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FINANCING AGRICULTURAL POLICIES WITH PARTICULAR REFERENCE TO PUBLIC GOOD PROVISION AND MULTIFUNCTIONALITY: WHICH LEVEL OF GOVERNMENT?

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NOTE BY THE SECRETARIAT

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TABLE OF CONTENTS

Boxes

FINANCING AGRICULTURAL POLICIES WITH PARTICULAR REFERENCE TO PUBLIC GOOD PROVISION AND MULTIFUNCTIONALITY –

WHICH LEVEL OF GOVERNMENT?

Introduction and background

The 2003-04 programme of work of the Committee for Agriculture mandated a study on evaluating "financing mechanisms, including the role of different levels of government, with particular reference to public good provision and multifunctionality." Drawing on the public finance and fiscal federalism literature, this study develops a framework which is illustrated with references to specific areas of agricultural policy, with particular emphasis on those related to public good provision and multifunctionality. It also assembles several examples of country specific materials describing how agricultural policies are designed, financed and implemented in a range of OECD countries, both federal and unitary.

Fiscal federalism relates to the level of government at which different types of policy should be designed implemented and financed.[1] The guidance which fiscal federalism may provide as to the appropriate level of government at which the non-commodity-outputs (NCOs) of agriculture should be financed relates to the nature of the public good characteristics of the NCOS in question. In general, if non–use values dominate demand by the general population, the good should be financed by the central government. If, on the other hand, territorially specific use values are predominant, as in the case of a local public good, funding by sub-central governments is most appropriate (OECD, 2003). In this study, a first attempt is made to look at these issues from the specific point of view of non-commodity output provision and negative externalities of agriculture.

This study begins with a general overview of the relevant tenets drawn from fiscal federalism and an attempt to apply them to agricultural policy issues arising from multifunctionality. This discussion is illustrated by examples drawn from the United States and Canada. Four country chapters follow. The first reviews the financing and implementation of agricultural policy in selected regions of the European Union. The second describes the situation in Korea, while the third and fourth chapters describe the situation in Canada and the United States. The study ends with a few concluding remarks.

1. It is assumed that the existence of a market failure necessitating a government intervention has already been established, following the principles set out in earlier OECD work on multifunctionality.

Part I

A conceptual overview[2]

Multifunctionality suggests a different role for agricultural policy that involves greater consideration of policies that go beyond typical price and income support. Part I starts from the OECD definition of multifunctionality (OECD, 2001) and examines how incorporating characteristics of public goods into agricultural output alters the policy environment. If agriculture produces local public goods there are potentially important questions of how the optimal quantity of goods is produced and how they are paid for. Aspects of the public finance literature that deal with externalities and public goods as they relate to fiscal federalism are reviewed. To illustrate the issues, references are made to conditions in Canada, the United States, European Union countries and Korea. While these issues are not restricted to federal systems of government, there are additional complications in all federal systems that make them a useful model for discussion.

OECD (2001, p. 13) has defined multifunctionality in the following way:

- the existence of multiple commodity and non-commodity outputs that are jointly produced by agriculture; and

- the fact that some of the non-commodity outputs exhibit the characteristics of externalities or public goods, with the result that markets for these goods do not exist or function poorly.

This study will focus on the second part of the above definition, although the issue of jointness remains central because policy becomes more complex with joint production, especially when public goods and jointness are both involved.

The first section of Part I reviews differences between private and public goods. This is followed by an overview of federal and unitary systems of government, the scope of fiscal federalism and a link between these major concepts and agricultural policy. A brief review of the relevance of multifunctionality for agricultural policy follows to ground the ideas into a specific context. Questions of implementing multifunctionality in federal systems are then addressed, using three examples from Canada and the United States to clarify some of the issues.

1. Public and private goods

The general definition of public goods focuses on two characteristics: non-rivalry and non-exclusion in use (Atkinson and Stiglitz, 1980, pp. 483-487; Starrett, 1988, pp. 42-44). For a public good, consumption by one individual does not eliminate the possibility of another individual also consuming the same good or service. Further, in the case of a pure public good it is impossible to exclude others from consuming that good. In contrast, a pure private good is characterised by both rivalry (my consumption precludes your consumption) and exclusion (strong rights of ownership).

In the case of public goods there is also a distinction between pure and local public goods. A local public good is still characterised by non-rivalry and non-exclusion, but there are limits on its effects. These limits are generally spatial in nature so that the benefits of the good are available in a specific territory but not outside it. Thus, while national defence is a pure public good since all people in a country are provided

2. Part I was prepared by a consultant, Professor David Freshwater, Department of Agricultural Economics and Martin School of Public Administration and Public Policy, University of Kentucky, United States.

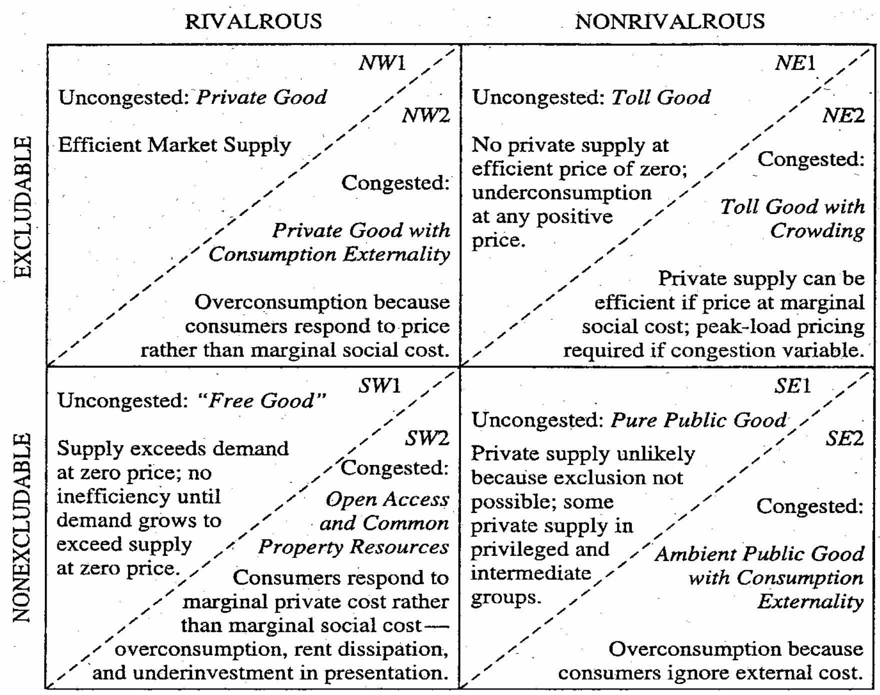
protection, a farmer who maintains visually pleasing fences or hedges provides a local public good that benefits primarily those who live near the farm.

Weimer and Vining (2004) provide a useful typology of the two attributes of rivalry and exclusion. In Figure I.1 they include the effects of congestion since this has a major impact on the quality (value) of the various goods. Congestion can significantly alter the appropriate price of goods. For example, in the case of toll goods the appropriate price is zero in the absence of congestion, but the price should be positive when congestion is present. The central feature of Figure I.1 is that in addition to pure public and private goods there are two mixed goods: “toll goods” that are characterised by being non-rival in consumption, but where exclusion is possible, and “free goods” or common property goods that are characterised by being rival in consumption but where exclusion is not possible.

The two latter categories are common in agriculture. Community pastures, public hunting and hiking rights on farm land and common access to forests are well-known examples of common property resources. Marketing cooperatives that create a regional brand identity are an example of a toll good. All farmers in the region benefit from the existence of the brand with zero marginal cost from employing it, although it is possible to exclude farmers who do not pay to help promote the brand from using it. However, Weimer and Vining (2004) demonstrate that the binary distinction between public and private goods is too simple since there are clear examples of goods that satisfy neither definition.

Moreover, Cornes and Sandler (1986, pp. 114-115) note that any particular good or service may have both private and public attributes. Consider a farmer who sprays his crop with a pesticide. The farmer receives a large private benefit from the pest control activity, but there is also a jointly produced public good aspect. Farmers in close proximity also automatically receive some pest control effects if the local pest population is reduced. There is also a potential third effect. If pesticide drift occurs, then neighbouring farmers who have adopted “organic” production techniques experience a negative externality. Thus, one action results in the production of an output “pest control” with multiple attributes, some of which are public in nature and others private.

Figure I.1. Classification of goods: public and private



Source: Weimer and Vining, 2004, p. 78.

This idea of "mixed goods" is central to the OECD definition of multifunctionality. In practice, there are a large number of goods and services that do not fit neatly into pure private or public goods. As a result, it is difficult to argue that either markets or government are the appropriate means of provision. Further, the potential for congestion may indicate the possibility of a turning point where traditional means of provision are no longer effective and new ones are required.

Tempesta and Thiene (2004) in their study of the Cortina D'Empezzo region of Italy illustrate how multiple attributes or outputs are associated with alpine pastures. The region has shifted from a primary reliance on agriculture to a strong tourism focus, with the alpine pastures playing a key role in attracting tourists. As production agriculture declines, the incentives for farmers to maintain pastures also shrink. From a farmer's perspective the pastures are private goods that have value in the farm enterprise, but the same pastures also have a public good value in that homeowners of the region experience a daily visual amenity. There is also a significant national, and perhaps international, public value that comes from the option value of the locale as a tourist destination and the specific benefit for those who actually exercise this option and visit Cortina D'Empezzo.

2. Public goods and public policy

Systems of government

National governments are organised either as unitary states where the national government holds all powers but which may assign certain powers to local governments at its discretion, or federal systems where there is an explicit division of authority between a national government and a number of states/provinces through a binding constitution that limits the ability of any level to take powers from another level. Within this basic dichotomy are large variations in organizational structure that can result in sub-national regions in some unitary states having broader powers than those constitutionally assigned to states or provinces in a federal system. The three crucial points for this analysis are that in a federal system devolution of at least some authority is guaranteed, that the specific assignment of powers in the constitution may not match the current capacity of a given level of government to provide those powers, and that devolution is a crucial issue for the effective delivery of public services and management of public policy in both unitary and federal systems.

In both unitary and federal systems, certain functions of government are best carried out at the national level, while others are better carried out at the local level. Pure public goods, like national defence, are always provided by the national government in any system of government. Other functions, such as police protection, may be carried out by the national government in unitary (French National Police) or federal systems (Royal Canadian Mounted Police), as well as by local governments in unitary and federal systems (city police). Other functions, such as garbage collection, are always carried out by sub-national governments in both systems, but may also be carried out by the private sector. While the type of government may constrain how specific functions are carried out, there are no specific differences in the division of powers that strictly apply to one system or the other.

In a unitary state the national government can choose to assign responsibilities to subsidiary levels of government where this is seen as desirable, or can remove them from local government if national provision is deemed more appropriate. In a federal state, the constitutional division of responsibility may limit the ability to assign responsibilities to a level of government that is currently best positioned to manage them. Clearly those countries whose constitutions were put in place more than 100 years ago may face major discrepancies between how responsibilities were assigned then and the needs of today. While constitutional change or some form of bargaining among levels of government may allow ways to resolve problems within the separation of powers, this adds additional elements of complexity.

For example, unitary governments in Sweden and Japan provide public support for the protection of environmentally sensitive agricultural land (Fahlbeck, 2004; Ohe, 2004). In each country, the national government has a public policy goal but it is implemented through local governments because there are specific local values that co-exist with national goals. As a result, both the specific means for preserving sensitive lands and the associated uses of that land vary on a place-by-place basis (Fahlbeck, 2004, p. 129; Ohe, 2004 pp. 43-44). Thus, in practice some degree of delegation is required if goals are to be efficiently achieved irrespective of the system of government. Clearly, a unitary state has more flexibility in choosing how delegation/subsidiarity will occur since it is not bound by a formal delegation of powers.

A final crucial issue for any form of devolution or subsidiarity is that the assignment of power or responsibility may not produce the intended results where adequate fiscal capacity is not present in the responsible government. Much of the literature on fiscal federalism focuses on resolving mismatches between fiscal capacity and responsibilities, but similar issues are relevant in unitary states. Federal states are perhaps more prone to this phenomenon because of the constitutional assignment of responsibilities and revenues, but all countries face this type of problem.

Fiscal federalism

The fiscal federalism literature deals with asymmetries between various levels of government in a nation in terms of revenue capacity and expenditure requirements. It is most commonly applied in the context of federal states where there are multiple layers of government, each with defined revenue sources and expenditure responsibilities. In all federal systems significant intergovernmental transfers of revenue, and in some cases expenditure responsibility, are required to resolve problems in delivering adequate levels of service. Oates (1998, p. 3) provided an important perspective on fiscal federalism that is useful for applying the concept to agricultural policy.

> "At the outset it is important to stress that the basic issue in federalism (and this most certainly applies to environmental policy) is not one of centralization versus decentralization. The different levels of government all have important roles to play in the provision of public services (including environmental management). Alexis de Tocqueville put it eloquently well over a century ago when he observed that "The federal system was created with intention of combining the different advantages which result from the magnitude and littleness of nations" (*De la démocratie en Amérique*, I, 1, 8). But to realise these different advantages we need to understand which policy instruments are best centralised and which are best placed in the hands of state and local governments.
>
> This issue is the subject of "fiscal federalism," a subfield of public finance in economics. Its central concern is the vertical structure of the public sector, and this involves as a fundamental question the allocation of public-sector responsibilities to the different levels of government. In one sense, the term "fiscal federalism" is a bit misleading, for its domain is not just fiscal issues; it encompasses the whole range of issues relating to the vertical structure of the public service."

Oates points out that fiscal federalism is not just the study of financial resources, but of how different levels of government can be employed to deliver public services more efficiently. In the case of agriculture, while national governments have historically played the main role in developing policy, there are questions as to whether national governments alone can adequately provide a new form of policy that goes beyond traditional commodity and income support.

Boadway identifies four arguments for transfers from national to state/provincial governments. They are: the existence of a fiscal gap, fiscal inequity, fiscal inefficiency and inter-provincial spillovers (Boadway, 1986, p. 4). A fiscal gap exists when the national government raises more money than is needed relative to its expenditures, while provinces/states are unable to raise enough. Causes of the fiscal gap can reflect the constitutional assignment of taxing powers and public expenditures, tax competition among provinces/states, or a crowding out of tax categories by the national government when both it and the province/state tries to raise revenue form the same source.

Fiscal inequity comes into play when certain provinces/states have greater capacity than others and the national government provides funding from its tax sources to equalise conditions. Causes of fiscal inequity can include markedly different economic circumstances such as different resource endowments or industrial mix, or differences in the per capita cost of providing government services. "(F)iscal inefficiency refers to the misallocation of resources among provinces in a federation as a consequence of the tax-expenditure decisions taken by the provinces" (Boadway, 1986, p. 17). The most common example of fiscal inefficiency refers to the location choice of workers. In a nation with uniform taxes, all other things being equal, workers will relocate so that the value of their marginal product earns the same wage everywhere. In a nation where taxes vary by province, workers will locate where their after tax rates of return are equalised. In provinces where resources generate a large share of the tax base, workers may receive returns (including public sector expenditure) above their marginal product.

The final category, interprovincial spillovers, refers to the possibility that actions taken by one province may confer unintended benefits or costs to another. For example, if one province cleans up a river to provide local benefits, it also provides benefits to downstream provinces. Boadway suggests that since the first province may not have equated marginal benefits with marginal costs in making its internal decision, there is little reason to assume that the usual recommendation for internalizing the spillover applies (Boadway, 1986, p. 20).

Another important aspect treated by the fiscal federalism literature is the nature of the grants provided (Oates, 1999, pp. 1126-1128). Unconditional grants provide the recipient government with additional funds that can be used for any purpose. This allows the government to allocate funds strictly on the basis of its own criteria. In contrast, conditional grants limit how the funds can be spent. To the extent that the grants free up internal resources for other uses, there may not be a significant distortion of optimal local spending patterns, but there will be some change. Conversely, the government providing the grant has more confidence that a conditional grant will result in outlays that match its priorities.

A final point from the fiscal federalism literature that has important policy implications is the "flypaper effect" (Oates 1999, p. 1290). The flypaper effect reflects numerous observations that local governments are more likely to spend money received in the form of grants rather than equivalent amounts of additional local taxes. This suggests that intergovernmental transfers may be more effective in stimulating local outlays as compared to an increase in the underlying wealth of the community.

While the fiscal federalism literature is mainly concerned with relations between levels of government that have powers and responsibilities that are clearly enumerated by a constitution, it is also applicable to other circumstances. Within the provinces and states there are local governments that derive their powers and responsibilities from the provincial or state governments. In principle, these governments are not autonomous because they have no constitutional authority, but in practice they have a significant degree of independence. As a result, fiscal federalism can be conceived as a tripartite framework that involves bargaining among national, state/provincial, and local governments in order to accomplish some public purpose.

Further, much of the fiscal federalism literature is applicable to unitary states. While these countries may not have a formal division of powers that is entrenched in a constitution, there may be long-standing traditional divisions of power that are not easily changed. In addition, even in unitary states the concepts of subsidiarity and devolution play a role. As national governments transfer power to lower levels of government the same questions of which powers, how responsibilities are to be financed, and how coordination is to be managed arise.

Agricultural policy and fiscal federalism

Agriculture can have aspects that are important national issues, (for example, efficient commodity markets), but it can also have significant local effects (for example, visual amenities). The challenge is to find a mix of local and national policies that produce the desired quantity of all outputs. The optimal mix is likely to depend on the context itself.

In addition to a concern with vertical equity between different levels of government there is also a concern with horizontal equity. In the first case, the focus is on the varying abilities of the different levels of governments. In the second case, the concern is that some governments at a specific level may have significantly less capabilities than their peers. Governments are also concerned with the stability of the arrangements, thus the need for co-ordination.

In the Canadian and US context, vertical equity deals with relations between the national government and the states/provinces, while horizontal equity focuses on the relative abilities of the various provinces/states. In the context of the Common Agricultural Policy (CAP), the European Union adds another supra-national layer to vertical relations between the national and the regional levels (Section 1, Part II). In some countries, an infra-regional level (*e.g. départements* in France) is also involved in some agricultural policy choices.

