Questioning Agricultural Policy in the Modern Irish Economy

L.N. Harte
Department of Agribusiness and Rural Development, University College Dublin

Introduction

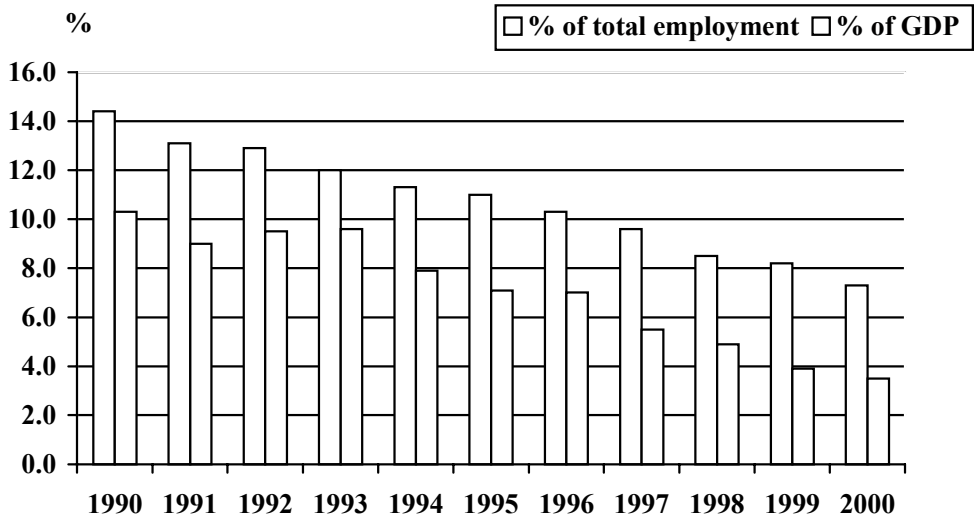
During the 1990s the Irish economy came through a period of unprecedented growth to the extent that its Gross Domestic Product (GDP) almost doubled over the decade, an achievement that might have taken 25-30 years at more normal growth rates. In this respect Ireland's performance has been out of step with of its European partners, all of whose economies have been growing much more slowly. In these more buoyant conditions a mature industry such as agriculture would also be expected to progress, albeit more slowly, in response on the one hand to better market opportunities but more especially through improved performance, restructuring, and redeploying resources into non-agricultural activities. However, apart from some redeployment of labour, mainly through increased part-time farming, there is little evidence of improved performance in agriculture during the 1990s, and in many respects the sector seems to have regressed. It is argued here that this was a failure of policy and a lost opportunity for the sector.

The purpose of the paper is to argue that agricultural policies, especially since 1992, have been inappropriate in Ireland's case. It is emphasised that this questioning is of the policy and not of the players in the industry who are assumed to act rationally given the commercial and policy signals they face. The approach adopted is to set out from an economic perspective the aspects of policy that inhibit progress, outline the reasons why this would be expected and present evidence where possible to support these arguments. The paper has stopped short of suggesting particular policy changes, although many are implied, on the basis that the first stage is to understand the policy shortcomings and then progress to new policy formation. The analysis is intended as a contribution to the on-going debate on agricultural policy especially leading up to the mid-term review of the CAP.

Agriculture in the Irish economy

The rapid expansion of the Irish economy over the past decade has left production agriculture accounting for a relatively small part the country's economic activity. Gross Value Added (GVA) in agriculture as a percentage of national GDP declined from 10.1% in 1990 to 3.5% in 2000 while employment in the sector fell from 14.2% to 7.3% over the same period (Figure 1).

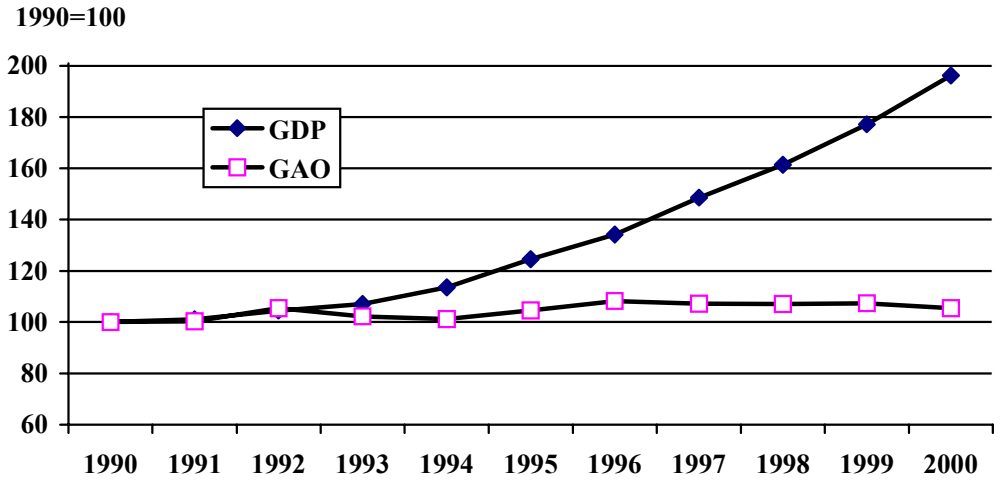
Figure 1. Importance of agriculture in terms of employment and contribution to GDP .



Source: Annual Review and Outlook for Agriculture, Food and Rural Development, Department of Agriculture, Food and Rural development, Series up to 2000/2001.

This change in the relative contribution of farming is of course more a reflection of the outstanding growth performance of the wider Irish economy than of poor performance in agriculture. As illustrated in Figure 2, the volume of Irish GDP almost doubled between 1990 and 2000 compared with a growth of 5-6% in the volume of agricultural output.

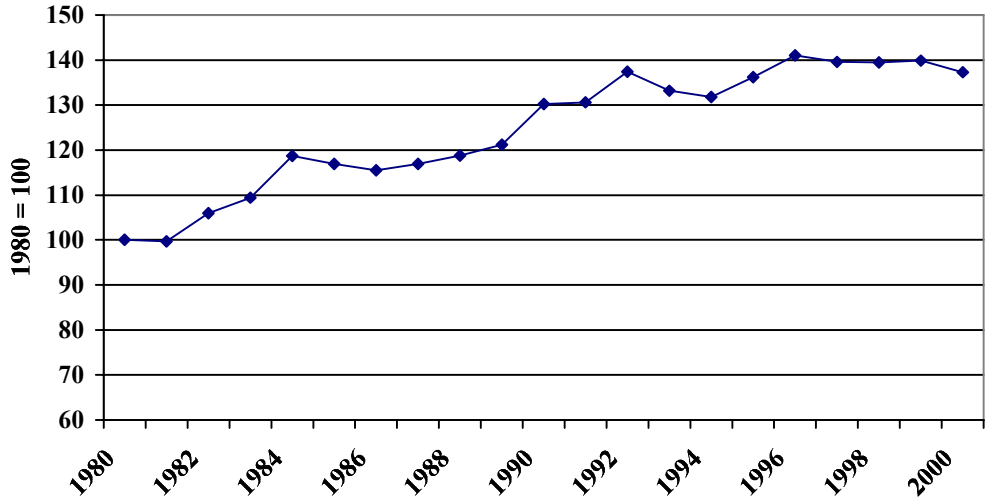
Figure 2. Volume indices of Gross domestic Product and Gross Agricultural Output 1990-2000.



