RESEARCH PAPER

A scenario for the conversion of Common Agricultural Policy payments in Spain after the 2011 legislative proposals

Silvia Andrés, José M. García, and Raúl Compés

Grupo de Economía Internacional. Departamento de Economía y Ciencias Sociales, Escuela Técnica Superior de Ingeniería Agronómica y del Medio Natural, Universidad Politécnica de Valencia. Edificio 3B (2º planta). Camino de Vera, s/n. 46022, Valencia, Spain.

Abstract

S. Andrés, J.M. García, and R. Compés. 2013. A scenario for the conversion of Common Agricultural Policy payments in Spain after the 2011 legislative proposals. Cien. Inv. Agr. 40(2):291-306. This paper evaluates the impact of a new model of agricultural policy outlined in legislative proposals issued by the European Commission in October 2011 and estimates its effects on agricultural aid in Spanish Autonomous Communities compared with 2009. Therefore, the OECD agricultural policy-index system was used. To the extent that transversal criteria are applied, which support the transfer of aid between territories, the results suggest that changing the payment assignation model would involve a redistribution of aid towards areas that currently least benefit from them.

Key words: agricultural policy, CAP post-2013, direct payments*, OECD, redistribution.

Introduction

The Common Agricultural Policy (CAP), the main European policy, will undergo reform in 2013. Until now, this policy has made it possible to sustainably produce food and comply with the European Union (EU) pre-2013 budget and with World Trade Organization (WTO) requirements. However, the 2006/2008 food crisis and the global recession have revealed its weaknesses. Its main pillar, which comprises 88 percent of the funds, has not managed to stabilize producer income.

The aid does not favor competitiveness, sectorial adjustments, or cohesion, as has been shown historically, and generates inequality between holdings and territories. Finally, it is bureaucratically complex and does not pay for agriculturally related public goods.

Even though the reform process is currently under negotiations between the Parliament and the Council, the legislative proposals of October 12th 2011 establish a number of direct payments for which farmers would have to meet the Base Payment, Green Payment, and Young-Farmer Payment conditions and States could voluntarily meet the requirements of the Coupled Payments and Payments in Areas with Natural Resource

Restrictions, thereby ensuring that the reform process will be less drastic than expected. The Commission has opted for moderately intense reform, far from the spirit of r refoundation that was taken for granted two years ago (Massot, 2010). However, some of its provisions involve a new model for agricultural policy that places the CAP midway between past vested interests and new multi-functional agricultural policy goals (Compés *et al*., 2011).

Agricultural and political organizations in Spain have reacted negatively to these legislative proposals because they fear losing aid, even though the Commission intends to maintain the agriculture budget – although not update it in line with inflation – and has explicitly acknowledged the multi-functional nature of agriculture and the public goods that it generates, which increases the legitimacy and visibility of CAP. However, the reform will result in a considerable redistribution of the first-pillar payments in each Member State (MS), particularly in those currently applying the historical model (Blanco *et al*., 2011) (according to Bureau and Witzke (2010), the holdings currently receiving reduced payments, such as fruit and vegetable holdings or permanent crops, would benefit, whereas other sectors, such as cattle, would receive decreased payments). Therefore, one might consider whether the new orientation of the Commission's legislative proposals will favor Spanish agriculture as a whole and regional agriculture specifically, and the geographical distribution of their expeditions (Andrés, 2012).

Some past work on the estimation of support for agriculture on a regional scale includes the work performed by the European Commission after the 90s reforms, including the results from 1994 and 1996 (European Commission, 2001) and from 1991 and 1995 (Tarditi and Zanias, 2001). This work uses the concept of the Producer Support Estimate (PSE) that was introduced by the Organization for Economic Cooperation and Development (OECD, 2007) and was also used by Zanias (2002) to estimate the transfer at the Member State level. The European Spatial Planning Observation Network project (2005) analyzed the territorial impact of CAP in 1999; however, it only takes continental products and the calculation of CAP's "first-pillar" transfers (price and market aid) into account. Other studies have analyzed the transfer in countries with a federal administrative organization, such as Switzerland (Walkenhorst, 2003), Germany (Anders *et al*., 2004; Hansen, 2005), and the United States (Sumner and Brunke, 2003).

In Spain, García *et al*. (1994) performed an earlier study of public expense in Autonomous Community agriculture. A later study was the Libro Blanco de la Agricultura y el Desarrollo Rural by what was then known as the Ministerio de Agricultura, Pesca y Alimentación (MAPA, 2004). The results of these studies made it possible to analyze the impact of public aid from the various administrations on Spanish regional agriculture, as in the case of the effects of CAP reform and the EU Enlargement (Compés and García, 2005).

Spain's concern in formulating a model for monitoring and evaluating agricultural aid has given rise to the development of research based on the methodological advances proposed by the OECD to calculate indicators for agricultural aid. Its main contribution is an adaptation of the OECD methodology, offering a regionalized estimate of the support arising from the execution of CAP in Spain from 2002-2009. The most valuable contributions are: a) a discussion of the various options for calculating the Market Price Support (MPS) for products that are not included in the OECD estimates (Mediterranean products), testing an MPS for these products by measuring the percentage differences between domestic and international prices and measuring third-party tariffs (García and Andrés, 2007); b) the existence of regional systems adapted to the process of agricultural policy reform at various speeds (Andrés and García, 2009); and c) a comparison

of the transfers arising from CAP with the full support of agriculture in other OECD countries (Andrés and García, 2010).