While the Canadian provinces and, to a lesser extent, the US states have been involved in agricultural policy, they have traditionally not played a leading role in either country. This reflects the historic focus on market development in agricultural policy, which clearly falls within the powers of the national government. In Canada, however, intensive consultations took place between the federal government and the provinces in the development of the 2003-2008 Agricultural Policy Framework in order to reach consensus on the provisions of the agreement and the contribution to be made by the provincial governments.[3] As agricultural policy is broadened to include the production of non-commodity outputs as a central aspect, the role of provinces and states will continue to expand. This reflects two main facts: the first is the constitutional division of powers in both countries that gives states and provinces a major role in resource management, and the second is the inherently local nature of many of the non-commodity outputs, which makes a pure national government role difficult to define. Local governments in both countries derive all their powers and responsibilities from the states/provinces, making the active participation of these controlling governments necessary. Further, as the emphasis in production shifts from mass commodity markets to niche markets, there is also increased scope for sub-national governments to play a role. Developments in the European Union can also be interpreted in this light: policy focus is moving away from market support to direct payments, increasing emphasis is given to Pillar 2 and multifunctionality is explicitly acknowledged as a policy driver. As this movement continues, the design and implementation of policy measures is becoming increasingly a matter for national and sub-national levels of government, whether member countries have federal or unitary constitutions.

3. Implementation agreements as part of the Agricultural Policy Framework are legal documents that bind provincial governments to cost sharing and emphasize the obligation to take part in discussions on issues of importance.

3. Multifunctionality and agricultural policy

The growing focus on the multifunctionality of agriculture

Because multifunctionality emphasises the importance of non-commodity production, especially the production of public goods and externalities, it challenges current agricultural policy that is based upon supporting commodities (unless strong or perfect jointness is established). It is also possible that multifunctionality will present a challenge to the predominant role of national governments in managing agricultural policy, especially if the impact of non-commodity public goods and externalities is largely local (Gunderson, Kuhn, Offutt and Morehart, 2004).

For example, agricultural policy has been national policy in Canada and the United States largely for historical reasons, but also because the policy focus was on commodity production. This has also been the case for the European Union, since the inception of the common agricultural policy up until relatively recently, and even more so in Japan and Korea. In market-oriented economies, however, a liberal internal trade regime is a matter of fundamental importance and in both Canada and the United States the national governments have tried vigorously to ensure internal free trade. The European Union has also been focused on the development of a single market within its borders within which goods (not just agricultural) would move freely and without hindrance. The United States has been somewhat more successful than Canada, largely because provinces have both more rights than states and have been more vigorous in protecting them, which has allowed a number of inter-provincial trade barriers to continue to exist. As a result, commodity prices in both countries largely reflect an equilibrium subject to transportation charges, *i.e.* there are few opportunities for spatial arbitrage. Both national governments have explicit authority to support interstate or interprovincial trade and, with this power, they have been able to implement internal agricultural policies that encourage the flow of commodities. Further, because many commodities have significant export markets and international trade is a national responsibility, national governments have had a further reason to dominate agricultural policy.

In many OECD countries, however, the national interest in commodity production is less clear than it has been in the past. Agriculture is no longer a central element in national development. Commodity production is not a large part of GDP, nor is farm income and employment. While farm exports continue to have a more important share of total exports than they do of GDP, few countries rely upon these exports as a major source of foreign earnings. In some regions of the OECD, agricultural commodity production remains very important, and in some rural communities farming is still significant, but do these pockets of agricultural predominance justify a national policy, especially when agricultural conditions differ significantly among places? These questions have both economic and political economy dimensions.

Clearly, the non-commodity outputs of agriculture, especially the environmental elements, are increasingly important in many OECD countries. As the population distribution changes, households come into contact with agriculture production differently. For example, non-farm rural households used to be linked to farming either through immediate relatives who farmed or because their livelihood depended directly on commodity output. Today, with the exception of those areas where agriculture remains the dominant source of rural income and employment, this is no longer the case. For suburban residents for whom neither situation has ever existed, their link to farming is mainly through its non-commodity outputs, whether positive or negative. For farms in proximity to cities, meeting environmental demands from an urban majority is becoming an increasingly important consideration in management practices.

In addition, with growing wealth, people are purchasing recreational property in more remote rural areas. Although they may not be full-time residents in the locality, they do have a significant influence on public policy both at a sub-national/local level and in terms of their contribution to local taxes. While pressures to manage farms in order to optimise non-commodity production in remote regions are not as intense as on farms adjacent to urbanised areas, they remain significant.

Implications of multifunctionality for agricultural policy

The second part of the OECD definition of multifunctionality notes that some of the non-commodity outputs of agriculture are externalities or public goods. This has significant implications for agricultural policy. The current focus of agricultural policy is mainly on commodity prices or farm income, which inherently assume the existence of markets for farm outputs. While these markets may not result in the desired level of prices or lead to levels of farm income that society would prefer, they are assumed to be sufficiently robust that policy can operate within the market context and supplement its outcomes. In contrast, the existence of public goods and or externalities poses challenges for a market based approach (Blandford and Boisvert, 2002, pp. 14-16).

The economic theory of public goods and externalities shows that without special treatment markets will not necessarily produce the socially desirable quantities. In the case of public goods, because there is no additional marginal cost associated with additional use, the quantity produced is too small. In the case of externalities, because the producer does not consider the positive or negative consequences of the production this can result in too much pollution and lack of sufficient beneficial services that, in turn, lead to a sub-optimal outcome. In each instance, the standard recommendations involve the use of public policy to remedy incomplete markets. The types of policies suggested go well beyond the scope of traditional commodity-based agricultural policy.

In a recent study of the Castilla y Leon region of Spain, Gomez-Limon and Atance (2004, p. 205) tried to determine local preferences for various functions of agriculture. They considered three broad types of outputs: economic, social and environmental. Economic outputs are generally associated with traditional farm policy goals such as higher levels of farm income and reasonably priced and stable food supplies. They found that people in the region ranked non-economic aspects, preservation of rural villages, a safe and healthy food supply, and environmentally friendly agriculture highest. In second place were the traditional farm policy goals, and in third place another set of social and environmental outputs followed. Both the introduction of "non-economic" outputs as policy concerns and the high ranking attributed to some of these outputs suggest that a broader perspective on agricultural policy is needed. Since a number of the non-commodity outputs valued by society have clear public good aspects it will be important to see how market and non-market mechanisms can be employed to produce a more valuable mix of agricultural outputs.

In addition, there is a growing sense that many of the non-commodity outputs have the greatest impact in a relatively small spatial area. This means that they are typically local public goods or spatially bounded externalities. This creates another significant issue for current agricultural policy since it is defined mainly as national policy. Commodity markets are largely national in scope and commodity outputs can be readily transported from one region to another, subject to transport cost limitations. By contrast, local public goods and externalities are specific to a place and cannot be moved. The most commonly enumerated non-commodity outputs are environmental effects, both positive and negative, wildlife effects, cultural and historical aspects, rural development effects, and food security. Of these, only food security does not have a strong spatial component. For all the rest, the nature of the output has to be defined in a specific location for it to be fully described and its value determined.

Moreover since the outputs have a spatial context they may also face primarily local demands.[4] In this case, there are strong arguments for only local beneficiaries paying for the provision of the good. In the case of a local public good, the appropriate way to finance a payment deemed necessary to compensate the providers for their costs of production would normally be through a local tax paid by the beneficiaries.[5] Similarly, a local externality is internalised by a local tax when a "bad" is being produced or a local subsidy in the case of a "good". In each case the local payment will alter the relative mix of commodity and non-commodity outputs by producers within that region. From a national perspective there will be an aggregate shift in commodity production that cannot be explained by market prices or changes in national policy.

The definition of multifunctionality provided by the OECD captures the complexity of this issue. Jointness and public goods characterise multifunctionality but in a complex way. One can think of private and public goods being produced as identifiable joint outputs of agriculture. This creates problems of the optimal mix of outputs and optimal pricing. In addition, one can think of an output of agriculture having attributes of private and public goods which creates the mixed goods described by Cornes and Sandler (1986). In this case, the problem becomes more complex because there is no possibility of separation. A farmer sprays a field and produces pest control for that farm and for neighbouring farms, just as immunization provides protection for the individual and reduces the likelihood of the disease spreading to others.

Fiscal federalism and multifunctionality

In this section the linkage between fiscal federalism, public goods, and multifunctionality in agriculture is explored. The essence of the issue is that if agriculture produces non-commodity outputs that are local public goods, how can farmers best be provided with incentives to produce the socially optimal quantity? Because these are local goods, the initial assumption is that they should be funded from local sources that in turn receive the benefits, but if there is inadequate local revenue to produce the goods then perhaps there is a role for grants in some form from national government. The separation of financing from program design and delivery is a central feature of fiscal federalism.

Much of the controversy in the environmental federalism literature revolves around "the race to the bottom" where in order to bolster economic growth local jurisdictions reduce environmental standards to attract polluting business (Oates, 2001). There is considerable disagreement on the merits of this argument, but it applies to agriculture in a different way. Because agricultural production is strongly tied to site specific factors of production, the ability to use environmental standards as a factor in attracting agriculture to a location is limited. However, because agriculture produces mainly standardised commodities that are sold at non-differentiated prices, the viability of this type of standardised production in any given place depends on costs of production. To the extent that more stringent environmental standards increase costs of production, the farms in an area may be less competitive. While this may be true, until farms absorb the full costs of their activity there is an implicit subsidy for commodity production through non-internalisation of pollution.

The race to the bottom may also apply in a different way. If commodity output is subsidised, then higher levels of production take place; and with higher levels of commodity output may come higher levels

4. The principal exception to this is the possibility for wide-spread option demand. In this case individuals a long way away from the point of production of the non-commodity output may value the existence of a local public good or externality because they might experience it in the future. However since there is typically only small variation among the nature of non-commodity outputs across space, it is likely that option value of non-commodity outputs at any particular place is not very large.

5. Other instruments or market-based solutions could, however, be envisaged.

of environmental degradation. When the environment is undervalued in this way, current forms of agricultural policy may contribute to higher farm incomes, but at the expense of a lower quality of life for local communities.

A somewhat different argument has been advanced when payments are made to farms to compensate for the additional costs of producing environmental amenities. There is a concern that such payments would reduce commodity production costs. This is possible, and in the case of intrinsic, fixed proportion joint production likely (Freshwater and Jia, 2004, p. 61). However, in other cases there is less reason for concern. Payments for non-commodity outputs reflect the value of the output produced. So, to the extent that the outputs are substitutes higher prices for non-commodity production should reduce commodity production. They can be thought of as paralleling off-farm work decisions on the input side. Traditionally there was a belief that off-farm work was undertaken to subsidise the farm enterprise. More current thinking is that the farm versus off-farm labour decision is more complex and reflects opportunity costs, risk management, and life-style considerations. A similar degree of complexity is necessary to relate the mix of commodity and non-commodity outputs.

A simple taxonomy can be used to identify possibilities (Figure I.2). First, the outputs may not be pure public goods in that some degree of exclusion can be practiced and it may be possible to establish a framework where groups of individuals affiliate to pay for additional units – club goods, for example, can be funded by membership. “The basic notion of club economics is that agents form groups to confer externalities on each other” (Scotchmer, 2002, p. 1999). In this situation, the club provides an optimal quantity of goods or services to its members allowing markets to function efficiently.

In North America, the organization Ducks Unlimited pays farmers in Canada and the United States whose farms are on the major north-south migratory path of waterfowl to maintain wetlands. As a result the hunters and conservationists who are members of Ducks Unlimited are able to increase the number of waterfowl. In this instance, waterfowl are a quasi-public good because they are not owned until shot and at low densities of activity neither hunting nor bird-watching results in additional marginal costs. Similarly groups of hunters can form a club and purchase hunting rights from a farmer who then closes his or her land to non-members. This solution can limit the congestion costs associated with too many hunters and provide an incentive for the farmer to better manage wildlife habitat.

Figure I.2. Preliminary typology of non-commodity outputs

club good		
public goods		
	non-local	
	local	
		provided locally
		limited local powers preclude provision
		local good with spillovers
		local good limited by jointness

Second, if the outputs are public goods, they may not be local. If they are not local, then a national policy is appropriate and issues of fiscal federalism are not important. Some environmental amenities may be significant enough to fall into this category and be able to command national protection, but most do not. Endangered species fall into this category because of concerns about irreversibility and the possibility of them having significant, but currently unknown, value. Another example at the global level is the UNESCO designation of globally significant wilderness or other natural features. In this case, the option demand or merit good value of the site is seen as being large enough to allow global recognition. Clearly, only a miniscule portion of the earth's population will ever directly experience these sites but their continued existence is viewed as benefiting everyone.

The third case is when the non-commodity output is a local public good. Here, several subcategories can be defined. In the first case, the local government is capable of identifying the desired quantity of output and raising funds to support it. This will lead to a rebalancing of the mix of outputs of agriculture to increase the quantity of the non-commodity output. The implications for commodity production are not clear. If the non-commodity and commodity outputs are intrinsically joint and produced in fixed proportions then *ceteris paribus* more of the commodity will also be produced, as long as aggregate returns to production have increased. If the commodity and non-commodity outputs are not joint, or joint but the output proportions are varied, then a decline in commodity production should occur as the relative returns from producing the non-commodity output are increased.

Efforts to retain land in agricultural production through the purchase of development rights fit this category. The community derives visual and other benefits from farm activities. These benefits have local public good aspects and the supply can be influenced by the local government using tax revenue to sever development rights from parcels of land to ensure they are not converted to alternative use.

The next sub-case is when the non-commodity output is a local public good, but the local jurisdiction is unable to provide funds to support the desired level of production. Several causes for this inability can be identified. The first is that authority for the provision of the good lies outside the legal authority of the local government and is the responsibility of some other government. Solutions in this case involve redefining powers or in convincing another level of government to act. The abandonment by railroads of rights-of-way in North America provides an example of this problem. The original right-of-way was often provided by the national government during the settlement phase of the nineteenth century. Many rural communities wanted to retain public access to these rights-of-way and use them as trails or bicycle paths, but in many cases farmers believed they had the right to reoccupy the land and use it for production. Due to the nature of the original transaction local governments had difficulty in implementing the provision of local public goods until the national governments clarified ownership rights.

Alternatively, Boadway's concepts of a fiscal gap or fiscal inequity may create an argument for funding by another government through grants in order to increase social welfare. In this circumstance it may or may not be possible to reach the optimal output depending on the opportunity cost of the funds being transferred. If transfer funds have a high opportunity cost then only part of the unmet demand for the non-commodity may be met.

A third case covers Boadway's interprovincial spillover situation. In this case the local government may fund the optimal quantity of production for people in its locality, but ignore demand from outside its jurisdiction. For example, option demand for potential visits to a place to experience an environmental or social amenity associated with agriculture may be relatively low for individuals who live some distance from the site. But when the demands of all individuals are added together, the aggregate demand may justify a transfer from a higher level of government to increase the quantity of the amenity beyond the amount that is locally funded. Another example are local agricultural fairs organised primarily to meet the needs of the surrounding population, but which if seen by society as a whole as providing historical or cultural benefits to a larger population, then funding from it may be justified.

The last situation involves a modification of Boadway's fiscal inefficiency condition. The starting point is that national agricultural policy supports the production of commodity outputs of agriculture. Except in the case of fixed proportion, intrinsic joint production, current policy will lead to a shift in the mix of outputs to favour commodities over non-commodities. If non-commodities are local public goods then there is no national interest in their production, but there is a local interest. As a result of national agricultural policy, local governments have to pay more to obtain the desired quantity of the non-commodity output than they would in a world without agricultural policy. This means that agricultural policy creates fiscal inefficiency. If this problem is small relative to the national benefits of agricultural policy then an optimal solution may be a transfer payment to compensate those places that face higher costs in obtaining their desired mix of commodity and non-commodity outputs. Even if policies are non-distorting, national markets may lead to local under-provision of the public good.

As an example of this last phenomenon consider the major grain-producing areas of Canada and the United States. (A similar argument can be made in Europe for the large scale cereal producers of the Paris Basin in France, or in England.) While subsidies induce more production than under competitive conditions, it remains true that these regions have a comparative advantage in cereal production. Farms in all these regions are highly specialised in grain production and each individual farmer has a strong incentive to cultivate as much of the available arable land as possible, even where this leads to a reduction in non-commodity output, for example wild-life habitat. Part of this incentive comes from current agricultural policy. As a consequence, the level of non-commodity production of agriculture is reduced. However, even without the distortions of current agricultural policy the costs of grain production in the regions are below those in other parts of each country. This suggests that society in general has a strong interest in continued high levels of grain production from the regions. While diverting some of this land to other uses may provide local benefits, there could be higher national costs if less productive and more fragile land in other parts of the countries are induced to switch to grain production. Thus, as long as there is a perceived national benefit from this type of specialization, the best solution may be some form of compensation to specific communities to offset their loss of non-commodity outputs.

4. Taking account of multifunctionality in policy implementation

General issues

Supposing that many of the non-commodity outputs closely resemble local public goods or local externalities suggests a crucial question about how they are best managed in a federal system. Clearly the size and degree of diversity of a country plays a large role in the answer. Using Canada and the United States, which are both very large and geographically diverse countries, it is possible to conclude that many of the public good aspects of Figure I.3, which sets out the key non-commodity outputs of agriculture, are local in nature (Freshwater, 2003). Food security issues are the obvious exception since food security, like national defence, is an aggregate concern. While some aspects of the environmental category may have national implications, the local effects of amenities and species diversity are much more significant because the local populace has direct experience and the rest of the population has mainly an option value. Similarly, rural development and social concerns are also much stronger at the local level.

Given a high incidence of local effects, it is reasonable to expect a significant contribution by the local community to the provision of these goods and services. While there are always problems with free-riders associated with the provision of public goods, there is a higher likelihood that they are lower at the local level where community pressures can be applied to reduce shirking.[6] While there may be a federal role in developing a solution, it is unlikely that there should be a dominant federal role. Perhaps the main national role comes from fiscal incapacity or a mismatch between constitutional authority and the level of

6. Bowles and Gintis (2000) suggest that community governance and local social capital can play a key role in moderating behavior through informal sanctions to reduce free-riding in a variety of situations. They see it as being particularly important when neither the state nor markets can provide clear solutions to problems (p. 19).

government. In smaller countries with more uniform conditions there may be an argument for retaining a lead national government role.

There are four central issues in defining an effective policy to deal with local non-commodity outputs. They are:

- choosing the size of region – multiple sizes and various boundary conditions;
- recognizing production linkages (output jointness and spillover effects);
- determining optimal quantities – local demand plus broader issues arising from option value, irreversibility and merit goods; and
- the funding level.

Defining the region that delimits the local market is a challenge. However, although in the case of watersheds the boundaries are typically the appropriate drainage basin, these are not clear for many other non-commodity outputs. Local government political boundaries are largely unsuitable since effects spread across single jurisdictions. However, states/provinces may be too large. While it is obvious that the optimal size of the region varies with the type of output, the optimal size can also vary over time as other conditions change. For example, if population density and average household income increases, the level of demand for environmental amenities associated with farming may also increase beyond previous boundaries.

