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RESEARCH IN ECONOMICS AND RURAL SOCIOLOGY

Modulation of Aid, Strengthening of the Second Pillar and Distribution of Subsidies and Farm Incomes

This paper presents three modulation scenarios of first pillar aid with a view to reinforcing the second pillar. Taking into account the weight of aid in the income, a more egalitarian redistribution of subsidies does not systematically correspond to a marked drop in the inequality of incomes. Income distribution also broadly depends on the evolution of the relative prices of farm products.

The issue of first pillar aid modulation to reinforce the second pillar is currently open to debate. It will arise at the time of the 2008 CAP health check-up, and even more during discussions on the CAP after 2013. The 2003 reform had already set up a modulation of first pillar aid of 5%, with an exemption up to first 5000 euros while broadening the competencies of the second pillar. It granted Member States the possibility to set up a voluntary modulation, up to 20%. This measure, heavily criticized by certain States such as France because of a fear for CAP nationalization and rejected by the European Parliament in its advisory notice, was finally only kept by the United Kingdom and Portugal.

Another debate concerns the attribution mode of the single payment. Most countries including France chose the historical method, with the effect of freezing the previous distribution of aid, the unequal characteristic of which has been long criticized. Proposals are made in certain circles to go back to that mode of attribution and move closer to that of Germany, which opted for a flat support per hectare per Land by 2013, and a joining of aid between Länder.

Inspired by proposals from the “Confédération paysanne”¹ (a French farmers’ union), this survey presents the simulation results of different modulation scenarios, of mutualisation of first pillar aid and reinforcement of the second pillar as regards subsidies and farmers’ incomes. It is based on results from FADN 2004, projected in 2009 (see frame), in particular by taking into account the reforms undertaken in the milk and sugar sectors and in favour of biofuels. This exercise is limited by its static aspect and by the fact that the results concerning farmers’ incomes depend on price levels. Two assumptions on cereal and oleaginous prices can be compared: their maintenance at the low level of 2004 and a

20% increase compared to 2004, taking into account the present development of world prices. The survey only examines the question of the distribution of subsidies and incomes linked to these measures, while it would be more interesting to model their impact in terms of reorientation of systems of production and farm employment.

The weight of subsidies and the limited nature of the second pillar in 2004 and 2009

The modulation of first pillar payments and the reinforcement of the second pillar have two objectives: on the one hand, to correct income inequalities, and on the other hand, to encourage more sustainable farming systems and regional development.

The inequalities of supports granted to farmers, in all their forms, have been criticized for a long time. As the initial project of the 1992 CAP reform would suggest, switching from income support by prices to support by direct payments could have been the opportunity for a more egalitarian distribution. Some steps were taken in this direction: no obligation for small producers to set aside lands, integration of a national component in the calculation of the reference, exemption for modulation... However, the reforms, chiefly planned as a compensation for falls in prices by direct payments, excluded the distribution problem. The 2003 reform, by setting single farm payments (SFP) under the historical reference, froze this distribution of subsidies. In the 2004 FADN survey, half of the farms get 80% of direct aid (see graph 1): income concentration is indeed higher since 80% of the Family Farm income is paid to 45% of farms. However, the application of successive reforms leads to a slowdown in disparities (Chassart et al. 2006) because, by nature, aid per hectare has more egalitarian effects than support by prices (Butault et al. 1999) and because herbivore incomes were raised, in particular in relation to general cropping, while their level was lower prior to the reform.

¹ This survey was initiated within the agreement between the Confédération paysanne (CP) and INRA. However, the simulations do not cover CP’s proposals, but scenarios inspired by them. This survey also concerns the ADD-Impact project (programme on integrated agriculture, financed by ANR (French National Agency for Research), via INRA.

Moreover, first pillar aid kept its determining characteristic. According to extrapolated data from FADN, it amounts to 7.4 billion euros (4.5 billion euros in future SFP), while second pillar aid only amounts to 1.85 billion. In the 2009 projection, before modulation, new subsidies on milk and beet integrated into SFP contribute to the first pillar for about 800 million, while the 2003 reform modulation only transferred 330 million from first to second pillar.

Modulation, mutualisation of aid and reinforcement of the second pillar

Three scenarios of modulation and mutualisation of first pillar aid were tested, excluding those on fruit, vegetables, wine and energy crops. Therefore, the base of modulated aids corresponds to the amount of SFP, assuming total decoupling.

