AGRICULTURAL INCOMES IN THE EU AND PUBLIC POLICIES

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The paper first discusses the issue of measuring agricultural incomes (section 1). It then describes the evolution of EU agricultural income support policies since 1992 and raises the issue of capitalisation of income support in farm assets, notably land value (section 2). The French case is used to illustrate how incomes from agricultural activity vary in function of output choice and farm size (section 3). This example also shows the increasing dependence of farm incomes on direct aids. Hence, the last section analyses the income effects of various scenarios involving the level and the allocation rules of first and second-pillar direct aids.

1. Measuring incomes in agriculture: Income from agricultural activity versus overall income of agricultural households

Traditional indicators of agricultural incomes adopt a producer point of view. As they relate solely to the income generated by agricultural activity, they do not include incomes from other sources (non-agricultural activities, salaries, social benefits and income from property). The standard indicator (*IA*) is the net value added at factor cost.[3] Data in real terms are obtained by deflating nominal values by the implicit price index of Gross Domestic Product (GDP) at market prices. Real agricultural incomes per worker are then defined by dividing real farm incomes by agricultural labour measured in Annual Working Units (AWUs) to take account of part-time farming and seasonal work (one AWU corresponds to the input of one person engaged in agricultural activity in an agricultural unit on a full-time basis over an entire year). This first indicator *IA* measures the remuneration of primary inputs, i.e., capital, land and labour (plus production rights). By subtracting from *IA* the compensation of employees, one defines the net operating surplus which measures the yield from capital, land and unpaid labour (indicator *IB*). By subtracting from the net operating surplus interest payments, land rents and farm rents, one defines the net entrepreneurial income which remunerates unpaid labour as well as capital and land belonging to production units (indicator *IC*). From these three definitions, one immediately sees that many factors determine the level and the development of agricultural activity incomes: production levels and prices, input quantities and costs, subsidies and taxes, etc. These factors are not independent. They are themselves influenced by exogenous parameters (climatic conditions), market conditions (notably the balance between supply and demand) and policy changes.

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[3] The net value at factor cost is defined by subtracting from the value of agricultural output at basic prices (prices received by producers net of subsidies and taxes on products) plus other subsidies on production (product specific and non-product specific subsidies), the value of intermediate consumption, the consumption of fixed capital and other taxes on production.

Income from agricultural activity does not measure overall income of agricultural households which also includes incomes generated by non-agricultural activities of household members. Measuring overall income of agricultural households raises two practical problems. First, Farm Accountancy Data Network (FADN) databases do not provide information on incomes from non-agricultural activities. In some countries, this first problem is (at least partially) addressed by developing specific surveys and methods for collecting information on incomes from non-agricultural sources. However, information registered through this way differs from one country to another making inter-country comparison difficult. In France three matching exercises were performed in 1991, 1997 and 2003 using the tax revenue register and the FADN database to compare incomes from agricultural activity and overall incomes of agricultural households. By construction, the comparison is restricted to professional farms, that is farms with more than 0.75 AWUs and/or a Standard Gross Margin (SGM) greater than 8 Economic Size Units (ESUs). In 2003 incomes from non-agricultural sources accounted for 40% of overall incomes of French professional agricultural households. The corresponding percentage was 25% in 1997. However, for 51% of French professional agricultural households, incomes from non-agricultural sources were equal to zero in 2003. On average, part-time agricultural households were largely better off than full-time units in terms of both SGM and income.

2. EU farm income support policy: Some questions raised by the Single Payment Scheme[4]

Income support is still an essential objective of the CAP. It is now well admitted that market price support policies are inappropriate devices for supporting farm incomes in so far as there exist other instruments that are simultaneously more efficient and less trade distorting. In that perspective, one achievement of the CAP reform process is clearly to increase the transfer efficiency in favour of agricultural producers through the continuous shift from market price support to direct aids progressively more and more decoupled from production and factor use. But efficiency and equity are two different concepts. One drawback of the June 2003 CAP reform is that it does not address the question of the uneven distribution of agricultural aids across countries, regions and farmers. The CAP as it now applies still benefits proportionally more to North-European countries and larger farms. There are distributional issues not only within the agricultural sphere but also with other economic sectors. On this point, critics are clearly summarised in the so-called Sapir Report (Sapir et al., 2003). According to this report, the CAP has moved from an allocative policy enhancing competitiveness towards a distributive policy targeted on a particular group of citizens. The report considers this as a "systemic anomaly" and recommends addressing this issue at Member State level.

Some agricultural economists argue that the 2003 CAP reform does not go far enough to capture all the benefits of decoupling. Of primary concern is the potential capitalisation of the Single Farm Payment (SFP) into land prices. Of course, production is no longer required to get the payment attached to entitlements.[5] But the scheme maintains a very specific link between payments and land use through the so-called activation constraint, i.e., the obligation for the farmer to maintain in agricultural use a number of hectares at least equal to the number of entitlements she (he) holds to get the payment attached to the latter. This constraint is likely to maintain the capitalisation of support into farm land prices, in favour of landowners and to the detriment of farmers. The greater the number of entitlements relative to the number of admissible hectares, the higher the capitalisation of the SFP into farm land prices (Guyomard et al., 2007).[6]

[4] For amore detailed presentation of the main issues raised by the 2003 Single Payment Scheme, see Guyomard and Le Bris (2003) or Guyomard et al. (2007).