Figure I.3. Some non-food products of agriculture

Environmental

Positive
Open space
Scenic vistas -
Isolation from congestion
Watershed protection
Flood control
Groundwater recharge -
Soil Conservation
Biodiversity -
Wildlife Habitat -

Negative
Odor +
Nutrient/pesticide runoff +
Watershed protection
Flood control
Soil erosion
Biodiversity loss +
Wildlife Habitat +

Food Security
Elimination of Hunger +
Availability of food supply +

Rural Development
Rural income and employment
Viable rural communities -

Social
Traditional country life -
Small farm Structure -
Cultural heritage

The + and the - signs denote the effect of intensity of output on the amount of the by-product.
Source: Bohman, Cooper, Mullarkey, Normile, Skully, Vogel and Young (1999), *The Use and Abuse of Multifuntionality*, USDA, ERS.

Linkages among commodity and non-commodity outputs may also be important. As noted above in the case of intrinsic jointness of outputs, policies must recognise that changes in the level of production of one output cause proportionate changes in the production of other outputs. If one good has a local demand and another a regional or national demand then it may be difficult to reconcile production signals. Where the linkage among outputs is less rigid (*i.e.* jointness is weaker) the potential for policies to have a more focused effect is greatly enhanced. In addition to jointness, there are problems of spillovers. Recall that Boadway identified the presence of externalities or spillovers as one of his four arguments for transfers.

Determining optimal quantities becomes important when there are multiple types of demand for the same output. An output can have a local demand that may be ascertained by some means such as the local political decision process. But if there is also another level of demand for the same output that has a different geographic base, then the optimal quantity produced should be the aggregation of all the demands. This requires, therefore, some mechanism to identify the levels of demand. For example, thoroughbred horse farms in the vicinity of Lexington, Kentucky provide a significant visual amenity for local residents. However, these farms are well known in much of the world and pictures of the farms create a broad public interest in visiting Lexington. Some of this non-local demand is captured each year through tourist activity, but a large part of it exists as an option value. People want to visit Lexington, but have not yet made a firm decision.

Last, a major aspect of fiscal federalism involves first identifying an optimal policy and the level of government to deliver it, and second an optimal way of funding the policy that reflects the capacities of different levels of government in Canada and the United States. This is a major issue for local goods. Local governments in both countries are the strict creatures of provincial/state governments which delegate their powers. These include sources of funding, and while cities may have significant revenue sources, the types and amounts of funds available to rural governments are very limited. This financial weakness of local levels of government, and particularly of rural governments, may be a feature of many other OECD countries, whether federal or unitary nations.

Three policy examples

To put these issues into context, three examples of how fiscal federalism applies to agricultural policy in the presence of externalities and public goods are provided. The first is not directly related to the issue of multifunctionality, although it could be argued that extension services provide multiple outputs. The significant feature of this example is that it shows a situation where what was initially a national public good is now largely seen as a local one. The second example is a more abstract discussion of the environmental effects of agriculture and focuses on the relative merits of national versus local supply and jointness in production. The third example is rural development which has primarily a local effect, but with significant national aspects because of concerns with equity, information asymmetries, and the efficient use of resources.

The agricultural extension model in Canada and the United States

The most obvious example of fiscal federalism now being applied to the provision of a public good in agriculture is the Cooperative Extension Service in the United States. The dissemination of educational information has clear public good characteristics. Once information is created there are no additional costs when others use it. Unless there is significant congestion in a room, a meeting to provide farmers with information has no additional costs if more farmers attend. Further education has merit good aspects in that society as a whole benefits if farmers are better informed and more efficient producers.

Cooperative Extension was established by the Smith-Lever Act in 1914 as a three-level partnership by federal, state and county governments. Extension employees work for a state land-grant (agricultural) university but are eligible for federal civil service benefits. Employees at the county level are typically chosen by a committee composed of county residents and the university. The program of work at the county level is largely shaped by local demands but within broad parameters established by the state and over-arching federal government rules. County agents are supported by state specialists who are based at the university to provide core technical expertise for local extension programs. These specialists are closely linked to the agricultural research programs carried out at the universities that are funded by state and national dollars. The national government provides support for regional and national extension activities that help coordinate state programs across multiple states.

Initially, the national government provided the largest share of the budget for cooperative extension, but counties were always expected to provide financial support. A large initial federal role can be seen as encouraging participation at the local level by farmers and government officials who may have been sceptical about the value of the service. In addition, a large federal role was more important when farmers were relatively poor and there were wide differences in the relative wealth levels of the various states and counties (horizontal equity).

Recently, the cooperative extension system has begun to take on different characteristics in different states. As the federal government reduced its financial contribution, states had to determine how extension would adapt. In some states the solution was a larger state outlay which increased the relative influence of the state government and the Land-Grant university administration. In other states more of the costs were absorbed by the local/county government. A smaller federal role can be explained by the transition of agricultural education from a primarily national public good to a more local public good.

Extension was established when agriculture played a dominant role in almost all of rural America and farms and farmers had a large national influence. Now agriculture has its largest impact locally, and consequently local government is a more appropriate source of funds for extension. A consequence is that in those states where the number of farms is small and non-farm interests dominate rural areas, there has been a shift away from a county-based extension model. In the north-eastern states , agents now serve regions made up of multiple counties, or in some cases are centrally based at the land-grant university with no on-going local presence. The decision has been made that if local governments are unwilling to commit to the provision of what is now a local public good, then there is no longer a compelling argument for it to be provided by the state or federal governments.

Extension in Canada provides a useful comparison to the American experience. The structure of agriculture in Canada has evolved in roughly the same direction as the United States with the same needs for technical information. In Canada, however, there has been a less coordinated approach. Agricultural research has been conducted almost exclusively by the federal government, but extension has been a purely provincial responsibility. In carrying out their extension responsibility the provinces have tended to centralise extension within Ministries of Agriculture, rather then having locally based extension agents. With little grounding in the community and a strong central administration there has been less incentive to develop programs that reflect local needs. Moreover, extension programmes have suffered from a reduction of provincial funding. As a result, Canadian extension programs have been generally less successful than their US counterparts.

Environmental regulation

There is a small but significant literature on the merits of fiscal federalism as a basis for environmental regulation. The main focus of the discussion is the extent to which allowing localities to set environmental standards leads to either an increase in social welfare, because each locality chooses a level of environmental protection that meets its best interests; or whether a uniform national standard results in higher welfare, because it prevents "a race to the bottom," as places compete for industry by relaxing standards, with the consequence of large externality costs due to environmental spillovers between jurisdictions (Oates, 1998; Smith, Schwabe and Mansfield, 1997). Underlying the divergence is the extent to which the environment is a local versus national public good. If it is a local public good then it follows that local choices will result in higher levels of welfare (Oates, 1999, p. 1182). Conversely, a national public good is more efficiently provided through national policy.

A related strand of literature is based on joint production. If environmental outputs are intrinsically jointly produced with other commodities, then it becomes more difficult to devise appropriate policy. In particular, if the value of particular environmental outputs changes sign depending upon the level of production and other circumstances then you have ambivalent joint production (Baumgartner, 2000, pp. 2-3). The classic example of this is animal manure which in low volumes in a sparsely populated area is a valuable fertiliser, but in large volumes or in a densely populated area is at best a nuisance. In this circumstance, because joint production of commodities and environmental impacts can result in either positive or negative environmental consequences, it becomes almost necessary to develop policy on a local level. This provides another argument for disaggregated environmental policy.

A potentially significant factor in determining whether a specific non-commodity output is a local, regional or, perhaps, national public good or externality is how common the farm practices are that produce it. Following are several examples. If only a few farms in a community maintain attractive hedges along roads to enhance visual amenities the effects are largely going to be felt by people in close proximity to the farms. If the majority of the farms in a county are intensive hog producers, then the spillover effects of odour and manure management practices are likely to be regional in effect. Finally, if the majority of producers in Western Canada practiced summer fallow with clean fields, then the resulting wind erosion problems could be national in scope.

An important exception to this approach is when the non-commodity output has significant national effects but is found only in a small geographical area. The two best examples of this would be either a specific endangered species that has a very small habitat, or a particularly important natural feature that has significant aesthetic, historic or cultural value. In these cases, the national interest may require management that involves the national government. However, these are likely to be minor exceptions for agriculture for several reasons. The first is that the majority of truly national effects are already managed through parks, historical sites and other public properties. Second, the relative number of these sites in proportion to the total land of farms and the number of farms is small, so they can be managed as special cases.

It is also important to consider the effect of changes over time. If specific farm practices become more or less common, then the nature of a public good or externality output can change from its current category of local, regional or national. Hog production in the United States is a good example. As recently as two decades ago hog production was dispersed over a large part of the country and farms raised hogs using extensive production practices. While there were adverse intrinsic joint products of odour and at times manure, the effects were largely local. Today, however, hog production is highly concentrated on a geographic basis in a small number of states and production practices have shifted to highly intensive confinement systems. As a result, far fewer communities now have to deal with externalities from hog production, but where this takes place the impacts of a lagoon spill can result in multi-state pollution consequences.

Where a non-commodity output has a strictly local effect then it is more likely that the optimal quantity will be better determined by local demand and that these quantities will vary by geographic place. As is seen in North America, concern with conversion of farmland to housing is highest in the vicinity of large population concentrations where the demand for conversion of land is greatest but green-space is in limited supply. In more remote rural areas, most communities would be happy to allow farmland to be converted to housing or manufacturing uses. In addition, the two main concerns — that differences in environmental policy will lead to a race to the bottom, or that significant spillover effects are present — are less likely to be relevant. Differences in local environmental regulations are unlikely to be significant production factors compared to the inherent suitability of the area in terms of soil, climate, topography, and proximity to markets.

Conversely, as the non-commodity output becomes more significant and takes on a regional dimension, concerns with competitive and spillover effects become more meaningful and policy decisions about optimal quantities require a broader perspective than that of the local government. States and provinces have significant influence over environmental policy, but they typically design policies that adapt to local conditions, rather than imposing a uniform approach. Because there are large degrees of diversity within any given state or province in terms of production practices and environmental impacts, policy must be administered on a regional basis. The existence of regionally sensitive, but provincial/state based, policies prevents local competition and ensures that a broad enough perspective exists to internalise most spillover effects.

A central aspect of the fiscal federalism literature is that it may be desirable to separate policy design and management from funding. In many countries the limited fiscal capacity of most rural local governments means that even if environmental policy is optimally managed at this level, with no source of funding it is unlikely that these governments will be able to carry out the task. Transfers from the federal or state/provincial levels may be required because of fiscal gaps. The lack of fiscal capacity at the local level, and an historic unwillingness of state/provincial governments to provide smaller municipal governments with significant sources of revenue, greatly constrains local government policy and program design, due to a lack of expertise, and implementation, due to the inability to fund new activities.

Rural development policy

Rural development in Canada and the United States has historically been a national policy, but as societies have become more urbanised it has lost its national significance. Rural development is now important at a national level more in terms of equity among regions and balanced growth concerns than in terms of a national development strategy. In addition, as rural areas became more diverse and less dependent upon agriculture the traditional national rural developments strategies of supporting agriculture has become less relevant (Freshwater, 1997).

While agriculture now has a minor national role in rural development strategy it remains important in specific areas. In those regions or localities that remain farm-dependent, rural communities depend on the surrounding farms for their economic function but also for their social viability. The increased scale of farms has led to shrinking farm numbers in most OECD member countries, even as output has increased. An unintended consequence of this has been fewer farm children in local schools, fewer customers in local shops, and a consequent decline in the viability of many rural communities. In some places these changes have been used to argue for a more robust agricultural policy that will support a larger numbers of farms.

There is, however, little evidence that higher levels of farm support leads to rural development (Debertin and Goetz, 1996). In Canada and the United States, the areas of both countries receiving the largest amounts of farm support are the areas where the population is falling. Where agriculture appears to contribute the most to rural development is in areas where there are numerous forms of employment opportunity and agriculture contributes to household income from the work of part-time operators, or on farms where the spouse has an off-farm job.

Innovative agricultural policies can still contribute to rural development, even though farming may not be the dominant industry. In the Niagara Peninsula of Ontario, the grape industry was initially oriented to producing grapes for jam and low-quality wine. Linkages to the community were relatively minor, except for some processing jobs. In the last twenty years, however, new varieties of grapes have been planted and numerous independent wineries have been established. Financial support from Agriculture Canada and other government sources was instrumental in this farm level transition. Many wineries are now establishing restaurants and banquet halls, and are holding wine-tasting receptions that are attracting tourists. As a result, grape production has become an important element of a pre-existing tourism sector based on Niagara Falls and other cultural and historical features. This example demonstrates that specific regional niches exist for agriculture and the value of agricultural production can be enhanced when it is able to build upon other local competencies.

Rural development policy is now mainly seen as best originating at the local level, albeit with significant support from national government. Because local conditions vary greatly, as do local aspirations, it is only by having policy based at this level that it is possible to help the development of rural areas. A possible analogy to agriculture exists. As more than nationally traded commodity outputs become important, it is harder for national governments to provide a single policy that results in efficient levels of production in the various parts of the nation. Only by pushing policy down to the local level can an efficient mix of commodity and non-commodity outputs be achieved. Just as in the case of rural development it does not mean that there is no national government role, but that that role is very different from the one played in the past. The new role is to facilitate co-ordination among regions, provide information, and carry out the core funding responsibilities associated with a greater degree of fiscal capacity.

In the last twenty years, rural development policy has made a transition from a sector-based focus driven by a national perspective on how development should proceed to a area-based policy that places the emphasises on local interests and local conditions. In practice, however, the ability of the provinces and states to constrain the decisions of local government means that there are real limits on the types of policies that can be defined. Beyond the design question, fiscal capacity problems may limit the ability to implement policies, unless a more senior level of government is prepared to participate in the funding.

5. Conclusions

Appendix 2 of *Multifunctionality: Towards an Analytical Framework* establishes that multifunctionality is a significant characteristic of agriculture (OECD, 2001). In the past, agricultural policy has focused the majority of its effort on commodity production, but there is increasing pressure at present for a more balanced set of outputs. As nations become wealthier many of the non-commodity outputs of agriculture have become more important than further expansion of the supply of food and fibre. These outputs are more income elastic than traditional farm commodities, so increases in income are associated with greater demand growth than is the case for food and fibre.

In most OECD countries the current dominance of national governments in agricultural policy is largely a reflection of past development policy and historical events. In Canada and the United States, the constitutions imply a division of power between the national government and the provinces/states, and potentially local government to the extent that provinces and states delegate responsibility. This is also the case in other federal OECD countries, although as mentioned above even in centrally administered countries some legally defined powers and responsibilities have been devolved to regional and local governments. While the recognition of the public good nature of non-commodity outputs appears to provide a new rationale for national agricultural policy, the fact that these are largely local public goods argues for devolution of responsibility (Gunderson, Kuhn, Offutt and Morehart, 2004). The founding treaties of the European Union gave responsibility for agricultural policy to a supra-national level of government, but recent policy reforms emphasize multifunctionality, food quality and safety, and animal welfare, thereby giving an ever-increasing role to national and sub-national governments within a clearly defined framework and set of rules defined at EU level. As a result, the over-arching principle of subsidiarity, which governs EU affairs, takes on more meaning in the context of agricultural policy.

The combination of a growing importance of non-commodity outputs, which largely exhibit local public good or externality characteristics, combined with a growing dissatisfaction with current agricultural policy provides an opportunity for redefining policy and the level of government that provides it. In the majority of cases we are dealing with mixed goods that have both public and private good attributes. The jointness of private and public goods adds considerable conceptual difficulty. Any solution would be difficult as the theoretical base does not fit either of the standard economic models of pure goods. While this clearly complicates the problem, it does immediately lead to thinking about solutions that combine markets and public policies.

The fiscal federalism literature provides some important advice on how these responsibilities might be defined. In several countries there are already useful examples of effective multi-level government programs in agriculture. These programs reflect a combination of different levels of responsibility and different conditions across each country that precluded a single national policy from operating efficiently. A parallel example is rural development policy which has shifted from a predominantly national focus based on agriculture to a mostly local focus that incorporates multiple strategies based on local needs and capacities.

It should be noted that agriculture poses important challenges in policy design. In particular, the combination of commodity outputs that have national or global markets and non-commodity outputs that have local markets requires coordination among different levels of government and monitoring policy outcomes. The coordination problem is exacerbated by the existence of jointness. In the case of intrinsic jointness, it is impossible to separate either outputs or policies because of the technological link. In these cases, decoupling of policy instruments is not possible. If outputs are substitutes to some degree then policy signals are more likely to have their intended effect. But with jointness comes the potential for disagreements over the effect of policies. From an international perspective, payments for a farm produced amenity may have an impact on an exported commodity depending on the type of payment. That impact could be positive or negative based on the technical relationship between the amenity and the commodity production. Yet, from a domestic perspective the payment is seen as appropriate in order to obtain the desired level of output of a public good or externality. To the extent that these payments are local they may have a negligible effect on aggregate commodity output, but the potential suggests there is a significant role for national governments in monitoring the scope and nature of local policy.

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Part II

Country Chapters

1. European Union: The role of the regions in the implementation and financing of agricultural policies[7]

Introduction

Agricultural aids in European Union (EU) countries are disbursed through the Common Agricultural Policy (CAP). The CAP consists of two pillars. The first comprises common market organisation (CMOs) measures, such as production quotas, intervention purchases and assistance to on-farm storage as well as area and headage payments, which are being progressively replaced by the single payment scheme. This pillar is entirely financed by the EU and 90% of the 2000-06 CAP budget is allocated to this pillar (European Commission, 2003).

The second pillar consists of Rural Development Regulation (RDR) measures implemented within the framework of Rural Development Plans (RDP) developed by each country. The RDR offers each member country a list of measures (Box II.1) varying from payments to less-favoured areas, investment, early retirement, or agri-environmental measures. This list provides the basis for member countries to develop their RDP. Depending on the country, either a single RDP is developed at the national level (NRDP) or several regional RDPs are developed within a national framework. Financing for this programme represents 10% of the total CAP budget. Second pillar measures are co-financed, that is funds received from the EU are complemented by national or regional funds. The co-financing ratio depends on the type of measure and the region. The rate for the majority of RDP measures is 75% in Objective 1 regions and 50% in the other regions. Implementation of RDP measures can also occur within the framework of EU regional policies, in particular the Leader programme or programmes in which Objectives 1 and 2 have an agricultural component (subsidies for integrated rural development).

In addition to the two CAP pillars, there are also purely national measures which must be approved by the European Commission. The level of EU financing is low in comparison to CAP measures. National measures include interest concessions on loans to farmers and to the agro-food industry, subsidies for agricultural insurance schemes, or reduced tax imposition rates.