Source: CSO, Annual National Income and Expenditure Accounts, for GDP volume index and CSO, Output, Input and Income in Agriculture, Series for volume index of GAO.

The low growth in agriculture is no surprise since all of the main farm sectors have been directly or indirectly controlled by production quotas, especially since the McSharry CAP Reforms of 1992. The quota effects and the slowing of agricultural output growth during the 1990s is also very evident from the longer series of the GAO volume index as shown in Figure 3. While the volume of GAO increased at an average annual rate of 2.3% during the 1980s, it slowed to an average annual rate of 0.6% in the 1990s.

Figure 3. Index of volume of Gross Agricultual Output, 1980 - 2000.



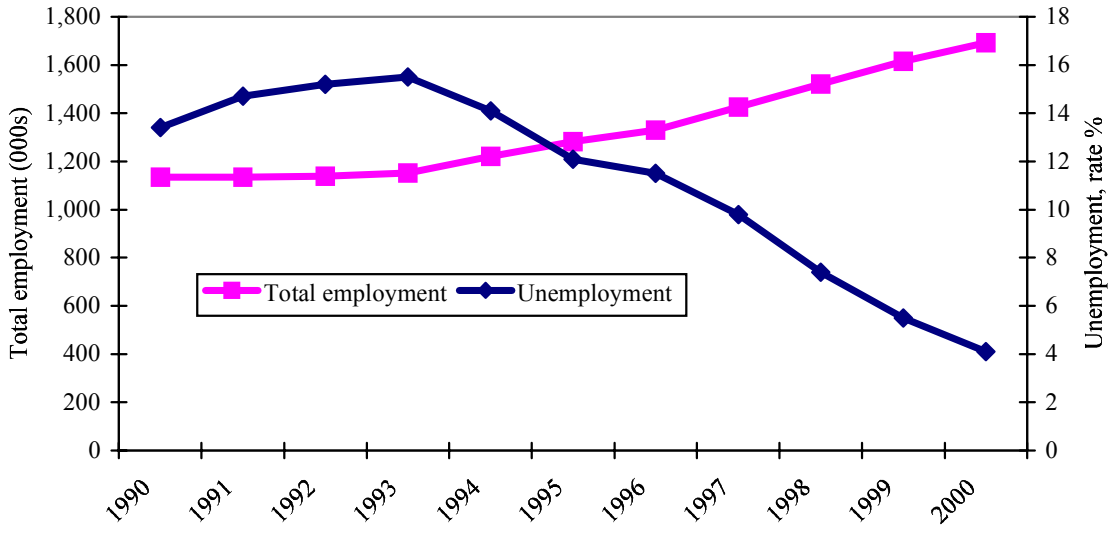
Source: CSO, Output, Input and Income in Agriculture, series up to 2000.

Neither is the low growth in itself of national concern provided resources used to produce agricultural output are adjusting to deliver levels of productivity gain comparable with those achieved by the rest of the economy. However, this has not been the experience. The decline in the farm sector's share of GDP has quickened especially since the 1992-93 period, declining by two-thirds between 1992 and 2000. By contract over the same period, agriculture's share of total employment declined by only 42%. Superficially at least this suggests a considerable shortfall in agricultural labour productivity as compared with performance in the wider economy, although the shortfall may be partly bridged

by farmers working part-time off farms. There is also much evidence, as presented below, that the rate of adjustment in other resources such as land, livestock and other farm resources and the rate of technical progress has not only lagged behind what would be required to match performance in the wider economy, but has progressed more slowly in the 1990s than in the previous decade.

In the past when the economy was growing much more slowly with an overhang of unemployment there may have been some justifications for subscribing to a policy of slowing the rate of restructuring in Irish agricultural, lest that redeployment would swell dole queues. It would have been argued that it was more acceptable to have people underemployed in farming than unemployed in towns and cities, although the cause and effect relationship between the two was probably never valid. But the employment situation has been transformed over the decade of the 1990s. As is well known and illustrated in Figure 4, employment in the Irish economy has been growing strongly since 1993, and unemployment has been falling rapidly, to the extent that most regard the economy as close to or at full employment.

Figure 4. Employment and Unemployment in the Republic of Ireland, 1990-2000.



Source: CSO: Labour Force Survey series to 1997 and Quarterly National Household Survey 1998-2000

Agricultural support and international competitiveness

Relating GVA in agriculture to national GDP exaggerates the net economic contribution of farming because it includes production subsidies as well as market transfers from consumers who under EU CAP must pay higher than free market prices for food. Using a similar methodology to Matthews (2001), data presented in Table 1 adjust for subsidies and taxes and for market transfers to estimate the Gross Value Added (GVA) and Net Value Added (NVA) of Irish agricultural at world market prices for the period 1996 to 2000. Market transfers were estimated as the value of farm output multiplied by coefficients of the gap between Irish and world market prices. Price gap coefficients are estimated by the Department of Agriculture, Food and Rural Development (DAFRD), but these are based on existing world market prices. It is widely held that existing world market prices are lower than would prevail in a liberal market environment and that such coefficients therefore exaggerate the true price gaps. For this reason, the DAFRD calculated coefficients were adjusted assuming that free market prices would be some 20% higher for livestock products and 5% higher for crops – which is in line with the results of trade liberalisation models (Matthews, 2001).

It can be seen from these estimates that GVA in agriculture at world market prices was only 1.0% of GDP in 2000, having declined from 2.1% 1996. When expressed in terms of world market prices therefore the 7.3% of employment in agriculture in Ireland accounted for only 1% of national GDP in 2000. This is an estimate of the net value of Irish farming under free market conditions. Its value to the Irish economy however is greater because the costs of much of the direct payments and market transfers are borne by taxpayers and consumers in other EU member states.
By deducting depreciation (capital consumption) in agriculture from GVA, the NVA is calculated to give the net economic value of Irish agriculture at world market prices. The resulting NVA is very low at an estimated at €375 million in 2000, a mere €3,030 per person employed in farming in that year. The difference between the NVA and income from farming is the value of the income support received by the Irish farm sector under the CAP. It is a

measure of how far the sector is away from being competitive under free market condition given its present product mix and use of resources. This international competitiveness gap (ICG) was estimated at 85% of national farm income for 2000 and at an average of 81% of income over the five years 1996-2000. This is an enormous performance gap and one must question policies that have left this sector of the economy so hopelessly under-productive and so dependent on consumer and taxpayer transfers. It is especially disappointing that the position of the sector does not seem to have improved in a period when performance in the rest of the Irish economy has been so impressive. The ICG series presented is too short and has too much variation to conclude a trend, although the evidence is more in favour of deterioration than improvement.