- The first scenario (S1) corresponds to a 10% flat modulation rate. 84% of farms are concerned. The average first pillar subsidy moves from 20.8 to 18.8 billion euros. The modulation corresponds to 780 million and allows a 36% rise in the second pillar.
- The second scenario (S2) is inspired from proposals debated within the Confédération paysanne. Like for income tax, modulation is made at a progressive rate according to the initial amount of subsidy per active worker. The selected rates are given in table 1: modulation only applies beyond an amount of 15,000 euros per active farm worker. Only 37% of farms are modulated and modulation amounts to 700 million (or 9.2% of the amount of the initial first pillar and more than 33% for the second pillar).
- The mutualisation of aid (S3) was modelled in the third scenario. In accordance with the Confédération paysanne proposals, we first attribute aid per active family worker to every farm: the selected amount is relatively weak, 1500 euros per active worker. Mutualisation is then done by distributing the amount of aid left, inside each region, in proportion to the eligible area. The latter corresponds to 24.8 million hectares for an amount of 6.9 billion euros, or 281 euros per hectare (against 313 euros initially before the fixed aid to family work). This amount per hectare is quite variable from one French region to another (385 euros in Picardie and 122 euros in Languedoc-Rousillon).

The aid is then modulated according to the rates of scenario 2. Taking into account the operated redistribution, the product of modulation lowers in the strict sense, from 700 million in scenario 2 to 586 million in scenario S3.

On the second pillar, we first consider that the modulation product remains within the farm sphere: then, the average subsidy (27,000 euros per farm) is identical in the initial situation in 2009 and in the three scenarios. A priori, it is not easy to determine the beneficiaries of the second pillar reinforcement. We assumed that the modulation product was divided into four equal parts, the first three assigned to a flat rise in aid to disadvantaged zones, subsidies to climate accidents and aid for agro-environmental measures. The last part is allotted to new agreements on agro-environmental measures, by random drawing of lots, like in the 2009 projection (see frame).

Redistribution of subsidies

By construction, the first scenario S1 does not involve major redistribution of subsidies. However, the other two scenarios appear to be quite redistributive. If we divide farms into 5 quintiles equal to the relative variation of subsidies per active family worker (AWU) - this variation ranges from -25 to + 50% between the first and last quintile (see table 2) for scenario 3. Moreover, this classification does not take into account the 25,000 farms which did not have any subsidy in the initial situation and which, in scenario 3, get some with the aid to family work.

There is also an evening out of inequalities in the subsidy amount per active family worker: between the initial situation and scenario 3, the Gini index moves from 0.44 to 0.39 and the subsidy ratio per active family worker from 2.70 to 2.37, between the fifth and the third quintile (table 3).

The effects of redistribution, particularly of progressive modulation and mutualisation of aid, are highly differentiated according to orientations (and therefore also according to regions, taking into account the geographical distribution of orientations). On average, general cropping farms appear to be the only ones to be penalized, in particular in scenario 3 (table 4). This is due to their higher initial amounts of subsidy per hectare (which comes into play in mutualisation), to larger areas per active worker, and higher initial subsidies per active worker (which comes into play in progressive modulation). According to assumptions, the redistribution by the second pillar is of little benefit to general cropping farms. In scenario 3, then, general cropping farms lose 5,200 euros on average, their subsidy dropping from 37,400 to 32,000 euros.

On average, redistribution is in favour of “herbivore” systems (the profits of which are 3,300 euros) and “other” orientations (2,900 euros). The redistribution is relatively neutral on milk systems, on average.

Effects on income

By construction, the absolute variations in subsidies and incomes for every farm are identical within each scenario.

The same is not true in relative terms, taking into account the weight of subsidies in income: low variations in the subsidy level may thus bring about high relative income variations, if the latter is modest. On this point, the change in income of general cropping farms is significant (table 5).

In scenario 3, according to the assumption of unchanged cereal and oleaginous prices compared to 2004, the 5,200-euro drop in subsidy makes the PBT fall from 27,100 euros to 21,800 euros (-19%), that is to say to a much lower level than the average (27,800 euros). Assuming that cereal and oleaginous prices rise by 20% in 2009, PBT goes down from 37,300 euros to 32,100 euros (-14%), that is to say a higher level than the average (31,900 euros).

Therefore, subsidy redistribution may have contrasted effects on income sharing according to price evolution. In the first price assumption, an indicator of inequalities such as the Gini index (see table 6) shows that the subsidy redistribution has little effect on income distribution. This is due to the fall in incomes in general cropping, including

in medium-sized farms: some inequalities are lessened but others rise. In the second price assumption, the more egalitarian distribution of subsidies corresponds to a more egalitarian income distribution.