Member states and their local authorities do have some flexibility in their national policies within EU legislation. This section will focus on local government interventions, in particular at the regional level which is the principal level at which agricultural policies are designed and financed in member States of the EU.[8]

7. This section was prepared by a consultant, Aurélie Trouvé (CESAER, INRA-ENESAD, Dijon), with the collaboration of Marielle Berriet-Solliec, Hélène Delorme and Daniel Perraud.

8. Empirical sources on regional agricultural policies come mainly from various studies carried out as part of an INRA-Rhône-Alpes region research programme (PSDR) on institutional innovations and regional policies (Berriet-Solliec, Delorme and Perraud, 2001-04), supplemented by studies mentioned in the

Box II.1. List of measures available within the framework of the RDR and regional development programmes of Objective 2 regions of Structural funds

a. Investments in agricultural holdings[1]

b. Installation of young farmers

c. Vocational training

d. Early retirement

e Less-favoured areas; areas with environmental restrictions

f. Agri-environment measures

g. Investments in processing/ marketing

h. Afforestation of agricultural land

i. Other forestry

j. Land improvement[1]

k. Reparcelling[1]

l. Setting-up of farm relief and farm management services[2]

m. Marketing quality agricultural products[1]

n. Basic services for the rural economy and population[2]

o. Renovation and development of villages and protection and conservation of the rural heritage[1]

p. Diversification of agricultural activities or activities close to agriculture to provide multiple activities or alternative incomes

q. Agricultural water resources management[1]

r. Development and improvement of infrastructure connected with the development of agriculture[2]

s. Encouragement for tourist and craft activities

t. Protection of the environment in connection with agriculture, forestry and landscape conservation as well as the improvement of animal welfare[1]

u. Restoring agricultural production potential damaged by natural disasters and introducing appropriate prevention instruments[2]

v. Financial engineering[2]

w. Monitoring and evaluation[1]

Measures j to v correspond to Article 33, which groups together measures which are not specific to farmers.
1. RDR and Objective 2 funds.
2. Objective 2 funds only.

Source: French PDRN 2000-06.

The first section will present a brief historical overview of the decentralisation of agricultural policies in the EU and a definition of agricultural measures at the infra-national level. The following section identifies degrees of flexibility at the infra-national level in terms of regulations and budgets. The third section attempts to show the regional disparities in the orientation of agricultural policies and examines, in particular, the issue of change in how aids are distributed. Finally, the fourth section closely examines the reasons for regional differences in the orientation of agricultural policies within the same country. This is

bibliography. With the exception of France, these studies apply to countries that are strongly regionalised in terms of agricultural policies. They cannot therefore be generalised to all EU Member States.

done on the basis of a case study that examined two regions in Germany. The conclusions examine the results in light of the lessons learned from fiscal federalism.

Decentralisation of agricultural policies in the EU: historical overview and administrative mechanisms

Overview of the process of decentralisation of agricultural policies

The process of decentralisation designates, in the classic definition given by fiscal federalism (Oates, 1999), the process by which local authorities[9] are increasingly taking charge of all types of government interventions. A distinction is made between this and devolution, which reinforces the role of State actors at the infra-national level. The region is the main level which is strengthened. Bullman (1997) suggests the creation of a "third level" which would be complementary to the national and EU levels. This process of regionalisation differs from one member state to another, as does the way in which it is brought about (Joumard and Kongsrud, 2003).

In so far as agricultural policies[10] are concerned, the region is also the most important level concerned by the decentralisation process. **The regional level will therefore be the principal focus of our analysis**. Since the beginning of the 1990s, Pillar 2 of the CAP and regional EU policies have undergone a progressive and new division of responsibilities in favour of regions. This development varies from one member State to another. As a result of this development, certain policies are developed, implemented and financed jointly by the regional and national levels. This is the case for Structural Funds, the Leader programme, and the RDPs. EU policies contribute to the development of a territorial design of agricultural policies, which is more or less pronounced depending on the member State (Berriet-Solliec and Daucé, 2001; Perraud, 2001).

The regions, however, are strongly limited by budgetary and regulatory constraints imposed by the state; indeed, it is the latter which determines the global budgetary envelop for each region both as collector and distributor of taxpayers' money (Delorme *et al.*, 2004). As well, it is the state that negotiates agricultural policy in Brussels and decides on Pillar 1 measures. However, the decentralisation process has given regions an increasingly wider latitude in deciding on agriculture-related rural development policies. This has resulted in the development of policies specific to regions. In addition, the decentralisation process has changed the nature of the relationship between the EU, national and regional levels. Finally, this process has led to differentiated aid by region not only in terms of the amount of aid or policy orientation, but also occasionally has led to the development of innovative ways of providing support to agriculture.

An initial characterisation of agricultural policies at the infra-national level

The flexibility in the development of agricultural policy that is accorded to regions varies according to the member states. A region's room for manoeuvre in the development, application and financing of "regional agricultural aids" is determined either by the RDR, on which Pillar 2 of the CAP is based, or on

9. The local authority, as defined by Delcamp and Loughlin (2002), is "a group of inhabitants which choose through elections the people in charge of managing their common interest". It is thus an administrative structure individualised from State administration. It has its own staff and budget and must take charge of the interest of the population living within a specific infranational area.

10. Agricultural policies are considered as all the economic, legislative or regulatory interventions implemented by institutions, which aim at guiding processes of production and distribution of production factors and products between agricultural producers on the one hand, and between the agricultural sector and other sectoral activities on the other hand (Kroll, 1991).

EU legislation on national aids (article 87, paragraphs 2 and 4 of the EC treaty) which forbids any national aid that could interfere with the EU support prices system. Regional aids are often tied to the multifunctionality of agriculture or to rural development.

Within the regulatory framework, “regional agricultural aids” are distributed in the following way: *(i)* aid directly paid to farmers as farmers; *(ii)* aid paid to agricultural organisations where these create value-added to agricultural activity; *(iii)* aid paid for promotional activities of agricultural products and to agro-food industries (those at the first level of processing or those involved in selling agricultural products); *(iv)* economic support to the agricultural sector, but within a broader perspective of integrated rural development (this type of assistance can be given to beneficiaries who do not work in the agricultural sector). Regional aids to forestry, administration, research, and basic vocational training are not taken into account in this study even though such assistance is often included in agricultural budgets. Neither are integrated rural development aids when they are not included in support to the agricultural sector in the budget.

Regional agricultural policies can be distinguished according to three principal frameworks of intervention:

- The RDR is implemented within the framework of national or regional RDPs depending on the country; the national co-financing can include regional funds.
- States can develop and finance agricultural policies in partnership with regions. Co-financing is thus regional and national.
- Regions can have their own regional agricultural policies which are neither within the EU nor the national framework. The region finances these policies alone.

Finally, since the 2003 reform, the regions have been progressively given some, although still very limited, leeway within Pillar 1 of the CAP. This varies among the member States: for example, regions in Italy have decided to negotiate amongst themselves and with the State the modalities of decoupling, modulation and the environmental conditions of Pillar 1 of the CAP in 2004. Regions are also given the possibility of adding environmental conditions Pillar 1 aids on a case by case basis. However, regional and *départemental* authorities in France have absolutely no role concerning aids. The role of the regions in the implementation of Pillar 1 is not examined in this study, the aim of which is to examine multifunctional policies.

The responsibilities of local authorities in agricultural policies

A brief review of the administrative structure of those member States examined

The “degree of decentralisation” is defined according to several criteria (Joumard and Konsgrud, 2003): the overall institutional structure, the regulatory flexibility, and the budgetary flexibility. No single criteria can be used to define the existing degree of decentralisation; for example, high levels of spending can hide the fact that it is the state that determines the precise conditions attached to that expenditure. Conversely, the room for manoeuvre within regulations can be significant even though the local authorities do not have sufficient funding to implement the desired policies.

It is important to recall the degree of decentralisation in each member state. Indeed, this information will allow the reader to understand subsequently how responsibilities for agricultural policy are allocated. The table in Annex 1, based on several sources (Janin and Palard, 2004; Joumard and Kongsrud, 2003; Delcamp and Loughlin, 2003), gives an overview of the different national situations.

Regulatory flexibility of local authorities in developing agricultural policies

Regional prerogatives in the domain of agricultural policy have evolved differently. In the United Kingdom, these prerogatives were reinforced by devolution in 1999 which granted Scotland and Wales legislative power. In Italy, the so-called "Bassini" law of 1997 transferred all national competencies in the realm of agricultural policy, rural development and food to the regions. The role of the Italian Ministry of Agriculture is now limited to that of co-ordination. In Germany, these competencies date from after the Second World War. The Federal level is in charge of social policy (welfare system), income compensation payments, and applying reduced rates of taxes to the agricultural sector. Other agricultural policies are jointly operated by the federal and *Länder* governments. In Spain, the State and the regions split the responsibilities for rural development and agricultural policies equally. In France, since the decentralisation laws of the 1980s, economic interventions by departmental and regional authorities, which were practically non-existent, have been progressively strengthened. The local authorities do not have any specific responsibility to provide assistance to the agricultural sector. Nonetheless, they can do so within the context of their general economic intervention as long as the national code for local authorities is respected (Berriet-Solliec, 2003). Since 1992, the amount of regional agricultural aid has not increased significantly.

Within the RDR framework, two member states — the United Kingdom and Italy — have decided to completely regionalise their RDPs. However, in Italy, even though Pillar 2 is managed by the regions, the state continues to finance some measures (in particular agri-environmental measures, payments to less-favoured areas, afforestation, early retirement, and the processing and marketing of agricultural goods) based on historical funding and over or under spending. This reduces the room for manoeuvre of the regions which seek to maximise state funding and thus choose the RDR measures financed by the state. Three member states — Belgium, Spain and Germany — have chosen both regional and national plans to finance certain measures. In Belgium, only measures f and n are national (Box II.1), although these can be supplemented by the regions and represent no more than 0.01% of RDR financing. In Spain, however, measures a, b, d, e, f, h, q (Box II.1) are national and represent 15% of RDR funding.[11] In Germany, a national plan (GAK) is superimposed on the RDR, thus allowing the regions if they so wish to benefit from national co-financing (30%) in addition to EU co-financing (50%). As a result, regions are in the position of co-financing only 20% of total expenditures. In general, this is what occurs. However, both EU and national conditions are imposed, thereby reducing regional autonomy.

France, like other EU member states, has developed a national RDP. The departmental and regional authorities have very little input in the elaboration, revision, implementation and financing of this plan. Even at the regional and departmental levels, it is the representatives of the state agricultural professions or technical services who are in charge of developing agricultural policy. However, the local authorities can (although this is rarely the case) directly co-finance RDR measures with the EU. This is the case, on an experimental basis, for Alsace in France which manages EU funds. The room for manoeuvre of local authorities is found particularly in the elaboration by regions of programming documents falling within Objectives 1 and 2, which govern certain RDR measures (a, g, j and v as defined in Box II.1).

In addition, regions also have flexibility within national policy frameworks that are not limited to RDR. This is the case for Germany, within the GAK framework, which co-finances nationally up to 60% of aids to programmes falling outside the RDR. France also uses contracts between the state and regions (financed 50% by the regions) as a means to coordinate all public expenditure and to allocate it in a concerted way to priority objectives. Such national plans also enable the State to harmonise and verify a part of the aid given to agriculture; thus, the GAK is discussed and negotiated by both the state and the

11. Except in Navarre and the Basque regions which as "historical communities" are entirely responsible for the management RDR measures.

Länder. It should be noted that there is no such framework in either the United Kingdom or Italy. Finally, regions have room for manoeuvre within policy frameworks that are specifically regional in nature. The following budgetary analysis will show the importance of the modalities preferred by the different regions.

The budgetary flexibility of local authorities concerning agricultural policies

The first regional agricultural policy indicator used in this study is payments allocated to the sector, and in particular "regional agricultural aids." It is based on the hypothesis that public support is a faithful reflection of the development of agricultural policy. The quality and extent of data relating to regional agricultural budgets varies amongst the member states. In the case of France, studies undertaken by Berriet-Solliec (1999) on regional budgets, are used here.[12] German budgetary data on assistance to production, processing and marketing of agricultural products are generally complete and published in annual reports (*Jahresbericht*). Data for the United Kingdom, Spain and Italy are incomplete and were obtained from regional case studies. In view of the uncertainties concerning these case studies of budgets, the values cited must be treated with caution and have been rounded by 2%. In addition, "regional agricultural aids" are compared to "total agricultural aids" received by the member States or regions in this study, and which are published by EUROSTAT in its macro-economic accounts,[13] or, where these were not available, data found in empirical studies. Table II.1 presents all budgetary indicators concerning "regional agricultural aids" for the member States and regions covered in this study.

Table II.1. Budgetary indicators on "regional agricultural aids"

Budgetary year	Region	Consolidated expenses for "regional agricultural aids" Millions Euros	Consolidated expenses for "regional agricultural aids" / "total agricultural aids" %	Consolidated expenses for "regional agricultural aids" / AWU EUR / AWU	Expenses by regions / consolidated expenses in "regional agricultural aids" %	Expenses for "regional agricultural aids" / "global regional expenses[1]" %
2002	French[2]	650	6	640	90	1.5 (regions)
2002	German	3 540	67	5 730	30	0.61
2003	Catalonia	110[3]	unknown	1 500	unknown	0.6
2004	Marches	200	50	2 700	10	2.2
2002/03	Scotland	360	25	3 900	unknown	0.6
2001/02	England		15	1 670	unknown	Unknown

AWU: Agricultural Work Unit.
1. This ratio is calculated for own expenditures (local ones on the one hand, national on the other) for France, and on consolidated expenses (with supra-regional transfers on the one hand, and with supra-national transfers on the other) for all other regions.
2. The regional and departmental levels are taken into account for France.
3. Expenses incurred for research and forestry could not be excluded.

Source: Case studies.

12. Budgetary data from the ENESAD database for the years 1995 and 2000 and from the Ministry database for the year 2000.

13. These budget data take into account Community spending for Pillar 1 (direct and indirect aids), Pillar 2 and aid paid by national and local public administration to agricultural producers. These amounts, however, are under estimated as they do not take into account the following: payments to market regulating agencies, payments by these agencies to agricultural producers, exceptional payments to professional organisation s based on agricultural production units, payments to farm households as consumers, and finally capital transfers (*e.g.* restoration and conversion of orchards, debt cancellations, etc.) (Regulation (EC) N°138/2004 relative to agricultural economic accounts of the Community).

The disparities in regulatory responsibilities amongst the regions of member states are reflected in the budget. Thus, French regions control only 6% of "total agricultural aids" (consolidated payments[14]), that is EUR 640 per AWU (Annual Work Unit). It should be noted that the budgetary results for France show that *départments* play a larger role than the regions in so far as agricultural policies are concerned: the consolidated spending by *départements* is EUR 370 million and EUR 216 million for the regions. At the other extreme, regions in Germany manage 67% of total agricultural aids, or EU 5 730 per AWU. This is also the case for the Marches region in Italy, which manages 50% of "total agricultural aids", or EUR 2 700 per AWU. The agricultural policies of the United Kingdom, like in Italy and Germany, are strongly regionalised. However, Scotland and England manage only 25% and 15% respectively of "total agricultural aids", which is partly explained by the much greater weight of Pillar 1 than Pillar 2 and, in England, the decision to spend less per farmer (EUR 1 670 per AWU of consolidated expenditure on "regional agricultural aids"). The degree of regionalisation affecting agricultural aids seems to be about average in Catalonia: the relatively weak percentage of "regional agricultural aids" per AWU is explained by the fact that the State subsidises a certain number of programmes (particularly irrigation and agricultural insurance) and RDR measures.

The consolidated agricultural expenses of the French regions and *départments*, although weak, are almost entirely financed independently without co-financing. In the other member States, the share of co-financing is significantly greater. As a result, the Marches region in Italy finances only 10% of consolidated payments for "regional agriculture aids" and the German regions 30%. In general, such payments are made within the EU framework of RDR programmes: this is the case for 50% of payments made in the Marches and Catalane regions, 70% of payments made in German regions, and more than 80% of the payments made in England and Scotland. Such a high level of payments is also due to the fact that payments made remain within this framework, even without EU co-financing, when the budget allocated has been spent. Indeed, this procedure "shows" the EU the necessity to increase the budgetary envelope allocated to regions. This is particularly the case for British and German regions. Thus, in general, expenses allocated towards "regional agricultural aids" fall with an EU and/or national framework. These frameworks strongly influence regional choices concerning agricultural support. As a result, budgetary envelops for regions, particularly in Germany and Italy, are revised on an annual basis in favour of regions that have overspent the previous year. This encourages them to maximise and to orient policy development towards measures that are co-financed. This is also true for Scotland and England which favour agri-environmental measures and payments to less favoured areas that fall within the RDR framework. This is explained by the fact that these two measures, in contrast to most other measures, allow them to benefit from a 50% EU co-financing rate. Thus, the degree of regional autonomy in these member States, which are strongly regionalised, should be interpreted in the context of the share of "agricultural regional aids" that benefits from national or EU co-financing

Finally, over and above the clear differences in regional competencies amongst the member States, significant variations in "regional agricultural aids" payments within the same member State are found. Thus the consolidated expenditures per AWU[15] in France in 2002 were on average EUR 467 per active farmer in Languedoc-Roussillon and, in the particular case of Corsica, more than EUR 3 100, against

14. Consolidated payments include national and European contributions within national and European frameworks. In this case, for French regions, they consist of total payments made for "agricultural aid" in the framework of DOCUP and the *Contrats des Plan Etat-Région* (contracts between the State and the region). In the French case, in order to calculate the consolidated payments we make the hypothesis that aid in the form of DOCUP and the Contrats de Plan-région do not overlap, although in reality the same types of aid are given by both these programmes. As a result, the French consolidated expenses are slightly under-estimated.

15. These expenditures do not take into account European and national funds that fall within the framework of the *Contrats Plan État-Région*, which could not be properly identified in every region.

EUR 113 in Ile-de-France. Such contrasts are even greater in Germany, most likely due to the greater room for manoeuvre of the regions. In 2002, the average expenditure on "regional agricultural aids" reached EUR 12 400 on average per active farmer (Sachsen-Anhalt) against EUR 1 900 in Nordrhein-Westfallen, and, in the particular case of Berlin, EUR 30. With EUR 5 000 to 6 000 per AWU per year, among the older Lander Baden-Würtenberg and Bavaria grant the highest aids per active farmer, due in particular to their large budgets but also because of the clear choices these regions have made in favour of agriculture. It should be noted that new member States receive much greater amounts of aids than others, due in particular to preferential co-financing arrangements (the EU co-finances up to 75% in Objective 1 regions). It should also be noted the strong leverage (*effet levier)* that this EU co-financing of 75% has played: in all the regions studied where such co-financing exists, the budgets were used in their entirety. This is the case, in addition to the new German Länder, for Corsica in France and for the Highlands in Scotland. Thus, in addition to the regulatory and budgetary room for manoeuvre, regions may also finance and develop their "regional agricultural aids" differently. These differences are analysed in the following sections and the factors which explain these differences are identified.