In addition to the Series sobre Análisis y Prospectiva del Ministerio de Agricultura, Alimentación y Medio Ambiente (Agrinfo, 2013), one of the main prospective studies that inspired this work is a recent report by Compés (2010), whose analysis focuses on the multi-functional aspects of Valencian agriculture and their application in the CAP payment system. This report includes useful conclusions that can guide political decision-making to uphold the region's budget interests in the 2013 CAP reform debate. Blanco *et al.* (2011) also develops potential scenarios for the reform of the single-payment system and analyzes the redistributive effects of these scenarios using the CAPRI partial-equilibrium model (which simulates the operation of food and agricultural markets on a global level). These results suggest that the convergence of direct aid would have a minimal impact on the level of EU aid; however, its effects would be highly significant for some regions and production systems, such that the regions in each MS that have historically received lower-than-average payments per hectare would benefit, and a transfer of funds from the EU-15 to the EU-12 States would take place. Other studies of European aid have reached similar conclusions (Velázquez, 2008; Erjavec *et al.*, 2011; Gocht *et al.*, 2011).

This paper takes a prospective approach by positing and analyzing the future scenario outlined in the 2011 legislative proposals that are being considered in the EU. Consequently, its main objective is to perform a simulation consisting of an evaluation of the impact of a change in the support model following the criteria arising from these legislative proposals. Thus, it calculates the effects on agricultural support in each Autonomous Community (AC) compared with their 2009 status using agricultural policy indicators put forward by the OECD. This entails that the following specific targets be attained:

- Regionalizing and quantifying all EU transfers to Spanish agriculture in 2009, according to the OECD methodology;

- positing a scenario for conversion of the CAP direct payments; and

- assessing the economic impact generated by the new scenario in Spanish autonomous communities (ACs).

Materials and methods

The OECD methodological background

Agricultural support measurement is institutionalized by the OECD in its annual publication Agricultural Policy Monitoring and Evaluation 2012: OECD Countries (OECD, 2012a). The methodology used by the OECD consists of the estimation and interpretation of a wide-ranging system of indicators based on the following concepts: the Producer Support Estimate (PSE), the General Services Support Estimate (GSSE), and the Total Support Estimate (TSE), which are summarized in Table 1. The PSE Manual includes a detailed explanation of the concepts, calculation, interpretation, and use of each indicator, including how to identify, distinguish, and classify policies and how to quantitatively estimate which transfers occur (OECD, 2010). Statistics for agriculture in each of the Member States (the EU is regarded as a whole), as well as Brazil, China, Indonesia, Russia, South Africa, and the Ukraine, are included in the OECD Database 1986-2011, which complements the annual report (OECD, 2012b).

In contrast, given that the authors in previous work applied the OECD methodology to a regional calculation of EU aid received in Spain, we find it unnecessary to repeat previous methods for estimating the indicators of EU transfers. Readers can refer to Andrés and García (2009), which provides a detailed explanation of this empirical

Table 1. Aid categories comprising the OECD indicators

- A. Production-based aid

- A.1. Market Price Support (MPS)

- A.2. Production-based payments

- B. Payments based on use of inputs

- B.1. Variable use of inputs

- B.2. Creation of fixed capital

- B.3. Agricultural services

- C. Payments based on present A/An/R/I, production required

- C.1. for a single product

- C.2. for a group of products

- C.3. for all products

- D. Payments based on non-present A/An/R/I1, production required

- E. Payments based on non-present A/An/R/I[1], production not required

- E.1. Variable rates

- E.2. Fixed rates

- F. Payments based on criteria other than the product

- F.1. Withdrawal of long-term resources

- F.2. Production of non-marketable products

- F.3. Other criteria other than the product

- G. Various payments

PSE=$\sum$ (categories A-G)

- H. Research and development

- I. Agricultural training centers

- J. Inspection services

- K. Infrastructure

- L. Promotion and marketing

- M. Public storage

- N. Other services

GSSE=$\sum$ (categories H-N)

- O. Transfers to first consumer

TSE=PSE+GSSE+O

Source: own production data.

application for the PSE, GSSE, and TSE indicators (a brief mention of this estimate can be found in Table 1). Consequently, the authors conducted their work following the explanation in Andrés and García (2009), calculating the OECD indica-

tors for 2009 and for each of the ACs. These are provided in Table 2.

The new CAP payments

Based on the various documents issued by the European Commission (2010 and 2011) and the political debate on CAP reform (Enrocare, 2007; Bureau and Mahé, 2008; Massot, 2009; Group of Leading Agricultural Economists, 2009; Zahrnt, 2009), it is possible to anticipate that the CAP reform will be oriented towards:

- the continuity of direct payments to all farmers, but with revised baselines that do not refer to historical production, which may potentially result in reduced payments compared to current levels;

- greater equality between payment levels for farmers in different areas, which will entail a redistribution of aid;

- a progressive approach to direct aid, with higher levels of support for small-holdings and conditional payments based on good harvest practices, with higher payments based on the achievement of environmental targets; and

- territoriality: support for especially vulnerable or less-favored agricultural areas.