Table 1. Gross and net value added in agriculture at world market prices, comparisons with national GDP and estimates of Irish agriculture's international competitiveness gap

	1996	1997	1998	1999	2000
	€m	€m	€m	€m	€m
1. GDP at factor cost	52,031	59,858	68,452	77,788	90,850
2. Agriculture GVA at factor costs	3,468	3,286	3,272	2,954	3,126
3. Subsidies less taxes	1,127	1,166	1,289	1,123	1,268
4. Market transfers	1,231	960	1,020	810	927
5. GVA at world market prices	1,110	1,160	963	1,022	932
6. GVA at world market prices % of GDP	2.1%	1.9%	1.4%	1.3%	1.0%
7. Less depreciation	517	527	536	544	557
8. NVA at world market prices	593	633	427	478	375
9. Factor income	2,951	2,759	2,736	2,411	2,570
10. International competitiveness gap (ICG)	2,357	2,126	2,308	1,933	2,194
11. ICG % of farm income	80%	77%	84%	80%	85%

Sources: Rows 1 to 5 and 7 & 8 adapted and updated from Matthews, 2001 and DAFRD Annual Review and Outlook for Agriculture, Food and Rural Development.
Row 9 from CSO, Output, Input and Income in Agriculture, series up to 2000 and rows 6, 10 and 11 derived as explained in text.

In questioning the policies of recent years, this discussion sets out the main ways by which the CAP and its application in Ireland works to inhibit the efficiency and competitive gains that would be expected in the normal performance of an economic sector. These are set out under five main headings: (i) rigidities of the quota regime, (ii) impediments to restructuring, (iii) disincentives to efficient use of farm resources, (vi) detachment from market signals, and (v) progressive institutionalisation of farming.

Rigidities of the quota regime

Quotas lead to inefficiencies in two main ways: one by inhibiting entry (and expansion) and exit (and contraction) of individual producers, and the other by restricting the extent to which the farm sector as a whole can shift resource use from one type of farming to another in response to changes in market opportunities and cost structures.

At individual producer level the standard economic theory on quota holds that the setting of limits on production possibilities inhibits adjustment of resources to changes in market conditions, technology and factor costs. In particular it creates conditions where inefficient producers are shielded by entry barriers and the efficient are prevented from expanding, thus reducing the overall efficiency of the sector.

Allowing quota transfers between producers, however, helps to reduce this inefficiency. The economic object of the transfer process is to direct production into the hands of the least-cost or more efficient farmers. In practice, given that cost structures of individual producers are continually changing as they invest in or run down assets and as their opportunity costs change, the optimum allocation of resources is not static. Assuming the presence of quotas therefore, what is required is a quota transfer system which enables restructuring of production from those wishing to cut back to those wishing to expand, on the assumption that both sets of parties are acting in an economically rational way. For a more complete discussion of the economic theory, see Colman, D. *et. al*. (1998).

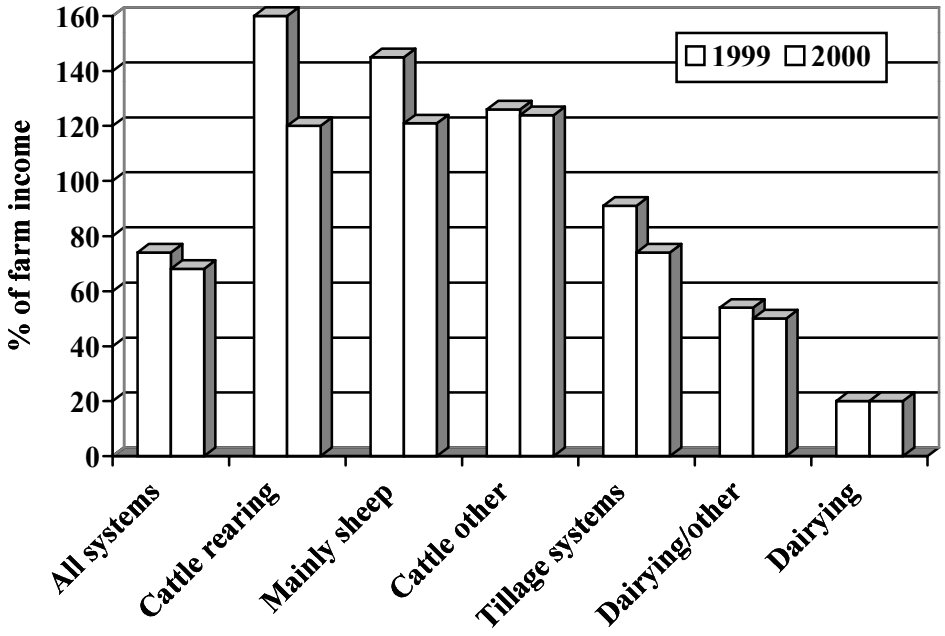
The milk quota was first introduced in 1984 and restrictions on the other main enterprises followed the 1992 McSharry CAP reforms. Up to April 2000 the transfer of quotas between farmers was rigidly linked to the accompanying sale or lease of land, a very restrictive provision in view of the very low mobility of land in Ireland. The expected effect is

accumulating inefficiency for as long as the restrictions are maintained. The milk quota had been in existence for 16 years prior to the breaking of the land-quota link. Even when freedom to break the land-quota link was allowed under Agenda 2000, the Irish authorities stopped short of facilitating free transfer by purchase and lease. Considerable barriers to both entry and exit were retained in the forms of quota clawbacks in the case of both suckler and milk quota and in the form of a capping of exchange prices and giving priority access to small scale producers in the case of milk. These serve to inhibit normal restructuring of these farming sectors and so preserve inefficiencies.

An effect of impeding expansion and contraction is to limit the extent to which producers can avail of the advantages of specialisation. For example, it might be argued that quota restrictions and lack of freedom to transfer quota between producers has forced many dairy farmers who would have built larger dairy enterprises to continue with dual purpose dairy and beef systems. Such compromise enterprises are not only more inefficient in terms of production costs, they probably also lead to the wrong end products.

At industry level the lack of freedom to shift resources from one enterprise to another in response to changes in market needs and cost structures lead to further inefficiencies. As illustrated in Figure 5 cattle and sheep enterprises, for which direct payments exceed incomes on the average farm, clearly represent poorer use of resources than does dairying or tillage. Of course Figure 5 also illustrates the hopelessly uncompetitive position of the cattle rearing and sheep sectors of Irish agriculture.

Figure 5. Direct payments expressed as a percentage of farm incomes.



Source: Teagasc, 2002, National Farm Survey results, 1999 and 2000.

Impediments to restructuring in Irish agriculture

Conflicting and inappropriate policy objectives

In its vision for agriculture, the Agri Food 2010 Committee cited two overriding aims as dominating Irish agricultural policy: the achievement of 'an efficient and competitive agricultural sector' and the desire to retain the 'maximum number of farm households' (DAFRD, 2000a). These two aims are conflicting and the 2010 Committee conceded this, but nevertheless persisted with them on political grounds. In view of the very wide international competitiveness gap cited above, it is very difficulty to regard the aim of achieving an efficient and competitive agriculture as a credible objective and to date it seems to have lost out heavily to the aim of maintaining the maximum number of farm households. In its response, outlining the Agri Foods 2010 'Plan of Action', the Government reiterated the maximum numbers aim in its vision for an agri-food sector in 2010 that 'offers farm families attractive and sustainable livelihood options, thus ensuring the maintenance of the maximum number on the land' (DAFRD, 2000b).