Infra-national flexibility in agricultural policy: Infra-national networks

It would appear that the infra-national room for manoeuvre in agricultural policy allows for a greater number of actors to play a role in policy choices and to reflect to some extent the local demand for agricultural goods and services. These are referred to as "regional networks" and include all actors and, who participate in the development and implementation of regional agricultural policies and the interactions between them. In all the cases studied, all or almost all the infra-national responsibility is held at the level of the regional governments. France is an exception in that such competencies are shared at the *départemental* and regional levels but both levels are weak in comparison to the state. In the other cases, regional centralisation is strong.

There exist cases, usually exceptions to the rule, where infra-regional authorities are involved: for RDR measures or for Objective 1 programmes in Scotland, in the PRODER programme in Catalonia, and the LSE in Schleswig-Holstein. These programmes, within the framework of certain RDR measures, rely on locally elected officials, professionals in the agricultural sector, representatives from associations, company heads and craftsmen who develop (in Schleswig-Holstein) or select and approve (in Catalonia) rural development projects: essential services for the rural economy and population, renovation of villages and the protection of the rural heritage, encouraging tourist and craft industries, or diversification into non-agricultural activities (RDR measures seeking overall development of rural areas).

Within the regional networks the role of the central state is weak, with the exception of France. Indeed, France has chosen to develop a national RDP with regional variations. It is the State agricultural service (DRAF) that coordinates these regional variations, with little participation from the territorial authorities and other technical branches of the state (environment, infrastructure, etc.). In the other cases, the central state has no devolved role at the regional level or is present at other levels (in Italy, at the provincial level). However, as is the case in Scotland, the state may be represented in the development of the RDP, which affords it the opportunity to have some control over agricultural matters.

A new development is that environmental departments are increasingly participating in the management of agricultural policies. This reflects efforts by the regions to integrate the management of the agricultural sector into a more horizontal management that is better linked to other sectors.

Representatives from the private sector and civil and rural society are also emerging as participants in the regional networks. This is the case for environmental organisations. These actors participate in meetings of the institutions developing the RDPs in Scotland and the Marches region of Italy.

The co-management model, which has existed in northern European countries since 1945, is characterised by an association between the state and the major agricultural union in the management of agricultural policy. The integration of new participants and other agricultural unions at the regional level can bring about a certain weakening of this model.

Diversified and renewed agricultural policy interventions?

A study based on RDR spending

This section is based on the results of a large study published in Berriet-Solliec *et al.* (2006). RDPs are based on a choice of 22 measures (listed a to v) as indicated in Box II.1. Regional programmes thus reflect the characteristics of agriculture, in particular with respect to the provision of public goods as well as the demand for agricultural goods and services as expressed by the different institutional compromises concerning agricultural policy. As seen above, only five member States have regionalised their RDPs: *i)* the United Kingdom and Italy have developed regional plans and *ii)* Spain, Belgium and Germany have established both regional and national plans. France, which has implemented only a national plan, is also included in this study.

In the countries studied, RDR aids depend not only on regional choices, but also on national choices. However, in the case of Spain and in particular Belgium, the national influence in policy development is less given that the sums received from the national RDP are insignificant. In the case of France, the framework is developed at the national level and there is little financial contribution to RDR measures by the regions. Nevertheless, the State works closely with regional communities to transfer the plan to the regional level. Hence, the hypothesis that the analysis of regional RDR spending undertaken here allows an understanding to be gained of differences in regional choices concerning agricultural policies.

The following statistical analysis is based on the budget envisaged for the 2000-2006 RDR. In order to simplify the analysis, Objective 1 regions are excluded. The statistical methodology and estimates are described in Annex 2. The RDR measures are classified according to the seven headings (poles) defined in Box II.2 and the sums allocated to each are calculated. A principal component analysis (*Analyse en Composantes Principales,* ACP) is then done.

Two major axes emerge from the analysis (ACP) of each heading as a percentage of the total amount of all RDR aids in each of the regions under study, and allow a structured description of the differences observed:

- The first axe is defined by Pole 1 (social-structural support and assistance for the modernisation of farms) at one extreme and Pole 2 (support to less favoured areas) at the other. This explains 50% of the variance between regions. This first axe corresponds to a "spatial" logic in the geographical location of farms which results in two distinct targets for government intervention, on the one hand the most productive farms located in plains, and on the other hand, farms located in areas considered as less-favoured.

- The second axe is defined at one end by the weight of rural development assistance (pole 6) and on the other hand by the weight of assistance given to farms *stricto sensu* — poles 1, 2 and to a lesser extent measure 3 (agri-environmental measures). It is based more on a logic that opposes a sectoral management of agriculture to a more territorial management of agriculture.

A hierarchical classification (Ward criteria) based on the weight of the different poles distinguishes eight classes, differentiated according to the two axes above which confirms their pertinence as a summary of the seven poles. The eight classes are presented geographically in Annex 3. In the following section, this classification by orientation is compared to the level of funding by region and by unit of farm labour.

Box. II.2. The choice of seven poles in the statistical analysis of RDR aids

The classification based on 7 poles, which groups the 22 measures of the RDR, is inspired by the RDR nomenclature (European Commission, 2003), that of MAAPAR (French Ministry of Agriculture) and that proposed by Delorme and Guglielmi (Perrraud *et al*., 1998). This classification was also inspired by hypotheses developed by the authors concerning the different emphases used in developing regional agricultural policies and which are based on an analytical and empirical bibliography: *i)* the first, management of natural resources and less-favoured areas is based on agri-environmental measures and aid to less-favoured areas; *ii)* the second , which favours competition through the modernisation and restructuring of farms, is based on individualised socio-structural measures (investment, setting up of young farmers, etc.); *iii)* a third which favours competition through the promotion of quality products and local territorial products, is based on assistance to agricultural management structures and to processing and marketing; *iv)* a fourth favours "rural integrated development", is based on support to all rural activities in general. The 22 measures have thus been grouped in such a way as to reflect these different regional preoccupations.

Nomenclature of intervention poles used in the statistical analysis

Orientation of aids according to the main pole of intervention	Corresponding RDR measure	Dominant characteristic
Pole 1	a, b, c, d, u	Individualised socio-structural support (investment, early retirement, installation, etc.)
Pole 2	e	Payments to less-favoured areas
Pole 3	f	Agri-environmental measures (AEM))
Pole 4	j, k, l q, r	Assistance to agricultural management structures
Pole 5	g, m	Assistance to processing and marketing
Pole 6	n, o, p, s, t, v	Assistancet to rural integrated development
Pole 7	h, i	Aids to afforestation and forestry

Results: The differentiation of the 8 classes of regions based on the orientation of their agricultural policies

Two classes of regions (classes 1 and 4) have a strong agricultural basis, dominated by socio-structural assistance to farms. They are characterised by lower levels of RDR expenditures per farmer than those given in other regions; these two types seem to share the same production focus which seeks to encourage agricultural competitiveness. However, one must distinguish between class 1 (French approach) which is based on a more individualised type of support, with that of class 4 (Italian approach) which tends to give more community-type support to agricultural management structures and to high-quality agricultural products. Clearly a national focus is also reflected here, which in turn is probably tied to institutional factors (*i.e.* the tradition of co-operatives in Italy) as well as to productive factors (*i.e.* greater diversification of products in Italy).

Three classes of regions (classes 2, 3 and 6) are based on giving support to less-favoured areas and to agro-environmental measures. The statistical analysis shows that there are two distinct approaches at work. Class 3 is based on strong support for less-favoured areas, devoting 70% of RDR funds to these measures. These areas include mountains, essentially those located in Wales, Scotland and Northern Ireland of the United Kingdom and the Val d'Aoste. Class 6 is strongly tied to agri-environmental measures. Regions include England (53% of RDR budget), Baden-Würtember, Nordrhein-Westfallen and Burgundy. A third type of region (for the most part French, half of these in the south-east) has made the choice of having a large diversity of measures, although with a strong emphasis on agri-environmental measures and support to less-favoured areas. It is important here to carry the analysis further and to distinguish the regions according to the type of agri-environmental measure implemented, especially as a detailed database allows us to do this (source: European Commission). This analysis shows that the majority of support in British regions, and to a lesser extent Baden-Württemberg and Nordrhein-Westfallen, is tied to the implementation of landscape and natural resource management. These two regions, in addition to those found in class 3 (support to less-favoured areas) seem to correspond to a focus on management of natural resources and of less-favoured areas. Based on this approach, agriculture is treated the same as any other sector that does not justify significant specific support, except in cases where the remuneration of public goods provided by agriculture is necessary to correct market failure. But they are also a reflection of the growing tendency to view the countryside in recreational terms. An example is land reform laws in Scotland, voted in 2002 following devolution, which allowed public access to large areas of private land. This approach can also be synonymous with giving support primarily to the largest farms. In the case of the French regions (class 2), the approach consists essentially of agri-environmental support to agricultural production (support to organic agriculture, extensification, crop rotation, and reducing input use).

Class 5 groups 11 Spanish and German regions which are characterised by a weak Pole 1 and choices oriented more towards Poles 4, 5 and 6, that is measures that embrace a collective management framework for agriculture and rural measures (in particular the renovation of villages). This type is closely tied to an integrated rural development logic, for which Schleswig-Holstein is certainly the archetype (Class 8 is made up of a single example). This class seems to be less focussed on the agricultural sector: a part of the support is given to all those involved in rural development in a way that is less sectoral. A majority of RDR funds (80%) is concentrated on these integrated rural development measures in Schleswig-Holstein, which of course creates tensions with professionals in the agricultural sector. In several other regions studied, this type of measure also receives about 20% to 40% of total aid: reorientation of agricultural support to other sectors, significant in several cases, seems to be one of the major institutional "innovations" in comparison to Pillar 1 and national agricultural aids. This seems to confirm the hypothesis of fiscal and experimental federalism in which decentralisation, thanks to the wide range of economic and social policies that are possible in a decentralised system as well as to reduced "electoral risk", allows for significant institutional innovation.

Finally, class 7, which consists of three regions in France (Aquitaine, Ile-de-France and Lorraine), is characterised by significant support for afforestation and forestry, probably due to the reforestation and reparations necessary after the extremely violent winter storms of 1999-2000. Indeed, if the support given for forests is excluded, the profiles of these regions is closer to class 1.

First, the map in Annex 3 shows that national preoccupations seem to prevail, particularly in the United Kingdom. France seems to be divided between two different approaches: productive in the North-west plains where individualised socio-structural aids are found and less-favoured areas in the south-east where agri-environmental support to agricultural production is found. On the other hand, it is clear that RDR measures in Germany can be broken down according to *Länder*. A certain number of these tendencies can be seen in a few regions in the north of Spain and Italy, which seem to have adopted approaches that are similar to those of their northern neighbour states rather than those of their own state.

Do regional agricultural policies lead to a new distribution of agricultural support?

As in most European countries, a large majority of "regional agricultural support" is co-financed; due to tight budgetary constraints regions may attempt to maximise co-financing rather than favour their own local preferences. Thus, the principal argument of fiscal federalism in favour of decentralisation, that is, tailoring public intervention to local preferences, becomes null and void in the case of co-financing and hence, in the case of a large part of regional agricultural support.

Only regional agricultural support falling outside the supra-regional framework can be fully independent with respect to the choice of agricultural policies. Such support is therefore an important reflection of regional preferences in agricultural policy. Thus Scotland supports an important social group with specific and innovative measures — the Crofters, a small but diversified group of farmers in remote rural areas. These measures are not sector-based and are largely inspired by Article 33 of the RDR (Box II.1). But such measures are rare. In general, Scotland and the Marches develop their agricultural policies in favour of professional farmers who maintain the most modern, most productive and often largest farms. Thus, although there has been a move away from a policy based on animal number to one based on area in the less-favoured areas, these regions have nevertheless sought to maintain the same amount of support for these farms as before the transition to the new policy. In the same way, the modulation of Pillar 1 support in Scotland, although decided at the United Kingdom level, was done in a way that did not modify the way support was distributed previously. In the Marches, agro-environmental measures are concentrated on maintaining, lucerne with eligibility conditions that clearly favour the biggest farms. In these two regions, support continues to be very selective and given to only a few farms which are either the biggest and/or the most competitive on the market. However, Catalonia favours support policies which maintain the agricultural income of all its farmers. In Catalonia in particular, agro-environmental support is digressive and a ceiling imposed on investment support. Thus, this region attempts to implement an alternative distribution of support compared to Pillar 1, which does not favour the large farm holder but rather seeks to help those farmers who receive little or no support from Pillar 1. It is in Schleswig-Holstein that the distribution of "regional agricultural support" has changed the most in that it has been reoriented towards the smaller farms and other rural development actors. Nevertheless, one can in no way conclude that "regional agricultural policy" has been "innovative"; the regional approaches under study range from a strongly conservative approach which reinforces Pillar 1 to an approach that reallocates support to new farmers and new actors on the rural scene.

Support to the production of quality products is a new objective of many regions. The sums allocated are significant, particularly in Catalonia, Bavaria and the Marches. In so far as the environment is concerned, in some regions there has been little progress due in particular to pressure from the dominant agricultural unions. In others the programs were designed in close cooperation with environmental non-governmental organisations. The measures chosen from the agri-environmental measures tend to be the classic ones, which in the Marches and Bavaria focus mainly on production. The Agro-environmental Measures are somewhat bolder in Scotland and seek to preserve biodiversity and protect fragile zones. However, good agricultural practices, which are supposed to condition any support received in less-favoured areas or for agri-environmental reasons, are not always strictly imposed. In Catalonia, the major environmental problem, animal manure, is not dealt with by regional policies. As to opening up support to non-agricultural actors, several possibilities are offered by certain RDR measures. However, with the exception of Schleswig-Holstein, the sums allocated are small (even the PRODER programme in Catalonia receives only 20% of the RDR budget).

The majority of "regional agricultural aids" remains focussed on agriculture. This is due in particular to the strong "agricultural" nature of Pillar 2 of the CAP, which is, in principle, devoted to "rural development"; only a few measures benefit non agricultural actors and concern objectives that are genuinely non-sectoral. It should be noted that several regions do not implement any or very few of these measures: of the 65 regions studied, for the 2000-2006 RDR budget, Scotland, Northern Ireland (United Kingdom), Molise, and Val d'Aoste (Italy) allocate 0% of funds for these measures, and 13 other regions (EC statistics) allocate less than 5%. Finally, aids are often weakly or not at all targeted to specific areas and to local characteristics; thus the agri-environmental measures apply to the whole territory of Scotland and the Marches. Only those measures that are not allocated a significant budget, and which are less directly tied to agricultural production, are applied to specific areas in consultation with local partners: these include measures concerning processing, marketing and diversification outside the agriculture sector in Scotland, some agri-environmental measures (a very small number in Catalonia) and some measures concerning the marketing of quality products, in particular those linked to a specific rural area.

The implications of decentralisation: Some lessons learned from a comparative study of two German Länder

A case study of two German regions is used to illustrate the decentralisation of agricultural policies and to help understand more precisely the factors that lead regions in the same country to differentiate their regional agricultural policies. Two regions with significant differences in terms of their agricultural policies have been chosen: Bavaria and Schleswig-Holstein.

Identification of regional explanatory factors: Two regions with contrasting resources

In terms of regional economic resources, Bavaria is a rich, dynamic Lander with considerable weight in the German economy; on the other hand, Schleswig-Holstein is undergoing profound industrial and agricultural restructuring. In terms of production systems, both regions are characterised by mixed livestock and cereal farming. Agricultural productivity, substitution of labour by capital, production intensity, concentration of structures and agricultural income are, however, lower in Bavaria than the average of the older *Länder*, while they are above average in Schleswig-Holstein. Moreover, there is strong diversification of income in Bavaria but not in Schleswig-Holstein. It could be concluded that the agricultural system is decidedly more oriented towards multifunctionality in Bavaria and towards price competitiveness in Schleswig-Holstein.

In terms of institutional structure, the main actor in the regional networks is the regional government in both cases, with sole responsibility at this level for the elaboration of agricultural policies. There are, however, clear differences: the Bavarian administrative network is dense, present at all infra-regional levels and with a ministry is specifically in charge of agricultural matters. The regional ministry is entirely in charge of the implementation of regional agricultural aids and the farm advisory system, and representatives of associations, citizens and local authorities are only weakly involved. Conversely, the administrative network in Schleswig-Holstein is less dense, divided between two ministries (Interior and Environment). Farm advisory services are delegated to the Chambers of Agriculture that are independent of the government and are involved in collective actions, in particular representatives of associations, citizens, and local authorities.