These are the premises on which this *ex-ante* assessment is based, through the reform option included in the 2011 legislative proposals. With respect to direct payments, the Commission's legislative proposals establish a number of direct payments to replace the current single payment – compulsory payments and voluntary payments for States–; to receive these, farmers must meet a number of conditions. In addition, special conditions are established for small farmers. The new payments would include the following:

Table 2. The PSE, GSSE, and TSE and their respective percentage indicators in ACs in 2009 (thousands of euros)

	PSE	% PSE	GSSE	% GSSE	TSE	% TSE
Galicia	362,468.6	20.63	91,915.9	20.22	454,503.41	0.83
Asturias	102,612.0	23.92	29,821.5	22.51	132,471.93	0.58
Cantabria	79,732.9	30.53	3,934.1	4.70	83,684.22	0.62
Basque Country	82,017.1	17.42	4,793.8	5.47	87,571.12	0.13
Navarre	173,775.2	20.17	8,017.8	4.28	187,184.23	1.03
La Rioja	56,155.8	10.07	5,863.1	9.23	63,547.80	0.81
Aragon	539,613.3	18.57	25,210.4	4.21	598,261.49	1.84
Catalonia	707,471.5	16.56	35,636.3	4.71	757,046.75	0.39
Balearics	45,516.9	12.13	1,474.1	3.13	47,088.17	0.18
Castile and Leon	1,257,849.2	24.96	53,576.3	4.03	1,329,160.70	2.37
Madrid	133,248.5	36.41	3,957.7	2.87	137,993.20	0.07
Castile-La Mancha	1,053,388.9	28.32	86,744.6	7.44	1,165,359.26	3.33
Valencian Community	319,424.4	11.03	100,209.7	23.87	419,758.52	0.41
Murcia	179,914.3	9.80	61,360.9	25.42	241,353.12	0.89
Extremadura	702,285.3	34.13	86,012.0	10.88	790,687.33	4.49
Andalucia	2,645,403.2	26.42	356,891.4	11.87	3,007,552.25	2.11
Canary Islands	192,590.4	26.27	85,337.4	28.59	298,534.15	0.72
TOTAL SPAIN	8,633,467.5	22.39	1,040,756.9	10.62	9,801,757.65	0.93

Source: OECD (2007).
[1]Note: A (surface), An (number of heads), R (performance) or I (income).

a) Compulsory Payments for the MS

a.1) Base Payment. A single program for the entire EU is established, known as the base-payment program, replacing the single-payment and single-payment by surface programs after 2014. This program is based on new payment rights granted on a national or regional level to all farmers on the basis of their admissible hectares over the first year of application. In this way, the use of the regional model, which is an option in the current period, is generalized to include all of the agricultural land in the new program. To achieve a more equitable distribution of support, a convergence of the value of rights on a national or regional level towards a uniform value is regarded as desirable – a process which should be gradual to prevent serious disturbances. The MSs can decide, before August 1st 2013, whether to define the regions by agronomic or economic criteria or by their institutional or administrative structure. The holdings must meet environmental requirements.

a.2) Green Payments. Thirty percent of the annual national ceiling (budget allocation of direct payments assigned to Spain, also known as a "national envelope") for farmers who perform agricultural practices benefiting the climate – the fight against climate change – and the environment include the following:

- Crop diversification – farmers must grow at least three different crops on arable lands when they have a surface area of more than 3 hectares that is not entirely used for the production of fodder, left entirely fallow, or used entirely for flooded crops for a significant part of the year;

- maintenance of permanent meadows and prairies; and

- areas with an environmental interest of at least 7% of the agricultural land, excluding permanent pastures – they may be fallow lands, terraces, landscape elements, buffer zones, and forest areas.

a.3) Young-Farmer Payments (under 40 years old). Up to 2 percent of the annual national ceiling or limit can be allocated to additional surface-based payments to support the income of young farmers initiating agricultural activities. This can complement aid towards installation within a rural development framework. Payments may be received for a maximum of 5 years, covering the initial period of the holding, and they are not meant to aid operation.

b) Optional to MSs

b.1) Coupled Payments or Associated Aid. Up to 5 percent of the national annual ceiling – a limit which can reach 10 percent or more in specific cases, duly justified, of sensitive needs in a given region – can be allocated to the support of specific types of agricultural production or to certain agricultural systems that have problems surviving and are particularly significant for economic or social reasons.

b.2) Payments in Areas with Resource Limitations. States – or regions – may allocate up to 5 percent of the annual national ceiling or envelope to make payments by surface area to farmers in areas subject to specific natural conditions (delimited in the same way as that for rural development targets); this payment acknowledges the need for income support to maintain agricultural activity in areas subject to specific resource restrictions and completes already existing support in the framework of rural development.

A special support and simplified program for small farmers is established (up to 10 percent of the annual national ceiling), allowing for small farmers to choose their preferred model, which consists of a payment that replaces direct pay-ments, exempts them from agricultural practices that benefit the climate and the environment and makes controls lighter. This program affects approximately 2.3 million holdings (30 percent of the beneficiaries).