Conclusion

More acutely than before, the 2003 CAP reform formulates the issue of justification for first pillar aid. The implementation and payment of SFP will no longer be justified as compensation for a price drop, which occurred long ago. From a philosophical point of view, a historical right to income can only be considered as a defensible gain within the framework of the Nozick libertarian theory (see theories of law in political philosophy). From an economic point of view, decoupled payments as direct transfers appear to be the most efficient way to support farm producers' income. However, it seems difficult to imagine that, in the social debate, the question would not be asked about the payment of large-scale aid to a particular social class without any compensation other than respect of cross-compliance and maintenance of areas in good farming and environmental conditions. According to societal objectives, particularly as regards environment protection and territory management, a redistribution of support and a reorientation of aid thus seem probable.

The scenarios presented only have an illustrative value. They show potential actions in favour of a redistribution of supports but also measure the difficulties of their application. Taking into account the weight of subsidies in incomes, their modulation can have perverse effects, for instance by penalizing medium-sized farms. The modulation effects are highly variable according to price changes and direct aid is not yet the only form of protection of sectors, which poses the problem of justification for the modulation of this aid. Other devices may be necessary to go with such measures, such as the establishment of a guaranteed income to alleviate price variation effects.

This text does not look into the crucial question of the impacts of redistribution on employment and the reorientation of systems. If maintaining a certain level of farming employment is desirable, does the aid to active workers not constitute the most appropriate measure (but maybe not compatible with WTO rules)? Last, there is the question of the nature of the second pillar. It is difficult to model its effects because its content is not yet precise. Rather than set an amount, would it be not better to set more clearly its targets to determine its budgetary cost? Research may contribute to this debate.

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Graph 1: Lorenz curve for profit before tax (PBT) and farm subsidies in 2004 (FADN).

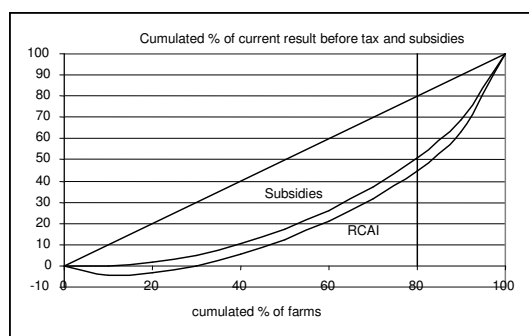


Table 1: Modulation rate according to the initial amount of subsidy per active worker in scenario S2 (thousand euros)

Bracket: subsidy/AWU	Rate	% farm	Subsidy index	% modulation
0	0	15.8	100	0
0-15	0	47.5	100	0
15-35	30	30.1	91	52.5
35-55	40	5.6	79	35.1
55-75	50	0.9	72	9.7
75-95	60	0.1	66	1.8
95-115	75	0.0	60	0.9
		100	91	100

Table 2: Subsidy per family AWU according to quintiles of relative variation of the amount of subsidies per family AWU for three scenarios (thousand euros)

	Q 1	Q2	Q3	Q4	Q5	Total *
S1						
Initial subsidy	22,3	22,5	23,4	20,2	14,7	19,1
Initial subsidy	20,5	21,8	23,2	20,9	16,6	19,1
Index	91,8	96,8	99,2	103,6	113,0	100,0
S2						
Initial subsidy	33,0	17,1	21,2	18,3	13,3	19,1
Initial subsidy	29,0	16,9	22,1	19,6	15,4	19,1
Index	87,9	98,6	104,0	107,3	115,0	100,0
S3						
Initial subsidy	31,2	25,9	20,9	15,7	9,3	19,1
Initial subsidy	23,3	24,1	21,9	18,9	14,0	19,1
Index	74,7	93,0	104,9	120,5	150,8	100,0

* Including 25000 farms with null initial subsidy

Table 3: Indicators of inequalities in the amount of subsidies per family AWU for three scenarios

	S0	S1	S2	S3
Gini index	0,44	0,44	0,42	0,39
Share of 5 th quintile	45,71	45,68	43,57	42,88
Ratio of 5 th on 3 rd quintile	2,70	2,72	2,45	2,37