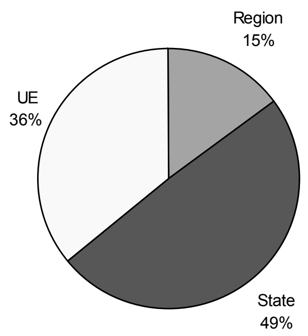
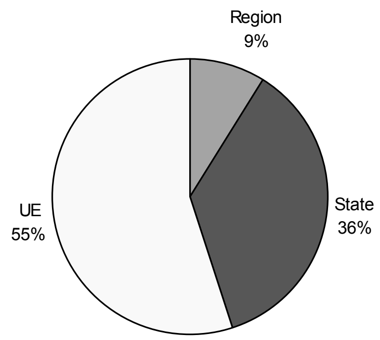
The importance of regional and supra-regional factors in the implementation and levels of regional, agricultural financing

There are wide differences between the two regions in the shares of “national agricultural aids” by EU, federal and regional levels and of “regional agricultural aids” in the GAK[16], RDP and region-specific programmes (Figures II.1 and II.2). Both regional factors identified above and supra-regional factors help explain the various ways of financing regional agricultural support. In Figure II.1, EU payments and the production system explain clearly the stronger share of EU “total agricultural aids” in Schleswig-Holstein, where a large area receives payments. (the opposite is the case in Bavaria). The political and economic context in the region and at the supra-regional level also explains the results. The high share of regional expenditures in Bavaria is linked to significant levels of “regional aids” within purely regional programmes. Figure II.2 shows that a large share of the funds come from the RDP, in which the State is not involved. Conversely, in Schleswig-Holstein, regional spending is almost always in the context of the GAK. Until recently, Bavaria, which was politically opposed to the federal level, notably concerning agricultural policies, and which has sufficient budgetary resources, tried to avoid any federal involvement in agricultural policy. This was done by complementing some federal measures (this is the case for investment assistance); by co-financing alone with the EU (as is the case for agri-environmental measures)

16. Note that measures that are funded both in GAK and PDR are counted only in the GAK to avoid double counting.

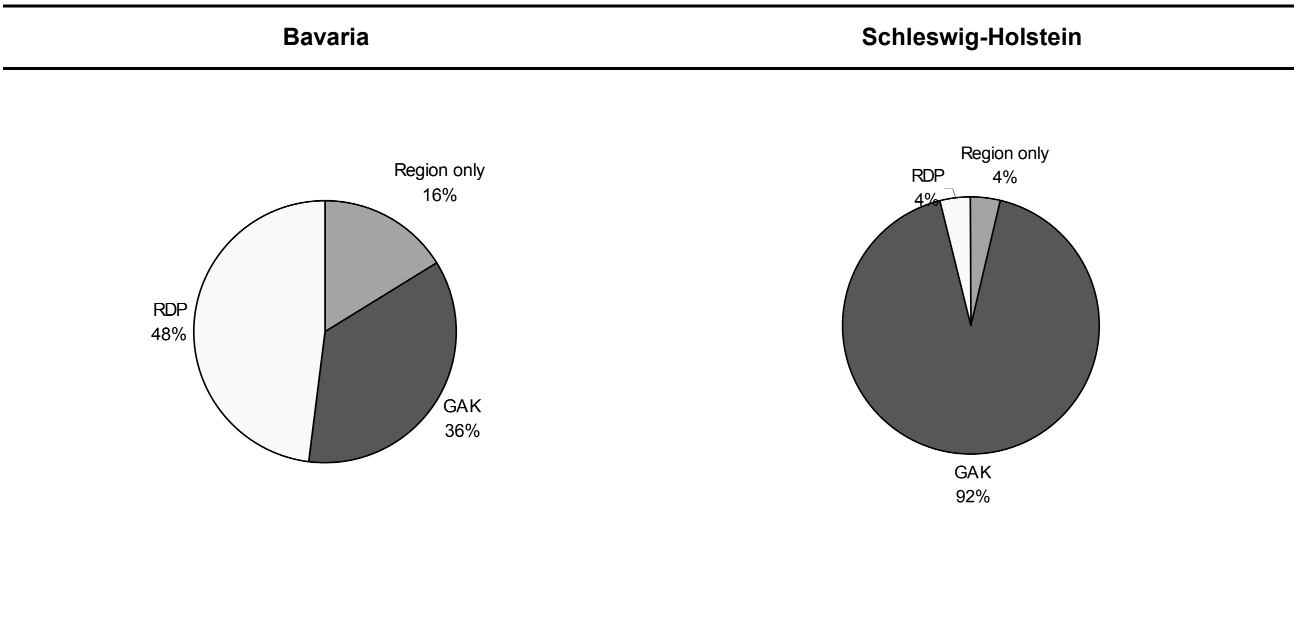
and by entirely financing some measures. On the other hand, given its economic difficulties and the fact that it is politically in agreement with the federal level, Schleswig-Holstein prefers to use co-financing with supra-regional levels and almost all the measures in the GAK are co-financed by both the national and EU levels.

Figure II.1. Distribution of "total agricultural aids"

Bavaria	Schleswig-Holstein
	

Source: Agricultural Reports (2002 for Bavaria and 2003 for Schleswig-Holstein); Regional financing plans 2002.

Figure II.2. Distribution of "total agricultural aids"



Source: Agricultural Reports (2002 for Bavaria and 2003 for Schleswig-Holstein); Regional financing plans 2002.

Differences in "total agricultural aids" financed by Bavaria and Schleswig-Holstein per agricultural unit of labour (Table II.2) relate primarily to EU factors: the Bavarian system, with low levels of EU funds, requires high levels of regional assistance to obtain a total amount of agricultural aids per agricultural labour unit similar to that in Schleswig-Holstein. But regional factors also explain these differences. Regional budgetary resources are only one of the explanatory factors as the share of "total agricultural aids" in "total regional expenditures" is higher in Bavaria. The political and socio-cultural context also explains why Bavaria helps its agricultural at any cost. In Schleswig-Holstein, the majority is sensitive to the aspirations of the urban middle classes it comes from and who elect them. It has a more industrialist view of agriculture, which is considered as a sector like any other that does not require large specific assistance, except to correct market failures in the remuneration of public goods provided by agriculture.

Table II.2. Some indicators of agricultural expenditures

	Total agricultural aids financed by the region	Total agricultural aids financed by the region / total regional expenditures	Total agricultural aids financed by the region per farm labour unit	Total agricultural aids per farm labour unit
Units	Million EUR	%	EUR	EUR
Bavaria	416	1.18	1 944	12 794
Schleswig-Holstein	50	0.52	1 010	11 434

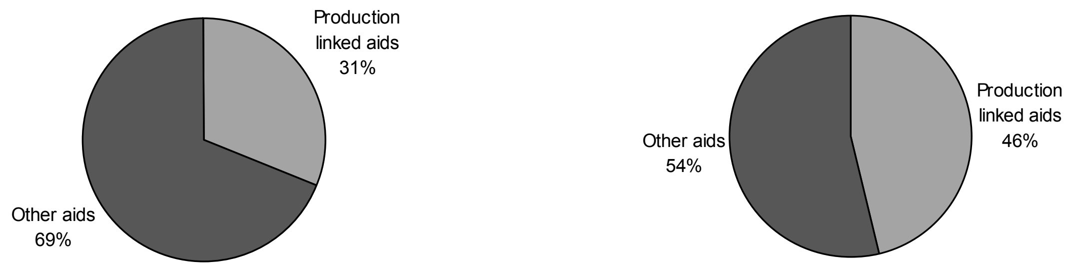
Source: Agricultural Reports (2002 for Bavaria and 2003 for Schleswig-Holstein); Regional financing plans 2002.

The importance of regional and supra-regional factors in the regional orientation of agricultural aids

Let us first consider "total agricultural aids." At first glance, the higher share of production linked aids in Schleswig-Holstein (Figure II.3) seems to come from the supra-regional level and is in particular due to a higher level of EU premiums, mainly production related. Let us then consider factors that are specifically regional: the regional production system in Bavaria, which has many multifunctional characteristics, explains the larger share of aids that are not linked to production. This is also related to the large budgetary resources of the region and to the regional agreement involving all interested parties in the region, around the idea of supporting multifunctional agriculture. These regional factors reflect a specific view of agricultural multifunctionality and rural development on the part of the Bavarian institutions: it involves above all supporting family farming and a way to compensate for the higher costs of ecological farming practices and the provision of nature conservation. Looking at the distribution of "regional aids" by objective (Figure II.4), agri-environmental measures paid directly to producers to compensate for the cost of public good provision appear to be the main instrument.

Figure II.3. Distribution of "total agricultural aids"

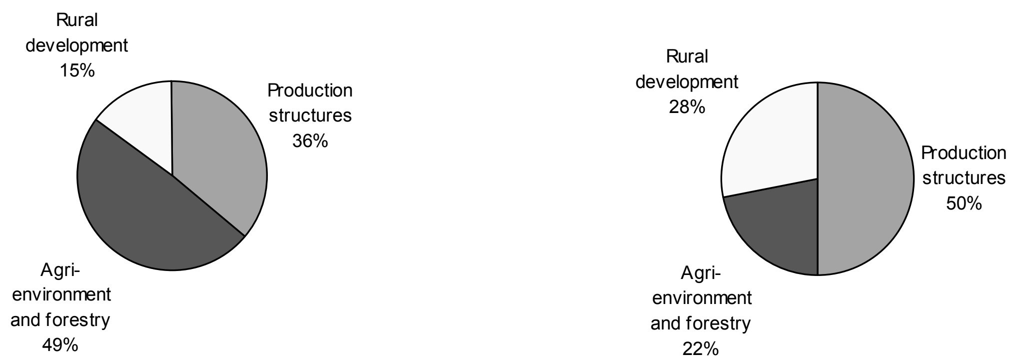
Bavaria	Schleswig-Holstein



Source: Agricultural Reports (2002 for Bavaria and 2003 for Schleswig-Holstein); Regional financing plans 2002.

Figure II.4. Distribution of "regional agricultural aids" by objective

Bavaria	Schleswig-Holstein



Source: Agricultural Reports (2002 for Bavaria and 2003 for Schleswig-Holstein); Regional financing plans 2002.

In Schleswig-Holstein, most aid goes to production structures and the amount of agri-environmental payments is extremely low. In fact, the regional government wishes to reduce assistance to production structures and to reinforce the already significant assistance to rural development. The government is implementing a switch from assistance to competitive agriculture towards aids to small farms and towards a genuine, integrated rural development policy. Targeted beneficiaries are not only farmers but all rural development actors, regional citizens and consumers. For example, the programme for the analysis of structures and for rural development (LSE) whose recipients are mainly non farmers appears to be the key regional RDP programme and accounts for over 80% of expenditures in Pillar 2. Agri-environmental measures are seen differently than in Bavaria.

Are budgetary resources the main factors explaining regional choices for agricultural development?

At first glance, supra-national (national and EU) factors appear central to developments in regional agricultural policies. Further analysis, however, shows that regional factors explain the differences in the position of regions faced with the same supra-national environment. The production system is the first factor that explains developments in regional agricultural aids. In Schleswig-Holstein, for example, the production system is oriented towards productivity and is thus not well adapted to the new directions in regional agricultural policies, towards agricultural multifunctionality and integrated rural development and may put a break on their development. The institutional framework is another factor: the more flexible, less hierarchical, more open and more bottom-up structure of Schleswig-Holstein allows the support system to evolve through innovative forms of governance, including the LSE programme mentioned above, which is a key example: groups open to all rural actors, under the authority and co-ordination of elected local officials, design development projects in restricted areas (around 1000 inhabitants), using funds available to all activities. Similarly, LEADER programmes are co-ordinated by local personalities, who do not belong to the regional government. Conversely, in Bavaria, regional administrative representatives are always responsible for this type of programme and their co-ordination. While Schleswig-Holstein adopts policies that are weakly regionalised (low regional financing) but highly territorial, focussing on projects and infra-regional actors, Bavarian policies are strongly regionalised but weakly territorial.

It is mainly the amount of regional economic resources that explains the development in regional agricultural aids: in Bavaria, financial resources have allowed the continuation of the same multifunctional agricultural policy for over 20 years, which provides high levels of support to farmers. But in the current context of economic difficulties and rising unemployment levels which are affecting Bavaria, such large public expenditures could be put in question or at least those involved at the local level could be asked to justify them. In Schleswig-Holstein, despite the institutional structure that favours innovations, the lack of regional budgetary resources hampers the trend towards multifunctionality and integrated rural development that has appeared in recent years.

Conclusion: Some responses pertaining to fiscal federalism

A strong argument of fiscal federalism (Oates, 1999) is that decentralisation allows potential gains in allocation efficiency through better adjustment to local preferences. The regionalisation of agricultural policies has in fact resulted in a diversification of agricultural policies reflecting the preferences of citizens and the needs of the agricultural sector. A number of other factors, however, interact: the level of EU aids, the objectives of national agricultural policies, the regional budgetary capacity, the preferences of regional elected authorities, negotiations between regional actors, etc. The impact of supra-regional levels remains important, through co-financing mechanisms in particular. The impact of the national levels is also demonstrated in the study of RDR regional aids.

Another argument of fiscal federalism is that the capacity for institutional innovation is higher at local levels (Oates, 1999). This analysis does not allow any generalisation, in particular regarding a different distribution of agricultural aids and the integration of non farm actors in decision-making processes. Institutional innovations are restricted to niches or to exceptional regional cases (see the Schleswig-Holstein study). Nevertheless, regionalisation has favoured their existence. This is also the case for the development of aids towards recipients that are not only farmers, or towards supporting, to some extent, farmers that do not receive, or receive less support under Pillar 1.

Local public economics also suggests that, at the local level, elected representatives are more likely to be influenced by interest groups (Laffont, 2000). But it is not possible, from the research reported here, to come to any general conclusion concerning the power of interest groups at local levels compared to the national level.

Finally, according to traditional American theory of fiscal federalism, the central government should be in charge of distributional policies to less-favoured segments of the society (Oates, 1999), to avoid strong regional disparities. Similarly, with the regionalisation of agricultural aids, could lead to strongly unequal support across farms and, in particular, those that are under threat. Thus, large differences in regional agricultural support have been observed within the same state. This raises issues concerning distortion of competition and the future of the CAP as a sectoral policy, decided and managed at the European level.

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Germany	*Case studies:* - within DADP2 : (Trouvé A., 2004) on Schleswig-Holstein and Bavaria regions. *Regional budgetary data:* - BMVEL, Jahresbericht 2001, 2002, 2003
United Kingdom	*Case studies:* - within DADP2 : (Crumière, 2003) on Scotland and (Escaffre, 2004) on England.
Italy	*Case studies:* - within DADP2 : (Picard, 2004) on the Marches region.
Spain	*Case studies:* - within DADP2 : (Clément, 2003) on the Catalonia region.
Austria	*Case studies:* - within DADP2 : (Gravier, 2004)

Annex 1.

Degree of decentralisation in EU member states

	Institutional structure and its development	Regulatory and budgetary distribution of competencies
France, Unitary State	- There is a strong tradition of centralism dating from the French revolution. Some competencies were recently given to regions (in 1982). - Local authorities are the 22 regions, then the *départements*, then the municipalities. Municipalities can join together (intermunicipality co-operation).	- Local authorities are in charge of 19.8% of public expenditures in 2001. - *Départements* have some competencies over social policy, regions over economic and development policy. - *Départements* and municipalities still have an important role compared to regions. However, the last reforms were in favour of regions, notably through contractualisation and experimentation. - The state retains large competencies, including at the local level, through its devolved services.
Germany, Federal State	- The federal structure dates from the beginning of the 19th century. In 1949, the German Federal State was created with a strong wish to give regions (*Länder*) extended competencies in order to limit the federal government's power through vertical division of power. - Local authorities are the 16 *Länder* (including 3 towns), then the *Landkreise* and the «town districts», then the municipalities. - The Federal State is not devolved. The *Länder* are devolved at the level of *Bezirke* and *Landkreise*.	- Local authorities are in charge of 66.2% of public expenditures in 2001. - Länder share state sovereignty with the Federal State. They have legislative, executive and judicial powers in the constitution. Regional governments are represented at the *Bundesrat*, the second legislative chamber of the federation. - The constitution assigns legislative competence in principle to the *Länder.* Competence lies with the Federal State only in some areas listed in the constitution. Furthermore, the Federal State is allowed to legislate in order to ensure state unity. Using this exception, most legislative acts today are enacted by the Federal State but implementation powers are principally with the Länder. Their room for manœuvre is limited by their weak fiscal power and a complex and extensive system of financial redistribution between *Länder*.

United Kingdom, Unitary State	- Governments and parliaments were created in the last ten years in Scotland and Wales but not in Northern Ireland. - Local authorities are the four nations (England, Scotland, Wales and Northern Ireland), then the regions (England), the counties (England, Wales) or districts (Scotland) or regions (Northern Ireland), then the districts, and the parishes (England) or the communities (Wales)	- Local authorities are in charge of 23.2% of public expenditures in 2001. - The competencies of the countries vary depending on the parliamentary legislation and in different parts of the kingdom: In Scotland, the parliament can modify the implementation of British laws; the Welsh parliament has less powers (no own legislative or financial competencies). - In the 1990s, the regions of England were reinforced by devolution. Regional assemblies were created but they have no real powers of decision and their members are county representatives. The strengthening and election of these assemblies are currently being discussed.
Spain, composed of autonomous regions	- A new constitution was signed in 1978, based on the principle of territorial autonomy. It introduces the new status of "autonomous communities.". - Local authorities are the 17 autonomous communities and two autonomous towns, then the provinces, and the municipalities. There is co-operation between municipalities. (*comarcas*, associations of municipalities).	- Local authorities are in charge of 37.3% of public expenditures in 2001. - Infra-national competencies have clearly increased in the last 20 years, mainly in favour of regions. Regional governments and parliaments have legislative and executive powers. They have an administrative jurisdiction over municipalities and provinces. Some regions have more competencies: Catalonia, Galicia, the Basque country, which are "historical communities". Regions have wide fiscal powers, which favour rich and dynamic regions. There is, however, a strong system of financial redistribution between regions.
Italy, Regional State	- Five regions with a "special" status were created in 1948, Other regions with an "ordinary" status were created in 1970. These two statuses are gradually converging. - Local authorities are the 20 regions, including five with a special status (Frioul, Aosta Valley, High-Adige, Sicily and Sardinia), then the provinces and the municipalities. There is also co-operation between municipalities.	- Local authorities are in charge of 30% of public expenditures in 2001. - Regional councils and administrations have legislative and executive powers that are larger than at the levels of provinces and municipalities. Depending on the area, legislative competencies can be exclusive, in "competition" with the State, or do not exist. The power of State control over the region is low, with restricted potential for checking legal validity. The transfer of competencies has recently evolved further in favour of regions, in particular regarding health and education. Italian regionalisation is, however, less than in Spain. In particular, the national State is devolved at the level of provinces and municipalities, not the region. In addition, there is a Ministry of regions at the national level but no "chamber of regions" equivalent to the German and Austrian *Bundesrat*. - The system of financial redistribution between regions is strong.

Belgium, Federal State	- Starting from a centralised State, communities and regions were created in 1970. A federal cultural and economic system was then put in place in 1980. - Local authorities are the three regions and three communities, with some overlapping boundaries, then the provinces and municipalities.	- Local authorities are in charge of 13.2% of public expenditures in 2001. - Powers are mainly in the hands of infra-national levels, the regions and municipalities. The federal system is stronger than in Germany and Austria: the national and regional levels are legally equal. Regions are represented at the Senate, the second legislative, federal chamber. - Regions administer services and the economy, while communities have competencies regarding culture, education, assistance to persons and health.
Austria, Federal State	- Local authorities are the nine regions or states, the *Länder*, then the municipalities. - The Federal State is not devolved. The *Länder* are devolved at the level of *Bezirke* (districts) and municipalities.	- Local authorities are in charge of 15.8% of public expenditures in 2001. - *Länder* share state sovereignty with the Federal State: regional governments, with their parliaments, have legislative, executive, but no judicial powers, in the constitution. They are represented at the *Bundesrat*, the second legislative chamber of the federation. - Although all the nine *Länder* have their own written state constitutions and their own legislature within the framework of the federal constitution, the *Länder* have little autonomy in legislative matters: Federal legislation takes precedence over state (regional) legislation, which applies to almost all matters of practical importance. - Even though there has been a federal institutional structure for a long time, the Federal State decides alone or shares competencies in some areas. Administrative competencies are shared and the *Länder* (acting as federal bodies) execute many administrative tasks on behalf of the federal government ─ the so-called indirect federal administration.
Netherlands, Unitary State	- The regions were founded approximately 200 years ago - Local authorities are the 12 provinces, then the municipalities.	- Local authorities are in charge of 36.7% of public expenditures in 2001. - The identity and competencies of municipalities are wider than those of provinces. - Local authorities have both "autonomous" competencies (they are involved in the areas they consider useful) and «co-management» competencies (that are compulsory).
Portugal, Unitary State	- Historically, the state is strongly centralised. Administrative regions have been envisaged for over 22 years but with the 1998 referendum, voters rejected the creation of the 7 intended regions. - Local authorities are the seven administrative regions, then the municipalities, the parishes and "organisations of inhabitants". There is co-operation between municipalities.	- Local authorities are in charge of 15.5% of public expenditures in 2001. - Two autonomous regions (Azores and Madeira) have a specific status that includes legislative and executive autonomy. - Regions have currently no administrative or financial powers.