The expressed desire to maintain maximum numbers on the land dates back to the 1937 Irish Constitution which included a social policy directive under paragraph 2, subparagraph v, of Article 45: 'that there may be established on the

land in economic security as many families as in the circumstances shall be practicable' (Constitution of Ireland, 1937). It is easy to appreciate why this directive might have been included in the Constitution in the Ireland of 1937 when land and farming were regarded as the country's main resource and when access to them was so important to a large proportion of the population. It also reflected a philosophy of the time which emphasised self-sufficiency and a life style of 'frugal comfort' demanding only the material wealth necessary for 'right living'. This is a long way from the consumer driven industrialised economy of 2002 where wealth derives mainly from knowledge based industries and services and where people demand ever higher living standards.

The Irish economy is currently at or close to full employment and suffering capacity problems at many levels especially in the case of human resources, to the extent that government has altered taxation and immigration policies and devoted resources to encouraging return of emigrants and attracting in foreign workers. In this environment a policy that actively seeks to retain the maximum number of people in a highly supported sector such as farming seems inappropriate while the rest of the economy offers such opportunities. The aim of course is also unattainable unless it is envisaged that decline in the farmer numbers could be prevented, a proposition that is absurd in the context of economic development. The objective of maintaining the maximum number of farm production units is also quite unique as an industry policy aim. For example, milk or meat processors would never have an objective of maximising the number of processing companies or processing plants and neither would this be an aim of Irish industrial policy.

Rural development objectives and the desire to keep people in the countryside have been used in recent years to justify the retention of as many farm households as possible. But rural development, and indeed regional development generally, is a policy objective for society as a whole and is no more a function of farming than it is of tourism, engineering, food processing, or other productive activities. Devoting resources to improving infrastructure and providing attractive conditions in rural areas for these other sectors would be much more sustainable and a more productive use of resources than seeking to retain or attract new entrants into uneconomic and totally state dependent small farm units.

The policy of seeking to maximise the number of farm units is as much a disservice to farmers themselves as it is to the taxpayers who provide the resources. It serves to maintain a fragmented and dependent structure, which offers limited prospects for future progress for individual farmers. Concern has been expressed about farming not being attractive to young people, and this is true, but perhaps the worst mistake is to encourage both public and private investment in under resourced farm enterprises only to find that their scale is still uneconomic and that even bigger adjustments are simply being deferred to a later and less opportune stage of a farmer's life cycle. For many this can be too late and the farmer becomes trapped in a subsistence life style. This is most reprehensible when under resourced young people, who could otherwise have left as educated knowledge professionals, are encouraged to stay in the industry only to be fully or partially force out as unskilled part-time or full-time workers at a later stage. Farming will only be attractive to a young progressive generation if it restructures itself and offers the prospect of building substantial enterprises that can offer incomes and working conditions comparable with other sectors of the economy.

Policies intended to retard the rate of restructuring

Amongst some of the policies that support the farmer maximisation aim and so serve to retard the rate of restructuring of Irish farming are: priorities for small-scale producers in milk quota restructuring, quotas based historically on farming scales of 1984 for milk and 1992 for the cattle and sheep, quota clawback schemes and the structure of direct payments generally which favours smaller-scale producers. Research and extension services are also biased to some extent toward the smaller-scale and more needy producer. The philosophy of these policies derives from the traditional and well-intentioned farm income support objective where the priority is to ensure that supports are directed more to the smaller and more needy rather than to larger producers. A criticism of the agricultural price support structures of the past was that much of the support went to the larger-scale farmers. However, this was significantly redressed by the greater use of direct payments following the McSharry CAP reforms which significantly shifted the balance in favour of smaller-scale producers. For example, Keeney (2000) has documented how the share of farm income received by the top 10% of Irish farms declined from 44% in 1992, prior to the McSharry reforms, to 38% by 1996 following the reforms, and that the growing share of direct payments in income supports was the factor responsible for this change.

Since direct payments are still coupled to farming, a reality is that this shift not only serves to improve the relative incomes of small producers compared with their larger scale colleagues, it also acts to make remaining in farming a more attractive proposition. It therefore works as an exit barrier encouraging less efficient farmers who might otherwise have left farming to stay in, and probably also attracts younger farmers who would otherwise have gone into more productive non-farming activities. At the same time the diminishing marginal returns and the quota restrictions faced by larger scale producers act to discourage or inhibit expansion of the more efficient producers. The combined effect is to progressively render the sector relatively more and more inefficient and thus adding to its needs for higher levels of support. In this way the policy works as a dependency trap, holding in the inefficient and inhibiting growth of the efficient.

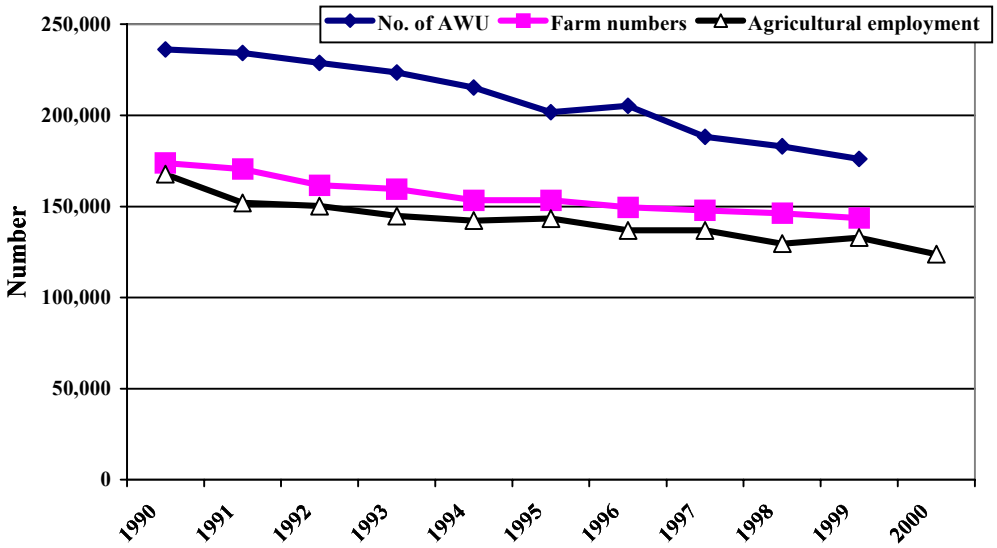
A compounding factor in this process is part-time farming. Encouraging underemployed farmers into outside work is undoubtedly better use of human resources and value enhancing for the farmers concerned and for the economy generally. However, since part-time farmers are more likely to be small-scale producers they too retain all of the small-scale preferences even though on welfare grounds they probably no longer have income problems. This again makes it more attractive for part-timers to stay in farming at some level. It further serves to retard the rate of restructuring and keeps more production in the hands of higher cost producers. In this respect the policy is probably both a dependency and part-time activity trap. It should not be forgotten that part-time farmers are part time or full time in some other trade or profession and that advancing their positions in these activities would in most cases be much more productive than enhancing or prolonging their involvement in farming.

Evidence of slower rather than faster restructuring in the 1990s

An acceleration of the rate of restructuring of agriculture would have been expected over the decade of the 1990s in view of on the one hand the slower growth of the sector because of quotas and on the other the opportunities offered by the fast growing wider Irish economy. This has not been the case as illustrated in Figure 6. The rate of decline in the number of farms was somewhat lower during the decade of the 1990s at an average annual rate of 2.1% compared with an annual rate of decline at 2.4% during the 1980s (based on Agricultural Census data 1980 and 1991, CSO, 1992).