Outline of the scenario for the conversion of CAP payments

The scenario that is outlined for the new payments assumes the following hypotheses: the budget allocation of direct payments received in Spain in 2009 – the national envelope – remains unchanged, and two types of payments are established, between which the national allocation is distributed: a Base Payment per hectare, which affects the entire cultivated area and is regarded as income support, estimated at 48 percent of the direct payments in Spain, and a number of "multi-functional" payments (52 percent), which give priority to territories on the basis of their environmental contribution (Green Payments), the prevalence of small-holdings (Special Support to Small Farmers), the existence of resource limitations (Payments in Areas with Resource Limitations) and vulnerable production systems (Coupled Payments). Table 3 shows the percentage of the national envelope that applies to each payment, corresponding to the maximum percentages established in the legislative proposals (the highest percentages envisaged in the legislative proposals have been used to thoroughly understand the multi-functional model and thus stress its effects on the ACs). In the next section, the economic impact of the new scenario, with respect to the situation of each AC in 2009 (given in Table 2), will be examined.

The new scenario does not involve the redistribution of the total direct payments between the MSs. This is the most likely scenario if the Commission follows the post-2013 CAP documents and enacts no modification to the budget allocation of direct payments to Spain, other than the budget cuts that affect the CAP funds as a whole (budget cuts

Table 3. New payments, application percentage, and amount (million euros)

New payments	%	Amount
Base payment	48	2586.4
Green payment	30	1616.5
Young Farmer Payment	2	107.8
Coupled payments	5	269.4
Payments in areas with resource limitations	5	269.4
Special support to small farmers	10	538.8
Total Spain	100	5,388.3

Source: Own production data.

might be significant according to the Commission Communication entitled the EU Budget Review, published on October 19th, 2010). However, the application of transversal multi-functional criteria (it is assumed that the CAP will retain its two pillars, but which pillar multi-functional payments will be included cannot be assumed) might entail the redistribution of the CAP funds among the ACs. In addition, it is assumed that the total level of direct payments in Spain equals the level in 2009, the year taken as a reference for comparison. Any budget cuts would have to be included in the evaluation, but should not modify the qualitative results of the simulations. In addition, co-financing of direct payments is not envisaged.

The legislative proposals suggested the conversion of direct payments into two types of payment, a base payment per hectare for all farmers and the multi-functional payments. This is justified by the European Communication Commission on the CAP post-2013 reform, which describes a greater degree of CAP orientation towards multi-functional targets through the following principles:

- a "green" component of direct payments to support environmental targets in the entire EU territory;

- the promotion of sustainable development in areas with resource limitations to be given as direct payments per hectare. These payments will most likely replace current compensation to less-favored areas;

- voluntary payments coupled with certain vulnerable production systems of economic and social significance; and

- special support for small-holdings that ensure a minimum level of direct payments.

These principles define the "multi-functional criteria" that have guided the design of the new payments proposed by the Commission and are simulated in this paper. The basis for the calculation performed in this simulation is the following: the average national direct payment received in 2009 will be distributed between the base payments (48 percent) and the multi-functional payments (52 percent). That is to say, once the base payment has been applied, the remaining volume of the national envelope funds are distributed on the basis of parameters that are consistent with the multi-functional criteria.

Therefore, some multi-functional indicators have been defined on the basis of the priorities that the Commission has established for the next CAP Reform: the environmental role of agriculture, support for "active" small-agricultural holdings, and support for agricultural areas with resource limitations and vulnerable production systems. In this way, the indicators to simulate the distribution of the national envelope for the application of multi-functional payments are the following:

- for Green Payments, the current value of the funds assigned to Axis 2 of the Rural Development Program. This is a CAP environmental indicator. In the simulation, the 2009 executed value given by the Fondo Español de Garantía Agraria (FEGA) has been used;

- for Special Aid to Small Farmers, the number of small-holdings was calculated according to the Encuesta de Estructura sobre las Explotaciones Agrarias of the Instituto Nacional de Estadística (INE). This criterion has been selectively used: only holdings employing less than 1 agricultural work unit (AWU)

and contributing a gross margin of at most 40 ESUs (Economic Size Units = 1200 euros' gross margin) are taken into account;

- for Payments in Areas with Resource Limitations, the current value of the allocated funds for low-favored areas included in Axis 2 of the Rural Development Program. This criterion prioritizes LFAs (less-favored areas). The 2009 value provided by FEGA has been used;

- for Coupled Payments, the current value of the funds assigned to category A of the PSE, which includes all production-linked aid (see Table 1). The 2009 value calculated in this paper while creating Table 2 has been used; and

- for Young Farmer Payments, the current value of the funds assigned to payments for young farmer start-ups, included in Axis 1 of the Rural Development Program. The 2009 value provided by the FEGA has been used.

It is still not certain what the multi-functional criteria designated for payment distribution will be. Therefore, the selected parameters are used as a working hypothesis, as they might be correlated to the parameters that are ultimately used instead of those assumed here (for example, a biodiversity or environmental agriculture index might be under consideration for the Green Payment).

For the distribution of the Base Payment per hectare, the total direct payments have been calculated by adding the OECD categories for direct payments per hectare and per head of livestock and the single payment (items C and E in Table 1) for each AC. Adding 1,554.547 million euros for category C and 3,833.777 million euros for E gives a total amount of 5,388.324 million euros for the total number of direct payments received in Spain in 2009.

