

A constrained outlook for EU agriculture

After some two years of negotiations, agreement was finally reached at the end of September 2013 on yet another 'reform' of the Common Agricultural Policy (CAP): an agreement that represents little change from current levels or orientation of support (OECD, 2013). This outcome does not augur well for the agricultural industry's outlook. The reform process was itself proof of political disquiet as to the effectiveness of the CAP, and amongst academics there is overwhelming condemnation of direct farm payments and widespread doubt regarding the policy's ability to achieve its diverse, multifunctional objectives, including protecting farm incomes, delivering food security, conserving the environment and developing the rural economy.

At the start of the negotiations, the Commission's stated aim was an economically viable industry with sustainability as 'the overarching objective' (European Commission, 2011a). It listed the challenges facing agriculture, including: significantly higher energy and fertilizer prices; a lack of investment; a slowdown in productivity growth; and increasing pressures on the rural environment. It is my judgment that the reform has not meaningfully addressed these challenges, and lacking from the Commission's outline of the issues was the growing threat to food security. A number of expert reports have concluded that global production needs to rise by 70–100% by 2050 (FAO, 2009; Nelson *et al*, 2010) in response to population growth and particularly to rising living standards in the world's developing regions, where surging demand for meat and dairy products is dependent on parallel increases in the supply of grain.

Two years ago, an authoritative report (Foresight, 2011) warned that the global food system faced an unprecedented confluence of productivity-sapping pressures involving intensive competition for land, fresh water and energy alongside the gathering adverse effects of climate change. The recent shift to a new era of much higher, more volatile global agricultural prices is a direct consequence of the failure of supply to keep pace with demand and, if not reversed, the relative price of food will increase, with implications for living standards. Against this background, I believe the reform should have given priority to raising productivity and competitiveness; instead it will only frustrate European agriculture's ability to rise to the challenges outlined above. In what follows, I shall justify this assertion by explaining how direct payments constrain the structural changes necessary to achieve a low-cost, competitive and sustainable agricultural industry while diverting funds that might otherwise better deliver a protected environment and broadly based rural development.

The structure of this article is as follows. The first section sets out the benefits for productivity, competitiveness and sustainable production technologies of structural change arising from the concentration of production on larger-scale farms. The second section argues that direct

payments greatly constrain structural change and should therefore be phased out. The third outlines the potential advantages if the CAP were to be replaced with dedicated environmental and rural policies.

The advantage of scale

Since the 1960s, both the number of EU farms and the numbers engaged in farming have declined at an annual rate of 2%, while the annual reduction in the utilized agricultural area has been less than 1% (European Commission, 2011b). Consequently, there has been a slow but steady concentration of production on larger-scale, more specialized farms (Brouwer, 2006). The growing average size of farms in the EU is evidence of the existence of economies of scale and confirmation that larger farms deliver a superior performance in terms of productivity, unit costs and incomes (OECD, 2011); indeed, the average value added per labour unit for the EU's largest farm size group is more than 10 times that for the smallest farms group (European Commission, 2010a). Larger-scale farms also gain competitive advantage in a food system where buyers require large volumes to meet strict delivery schedules and maintain high and consistent quality standards (Boselie *et al*, 2003).

That said, when it comes to EU agriculture, total factor productivity, the bedrock of economic efficiency, is frequently criticized for involving intensive production systems that critics claim damage the environment and are unsustainable. Leaving aside a debate on the extent to which environmental damage is the result of a lack of care or skill on the part of the farmer rather than the farming system, what is beyond dispute is the need for EU agriculture to increase current levels of productivity greatly if it is to play a significant role in feeding the world, and it must do so using only sustainable production systems. An important study by the Royal Society (2009) concluded that this apparent conflict could be solved by harnessing the fruits of science and technology to raise the productivity of scarce resources substantially: that is, to increase the levels of output per unit of land, water and energy as well as breeding crops whose yields are more resistant to the extremes of weather arising from climate change. This approach, dubbed 'sustainable intensification', provides a potential solution that would not only help to keep the growth of food prices as low as possible, but would also provide the best way to safeguard ecosystems and biodiversity (Beddington, 2010).

If agriculture is to rise to the challenge of increasing its productivity while reducing its use of non-renewable inputs, it will need to adopt a faster rate of technological advance. Despite some evidence that increasing scale is integral to technological advance at the farm level (Dimitri *et al*, 2005), there is no recognition by EU policy makers as to the benefits of the adoption of science and technological advances arising from more rapid structural change. Technological advances increasingly involve lumpy and expensive specialized capital, such as more powerful machines, no-till drills and precision farming technologies (Schimmelpfennig and Ebel, 2011), all of which require not only access to investment funds, but also a larger volume of output over which to spread the costs. Larger-scale farms also offer greater scope for learning (Halkos and Tzeremes, 2007) and the development of management skills (Mathijs and Vranken, 2000), attributes that are necessary for the efficient application of data-intensive, science-based modern technologies.

Direct payments and economic efficiency

Despite the multifunctional claims for the CAP, protecting farm incomes remains *primus inter pares*. The Commission rejected the phasing out of

decoupled payments because this would 'lead to substantial reductions in farm incomes, forcing many producers out of business' (European Commission, 2011a, p 74). Yet at best, decoupled payments have only slowed the long-term decline in the numbers engaged in farming, and average agricultural incomes remain significantly lower than earnings in other sectors. Moreover, direct payments as *de facto* income subsidies sit uneasily with their inequitable distribution: the product of their historical role as compensation for reductions in support prices. The fact that the payments are smallest – on a per hectare basis – in the countries with the lowest per capita incomes and greatest dependence on agriculture as measured by share of GDP (European Commission, 2011c) not only undermines their role as social payments, but also severs the claimed link between payments and the encouragement of a more productive and competitive industry.