[5] The SFP is broken down into a certain number of entitlements which in practice correspond to unit amounts of direct aids per hectare in so far as each entitlement has to be accompanied by an eligible hectare in order to give right to the payment of the amount fixed by the payment entitlement.

[6] The lower the supply price elasticity of land and the fewer substitution possibilities between inputs, the higher the capitalisation of support into farm land prices, ceteris paribus (Latruffe and Le Mouël, 2006).

3. Incomes from agricultural activity in France

At the national level, real farm incomes per worker exhibit a contrasted pattern of evolution over the last 15 years, that is a continuous increase from 1994 to 1998 followed by a continuous decrease from 1999 to 2005. Real incomes per worker increased over the 1994-1998 period despite the 1992 CAP reform which reduced institutional prices for cereals and beef meat. However, these price cuts were fully compensated by direct aids and labour productivity gains were rather high over the years 1994 to 1998. By contrast, price cut compensation was only partial following the Agenda 2000 CAP reform of 1999 and labour productivity gains were much lower over the years 1999 to 2005 (Butault, 2006). This contrasted evolution has brought the indicator *IA* to a level of around 17,000 euros in 2005, that is a level only slightly greater than the 1993 level. Figures for 2006 suggest a significant increase in real incomes per worker, essentially thanks to positive output price effects.

In "2005" (average of the years 2001 to 2005), real agricultural incomes per family worker of French professional farms were equal to 20,200 euros.[7] This average figure masks substantial disparities among units classified according to their product choice and their economic dimension. On average, farms of the highest economic dimension (more than 100 ESUs) had an income per family worker three times higher than farms of the lowest economic dimension (less than 30 ESUs), respectively 32,400 and 11,700 euros. The ratio of incomes on the value of production plus direct aids was equal to 20%. The higher the economic dimension, the lower the ratio of incomes on the value of production plus direct aids (from 25% for the farms of the lowest economic dimension to 18% for the farms of the highest economic dimension). On average, direct aids represented 87% of incomes. The dependence of incomes on direct aids was largely greater than 100% for beef farms (148%), sheep and goat farms (140%), as well as for producers of cereals and oilseeds (127%). It was equal to 87% for dairy farms. It was very low for farms specialised in pork and poultry (29%), horticulture and permanent crops (24%), as well as wine production (8%). The dependence of incomes upon direct aids will very likely increase in the next years, ceteris paribus, because of an increasing number of products included in the CAP reform process (olive oil, tobacco, sugar, fruits and vegetables, wine). Interestingly, the ratio of direct aids on incomes is equally important for all classes of economic dimension.

4. Impacts of domestic support reforms on agricultural activity incomes in France

The baseline: Impacts of the Single Payment Scheme on French agricultural incomes

The 2003 Single Payment Scheme (SPS) mitigates into a SFP most of per-hectare and per-head direct aids. France chose to implement the SPS using the historical model which, by construction, maintains unchanged the distribution of first-pillar budget funds among farms, ceteris paribus. France maintained coupled 25% of direct aids for arable crops, 100% of sucker cow premiums, 100% of calf slaughter premiums, 40% of adult cattle slaughter premiums and 50% of sheep and goat premiums. France has thus fully exploited the possibility offered by the European legislation of maintaining coupled some of direct aids that were formerly granted on a per-hectare or per-head basis. The baseline situation includes the dairy and sugar reforms. It assumes that 70% of land under mandatory set aside is used for production of biofuels and it incorporates a 5% mandatory modulation rate. Prices and quantities are assumed unchanged at "2005" levels.

Under these baseline assumptions (H1), the single payment (57% of total direct aids) amounts to 16,500 euros per farm and 234 euros per hectare. Single payment amounts per farm and per hectare vary considerably according to farm orientation. For example, the single payment per farm is three times higher for a wheat grower (29,500 euros) than for a specialised beef producer (11,500 euros). By definition of the historical model, the single payment per farm is higher for units previously oriented towards highly supported productions (arable crops, milk and beef). It is lower for beef farms (14,900 euros per farm) than for dairy farms (23,000 euros per farm) or farms specialised in arable crops

[7] The indicator considered here is the net operating surplus defined per family worker (expressed in AWUs) and in real terms (in euros of the year 2005).

(26,200 euros per farm) because of a higher degree of recoupling in beef relative to milk and arable crops. The higher the size of the farm (expressed in hectares), the higher the single payment per farm, ceteris paribus. The ratio of the SFP on total direct aids varies significantly in function of farm orientation / specialisation. This ratio is lower for extensive dairy, beef and sheep farms because these units are also supported through second-pillar measures which are not included in the SFP. This is the case in particular for extensive dairy, beef and sheep farms in mountainous areas. The single payment per hectare (on average 234 euros) varies from 125 euros (sheep and goat farms) to 349 euros (specialised dairy farms with a surface in fodder maize greater than 30% of total forage area). It is significantly lower for beef farms (167 euros) than for dairy farms (270 euros) and farms specialised in arable crops (290 euros).