The total direct payment amount has been divided between the total cultivated land in Spain in 2009,

which was 17,216,291 hectares according to the INE data. In this way, an average direct payment of 313 euros/hectare has been obtained for Spain. Forty-eight percent of this payment is 150.2 euros, so this will be the unitary base payment per hectare this fiscal year, which will be multiplied in each AC by the number of cultivated hectares (cultivated land plus meadows). The available amount for distribution as multi-functional payments, or 52 percent of 5,388.324 million euros, is 2,801.9 million euros.

Results

Table 4 provides the economic impact of the new scenario that was envisaged in the legislative proposals. (It is important to note that for the time being, these are only proposals and the negotiations between the Parliament and the Council are still ongoing. Therefore, some amendments to their contents are expected, and the reform that is finally approved might be significantly different.) The first row in the table (row A) displays the reference data, the transfer of 2009 CAP direct payments from EU funds. The second row (row B) displays the unitary Base Payment per hectare at 48 percent, which is the same for all of the regions. Row C includes the number of cultivated hectares in each AC, according to the Anuario de Estadística Agraria. The fourth row (row D) calculates the amount of the Base Payment for each AC based on the number of cultivated hectares. The rows below provide the multi-functional payments that were calculated based on the criterion chosen for each case. Row E quantifies the value of the funds assigned to Axis 2 of the Rural Development Program, and row F represents the percentage of the total Spanish environmental aid that was received by each region. This percentage is applied to the total to be distributed as Green Payments (see Table 3), whose value per AC is given in row G. Row H quantifies the value of the funds assigned to young farmer start-ups, and row I represents the percentage of the total amount of Spanish aid received by each

region. This percentage is applied to the total to be distributed as Young Farmer Payments (see Table 3), whose value per AC is given in row J. The remaining multi-functional payments have been accounted for in the same way; the value obtained per AC for each of them is displayed in rows M, P, and S. Row T gives the total amount of the transfer (sum of all payments) for each AC in the new scenario. Finally, rows U and V show the economic impact that the new scenario would have on each AC in absolute and relative terms, respectively (compared to the 2009 situation described in row A).

The main results are illustrated in Figure 1, which outlines the economic impact of the payment scenario envisaged in the Commission legislative proposals. As shown in this map, except for the Canary Islands, which require a separate approach because of their special status, the new scenario would have a substantial territorial redistribution effect on the CAP subsidies. Ten ACs would receive higher transfers than those received in 2009, whereas the transfers for the other six would be reduced.

According to the simulation performed in this paper, the regions that would benefit the most from the new CAP payments would be Galicia, the Valencian Community, and Murcia. Murcia would receive almost twice what it is currently receiving; Valencia would receive more than 2.5 times, and Galicia would receive more than 3 times the current level. As shown in Table 4, Galicia would be the main beneficiary of the multi-functional payments; note its privileged position for all of the indicators used for the distribution of multi-functional payments. Through Green Payments only, it would receive almost half of the new transfer, as more than 13 percent of the funds allocated in Spain to Axis 2 of the Rural Development Program correspond to Galicia (only surpassed by Andalucía). It is also a pioneering region, together with Castile-La Mancha, in young farmer start-ups (at almost 30 percent of the Spanish total).

In contrast, Galicia received almost 8 percent of the current coupled payments, due to the prevalence of border-protection measures and the maintenance of internal prices in the milk sector; thus, maintenance of production-linked aids in sensitive agricultural systems would be convenient for Galicia. In addition, it is this region, together with Andalucía, that has the highest number of small-holdings (20 percent of the Spanish total) and includes more than 10 percent of the less-favorable areas.

The case of Valencia and Murcia is different from the situation in Galicia. It is a well known fact that the Mediterranean region receives less support from CAP due to its horticultural and fruit specialization and, therefore, these two ACs, which currently have low subsidy levels, would benefit from the existence of a Base Payment on the basis of the number of hectares; given the cultivated surface areas in these regions, they would surpass the payment values that they currently receive. In addition, they jointly receive 15 percent of the current coupled payments due to the prevalence of border-protection measures in the horticultural and fruit sector and to the maintenance of internal prices for rice. In the case of Valencia, the advantage of the application of Green Payments and Special Aid to Small Farmers should be noted (it receives more than 5 percent of national funds for Axis 2 of the Rural Development Program and includes almost 6 percent of small-holdings).

Regarding the favored regions, four of the ACs would receive larger transfers, with new payments of between 40 and 70 percent: Castile-La Mancha, Asturias, the Balearics, and La Rioja. The case of Castile-La Mancha is very similar to the case of Valencia, which has already been described. Undoubtedly due to the weight of its agricultural sector, its Base Payment would be almost equal the transfer that it currently receives, which would be increased by the greater relative weight of CAP support in sub-sectors such as sheep and goats, beef, wine, arable crops,

Table 4. Simulation of the Base Payments and multi-functional payments and their impacts by AC (thousands of euros)

