytical framework

Most governmental programs for farm prices support and production control can be analyzed straightforward in the framework of Marshallian economics, which is essentially a theory of the demand for and the supply of private goods as

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[1] A complete description of the methodology for calculating the indicators of support and on their interpretation and use for policy evaluation can be found in *Methodology for measurement of support and use in policy evaluation*, http://www.OECD.org/agr/policy.

well as the institutions (markets) through which exchange takes place. Economic analysis of those programs in relation to the usual concept of "market competition" suggests some hypotheses derived from the logic of economic theory:

- All of these programs are simple and classical monopolies in intent, in methods of operation, and in the limitations imposed on them;
- There are no real conceptual or structural differences between these governmental monopolies and those in the private economy;
- The functional differences between government and private monopolies are generally caused by size, and especially by the greater power and Treasury of the government;
- As a result, there are some differences in the effects of government monopoly at the farm level and at other functional levels [Jesse, Hopkin 1959, p. 1225].

To achieve their objectives, these programs limit the amount offered for sale in primary channels to a smaller quantity than that which would be offered under free competition. Correspondingly, they raise the price in primary channels to a level higher than that which would have been with a market structure without the government intervention. On the other hand, none of the government programs aims toward a precise monopolistic maximization of income. The general goal of most of them is some proportion of some parity price. The explicit aim is a transfer of income to farmers, and the methods of income transfer are monopolistic.

There has been discussion over the past decades of the efficiency outcomes at the farm level of market support programs. Advocates of market-distorting agricultural policies argue that they have raised farm income. Nevertheless, without such programs resource and output shifts might have been sufficient to have resulted in an even higher farm income than actually was realized under the programs.

As it concerns impacts on input suppliers, both the input control and the supported price are determinants of the efficiency of all inputs going into a farmer's business and, therefore, of the demand for inputs. Accordingly, demands for inputs by farmers must have been affected. Upon consumers, the direct and evident effect must be like those of any other monopoly, i.e. the development of what amounts to a fixed price – consumption in primary channels is limited, and price is raised.

Summing up, as Pareto uncovered well ahead of his own time: "A protectionist measure provides large benefits to a small number of people, and causes a very great number of consumers a slight loss. This circumstance makes it easier to put a protection measure into practice" [Pareto 1927, p. 379]. Consumers will not protest, opposite to farmers who will push their agenda through the legislature. Public Choice economists call this behaviour rent-seeking, the attempt to seek special privileges or protection from government, or to get others to pay for your benefits.

4. Market price support in the OECD and its effects

Table 1 reports the percentage of agricultural support that is due to trade restrictions, i.e. MPS. The data suggests that agricultural policy in some OECD states is still organised around a protected development policy paradigm. There is certainly evidence that some states, with Australia and New Zealand, have moved in market liberalism direction.

As shown below, over 60% of agricultural support for the OECD area comes from trade restrictions that increase domestic farm product prices. An average share of the MPS in the PSE has fallen from 77% in 1986-1988 to 62% in 2001-2003, while in total value of production (at farm gate) from 31% to 22% respectively. In Korea, Japan, Switzerland, and the UE, the MPS to PSE ratios still remain among the highest in the OECD, whereas the opposite situation is observed in Australia, Canada and the USA. But, in the case of Switzerland and Iceland there has been a notable shift from MPS to other forms of financial assistance. In Australia significant progress has been made since 1986 in removing production and trade distorting policies. Similarly, in New Zealand, where agriculture is a market driven highly export-oriented sector, producer support is the lowest across the OECD members. Over the transition period, Poland starting off from a situation in which farm prices were quite heavily supported gradually eliminated this support. As a result, the MPS which in 1990 represented 136% of PSE fell sharply to 52% in 2003.

The OECD data provides a basis for calculation about long-term MPS policy convergence between its members. Most interesting might be coherence between the USA and Australia, the UE and the USA as well between the UE and Australia. In every instance the value of Pearson's correlation for MPS/PSE ratio in 18 years under study was calculated. An analysis showed a strong positive relationship both for the USA and Australia (0.84) and the UE and Australia (0.69), while moderate for UE and the USA (0.39). Those numbers should however be taken with caution since when border prices change, due to variations in world market prices or exchange rates, the MPS often also varies, even though nothing has changed in domestic policy settings. Nevertheless, this does not certainly mean that the MPS estimate provides a wrong indicator of the nature and evolution of price support policies actually pursued.

The MPS is often singled out for special consideration in policy discussions because it accrues both to the producer and the consumer sides of the market. If the price elasticities of demand and supply were equal the welfare cost of any tariff or export subsidy would be twice as great as that from a domestic subsidy applied at the same rate. Using unitary elasticities of demand and supply assumption, the total welfare cost of agricultural protection in OECD in 2001 was calculated at $87 bil-

lion, from which 8% was induced by domestic support, 11% by export subsidies, and 81% by import tariffs [Anderson, et al 2005, p. 3].