Greece, Unitary State	- Decentralisation has existed for a long time at the level of districts (*demos*) and municipalities, and has been extended to prefectures (*nomos*) in 1994, which are the real level of decentralisation. - Local authorities are the 51 nomos, than the demos and municipalities.	- Local authorities are in charge of 5.5% of public expenditures in 2001. - Infra-national levels are in charge of 5% of expenditures only. The state keeps a strong control over all local authorities. - The 13 regions are in fact an administrative level of State devolution. Their main responsibility is regional development. There is a regional council that groups representatives of local authorities and has only a consultative role. In the European context the question of strengthening regions that are not yet local authorities arises.
Sweden, Unitary State	- Regional autonomy was established for the first time in 1862. - Local authorities are 20 county councils, and 289 municipalities. There are also 21 counties, which are part of the central authority and therefore not autonomous.	- Local authorities are in charge of 44.3% of public expenditures in 2001. - The competencies of municipalities are larger than those of other infra-national levels. - The State is devolved at the provincial level. Local competencies have, however, been recently reduced and some have been transferred to the State
Finland, Unitary State	Administration consists of three levels: National, regional and local. - The local level consists of municipalities. - The regional level consists of provincial state offices and different kinds of regional centres depending on the administrative sector involved.	- Local authorities are in charge of 37.9% of public expenditures in 2001. - Regional autonomy is above all based on municipalities. - Regions have competencies mainly over regional development and planning. They contribute to national policies. - The Aland Islands have a specific status that includes legislative authority.
Ireland, Unitary State	- The various local authorities were created in 1898. In 1999 and 2002, reforms reinforced their competencies. - Local authorities are the 29 counties, then cities and burghs.	- - Local authorities are in charge of 39.9% of public expenditures in 2001. They are strongly controlled - They have competencies over transport, environment and sport. - As part of EU regional programmes, 8 regions were created in 1991 to take responsibility over the management of these programmes on their territory, but they remain under ministerial control.
Denmark, Unitary State	- Local autonomies were established in the 1849 constitution. - Local authorities are the 14 counties, then the municipalities There is co-operation between municipalities.	- Local authorities are in charge of 54.8% of public expenditures in 2001. - Competencies are strongly decentralised to local authorities. Counties have competencies over health mainly.
Luxembourg, Unitary State	- Local authorities are the 118 municipalities defined by the 1988 law. There is co-operation between municipalities.	- Local authorities are in charge of 14.8% of public expenditures in 2001.

Annex 2.

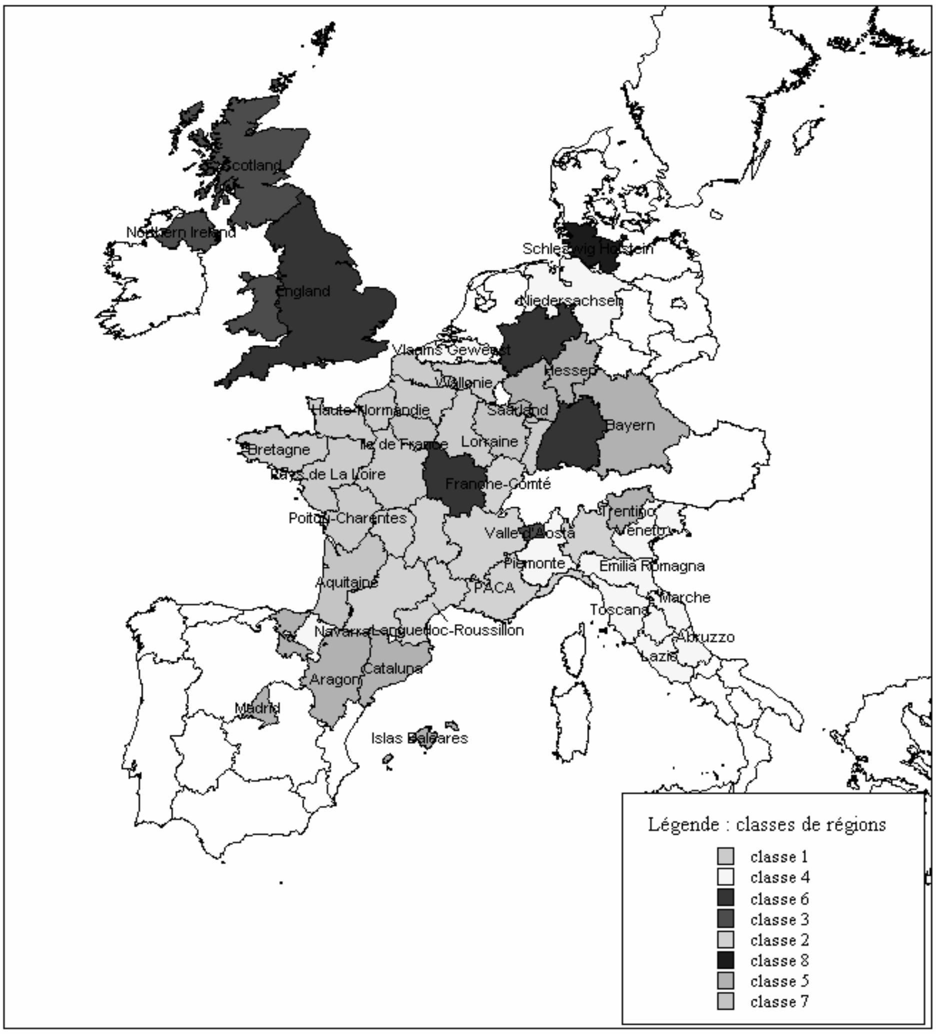
Description of the statistical methodology used in the study of RDR Funds

For the first five member States studied (Belgium, Germany, Italy, Spain, United Kingdom), the planned amounts of aids for 2000-2006, by measure and region, are used. Data on proposals were obtained from the European Commission. They reflect choices made by regions, and not actual spending[17]. For France, RDR expenditures in 2003 are used. They include both expenditures made in the national RDP and expenditures made in regional programmes (DOCUP) under objective 2.[18] These expenditures are allocated by region according to amounts received by beneficiaries in the region. In order to compare French budgetary expenditures with planned funds for 2000-2006 in the other member States, they are corrected by a coefficient based on total funds planned for 2000-2006 in France. In addition, expenditures on interest concessions, which were not included, were added to 2003 RDR amounts, based on estimates provided by CNASEA, the organisation in charge of RDR implementation in France, and distributed by region according to the number of AWU and the distribution of measures. Similarly, in Belgium and Spain, a national RDP (including measures f and n in Belgium, and measures a, b, d, e, f, h, q in Spain, see definitions in Box II.1) is added to regional RDPs. In order to have a better estimate of what RDR funds regions receive, these national measures have to be taken into account. The funds earmarked for these national measures have been allocated by region based on the number of AWU for measures specific to the farm sector and based on the share in rural population for other measures.

17. A brief comparison between planned and spent budgets in 2001 shows that realized expenditures are sometimes much lower than the planned amounts.

18. France is the only member State that includes RDR measures in objective 2 programmes.

Annex 3.
Map of regional classes according to RDR orientations



2. Korea - Financing agricultural policies – The level of government[19]

Overview of the financial structure of government budget

Budget structure

Korea is a centralised country composed of a central government and two tiers of local government, the latter composed of 16 administrative regions (seven metropolitan cities and nine provinces). These regions are, in turn, subdivided into 232 cities (Shi), counties (Gun), or districts (Gu). Local government expenditures, including transfers from the central government, account for approximately 40% of total expenditures. The 2003 state budget to the National Assembly was comprised of one general account, 22 special accounts and 47 public funds (Table II.3).

Table II.3. Characteristics of the General Account, Special Account and Funds

	General Account	Special Accounts[1]	Public Funds
Number (in 2002)	1	22	47
Outlays in 2001 (trillion Won)	72.3	38.1	26.0
Revenues	Tax revenues	Earmarked taxes, transfers from the general account and from the public funds	Mandatory contributions, transfers from other accounts and funds
Expenditures	Unrequited expenditures	General account and funds	Mostly loans
Linkage between revenue source and expenditure	None	Clear linkage	Clear linkage
Authorisation and Implementation	Voted on in the National Assembly. Controlled and monitored as mandated by the constitution.	Same as General Account	Operational plans for "Public funds" are authorised in the cabinet and reported to the National Assembly. "Other" funds are not reported to the cabinet or National Assembly.

Special accounts include four public enterprise special accounts.
Source: OECD (2003a), Ministry of Planning and Budget; Koh (2000), *Budget Structure, Budget Process, and Fiscal Consolidation in Korea*.

Korea's budget is highly fragmented and many taxes are reserved for specific funds. In addition to transfers from the general account, most special accounts have taxes specially earmarked to finance them. The resulting compartmentalisation and fragmentation of resources, however, may lead to less than efficient allocation of the overall budget (OECD, 2003a). Transfers from the general account also account for a large portion of the funds in the special accounts. Approximately half of central government spending on a consolidated basis comes from the general account. Although this consolidated budget excludes part of the social security system, it include regional and local government expenditures. There are ten extra-budgetary "financial" funds at the central government level.

19. This section was prepared by Kim Yoon-Jung, formerly of the OECD Secretariat.

The extent of fiscal decentralisation

The share of sub-central government tax revenues in total Korean tax revenues was 17.8% in 2001 (OECD, 2003b), as compared to other centralised countries, such as Canada, the U.S., Switzerland, Denmark and Sweden, where this indicator was between 30-40%. In Korea, any sub-central authority borrowing must be approved by the central government, thereby leaving sub-central governments with limited fiscal autonomy and taxing power.

In general, defence, foreign affairs and the judiciary systems are operated with central government financing, while road construction, education, housing and potable waterworks, fire fighting and sewage systems are financed by sub-central governments. However, it is difficult to make a clear separation between these public services because local matters often reflect nation wide concerns.

Fiscal decentralisation is on-going. The ratio of the central to local government' expenditures was 44:56 in 2003, compared to 65:35 in 1994. With respect to revenue, however, the ratio of the national to local taxes was about 80:20 in 2003, the same as in 1994. Local government expenditure, in general, is financed by a combination of local revenue and intergovernmental transfers. In general, they spend much more than they raise in local tax revenues.

Local revenue is composed of tax and non-tax-revenue. Intergovernmental transfers consist of tax sharing (Local Share Tax), conditional grants (National Treasury Subsidies) and more broadly defined capital grants (Local Transfer Fund) (OECD, 2003a). The expenditure from the Local Share Tax is usually specified in the regional development programmes and includes road construction, potable waterworks, water quality conservation, etc. The main purpose of this financial coordination is to provide a nationally uniform level of public administration and services.

The share of central government in public expenditure differs across activities; in 1994, it was 99% for defence, 51% for general public services, 44% for education, 52% for economic affairs, and 58% for social development. Among the different sub-categories in social development, 29% was for health, 77% for social security, welfare and housing, and 45% in regional development came from central government in 1994 (Yoon, 1994). Considerable decentralisation has occurred since then. Of the total revenue of 17 local taxes, provincial taxes (7) account for 56% and city and county taxes (10) account for 44% in 2002.

There are no formal fiscal rules imposed on the central government by the constitution or by the legislature concerning spending, the deficit or other fiscal objectives. However, there are financing guidelines between the central and local governments as follows.

- The central government should encourage the autonomy and sound operation of local financing and should not become a burden for local governments (Local Autonomy Act, article 11 ②).
- Local governments should, as far as possible, implement national policies (Local Autonomy Act article 114 ①), and should not implement opposing measures or unreasonably affect national finances (Local Finance Act, article 22).
- Where the central government mandates responsibilities to local governments, the former should also undertake all expenses (LAA article 132, LFA article 18 ②).

Among local governments, there are stipulations and ratios covering expenditures between regions and local governments. Regional governments have much stronger in administrative and borrowing power, and they usually encompass local governments.

The financing and implementation of agricultural policy

A limited but increasing flexibility for regions

Before 1994, the implementation of agricultural policies in Korea was centralised with a top-down approach. The central government decided which agricultural policies implemented and sub-central governments were instructed on how to attain the policy targets. As such, the process of policy making and implementation did not allow any opportunities to reflect on regional characteristics or needs. Nevertheless, there has since been some decentralisation.

Policy makers must first consider how to finance a policy; for example, through the general account, the special account, or through public funds. In the implementation stage, there is a hierarchical structure from the Ministry to the lowest sub-counties (Myon). As in other countries, the planning function and implementation responsibilities lie with the central government, even though local governments do the actual implementation.

The actual budget is co-ordinated among budgetary authorities and through negotiations between the relevant divisions of the central and sub-central governments. In view of their financial weaknesses, sub-central governments depend heavily on various types of grants or tax sharing schemes from the central government. The financing sources and the funding ratio for some grants are legally stipulated in legislation. Recently, the central government has slightly increased the number of non-earmarked grants for which no specific conditions are attached The intention is to increase local autonomy, while ensuring public objectives are met efficiently. This contributes in particular to reducing the risk sometimes associated with specific grants, for which sub-central governments try to overstate the demand for the public goods in their region so as to increase transfers (OECD, 2003b, p. 58).

The structure of agricultural financing

The total agricultural and forestry budget in 2003 amounted to KRW 9 978 billion, or 8.1% of the total national budget. Sixty-two percent of the 2003 agricultural budget (KRW 6 187 billion) came from the general account budget financed by national taxes. The budget of the Ministry of Agriculture and Forestry was 7.2% of total government expenditures for that same year.

Agricultural financing comes from government and the private sector. Government financing includes budget (general account, special account, local budget) and non-budget (fund, loan) sources. Government accounts related to agriculture are composed of general accounts and six special accounts:

- “Special account for rural and fishing community restructuring” (SARFCR);
- “Special account for the management of agricultural special tax”;
- “Public loan special account”;
- “Special account for the responsibly operated institutions”;
- “Grain management special account”; and
- “Special account for balanced national development”.

As of 2005, the “special account for balanced national development” under the management of the Ministry of Finance and Economy, brings together the budgets of all ministries involved in regional development programmes. There are six agricultural funds:

- “Price stabilisation fund for agricultural and fisheries products” (PSFAFP);
- “Livestock development fund”;

- “Farmland management fund”;
- “Fund for adjusting grain bonds”;
- “Rice income compensation fund”; and
- “Fund for supporting FTA implementation”.

The main sources of revenue in the agriculture-related special accounts are transfers from the general account, earmarked special taxes, or borrowings from other special accounts or public funds. Some agriculture-related funds have their own revenue sources. These are operated within the limits of the available revenue without any financial assistance from the general or special accounts. Examples are the “price stabilisation fund for agricultural and fisheries products” (PSFAFP), the “livestock development fund”. The sales profit and mark-up on imported agricultural and livestock products are the main financial resources.

There is one earmarked special purpose tax: the “agricultural special tax”. In general, special purpose taxes are expected to reflect taxpayers’ preference, although this is not always the case. These taxes have been criticised because they make financing inflexible that can be an obstacle to policy implementation. Two studies show that 43% of Koreans interviewed agreed to pay an additional tax for rural development (Kim and Min, 1994) and that 80% agreed to increase agricultural investment (Kim and Park, 1999).

In considering agricultural budget expenditures in Korea, it should be noted that 93% of support to producers is in the form of market price support policies that raise domestic prices above the world price level. These policies are generally financed at the national level. Co-financed programmes, such as the Agricultural and Rural Investment and Loan Scheme, account for a very small share of transfers to farmers but a more significant share of budgetary transfers. Despite the strong local government role in the implementation of some agricultural programmes, the share of local funding is still low. Table II.4 shows, for example, that the share of the central government in the second investment and loan scheme for agriculture and rural and fishing community was higher than in the first rural restructuring programme.

Table II.4. Agricultural and Rural Investment and Loan Scheme (1992 - 2004)

	1st Restructuring program (1992-98)		2nd Investment program (1999-2004)	
Central government	33 397 billion KRW	(72.2%)	37 838 billion KRW	(84.0%)
Local government	5 769	(12.5%)	4 717	(10.5%)
Beneficiaries’ share	7 072	(15.3%)	2 497	(5.5%)
Total	46 238	(100%)	45 053	(100%)

Source: Ministry of Agriculture and Forestry

Guidelines for the implementation and management of agricultural funds

The Ministry of Agriculture and Forestry imposes guidelines for the management of agricultural and forestry funds, including national budget funds, capital and other public money under its responsibility. These guidelines cover different financing situations such as subsidies, loan, investment, contributions and donations. Agricultural and forestry funds are directly managed by the Ministry of Agriculture and Forestry, Rural Development Administration (RDA), Korea Forest Service (KFS) or are mandated to agricultural institutions. For example, the National Agricultural Cooperatives Federation (NACF), National Fishery Cooperatives Federation (NFCF), Agricultural and Fishery Marketing Corporation (AFMC), Korea Agricultural and Rural Infrastructure Corporation (KARICO) manage agricultural or forestry policy loans, the "farmland management fund", and the "price stabilisation fund for agricultural and fisheries products", respectively.[20]

In 1994, the Ministry of Agriculture established the "Comprehensive Guideline for Agricultural, Forestry and Fisheries Programs", which encouraged initiatives by local government and farmers. For an integrated guideline on financing and managing the agricultural program fund, the Ministry established the "Basic Regulation on Management of Agricultural and Forestry Finance" in 1996.

The 2000 edition of the "Implementation Guideline for Agricultural and Forestry Programs (IGAFP)" stipulates the procedure by which agricultural programmes are to be implemented. For a specific agricultural programme, farmers apply to cities (Shi) or counties (Gun) a year before the programme is to be implemented. Based on the number of applications, municipal prefectures request a budget allocation from the "upper level government" provinces (Do). The provincial government then requests a budget allocation from the Ministry of Agriculture and, finally, the Ministry of Agriculture requests the budget from the Ministry of Planning and Budget for the next calendar year. Once the budget is ratified by the National Assembly, the Ministry of Agriculture confirms the budget allocation for the agricultural and forestry policy programmes. In this way, the beneficiaries of the programmes are decided at the beginning of the calendar year.