	Galicia	Asturias	Cantabria	Basque Country	Navarre	La Rioja	Aragon	Catalonia	Balearics	Castile and Leon	Madrid	Castile La Mancha	Valencian Community	Murcia	Extremadura	Andalucia	Canary Islands	Total Spain
A. Total 2009 CAP direct payments (Thousands €)	152,314.71	72,243.07	67,530.74	49,346.40	99,961.01	27,716.89	406,788.51	350,516.67	24,701.89	922,631.52	64,191.55	589,021.59	94,755.34	60,258.72	490,256.50	1,915,713.80	374.67	5,388,349.54
B. Unitary base payment per hectare at 48% (€/ha)	150.20	150.20	150.20	150.20	150.20	150.20	150.20	150.20	150.20	150.20	150.20	150.20	150.20	150.20	150.20	150.20	150.20	150.20
C. Number of cultivated hectares	415,110	20,044	8,671	84,620	366,882	157,463	1,794,240	846,804	155,798	3,463,544	209,785	3,705,436	688,382	483,076	1,155,901	3,607,816	52,719	17,216,291
D. BASE PAYMENT (Th. €): BxC	62,349.52	3,010.61	1,302.38	12,709.92	55,105.68	23,650.94	269,494.85	127,189.96	23,400.86	520,224.31	31,509.64	556,556.47	103,394.98	72,558.02	173,616.33	541,893.97	7,918.39	2,694,349.54
E. Rural Development Program (Axis 2) in 2009 (Th. €)	33,084.76	6,376.00	6,072.69	1,503.54	5,408.35	1,888.68	24,330.85	11,992.75	682.51	11,117.30	3,356.14	24,450.62	13,105.36	1,358.53	32,419.97	72,677.16	-0.37	249,824.84
F. % Rural Development Program (Axis 2)	13.24	2.55	2.43	0.60	2.16	0.76	9.74	4.80	0.27	4.45	1.34	9.79	5.25	0.54	12.98	29.09	0.00	100.00
G. GREEN PAYMENT (Th. €)	214,076.04	41,256.10	39,293.52	9,728.72	34,994.94	12,220.77	157,433.56	77,599.48	4,416.19	71,934.86	21,716.04	158,208.58	84,798.67	8,790.43	209,774.50	470,259.98	-2.38	1,616,500.00
H. Aid for young farmer start-ups in 2009 (Th. €)	6,024.58	0.00	0.00	0.00	624.52	475.31	1,782.98	558.26	297.53	3,855.99	72.00	6,274.43	408.60	381.66	0.00	430.02	0.00	21,185.88
I. % Aid for young farmer start-ups	28.44	0.00	0.00	0.00	2.95	2.24	8.42	2.64	1.40	18.20	0.34	29.62	1.93	1.80	0.00	2.03	0.00	100.00
J. YOUNG FARMERS PAYMENT (Th. €)	30,654.84	0.00	0.00	0.00	3,177.74	2,418.52	9,072.33	2,840.59	1,513.92	19,620.41	366.36	31,926.15	2,079.08	1,942.00	0.00	2,188.07	0.00	107,800.00
K. PSE Category A in 2009 (Th. €)	167,522.85	25,901.09	10,463.34	31,582.40	54,885.28	21,687.89	103,625.80	336,061.64	19,291.97	248,810.16	66,376.60	149,438.57	200,939.92	97,246.47	141,282.98	491,756.52	16,790.81	2,183,663.75
L. % PSE Category A	7.67	1.19	0.48	1.45	2.51	0.99	4.75	1.39	0.88	11.39	3.04	6.84	9.20	4.45	6.47	22.52	0.77	100.00
M. COUPLED PAYMENT (Th. €)	20,667.40	3,195.43	1,290.87	3,896.34	6,771.23	2,675.65	12,784.38	41,460.14	2,380.06	30,695.87	8,188.86	18,436.33	24,790.09	11,997.36	17,430.17	60,668.32	2,071.49	269,400.00
N. Aid for less favored areas in 2009 (Th. €)	7,115.82	6,847.33	3,029.09	-13.94	2,353.22	240.95	1,347.66	2,455.99	302.68	17,085.39	290.24	2,885.93	1,180.60	1,633.68	7,151.09	13,251.14	0.00	67,156.87
O. % Aid for less favored areas	10.60	10.20	4.51	-0.02	3.50	0.36	2.01	3.66	0.45	25.44	0.43	4.30	1.76	2.43	10.65	19.73	0.00	100.00
P. PAYMENTS IN AREAS WITH RESOURCE LIMITATIONS	28,545.13	27,468.09	12,151.20	-55.92	9,439.95	966.57	5,406.14	9,852.21	1,214.20	68,538.10	1,164.30	11,576.92	4,735.98	6,553.51	28,686.62	53,156.99	0.00	269,400.00
Q. Number of small-holdings in 2007 (at least 1 UTA and at most 40 ESUs)	51,908.00	15,364.00	5,202.00	6,623.00	3,090.00	2,212.00	9,144.00	18,590.00	3,080.00	24,928.00	1,960.00	20,707.00	15,110.00	5,900.00	16,232.00	52,149.00	6,748.00	259,647.00
R. % Number of small holdings	19.99	5.92	2.27	2.55	1.19	0.85	3.52	7.16	1.19	9.60	0.75	7.98	5.82	2.27	6.25	20.08	2.60	100.00
S. SPECIAL AID TO SMALL FARMERS (Th. €)	107,715.59	31,882.22	12,247.39	13,743.55	6,412.14	4,590.18	18,974.94	38,576.58	6,391.39	51,728.72	4,067.25	42,969.61	31,355.14	12,243.24	33,683.43	108,215.70	14,002.94	538,800.00
T. Transfer new scenario (Th. €): D+G+J+M+P+S	464,008.53	106,812.46	66,285.36	40,022.62	115,901.68	46,522.62	473,166.21	297,518.96	39,316.62	762,742.27	67,012.44	819,674.06	251,153.93	114,084.56	463,191.05	1,236,383.03	23,990.45	5,388,349.54
U. Economic impact (Th. €): T-A	311,693.82	34,569.39	-1,245.38	-9,324.12	15,940.67	18,805.73	66,377.70	-52,997.71	14,614.73	-159,889.25	2,820.89	230,652.47	156,398.59	53,825.84	-27,065.45	-679,330.77	23,615.78	0.00
V. % Economic impact	304.64	147.85	98.16	81.10	115.95	167.85	116.32	84.88	159.16	82.67	104.39	139.16	265.06	189.32	94.48	64.54	6,403.09	100.00