The rate of decline in numbers employed in agriculture was also relatively moderate at an annual rate of 2.4% between 1990 and 2000. However, total labour input (time spent working on farms) declined considerably more at an annual rate of 3.4%, probably reflecting increased off-farm work. This is indicative of considerable labour productivity gain on the part of individual farmers. However, since the number of farm units declined more slowly, there has been an actual decline in the labour input per farm from 1.41 family annual work units (AWU) in 1990 to 1.23 AWU in 2000. In terms of labour input therefore, enterprise size in Irish farming has fallen by 13%, adding to rather than reducing the degree of fragmentation of the sector.

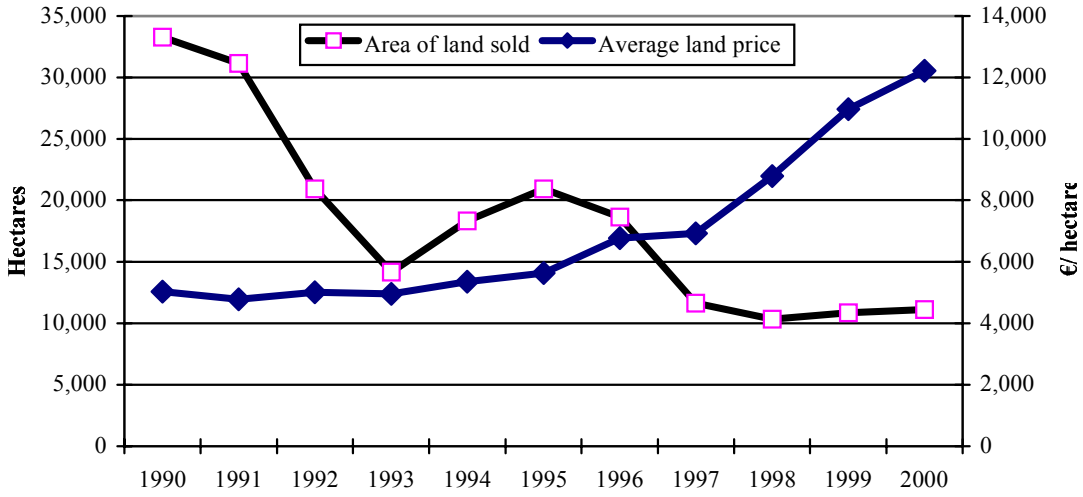
Figure 6. Number of farms, employment and number of family annual work units, 1990-2000.



Source: Agricultural Labour Input series, CSO, Dublin.

The slowing rate of restructuring is also reflected in the considerable decline in the area of land that has been transferred by sale over the decade. Figure 7 shows that the area sold has declined from more than 30,000 hectares per year in the early 1990s to just over 10,000 hectares per year toward the end of the decade, in spite of a substantial increase in land prices since 1993. No doubt this is also linked to the greater prevalence of part-time farming.

Figure 7. Area of agricultural land sold and average price, 1990-2000.



Source: Agricultural Land Sales series, CSO, Dublin.

Disincentives to efficient use of farm resources

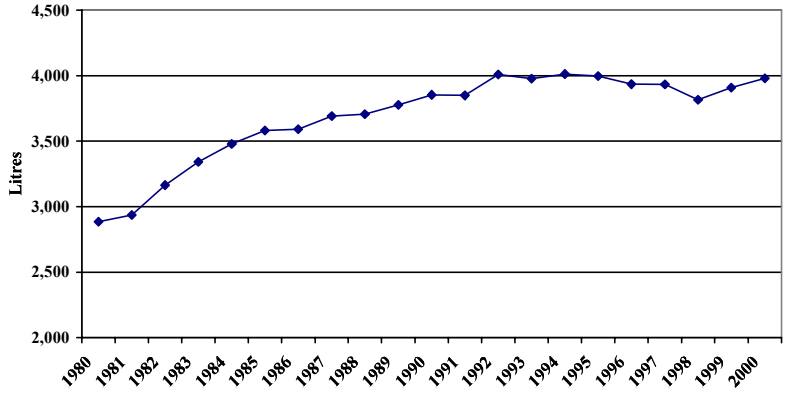
As well as having an objective of high human resource use by maintaining as many people as possible in farming, agricultural policy instruments also directly or indirectly encourage inefficient use of land and livestock resources. In the case of land use, the set-aside system in tillage is a direct means of idling land and so forcing farmers to use more land than is necessary to produce a given crop output. Extensification payments and low stocking density requirements to comply with REPS and qualify for other direct payments are further incentives for inefficient land use. While policy makers provide justification for REPS and extensification on environmental grounds, the cause and effect relationship between these policies and environmental benefit is weak and much more targeted interventions and redesign of these policy instruments would be necessary to regard these as payments for environmental benefits in the economic sense (see for example Harte and O'Connell, 2001).

While this poorer use of land resources is obviously inefficient in terms of higher farm production costs and the need for higher farm income supports, it is also a very inefficient general use of the country's land resource. In the current phase of infrastructure building in Ireland, society might be justified in questioning policies that are wasteful in the use of land when acquisition of land for housing, roads, amenity and other infrastructure building is so difficult and expensive.

Extensification type incentives may also have other unintentional effects. By encouraging or requiring farmers to use more land than is justified on economic and nutritional grounds, the feeding quality of crops such as grass is likely to be diminished and standards of nutrition and animal production generally lowered. There is considerable evidence that this has happened at least to the extent that performance gains that would have been expected during the 1990s have not materialised. For example, as can be seen from Figure 8, national milk output per dairy cow increased from 2,900 litres in 1980 to 4,000 litres in 1993, a level at which it has remained up to 2000. Under normal commercial conditions continued growth in output per cow would be expected, especially from the relatively low yield levels of the Irish dairy herd.

The direct payment structure itself would also be expected to directly encourage poor use of livestock resources generally. The relative importance of direct payments to cattle and sheep farmers was illustrated in Figure 5, which showed that the value of these payments considerably exceeds income on average cattle rearing and sheep farms. Direct payments made to these farm businesses such as the suckler cow, special beef and ewe premia are all paid on the basis of the numbers of animals on farms and not on the basis of output of beef or sheepmeat. Farmers are therefore rewarded for keeping stock on their farms rather than for optimising the use of their livestock resources in producing valued output. The expected economic response is poorer productivity of the breeding herd and the general retention of more animals than necessary to produce a given output.

Figure 8. Milk output per dairy cow, 1980-2000.