Scenario S1: Impacts of total decoupling

Under the assumption of total decoupling (scenario S1), the single payment (80% of total direct aids) amounts to 23,100 euros per farm and 327 euros per hectare (an increase by 40% relative to the assumption of partial recoupling). The increase per farm and/or per hectare is logically more marked for beef farms (the single payment per beef farm increases from 14,900 euros in the baseline to 28,600 euros in this scenario S1, that is a rise of 92%) than for dairy farms (the single payment per dairy farms increases from 23,000 under H1 to 27,800 euros under S1, that is a rise of 21%). The single payment per farm and per hectare of arable crop producers increases by about 25% due to the inclusion into the SFP of the 25% of direct aids that were previously maintained coupled. Even under the assumption of total decoupling, considerable differences remain in amounts of decoupled aids per farm and/or per hectare. The single payment per hectare is equal to 177 euros for specialised dairy farms with a fodder maize surface lower than 10% of total forage area, but to 415 euros for specialised dairy farms with a fodder maize surface greater than 30% of total forage area. On average, the single payment per hectare is equal to 321 euros for beef farms, 327 euros for dairy farms and 368 euros for arable crop farms.

Scenario S2: Impacts of a 20% mandatory modulation

The second scenario S2 assumes a mandatory modulation of all first-pillar direct aids at a rate of 20%, all the funds saved through this mechanism being reallocated on existing measures of the second pillar.[8] By construction of the scenario, its impact on the average income of French professional farms is null. However, some types of farms loose while other types gain. Units which suffer the most are those which, under H1, received large amounts of first-pillar direct aids and small amounts of second-pillar subsidies. This is the case, for example, of arable crop producers who record an income loss of 19% and intensive dairy farmers who suffer from an income decrease of 14%. By contrast, extensive livestock farms, notably those located in mountain areas, register significant gains: incomes increase by 48% for sheep and goat farms, 45% for grass-based dairy farms and 25% for specialised beef farms. This modulation scenario would favour smaller size units relative to large size units. In other words, the distribution of direct aids would be slightly less unequal in this scenario S1 relative to the baseline H1.

Regarding output price changes that would be needed to neutralise the positive or negative effect on incomes of this 20% modulation scenario, one notes first that a very small increase (1%) would be sufficient so that incomes of dairy farms are the same in the baseline H1 and in this scenario S1. In the same way, a relatively small increase (5%) in prices of cereals and oilseeds would be sufficient to neutralise the negative impact on incomes of arable crop producers of this 20% modulation scenario. These average figures mask significant disparities among farms according to their product choice and/or economic dimension. The case of dairy farms illustrates this diversity. Farm-gate milk prices should increase by 3% to maintain unchanged incomes of fodder maize based dairy farms but they should decrease by 14% to maintain unchanged incomes of grass-based dairy farms.

[8] Of course, the redistributive effects of any modulation scenario critically depend on the way funds are reallocated on the second pillar.

Scenario S3: Impacts of a 35% cut in first-pillar direct aids

The third scenario S3 assumes full decoupling. The SPS is applied using the regionalised model. Unit values of entitlements are thus identical for two farmers located in the same region. These unit values are cut by 35%. But contrary to S2, funds saved thanks to this mechanism are not used to increase second-pillar subsidies.

On average, incomes of French professional farms decrease by 28% (8,100 euros) because of the decrease by 35% in first-pillar decoupled direct aids. Income losses are particularly important for arable crop growers (-50%) and beef producers (-45%). Dairy farms also suffer from a substantial income decrease (-32%) with important differences according to farm characteristics. While fodder maize based large units record an income loss of 42%, grass-based small to medium units obtain an income gain. However, output price changes needed to neutralize these huge income losses would be rather "modest". Farm-gate milk prices should increase by 7%, beef prices by 14% and arable crop prices by 11%.

Concluding comments

Given the weight of direct aids in agricultural incomes, any reduction in first-pillar direct aids and/or any redistribution of funds from the first to the second pillar will significantly impact most types of farms. Accordingly, it would be economically (and politically) dangerous to implement too drastic and rapid cuts in first-pillar direct aids. In other words, cuts should be spread over several years to allow farmers to adapt. The dependence of farm incomes on direct aids also highlights the risk of a domestic support reform strategy excessively based on a mechanism of "communicating vessels" (cuts in first-pillar aids to increase budget support of the second pillar). Clearly, a better strategy would be: first to define policy objectives, be they of the first or second pillar; second to define efficient instruments and resources needed to achieve these objectives. In that respect, it is clear that the 2003 CAP reform does not address the question of small and poor farmers, very often located in marginal zones where agriculture is still a major economic activity and employment alternatives are seldom. In the same way, it does not address the question of agricultural price and income instability. Income support expenditure could and should be significantly reduced and funds saved by this way used to finance price and income stabilisation programmes as well as remunerate positive environmental and territorial public goods.

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