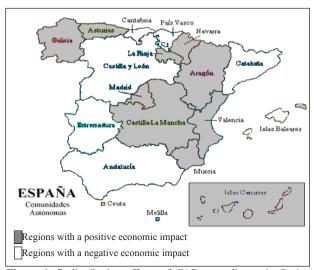Source: Own production data (1 euro=0,775 dollars, May 28, 2013).

Figure 1. Redistribution effects of CAP expenditures in Spain; Source: Own production data.

and olive oil – which accounts for the lower percentage increase in the region than those previously discussed. It is also a region that is clearly favored from a multi-functional point of view, receiving 10 percent of the environmental aid in Spain through Green Payments, almost 30 percent of the Young Farmer Payment to new farmers, and 8 percent of the Special Aid to Small Farmers, as well as earning significant Coupled Payments.

Asturias, which currently receives considerable direct subsidies given the size of the region, is a cattle farming region and thus strongly supported by CAP. This region has a strong multi-functional nature, containing 10 percent of less-favored areas nationally and 6 percent of small-holdings as well as benefiting from the environmental axis. The Balearics and La Rioja do not particularly benefit from multi-functional payments, but they are regions that would receive the 2009 subsidy, despite their small size, merely due to the number of cultivated hectares.

The size of the transfer might also grow, albeit slightly less, in Aragon and Navarre – approximately 16 percent – and in Madrid – approximately 4 percent. Aragon is an agricultural region that is strongly supported by CAP; thus, despite the size of its agricultural sector in number of hectares and the relevant levels of concentrated Green Payments and Young Farmer Payments, it is unlikely that the amount that it currently receives as subsidies will increase significantly. Navarre and Madrid would most likely not benefit from the new payment system, but given that the subsidies that they currently receive are not very high, the change in the system might be slightly beneficial for them.

As stated previously, the Canary Islands are a special case. Table 4 shows that their transfer would increase by more than 6,000 percent. The reason for this disparity relative to the other ACs is that the transfers corresponding to the Canary Islands by virtue of the various direct payments and rural development payments used as indicators in this paper are very low, which means that any increase in these transfers, however small, will constitute a high percentage.

In contrast, the reallocation of subsidies that the new scenario entails will predictably be detrimental to Cantabria, Basque Country, Catalonia, Castile and Leon, Extremadura, and Andalucía. The amount received by Cantabria and Extremadura would decrease by 2 and 5.5 per cent, respectively; the Basque Country, Catalonia, and Castile and

Leon would lose 15-20 percent; and Andalucía would lose 35.5 percent. We analyze the reasons for these reductions below.

Agriculture in Cantabria and Basque Country, with a continental specialization, is oriented towards the products most supported by CAP. Consequently, the proportion of producer income coming from the agricultural policy is currently higher than in other regions. The implementation of the new payment system would be detrimental for these regions: first, due to the small size of their agricultural area, the Base Payment would not make it possible to receive even one-fourth of the 2009 transfer; in addition, the multi-functional payments would not compensate for this loss, as these Cantabrian regions are not particularly distinctive with respect the criteria for their assignation.

This situation is even more extreme in Catalonia, Castile and Leon, Extremadura, and Andalucía. The concentration of current CAP payments that are supporting these regions is such that, despite their significant agricultural sector and the area in number of hectares, the Base Payment for these regions does not reach even half of the 2009 transfer. With regards to the multi-functional payments, these regions are particularly relevant to many of these functions. Table 4 shows that Catalonia contains more than 15 percent of the production-linked aid – maintenance of production-linked aid for sensitive agricultural systems would be beneficial for this region – and more than 7 percent of small farmers live in this territory. Castile and Leon receive 18 percent of the aid for young farmer start-ups in Spain, 11 percent of the production-linked aid, and more than 25 percent of the aid for less-favored areas; in addition, almost 10 percent of small-holdings are found in its territory. Extremadura and Andalucía also have an outstanding multi-functional nature, with 13 and 29 percent of environmental aid in Spain, 6.5 and 22.5 percent of the production-linked aid, and 11 and 20 percent of the aid for less-favored areas, respectively. In addition, 6

and 20 percent of small-holdings are found in their territories. However, not even their outstanding multi-functional nature, which results in substantial multi-functional payments, and the Base Payment could equal the amount that they are currently receiving.

Discussion

Ever since its creation in the early 1960s, the Common Agricultural Policy has constantly evolved to adapt to new challenges as they arise and to current problems, introducing new objectives and instruments through successive reforms. The 1992 reform marked a radical shift in the course of agricultural policy with the introduction of direct payments per hectare or head of livestock replacing a portion of the price supports. Since then, direct payments have been one of the main EU instruments for supporting the agricultural sector, although their nature has changed over time.