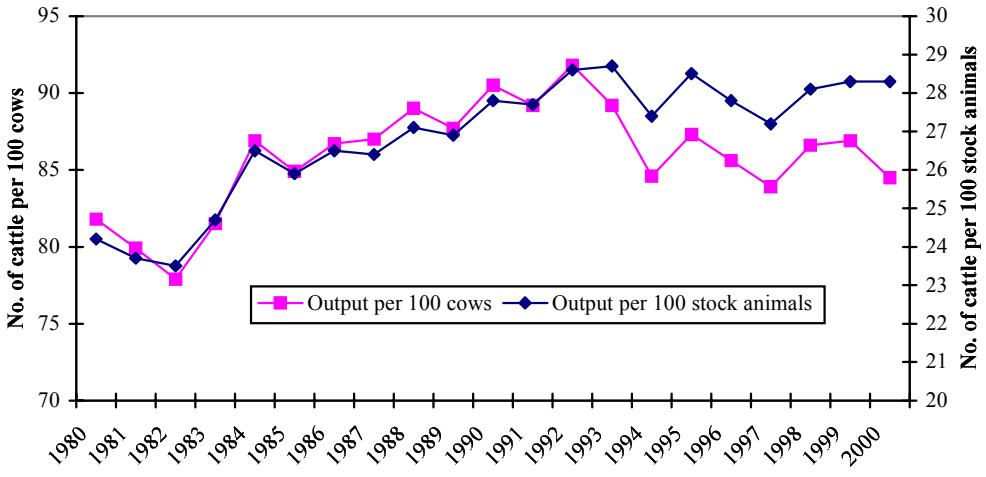


Source: Output, Input and Income in Agriculture series and Crop and Livestock Survey June series, CSO, Dublin

Relating cattle output to cow numbers and to the stock of all cattle on farms over the period 1980-2000 provides some evidence of diminished productivity gain in the cattle herd in the 1990s. Figure 9 shows that cattle output per 100 cows in the national cow herd increased through the 1980s and up to 1992 when it exceeded 90 animals produced for every 100 cows in the national herd. Since then it has fallen back and stabilised at an output level of 85 animals produced for every 100 cows. Similarly the number of cattle produced per 100 cattle of all types in the national cattle herd increased from 24 in 1980 to almost 29 in 1993 but remained at or below this level up to 2000.

A policy of encouraging inefficient use of the cattle herd is perverse economically and contrasts with practices in non-agricultural sectors where inventory management is given a high priority with optimisation of logistic and use of practices such as 'just in time' inventories. One of the main overheads and sources of inflexibility in animal production of all types is the length of the breeding cycle. Shortening it has been the great achievement of production systems in for example pigs and poultry. Yet for the Irish cattle sector, policies are structured to prolong the cycle. Many observers were surprised to find that 30% of steers sold for slaughter in January to June 2001 were over 30 months of age and so qualified for the Purchase for Destruction Scheme[1]. Maximising output from a given cattle herd may also become a priority in the future for environmental reasons to minimise production of greenhouse gasses such as methane.

Figure 9. Numbers of cattle produced per 100 cows and per 100 stock animals, 1980-2000.



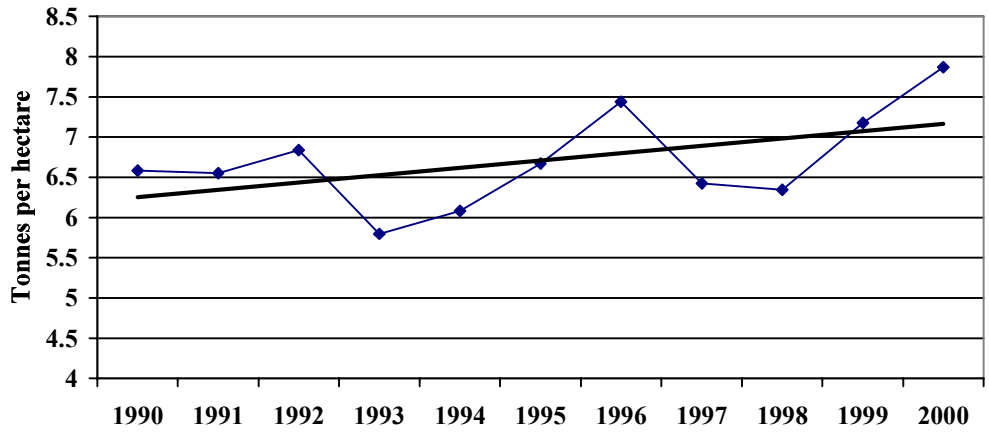
Source: Output, Input and Income in Agriculture series and Crop and Livestock Survey June series, CSO, Dublin

By contrast with dairy and cattle production, yields of cereals continued to increase at an annual average rate of 1.4% over the decade of the 1990s, although as shown in Figure 10, year on year variation in cereal yields was much more than in for example in dairying. Within the overall quota structure on the national area eligible for arable aid and the

[11] Estimated from Bord Bia Cattle Marketing data and from CSO Livestock Slaughters data, 2001.

requirement for set-aside, there is relative freedom to transfer production rights between producers and so allowing production into the hands of the more efficient. Neither have cereal growers been affected by externalities of schemes such as REPS and Extensification.

Figure 10. Cereal yields on Irish farms, 1990-2000 Figure 10. Cereal yields on Irish farms, 1990-2000.



Source: DAFRD, Annual Review and Outlook series.

Of course these are only partial indicators of changes in farming productivity over the two decades, nevertheless the contrast between the patterns of performance before and after 1992 is compelling. Other researchers using more complete methodologies have also observed that the rate of technical change on Irish farms has slowed considerably during the 1990s. Using data series from the National Farm Survey to measure productivity growth on best practice farms, O'Neill *et al* (2001) found that technical change averaged 1.1% annually between 1984 and 1989 compared with an average annual rate of 0.7% between 1990 and 1998. Farm efficiency in terms of the relative efficiency of farms in general compared with best practice was also recorded as decreasing throughout the 1984 to 1998 period. This implies that not only did the rate of technical progress on best practice farms decrease over the period, the gap between best practice and average farm performance widened. The research also found a marked negative relationship between dependency on direct payments and farm efficiency. Similarly, work by Matthews (fortcoming) estimated that total factor productivity growth in Irish agriculture averaged 2.3% per year in the 1980s falling to an annual rate of 0.8% in the 1990s.

A policy of slowing restructuring, encouraging poor use of farms resources and retarding technological progress is perverse economically. It conflicts directly with the notion that resources are scarce and should be used efficiently. It is confusing for farmers and others in the industry, it calls into question the justification for funding agricultural research and extension services and it exposes the agricultural sector to criticisms for waste of resources. It raises the issue as to whether agriculture can still be regarded as an economic activity, and if it is not an economic activity what is it?

Detachment from market signals

Almost all farm support systems have the effect of distancing producers from the market to some extent. For example, the price support structures of the past, which included internal market protection, intervention and export subsidies, shielded farm businesses from the direct vagaries of international markets and to a large extent from the direct signals of the marketplace. This intervention and subsidised export structure has effectively provided an 'alternative' market for farm products. It behaves as a non-discerning market which takes all residual product. Product going into this market finds its way onto mainly developing country markets in commodity form. This support system effectively continues under the present export refund structure, but with minimal use of the intervention stage. Product that does not find its way on to the normal EU market is effectively sold into this 'alternative' market.

This structure is not very distorting where volumes going on to the 'alternative' market are small and signals from the main commercial market continue to dominate, and this has been the case to a large extent within the EU generally. However, the 'alternative' market has been much more important in the Irish case for two reasons. The first is that Ireland has a small domestic market compared with the size of its agriculture and is therefore a substantial net exporter of farm products. Secondly, the CAP operates common export subsidy levels for all EU countries, so that the price level offered by the 'alternative' market in the Irish case tends to be high compared with what can be earned by putting product on to the internal EU market from Ireland's more peripheral location.

The 'alternative' market is to a large extent artificial and generic in its requirements. The effect is to distance Irish producers from the normal signals of commercial markets and to diminish the normal market incentives to produce product that meets commercial market needs. Again this can be a trap whereby the product produced becomes less and less relevant to the market and in turn the alternative market becomes more and more the dominant influence.