Table 4: Average subsidy (in thousand euros) per farm for three scenarios

	General Cropping	Milk	Herbivore	Granivore	Others	Total
S0 : projection 2009						
Initial subsidy	37,4	27,8	32,6	16,1	6,6	27,0
Share of Pillar 1	33,7	21,9	18,8	13,2	3,4	20,8
S1						
Modulation	-3,3	-2,2	-1,9	-1,3	-0,2	-2,0
Redistribution	1,4	2,0	4,1	0,9	1,4	2,0
Final subsidy	35,5	27,6	34,8	15,6	7,7	27,0
Share of Pillar1	30,3	19,7	16,9	11,9	3,2	18,8
S2						
Modulation	-4,5	-0,9	-1,1	-0,2	0,0	-1,8
Redistribution	1,3	1,8	3,5	0,8	1,1	1,8
Final subsidy	34,3	28,7	35,0	16,7	7,7	27,0
Share of Pillar1	29,2	21,0	17,6	12,9	3,4	19,0
S3						
permanent subsidy*	4,2	6,0	13,8	2,9	4,2	6,5
Aid to work	2,0	2,4	2,0	2,4	2,1	2,1
Aid to area	28,4	20,1	18,2	10,8	2,3	18,3
Modulation	-3,6	-0,8	-1,2	-0,1	0,0	-1,5
Redistribution	1,1	1,5	3,0	0,7	1,0	1,5
Final subsidy	32,2	29,2	35,8	16,7	9,5	27,0
Share of Pillar 1	27,3	21,7	19,0	13,1	5,4	19,3

* Non-affected Subsidies by modulation and mutualisation (fruit, vegetables, wine, energy crops and second pillar).

Table 5: French RICA (FADN) variation of PBT for three scenarios according to orientation and to price trend in cereals and oleaginous

	General Cropping	Milk	Herbivore	Granivore	Others	Total
Cereal and oleaginous prices 2004.						
S0-1	27,1	26,3	22,7	23,3	36,9	27,8
S1: index	93	99	110	98	103	100
S2: index	88	103	110	103	103	100
S3: index	81	105	114	103	108	100
Cereal and oleaginous prices: +20%						
S0-2	37,3	28,4	23,8	25,4	37,2	31,9
S1: index	95	99	109	98	103	100
S2: index	92	103	110	102	103	100
S3: index	86	105	114	102	108	100

Table 6: Gini Index for profit before tax per family AWU, for three scenarios, according to price trend in cereals and oleaginous

	S0	S1	S2	S3
Price: 2004	0,54	0,55	0,54	0,54
Price: +20%	0,52	0,51	0,50	0,49

2009 Projections

The survey uses 2004 FADN data. Data are projected, at constant structures, to 2009 to take into account some implemented reforms. We kept the following assumptions:

- An 11% drop in milk price and payment of a 35.5 euro aid per ton of quota, integrated into SFP.
- A 35% drop in beet A and B price, compensated up to 64% by aid per hectare integrated into SFP.
- A 70% use of set-aside land for the development of energy crops and payment of 45 euros per hectare on a share of vegetal area.
- A modulation of first pillar aid, beyond a 5,000 euro exemption, the product of which is allocated to the second pillar. This allocation concerns new agreements on environmental measures. It is generated by a random draw, respecting the observed structure of aid in 2004 according to region, orientation and size of farms.

Furthermore, two assumptions on cereal and oleaginous prices have been kept (see table 7): an unchanged level compared to 2004 and a 20% increase against 2004 to take into account the upward trend in world rates. In large crops, these assumptions mainly affect farm income and subsidy weight in this income.

Table 7: Subsidy and farm income according to orientations of 2004 and in projection of 2009 (thousand euros)

	General cropping	Milk	Herbivore	Granivore	Others	Total
%	31	25	20	4	20	100
UAA: ha	97	72	74	38	22	69
Family AWU	1,3	1,6	1,3	1,6	1,4	1,4
2004						
Subsidy	35,9	22,6	31,9	14,9	6,0	24,9
% pillar 1	92,1	76,7	60,8	83,8	57,0	78,6
PBT	27,3	28,7	22,2	23,7	36,3	28,3
2009						
Subsidy	37,4	27,9	32,4	16,1	6,7	27,0
% pillar 1	90,0	78,3	57,8	81,9	51,5	77,1
PBT (1)	27,1	26,3	22,7	23,3	36,9	27,8
% subsidy	138,2	106,1	142,6	69,1	18,2	97,1
PBT (2)	37,3	28,4	23,8	25,4	37,2	31,9
% subsidy	100,1	98,2	136,1	63,3	18,0	84,7

(1). Unchanged cereal and oleaginous prices, in relation to 2004.

(2). Cereal and oleaginous prices: +20%.