The 2003 CAP reform launched the process of dissociation of direct payments from production decisions and, therefore, greater market orientation on the part of agricultural producers. After the 2008 approval of the Health Check, the decoupling of direct payments was strengthened; however, some coupled payments persist, and inter-region and inter-state differences remain considerable. After 2013, when the new reform will be launched, the key points will be the decreases in and redistribution of direct aid.

Within this context, this paper provides a prospective analysis based on the reforms envisaged in the 2011 legislative proposals and in the establishment of the new direct payments to identify the predictable effects of the new payment scenario and its potential consequences in Spain and its ACs. To this end, the OECD methodology has been used because it enables the use of a number of indicators measuring the support received by agriculture. The most relevant indicators, the PSE, GSSE, and TSE

have been quantified per AC in 2009, thereby obtaining the current fund volume that CAP transfers to each region, which is the basis for the comparison in this analysis. The values calculated for these indicators suggest that interventions in agriculture remain significant in Spain, which is the second largest recipient of agricultural funds in the EU and displays considerable regional differences in the support levels and policy instruments in each AC.

A new payment scenario was then defined. According to the 2011 legislative proposals, the current CAP direct payments have become a Base Payment per hectare plus a number of multifunctional payments: Green Payments, Young Farmer Payments, Coupled Payments, Payments in Areas with Resource Limitations, and Small Farmer Payments. To calculate the amount of each payment, the total direct payment previously received in Spain in 2009 was obtained. This amount was distributed between the new payments, maintaining the maximum authorized application percentage in the legislative proposals. The basis for the amount of the Base Payment is surface area, which is linked to territory, landscape, and the environment. To proceed to a regional distribution for each multi-functional payment, a set of parameters that are directly linked to the multi-functional criteria governing the definition of each payment type was selected.

The results of this study suggest that the new scenario would involve considerable redistribution of the budget allocated to direct aid between the regions and would specifically benefit the regions with a typically Mediterranean agriculture, such as the Valencian Community, Murcia, and the Balearics, which have historically received lower average payments per hectare due to their specialization in fruits and vegetables, as well as the West Cantabrian regions, where Galicia and Asturias would be particularly favored by the application of the multi-functional criteria. However, the reallocation of direct payments would decrease the amounts for the regions that currently have the highest CAP support, such as Andalucía, and Castile and León, which show a prevalence of continental agriculture, cattle, and olive trees, which are currently highly subsidized. These regions might face significant economic and social consequences in certain production areas and systems. The case of the Canary Islands is exceptional. This situation is the result of the Canary Islands' status as a peripheral area in the EU, and CAP subsidies are received through a special program known as POSEICAN.

In the regions that would significantly benefit from changing to a system based on historical rights to a regional system, the crop areas which influenced the historical rights would receive lower payments per hectare with respect to current aid levels. In addition, the transfer of funds from Western to Eastern Spain that are found in this paper anticipate a redistribution of production, with a likely decrease in arable crop surface and in cattle production, which would lead to an increase in the price of these products. However, the cultivated surface area for fruits and vegetables would increase.

Generally speaking, the results are consistent with those obtained in other recent studies analyzing the various scenarios for distribution of direct aid, such as those of Velázquez (2008), Philippidis (2010), Bureau and Witzke (2010), and Blanco *et al.* (2011).

There is a wide range of possibilities that will depend on the criteria or options prevailing in the application of the new CAP in Spain, many of which may be political. For this reason and to conclude this paper, further research in this area is proposed. This research would consist of a simulation similar to the one performed in this paper that would be more exhaustive and applied separately to each of the Spanish regions, thus establishing alternative hypotheses for payment distribution on the basis of variables including the following:

- the eligible surface area: the eligible base could be the entire Utilized Agricultural Surface (UAS), which includes pasture lands; or the eligible land may consist only the cultivated surface, that is, farmlands and meadows;

- the number of holdings might be expanded with less strict criteria to define the priority holdings;

- a non-irrigation vs. irrigation distinction: irrigated crops might be allocated higher payment levels than non-irrigated crops because there is a percentage difference between their respective performances; and

- the Base Payment level: various levels between the base level and multi-functional payments may be tested, with various percentages applied to each.

The results of this simulation would be very useful to orient and assist in policy decisions regarding whether to uphold each region's budgetary interests.

Acknowledgements

Resumen

S. Andrés, J.M. García y R. Compés. 2013. Escenario de conversión de los pagos de la Política Agrícola Común tras las propuestas legislativas de 2011. Cien. Inv. Agr. 40(2):291-306. Este trabajo evalúa el impacto del nuevo modelo de política agraria que se perfila en las propuestas legislativas emitidas por la Comisión Europea en octubre de 2011, calculando sus efectos sobre el apoyo a la agricultura en las Comunidades Autónomas españolas con respecto a la situación en 2009. Para ello se utiliza el sistema de indicadores de política agraria propuesto por la OCDE. En la medida en que se apliquen criterios transversales que admitan transferencias de apoyo entre territorios, los resultados sugieren que el cambio de modelo de asignación de los pagos implicaría una redistribución de las ayudas hacia las zonas que actualmente menos se benefician de las mismas.

Palabras clave: Ayudas directas, OCDE, PAC post-2013, política agraria, redistribución.

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