Producers who have been frustrated with these market dynamics over the years have tended to blame the post farm processing and marketing sector. Agricultural policy rarely seems to be questioned. But the Irish food sector has performed exceptionally well over the past two decades and the firms involved have developed rapidly in a market driven way both in terms of value added and international expansion. The sector has grown its output and especially its value added quite independently of the farm sector and outperformed all of its main EU partners in the period 1987 to 1997 (Harte, 2001 and O'Connell *et. al.,* 2002). It was driven by the impressive performances of a number of fast growing companies which have emerged from relatively small enterprises to become significant players in the European food industry. They have not only transformed production and marketing from the Irish base but have aggressively grown market share for their activities in the UK, mainland Europe, the USA and further afield. These businesses however are commercial market-driven enterprises and respond to the market signals they face, and if the policy chooses to offer high rewards for exporting commodity products to third country markets, that will be the outcome.

The greater role given to direct payments following the McSharry CAP reforms has served to further distance producers from the market place, especially in the cases of beef and sheepmeat. When all of the rewards were included in prices received for products, price acted as a reasonable means of transmitting market needs back to producers, even though its impact was diluted by the existence of the 'alternative' market. In the new regime most of the rewards are paid to producers by way of the direct payments with the effect that variations in prices for products such as beef and sheepmeat are relatively unimportant to total income for many farmers. In such circumstances, producers acting rationally are unlikely to be highly motivated to invest in or adapt their production systems to meet market needs. The predicted outcome is production of more and more product that falls short of normal market requirements. Again this is a marketing support dependency trap.

Part of the post farm food industry's success has been its market driven response to the very positive environment in the consumer foods market over the past decade, in which demands for variety, convenience and food services continue to provide opportunities for new food products and services. By contrast, agricultural support policies have to a large extent limited the exposure of much of the farm sector to these opportunities.

Progressive institutionalisation of farming

Government intervention in agricultural inevitably has costs and it is well known that the cost of administering the CAP is high. For example the cost of administering the Department of Agriculture, Food and Rural Development in 2000 was €181.1 million (DAFRD, 2001). This was equivalent to 19% of the estimated GVA in agriculture at world market prices in 2000 (Table 1). These are the inevitable and necessary costs of administering the policy.

In intervening in any market, governments assume part of the function of the market system. In the case of agriculture this is justified by the authorities on the basis that the market left to its own devices would not give the outcome desired by society. It is well known, however, that government intervention is less efficient than the market and that where markets do work well, market mechanisms are to be preferred. The market system is regarded as a much more direct and efficient mechanism for communicating information and inducing change than are planned systems (Williamson, 1986 and 1991). Actors in the market who are directly exposed to market incentives and disciplines spontaneously adjust to market needs. In planned systems signals are more indirect and the gains and losses associated with actions are diluted so that performance incentives and accountability are weakened and lack the direct impact and pressures of the market.

In market intervention therefore the authorities face the daunting task of simulating market mechanisms, a feat impossible to accomplish, especially where the needs of the market are complex and continuously changing as is the case in the modern food industry. The authorities respond to one need, only to find that the solution has some unintended effect which calls for another remedy and so on. Unintentionally the degree of intervention progressively grows.

There are many examples of this growing government involvement in agriculture. The enactment in 2001 of the National Beef Assurance Scheme is an example of a function that would ordinarily be conducted by an industry itself, but because of fragmented structure of beef farming and the distancing of farmers from the commercial markets, the function fell to government. Statutory requirements to maintain herd registers and animal remedy records for bovine animals, maintain individual animal records for sheep flocks and government involvement more generally in food safety are all examples of the progressive intervention of government in agriculture,

The Rural Environmental Protection Scheme (REPS) is a further example of how the authorities are becoming even more directly involved in farming, this time in the interest of protecting the natural environment. In other industries

guidelines and limits are set down and firms in the industry are required to stay within these or suffer the consequences on a polluter must pay basis. Apart from necessary inspection, there is usually no attempt on the part of the authorities to interfere with the internal management of the firms concerned. By contrast, REPS requires farmers to draw up nutrient plans to specifications that are decided by the authorities and to administer the plans under the supervision of approved planning officers.

The effect is an ever-growing bureaucracy, with not only the cost of the bureaucracy itself, but also the many costs to the industry of complying with the necessary systems. As before this is a trap: the more responsibility the authorities take on the more they are required to assume. It is a progressive institutionalisation of the sector.

It is an uncomfortable notion that the authorities themselves can be motivated to intervene in an industry such as agriculture more than is necessary, and that other organisations servicing the sector, both state and private, may also have a vested interest in maintaining the fragmented structured and state dependency of the sector. Organisational theory is divided as to the strength of these motives. The conventional theory holds that organisations generally, both state and private, have strong motives to build their own size and importance. The theoretical argument is that rewards for executives and managers who make up such organisations are more related to departmental and overall organisation size than to effectiveness at meeting objectives. Salaries, status and other benefits tend to be positively related to organisation size and importance.

According to the theory, civil servants gain recognition, power and wealth by maximising their budgets: the larger the government department or other state agency and the greater the range of activities, the more influence and rewards are enjoyed by its managers. The theory predicts that in responding to interest groups, public servants have strong incentives to commit the state to levels of activity beyond those actually necessary, and that in programme implementation, incentives to minimise costs are weak. In the private sector the tendency to build organisation size is reined in by controls and incentives applied by business owners' (shareholders) and by the disciplines of the market. Of course neither do public servants have the final say in public policy, this is the role of government. However, while government as a collective is concerned with the public good and with getting best value for the least expenditure, individual ministers may still be strongly motivated to build the size and importance of their own departments.

There is however a counter argument in defence of the public service which regards public administration as a 'practice' centred on the public good. The motivations to built bureaucracies as set out above are based on the assumption that public servants are driven only by external or material rewards and the model does not recognise the motivating power of internal rewards. Internal rewards are the satisfactions that professional public servants get from achieving excellence in performing their functions in an ethos of serving the public good. The ethos is a set of values in which public servants have been immersed through their education, training and experiences in public administrations. See Litton (2000) for a presentation of both arguments.

It is likely that both motivations are at work and that the extent to which one dominates is dependent on the policy circumstances. Where the public good objectives of a policy are clearly defined and resources are limiting, the danger of excess intervention is low. On the other hand, if objectives are vague, as they often are, and resources are not limiting, external rewards will carry more weight and the state may get committed to levels of activity beyond those actually desirable.

The latter circumstances have to some extent prevailed for Irish agriculture during the 1990s. As already argued one of the two overriding aims of Irish agricultural policy, to maximise the number of farm households, is inappropriate in the modern context and conflicts directly with the other objective of achieving an efficient and competitive agriculture. EU agricultural policy aims are also vague, especially some recent concepts such as farmers' role as 'custodians of the countryside' or the 'European Model of Agriculture'. These are vague umbrella propositions which provide cover for a very wide range of policies. They hardly could be regarded as clearly defined objectives.

The sector has also come through a period when both EU and national budgets have been relatively loose, the EU one relieved following the introduction of quotas and the more relaxed national budget associated with the very healthy state of our domestic public finances. In such circumstances the concern is that the authorities all too easily yield to calls for intervention and schemes where market solutions would be more appropriate. It is a further dimension of the institutionalisation trap, adding costs, reducing competitiveness and increasing dependency.