In practice, direct payments are in conflict with economic sustainability as they extend the life of unprofitable farms – thereby limiting opportunities for expansion-oriented farms – but not to the point at which a surplus is generated to fund performance-improving investment (Viaggi *et al*, 2011). A study of some 1,400 farm households across the EU revealed that small-scale farms with older and less educated farmers were the least resilient to change (Polman *et al*, 2011). Part of the explanation for this may be the official justification for direct payments, which emphasizes their role in supporting incomes and preserving a way of life (European Commission, 2002), thereby sending the message that operating at a suboptimal level of efficiency is acceptable. The Commission argues that direct payments improve competitiveness by encouraging farmers to tailor production decisions to market requirements, but the evidence for this is lacking (Rickard and Roberts, 2008).

Put simply, direct payments frustrate the objective of economic efficiency by enabling farms to avoid change, thereby undermining an emphasis on productivity at a time when productivity growth and, most notably, crop yields across the EU display a slowing rate of increase (Lobell *et al*, 2009). New Zealand, where agricultural support was largely phased out during the 1980s, provides evidence that such action can result in improvements in economic performance across the board. An Organisation for Economic Cooperation and Development (OECD) study concluded that the removal of support had 'enhanced flexibility of a sector that had been renowned for its inability to respond to change' (Vitalis, 2006, p 64).

The phasing out of decoupled payments would not necessarily be accompanied by a fall in total output. The contribution of smaller-scale farms is proportionally lower than their numbers (Martins and Tosstorff, 2011) and much would depend on the level of global commodity prices, the period of time over which payments were phased out and the response of viable farms to the opportunities for investment in scale and technological advances. A modelling exercise by Renwick *et al* (2011) concluded that overall production levels would be unlikely to change markedly.

The environment and rural development

The idea that the concentration of production on larger farms, the delivery of a better-quality farmed environment and balanced rural development form a mutually incompatible trinity appears to underpin the CAP. The Commission views the phasing out of direct payments – thereby generating rapid structural change – as incompatible with a better-quality farmed environment, as it would be followed by the likely intensification of production in fertile areas and the abandonment of

production and land in more marginal regions (European Commission, 2011a). But this overlooks the advantages of scale for investing in sustainable intensification at the farm level, which, according to Tilman *et al* (2011), could by 2050 markedly reduce the major adverse environmental impacts of agricultural production. As regards the release of marginal land, despite the Commission's concerns, less productive land is slowly being abandoned in the EU (Keenleyside and Tucker, 2010), though the phasing out of direct payments would speed up the trend. However, as Renwick *et al* (2011) point out, there are 'benefits arising from the process of abandonment' – a view echoed by Burgess and Morris (2009), who argue that land released from farming could be used to deliver ecosystem services such as habitat conservation, recreation and carbon sequestration.

Following the phasing out of farm support in New Zealand, Vitalis (2006) observed that it 'was an important contributory factor in the improvement of some of the environmental indicators' (Vitalis, 2006, p 66). This is not to claim that larger-scale, well managed farms utilizing new technology can be left solely responsible for delivering specific public goods: for example, specialized habitats. Burrell (2011) notes that the multifunctionalists' position, favouring the delivery of environmental goods via farm income support, has been progressively abandoned by the experts. The UK's statutory conservation, countryside and environment agencies have pointed out that environmental public goods are separable 'stand-alone' outputs better delivered by the direct purchase of environmental services (LUPG, 2009) and that a new policy of targeted environmental payments might benefit from greater consumer support (Brouwer, 2006).

Turning to the issue of rural development, the Commission's claim that the development of rural areas would be hindered as a result of the loss of smaller farms (European Commission, 2011a) needs to be challenged. Pillar II payments under the CAP are aimed at developing the rural economy, but in practice they are an indirect source of subsidies for farmers rather than a means of improving economic and social development in rural areas (Grochowska and Kosior, 2008). The CAP's focus on the number of farms is misguided as it is the level of rural incomes rather than the number of farms that is relevant. In the EU, agriculture's share of rural value added is 4.9% (European Commission, 2010b) and farm-based employment varies from less than 5% to 25% (OECD, 2009) – the highest shares being in former Soviet bloc Central and Eastern European countries that are undergoing rapid structural change. Agriculture is no longer the backbone of rural economies, where its contribution 'is often low and declining' (OECD, 2006, p 22) and technological advance leads inexorably to a decline in primary sector employment – generally located in rural areas – and its replacement with new industrial and service opportunities for employment. The replacement of the CAP with a dedicated rural policy would do more to generate economic activity, employment and growth in rural areas than a focus on unprofitable, small-scale farms.

Conclusion

The EU policy makers' determination to maintain, with minimum change, the CAP's current levels and orientation of support means that the ability of the EU's agricultural industry to respond to the challenge of increasing total factor productivity alongside the adoption of sustainable farming systems will be handicapped. The potential contribution of farming as a high-tech, highly productive, sustainable industry is being seriously constrained by a policy whose focus is social rather than industrial.

Phasing out direct payments would not only speed up structural change, but would also release funds for dedicated environmental and rural policies.

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