Table 1. Market Price Support as a portion of Producer Support Estimate and of Total value of production (at farm gate) in OECD countries, 1986-2003

Year	OECD		Norway		Switzerland		Iceland		Korea		Japan		UE		Canada		USA		Australia		New Zealand		Poland	
	MPS/PSE	MPS/VP	MPS/PSE	MPS/VP	MPS/PSE	MPS/VP	MPS/PSE	MPS/VP	MPS/PSE	MPS/VP	MPS/PSE	MPS/VP	MPS/PSE	MPS/VP	MPS/PSE	MPS/VP	MPS/PSE	MPS/VP	MPS/PSE	MPS/VP	MPS/PSE	MPS/VP	MPS/PSE	MPS/VP
1986	77	34	49	54	83	74	88	72	99	66	90	60	88	39	49	23	45	16	54	6	11	3	75	26
1987	78	32	49	53	83	74	89	74	99	69	90	59	86	36	50	22	51	16	43	3	27	3	55	11
1988	77	28	46	50	82	70	85	70	99	76	89	57	84	32	47	15	43	10	37	2	40	2	55	14
1989	76	25	46	47	81	65	83	68	98	75	89	53	79	26	54	16	45	9	43	2	56	2	-7	-1
1990	77	28	51	56	84	71	85	71	96	74	89	48	80	30	62	26	54	12	59	6	64	2	136	-26
1991	78	31	49	56	81	72	87	75	96	73	89	48	80	35	49	21	54	11	58	6	74	2	35	3
1992	77	29	45	53	78	66	73	66	95	72	90	54	76	31	55	18	53	11	59	6	77	1	57	5
1993	75	29	44	49	76	68	46	45	95	72	90	55	69	31	63	17	55	12	50	5	76	1	76	13
1994	74	28	43	49	74	69	46	41	95	72	92	60	65	28	65	13	56	10	45	4	80	2	81	19
1995	71	25	45	48	72	65	48	44	95	71	91	59	63	28	40	9	52	6	41	3	83	2	81	14
1996	68	23	45	47	65	60	45	40	94	63	91	56	58	24	45	8	51	7	36	3	79	1	85	17
1997	67	22	46	51	63	60	48	43	94	62	90	52	58	23	62	9	48	7	40	3	82	2	78	15
1998	68	26	48	57	65	63	53	54	94	56	91	56	63	28	61	11	48	12	40	3	74	1	85	25
1999	66	27	45	53	62	65	54	54	96	65	90	58	65	30	56	11	39	12	26	1	76	1	81	20
2000	63	23	42	47	61	61	48	46	96	66	90	58	58	23	49	10	30	8	7	0	62	1	75	12
2001	61	21	43	48	57	60	46	42	94	61	90	57	56	22	48	9	38	10	0	0	31	0	79	12
2002	64	22	46	55	58	62	57	56	93	67	90	55	58	24	49	11	38	8	0	0	83	2	67	10
2003	62	22	48	56	57	62	58	57	91	58	90	55	57	25	48	11	38	8	0	0	86	2	52	5
1986-2003	71	26	46	52	71	66	63	57	96	68	90	55	69	29	53	14	47	10	35	3	65	2	69	11

Notes:
1. EU15 for 2002-03.
2. The OECD total does not include the six non-OECD EU member states.
3. Value of production (VP), MPS and PSE expressed in nominal terms using national currencies.

Source: own calculation on the basis of OECD Database 1986-2003.

Ranking agricultural policy measures according to their potential relative impacts on production shows that, *ceteris paribus,* the MPS, output payments, and in-

put subsidies provide the greatest potential incentive to increase commodity production [OECD 2004, p.19]. The MPS reduces imports or increases subsidized exports, and depresses world market prices. This measure is recognized as a relatively inefficient in supporting farm income. The OECD findings show a close inverse relationship between trade distortion and transfer efficiency. In other words, most efficient in transferring income to farmers are those support measures that are least distorting to trade [OECD 2001, abstract]. The income redistribution caused by trade restrictions cannot precisely be described as subsidies from the governments of the high-income countries to their agricultural producers. In fact, some of the income redistributed by trade barriers accrues to producers in developing countries, as a result of higher prices for their output, rather than to farmers in developed countries [Wright 2003, p. 1]. When countries impose trade restrictions on agricultural goods, this can raise the price of those goods for both domestic and foreign producers. But price effects of trade policies will depend on the size of a country in international markets [Suranovic 2006].

5. Conclusions

The MPS continues to be the dominant form of support in many OECD countries but market access barriers imposed by it vary much across the OECD area. Despite the progress in shifting PSE composition from the MPS to direct payments, market support to Japanese and Korean agricultural producers still represents 90% of total producer support.

Market price support policies as Marshallian monopolies distort both production and consumption sides of the market. They might provide short-term benefits for agricultural producers, but those benefits generally result in the welfare loss to the consumers who pay higher prices for agricultural products and higher taxes to support farmers. By raising domestic prices, MPS effectively acts as a regressive tax on consumers.

Trade liberalization for agricultural goods will help some producers and hurt others: those producers (both domestic and foreign) that benefit from higher prices due to trade restrictions would lose, while those producers that are currently kept out of markets because of trade restrictions, or face lower prices due to subsidies, would gain.

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EKONOMICZNE SKUTKI RYNKOWEGO WSPIERANIA PRODUCENTÓW ROLNYCH NA PRZYKŁADZIE KRAJÓW OECD

Streszczenie

W artykule przedstawiono wspieranie producentów rolnych w krajach OECD za pośrednictwem polityki podtrzymywania cen rynkowych w latach 1986-2003. Wykorzystano w tym celu wskaźnik MPS, który mierzy różnicę między ceną otrzymywaną przez producentów rolnych i płaconą przez konsumentów a ceną na rynkach światowych.

Postawiono hipotezę, że polityka subsydiowania cen stanowi klasyczny monopol Marshalla, który na ogół powoduje spadek ekonomicznej efektywności oraz zniekształca podział dobrobytu (nadwyżek) konsumenta i producenta.

Mimo tego, że od połowy lat osiemdziesiątych stopniowo odchodzi się od rynkowego podtrzymywania cen, MPS nadal stanowi dominującą formę wspierania producentów rolnych w większości krajów OECD, osiągając w 2003 r. średnio 62% wskaźnika PSE. MPS zakłóca transmisję sygnałów płynących z rynków światowych do rolników, zniekształcając przez to mechanizm rynkowy, a także prowadzi do (nadmiarowego) transferu dochodów od konsumentów do producentów rolnych.