Summary and conclusion

The purpose of this paper is to question the logic of agricultural policy in the context of the modern Irish economy. Focusing on the decade of the 1990s during which the wider Irish economy almost doubled its economic size and virtually reached fully employment, the analysis shows that agriculture's contribution to the economy diminished by two thirds. Declining importance of the sector is to be expected and in itself is not of concern provided agricultural productivity is keeping up. But agricultural productivity has not been keeping up and it has not only fallen behind of the rest of the economy, it has performed less well during the 1990s than it did in decade before. This poor

performance is here attributed to negative effects of the agricultural support policies, especially since the McSharry CAP Reforms of 1992.

Irish agriculture's degree of dependency on transfers is now such that in 2000 its GVA was only 1% of the nation's GDP when valued at world market prices, and when the cost of capital is removed, the NVA in agriculture was estimated at €375 million, a mere €3,030 per person employed in the sector. Comparing this with the actual supported income received, Irish farming was estimated to have been uncompetitive in international terms to the extent of 85% of its 2000 income, and that this international competitiveness gap averaged 81% over the five years 1996-2000. This is an enormous performance gap and it is especially disappointing that it seems to have deteriorated rather than improved in a period when performance in the rest of the Irish economy has been so impressive.

The analysis set out five aspects of agricultural policy that impede efficiency and competitive gains: (i) rigidities of the quota regime, (ii) impediments to restructuring, (iii) disincentives to efficient use of farm resources, (vi) detachment from market signals, and (v) progressive institutionalisation of farming.

The quota regime impedes performance because adjustment of farm resources to take account of economic change is inhibited: expansion by efficient producers and contraction by the inefficient is curtailed, as is freedom to move resources between farm enterprises as relative profitability changes.

Fostered by the inappropriate objective of seeking to retain maximum numbers in farming and the well-intentioned traditional income redistribution objective, various policy instruments which work to favour small-scale producers, including part-time, and slow expansion of larger scale farmers have served to retard the rate of restructuring of the agricultural sector. The rate of restructuring has been less in the 1990s than it was in the previous decade, in spite of a more restrictive quota regime and greater opportunities in the wider economy. With increased uptake of part-time farming and the relatively slow rate of restructuring, farm enterprise size in terms of labour input actually fell by 13% during the 1990s, from 1.41 to 1.23 AWU.

As well as encouraging poor use of human resources, policies instruments such as set-aside, extensification, REPS and the direct payments system generally encourage and reward inefficient use of land and livestock resources. Rate of efficiency gains in the livestock sector in terms of milk output per cow, performance of the national cattle herd, technical change and technical efficiency were all found to have declined in the 1990s. Of the aspects of performance assessed, only cereal yields progressed as would be expected.

The CAP system of intervention and subsidised exports effectively acts as an 'alternative' market for Irish farm produce, especially beef. This artificial and generic market shields producers from the normal incentives and disciplines of commercial food markets. The effect is to reduce incentive to produce to market needs and so increasing the gap between the type of end product produced and the needs of the market. By diminishing the importance of market revenues in determining income, the direct payments since 1992 have served to even further distance farmers from real markets.

Direct institutional involvement in the farm sector has also increase in recent years adding further to farm costs and to the costs of administering the policy. The National Beef Assurance Scheme, statutory requirements to maintain herd registers and animal remedy records for bovine animals, requirements to maintain individual animal records for sheep flocks and REPS are all examples functions that would ordinarily be conducted by an industry itself, but in agriculture's case have fallen to government.

Two general themes emerge from the analysis. One is the extent to which current agricultural policy is perverse economically in terms of encouraging and rewarding inefficient resource use. In producing farm output, most of which is controlled by quota, the policy seeks to use as many people as possible, as much land as possible, and as much livestock as possible. It is difficult to defend such a policy in any circumstances, but in the contest of the opportunities currently offered by the wider Irish economy the policy is most inappropriate.

The second theme is the extent to which the policy is a dependency trap. Policies intended to retard the rate of restructuring and redistribution of income between farmers tend to holding in the inefficient and inhibit expansion of the efficient. This is a trap in that it increases the cost structure of the sector as a whole and so the need for further supports. The process also makes it more attractive for high cost part-time farmers and in this respect the policy is both a dependency and a part-time activity trap. Distancing producers from market signals is also trap in that farm products become less and less suited to market needs and so increasing the dependency on marketing supports. There is also an institutionalisation trap in that the more activities the authorities take on, the more they are required to or prepared to assume. The effect is a progressive institutionalisation of the sector.

References

Colman, D., M.P. Burton, D.S. Rigby and J.R Franks (1998). *Economic evaluation of the UK milk quota system*, Report to the Ministry of Agriculture, Fisheries and Food, The University of Manchester, pp.96.

Constitution of Ireland, 1937, online from http://www.irlgov.ie/taoiseach/publication/constitution/intro.htm, p. 174.

Department of Agriculture, Food and Rural Development, 2000a, *Agri Food 2010 Main Report*, Government Publications, Dublin, p. 13.

Department of Agriculture, Food and Rural Development, 2000b*, Agri Food 2010 Plan of Action*, Government Publications, Dublin, p. i.

Department of Agriculture, Food and Rural Development, 2001, *Annual Review and Outlook for Agriculture, Food and Rural Development*, p. 106.

Harte, L N. and J.J. O'Connell, 2001, Agri-environmental payments: income supports with cross compliance or payments for environmental outputs?, paper presented at conference *Achievement and Challenge – RIO+10 and Ireland*, 10 September 2001.

Harte, L.N., 2001, Rapid Expansion of Irish food companies, 1987-1997: governance, strategy and managerial explanations, *Proceedings of the Agricultural Economics Society of Ireland, 1997/98*, pp. 85-104.

Keeney, M., (2000). The Distributional Impact of Direct Payments on Irish Farm Incomes, *Journal of Agricultural Economics,* 51, 2, pp. 252-263.

Litton, F. (2000). The Civil Service – A Defence?, in *Questioning Ireland: Debates in Political Philosophy and Public Policy,* Editors Dunne, J., Ingram A., and F. Litton, IPA, Dublin, pp 170-186.

Matthews, Alan, 2001, How important is Agriculture and the Agri-Food Sector in Ireland?, *Irish Banking Review,* Winter 2001 pp.28-40.

Matthews, A., fortcoming. 'Productivity Change in Irish Agriculture', *Journal of the Statistical and Social Inquiry Society of Ireland*.

O'Connell, J., Harte, L. and Ruane, D. (2002) Quantification of output growth and value added captured by the Irish Food Processing Sector, paper submitted to *Journal of the Statistical and Social Inquiry Society of Ireland*.

O'Neill, S., Leavy, A. and Matthews, A, 2001, Measuring Productivity Change and Efficiency on Irish Farms, End of Project Report 4498, Teagasc website.

Williamson, O.E. (1986). *Economic Organisation: Firms, Markets and Policy Control*, Wheatsheaf Books, Brighton, 1986, pp. 86-87.

Williamson, O.E., (1991). Comparative economic organisation: the analysis of complete structural alternatives, *Administrative Science Quarterly*, 36, pp. 269-96.