The actual policy implementation process, in general, depends heavily on local governments. Cities (Shi) and counties (Gun) decide who is to be the beneficiary of agricultural programmes, allocate the budget, and carry out monitoring and evaluations. During the local level review of the budget and beneficiaries, the "city council for agriculture" and the "provincial council for agriculture" advise the local authorities. The Ministry of Agriculture then allocates the agricultural budget to sub-central governments.

In agricultural policies, the subsidy programmes, in general, do not require that farmers produce matching funds, while certain loan programmes do. Subsidies often have national objectives such as income redistribution. This is consistent with the idea that redistribution policies need to be financed at the national level.

The guideline (IGAFP) includes voluntary and public programmes. The "voluntary programmes" are based on the initiatives of farmers, production organisations and other agribusiness agents. Financial assistance is provided by the government. Loans are one of the major financial tools used in voluntary programmes. However, subsidies are also available in some cases and fund matching by beneficiaries is required. The "public programmes" are implemented directly by the central government or carried out by the agricultural administration in local government (*i.e.* Rural Development Administration, Korea Forest Service), farmers, producers' organisations, or agribusiness with financial assistance from central government.

Specific policy aspects with regard to multifunctionality and externalities

The policies with regard to multifunctionality and/or environmental issues are initiated by the central government reflecting the strongly centralised nature of government the widely held beliefs about the broad nature of the concerns, and the prevalence of spillover effects of agriculture across the regions. Some agricultural programmes have their own specific funding ratio between the central and local prefectures. For some policies, beneficiaries — *i.e.* farmers, producers' organisations or agribusiness — are required to provide matching contributions.

20. Some policy loans are also available from commercial banks. Recently, for example, the Ministry of Agriculture and Forestry expanded channels of some of the loan programs in the "Comprehensive Farming Operation Loan (CFOL) Scheme" to include commercial banks.

Financing in agriculture still highly centralised

Fiscal federalism suggests that the appropriate level of government at which the non-commodity-outputs (NCOs) of agriculture should be financed, depends on the nature of the public good characteristics of the NCOs in question. In general, if non–use values dominate demand by the general population, the good should be financed by the central government. If, on the other hand, use values are predominant as in the case of a local public good, funding by sub-central governments is most appropriate (OECD, 2003c).

The highly centralised nature of the way agricultural policy is designed and financed could be a reflection of the highly centralised nature of Korea more generally, with only a small proportion of overall tax revenue raised at sub-national level. It could also relate to the perception that Korean agriculture produces NCOs, such as food security, which bear strong pure public good characteristics. This argument has less weight with respect to environmental services or the contribution of agricultural activity to rural viability, aspects that usually have quite strong local or site specific characteristics.

Almost all direct payment programmes, including "the direct payment for environmentally friendly farming practices" and the "paddy-field environment conservation program", impose no fund matching requirement on local government or on beneficiary farmers. Financing is entirely from the central government's general account (Table II.5). The "paddy-field environment conservation program" is explicitly claimed to be a reimbursement for the multifunctionality of the rice paddy field, which produces NCOs for which there are no markets. The NCOs involved are flood control, water resource management services, soil conservation, cleaning air, landscape, rural amenity, cultural heritage and preserving bio-diversity. Implicitly this means that the Korean government believes that these NCOs have strong pure public goods characteristics. The extent to which this assumption has been tested is not clear. However, CVM studies have shown that people in cities are willing to pay more than market prices for agricultural outputs that are associated with NCOs.

Policies can sometimes be initiated by the sub-central governments. Although the newly introduced "payments for less favoured areas" are totally financed by the central government, this policy was inspired by an initiative taken at the local level. In practice, the province of Kang-Won, one of the most mountainous areas of Korea, tried to introduce such payments as of 2001. The provincial authorities failed initially to persuade the central budget authorities to provide the funds, but subsequently the payments were introduced by the central government. This, however, does not necessarily mean that central financing is the most appropriate means for funding this programme but simply a reflection of the weak financial capability of the sub-central government.

Although policy definition and financing may be entirely central, the implementation of direct payments is undertaken by sub-central levels of government, including cities (Shi) and counties (Gun). In general, the beneficiary farmers must meet certain conditions, some of which are strict and others less strict. For example, the "direct payment for environmentally friendly farming practices" requires farmers to reduce the use of chemicals on cultivated areas in national parks or water resources conservation areas. The local governments carry out monitoring and evaluation of these subsidy programmes through their agencies. The sampling and analysis on soil and irrigation water are carried out by the "National Agricultural Products Quality Management Service" (NAPQMS).

Table II.5. Examples of financing at different levels of government (billion Won)

Programmes \ Level of government	Fiscal Year of 2003 (budget base)				
	Total	Central government	Local governments		Beneficiaries' matching
			Province	Municipality	
Farmers' retirement programme	4.3	4.3 (100%)	-	-	-
Paddy-field environmental conservation programme	475.9	475.9 (100%)	-	-	-
Direct payment for environmentally friendly farming practices	3.0	3.0 (100%)	-	-	-
Formation of environmentally friendly agricultural zones	12.0	4.8 (40%)	n.a.	n.a.	2.4 (20%)
Creation of model villages of environmentally-friendly farming	6.3	3.1 (50%)	n.a.	n.a.	1.3 (20%)
Soil conservation programme	52.1	41.7 (80%)	n.a.	n.a.	-
Remodelling of rural residences	5.7	3.6 (63%) 1	n.a.	n.a.	1.1 (20%)
Building of modernised villages	72	72 (100%) [2]	-	-	-
Residence region development	243	243 (100%) [3]	-	-	-
Support for agri-tourism	6.0	3.4 (57%)	n.a.	n.a.	-

n.a.: Not available.
1. Include loan from central government, KRW 0.9 billion (17%).
2. Include loan from central government, KRW 59 billion (18%). The rest is special grants from Ministry of Home affaires and Autonomous.
3. Include loan from central government, KRW 2 billion (8%). The rest is special grants from Ministry of Home affaires and Autonomous.
Source: Implementation Guideline for Agricultural and Forestry Programs (IGAFP), 2004.

Programme of "formation of environmentally friendly agricultural zones (EFAZ)"

The supervising authority for this programme is the Governor of the province (Do). Funds are allocated from the Ministry of Agriculture to provinces, which have designated targeted zones up to the limit of the available budget. The actual implementation depends on sub-local authorities (cities, Gun). The city mayors or county chiefs carry out the basic investigation of soil and irrigation water quality.

The source of the funds is as follows: the central government (40% in 2003), the local governments' matching fund (40%), and the contributions by the beneficiaries (20%). The funding ratio may differ according to the policy objective and the characteristics. The allocation of the subsidy is the responsibility of the Governor of the province,[21] but mayors and county chiefs actually allocate it. The mayors are responsible for the implementation and settlement of the account. The mayors or county chiefs pay the expenses to builders or farmers following performance evaluation. Once an agricultural village is designated as an EFAZ, they are obliged to carry out several tasks:

- The mayors or counties chiefs are responsible for the detailed planning of the production of environmentally-friendly rice.

21. Act of Management and Budgeting of subsidy, article 38 and Enforcement Ordinance of the Act, article 17.

- The mayors or chiefs are also responsible for the establishment of facilities for recycling livestock manure.
- Farmers should record the amount of pesticide and chemical fertilisers used and the amount of livestock manure recycled.

Local agricultural offices carry out monitoring and investigation, as well as promoting and encouraging the development of activities as follows:

- The chiefs of the Agricultural Development and Technology Centre (ADTC) in the cities or counties investigate the soil and irrigation water.
- National Agricultural Products Quality Management Service (NAPQMS) or its branch offices analyze the chemical residue in the products.
- The Livestock Research Institute trains the farmers on the guidelines and skills needed for the production of organic livestock.

"Paddy-field environmental conservation program (PECP)"

PFECP is financed 100% by the general account of the central government. The explicit policy targets of this programme are income redistribution and enhancing the multifunctionality of the rice paddy-field.

According to the programme, guidelines set by the Ministry of Agriculture, municipalities (cities, Gun, Gu) decide on candidate farmers for the programme and check those designated as beneficiaries carry out the tasks to which they have committed. These include soil investigation, chemical residue analysis, account recording, and training on environmentally friendly farming. To be eligible farmers must carry out certain tasks as follows:

- maintain the shape and the function of the rice paddy-field;
- carry out environmentally friendly farming practices (for example, observing standards for chemical use); and
- maintain records on the amount of pesticide and chemical fertilisers that are used.

Local agricultural offices, such as Agricultural Development and Technology Centre, National Agricultural Products Quality Management Service, Korea Agricultural and Rural Infrastructure Corporation, and local prefectures monitor farmers' commitments. KRW 532 thousand is paid for the eligible farmers within the Agricultural Promotion Zone (APZ), while KRW 432 thousand is paid for the farmers in non-APZ.

The combination of central financing and decentralised implementation and monitoring would seem to correspond closely with the precepts of fiscal federalism, whereby income distribution should be a central function and the provision of environmental services a more local or site specific function.

Financing rural development programmes

The fiscal federalism literature suggests that rural development programmes should be designed, financed and implemented at the local level. In Korea, rural development programmes are financed by the central budget of the Ministry of Agriculture, inter-governmental grants (special grants from the Ministry of Government Administration and Home Affaires), loans from central government, local government's matching funds, and beneficiaries' contribution. In 2003, the "remodelling of rural residences" programmes were integrated into the newly introduced "comprehensive development program for rural communities", and funded by KRW 5.4 billion (USD 4.5 million). Half of this amount was distributed in the form of a loan from the central government. The rest was distributed through special grants, local budgets, and contributions from beneficiaries.

There are, however, arguments in favour of central financing. For example, rural development programmes are in part designed for regional income distribution. Improving living conditions in rural communities may also prevent migration to already congested urban areas.

The Korean government recently launched a multi-ministerial cooperation network to carry out a comprehensive rural development initiative under new legislation. Under-developed rural areas need policy interventions that go beyond those of the Ministry of Agriculture as the living conditions and the quality of life in these areas deteriorate. The financing available from the Ministry of Agriculture, although increasing, is not adequate.

The Ministry of Agriculture is also extending its support to agri-tourism as a source of non-farm income. And although farms already provide rural amenities and cultural heritage, villages need to install comfortable facilities for farm stay programmes. The central government and sub-central governments encourage such programmes with financial assistance. The villages which participate in these programmes receive KRW 0.2 billion each. Sub-central governments fund about 50% and the rest is paid by central government. In practice, the "agri-tourism" programme seems to be appropriate for regional financing since the benefits are region-specific.

Level of governance

The centralised financing of direct payment programmes can be partly explained by the fact a main policy goals is inter-regional income redistribution. Agricultural regions are relatively poor and their prefectures depend on the central government or the upper-level of sub-central government. With little financial autonomy, rural regions are not able to design and launch agricultural policies of their own. However, the level of government at which policies are financed differs according to the characteristics of the agricultural and rural programmes. Financing of "environmentally friendly agricultural programmes" is more decentralised than that of direct payment programmes with fund-matching from sub-central governments or partnership between central and sub-central governments.

According to the "Implementation Guideline for Agricultural and Forestry Programmes (IGAFP)", the direct payment programmes in Korea are classified as "public programmes", while the agri-environmental programmes described above are "voluntary programmes".[22] Almost all paddy-field farmers are eligible for the "paddy-field environmental conservation programme" if they commit to basic good farming practices. On the other hand, the "environmentally friendly agricultural zones (EFAZ)" are created only in villages that are ready to accept fund matching and compulsory regulations. The EFAZ has few spillovers across village boundaries. Therefore, decentralised financing seems to be a good solution.[23]

22. Public programmes are directly carried out by central governments or mandated to local governments, governmental agencies, farmers, producers' organisation or agri-business employers with financial assistance. While voluntary programs are carried out by farmers, farmers' organisation, or agri-business based on their own plans. Voluntary programs may involve grants or loans.

23. Such logic underpins Oates' "Decentralised Theorem". The Oates Theorem is, of course, true only under the condition that each level of government assumes certain responsibilities. When spill-overs are present, the appropriate level of governments depends on a weighing of the benefits of internalising externalities with the costs of uniformity.

The existing public finance literature has typically modelled a centralised system as one in which public spending is financed by general taxation, and all districts receive a uniform level of the local public goods. A decentralised system is one in which local public goods are financed by local taxation and each district is free to choose its own level of service (Oates, 1998). In the agricultural sector, the Korean government defends the highly centralised nature of financing as related to the public good characteristics of the NCOs and jointness. In reality, this may reflect the dominance of the central government, especially in the area of revenue raising in a highly unitary state. However, decentralisation could generate economic and political advantages. Lower levels of government are more attuned to their population and therefore more easily develop policies that reflect local demand. But if there are spillovers beyond the local level, there may be under-provision as compared with central government provision.

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3. Canada – Financing agricultural policies – The level of government[24]

Overview

Canada is a federal nation made up of ten provinces and three territories. Powers are formally divided between the national and provincial governments by a constitution. The Constitution reserves specific powers for the provinces and these powers are seldom relinquished. Unlike the United States there has never been sufficient pressure to create a strong national government. However, there is a strong tradition in Canada of proactive government at all levels. Because the provinces differ greatly in size, population and the volume of economic activity, there are great differences among them. To address part of this gap, the Canadian government has always provided equalization funds to the less advantaged provinces.

Provinces are primarily responsible for most social and economic programs and they control almost all the public land in Canada. While the national government has implemented a number of country wide programs they are almost always delivered through the provinces and the specific nature of the program may vary from province to province. The larger provinces have considerably greater capacity to both fund and deliver any program than the smaller ones and these differences in capacity present major challenges for federal provincial relations.

Provinces establish the local form of government. There is considerable variability in how the provinces structure government. In Ontario, major amalgamation of cities and counties has taken place to create large regional municipalities that govern sub provincial units and have large amounts of fiscal capacity and power. Quebec has a distinct system that reflects its unique heritage. In several provinces there is still unincorporated territory that has no local government. Typically, this is the most remote and least populated part of the province.

Sub-national government accounted for just over half of all government outlays in Canada in 2002. Of this share the provinces accounted for the vast majority (80% of sub-national spending). In Canada, the main expenditure items for provinces are health care and education. Both of these expenditures are much larger than the shares typically found in OECD countries that have federal systems of government. Other expenditure categories are not significantly different from other federal countries.

Structure

National-provincial relations

A distinctive feature of the federal system in Canada is the importance of federal-provincial negotiations. Because Ontario and Quebec combined account for the majority of the population, wealth, and economic activity in the country, they are able to bargain almost as peers with the national government. Other provinces often have different interests than the two central provinces but without the tacit consent of the two largest provinces there is limited scope for national policy to move in the direction of the other eight.

Over time the fiscal capacity of the national government has strengthened relative to the provinces. This reflects the dominant role of income tax as a source of revenue and the presence of a national sales tax. As a result, while the federal government has limited ability to actually deliver programs to Canadians it has the fiscal capacity to induce provinces to deliver these programs in a form that meets both provincial

24. This section was prepared by a consultant, Professor David Freshwater, Department of Agricultural Economics and Martin School of Public Administration and Public Policy, University of Kentucky, United States.

and national interests. Currently, there are three major federal-provincial transfer programs in place: equalization payments that provide funds to all but the two wealthiest provinces; established program funds that provide money for health care and higher education; and federal support for social services to the poor or others who require public assistance. In each case, the national government establishes performance and delivery criteria, but each province manages the actual programs. Despite major equalization payments there are large and persistent differences among provinces in terms of per capita GDP, income and wealth.

In Canada, because the provinces control most of the public lands they have the greatest influence over resource management and taxation of these resources. In some provinces, natural resource taxes provide a major source of provincial revenue. In other provinces, there are limited opportunities for resource taxes. Despite large differences in the underlying fiscal capacity of the provinces the existence of equalization payments provides a framework for tax harmonization. Every province but Quebec piggybacks its personal income tax onto the federal system. Provincial sales taxes are mostly harmonised with the national Goods and Services Tax.

Provincial/local government relations

The Canadian constitution makes no mention of local government and consequently the powers and responsibilities of local government devolve from each province. As noted above there are multiple models of organizing sub-provincial government, with the county system being the most common. Local governments in Canada are relatively weak and have limited popular support. Large urban places tend to have far more power and responsibility than do smaller governments, but even they are closely supervised by the provinces. There are ongoing efforts in most provinces to consolidate local governments to obtain scale economies, but this often has the effect of weakening citizen support for government.

Local government rely almost exclusively on property taxes and fees for revenue, but their discretion on tax rates is limited by provincial oversight, or by provincial requirements to fund programs at specific levels. Provinces provide significant amounts of equalization payments because in all but the smallest provinces intra-provincial differences are as large as inter-provincial ones. In larger urban centres there have been a number of tripartite agreements that involve the city, provincial and national governments jointly committing to specific activities. These reflect the greater devolution of powers to large cities and the unique needs of particular large urban places.

Agricultural policy

Agricultural policy in Canada is primarily a national responsibility, although provincial governments play a central role in specific aspects. Agricultural policy was not clearly assigned in the British North America (BNA) Act, but the development path of Canada moved it to a national government responsibility. In the nineteenth century the main function of the national government was consolidating Canada's influence in the western region as a counterforce to US expansion. This required settling territory ceded to Canada by encouraging immigration of farmers. Thus development policy became agricultural policy.

For decades there have been two distinct aspects to Canadian agriculture and agricultural policy. In the eastern provinces agriculture is largely focused on domestic markets while in the western provinces it is highly export oriented. The very different needs of the two types of agriculture have complicated policy. Policy in the west has focused on enhancing exports through transport subsidies, and marketing agencies. In the east there has been greater use of supply management and border measures that increase the prices paid by consumers.

More recently continental economic integration has provided a new reason for a national role. Trade flows between Canada and the United states continue to increase in importance and agriculture is no exception. Managing these flows is a contentious process and the national governments of both countries spend considerable resources and time resolving trade irritants.

Agricultural programs in Canada fall into two broad categories. Supply management programs are used for a small number of products that are almost entirely consumed within Canada. A combination of border controls and limits on domestic production result in high consumer prices and stable income levels for the farmers who produce these products. Supply management is used for dairy, poultry and few other products. Typically supply management involves the provinces since they have the ultimate authority to control production levels, but the national government has to provide the border protection to control imports.

The second form of policy provides income or price support to farmers. It is most commonly applied to products where there is either a significant export market or significant imports. Because of continental integration there are numerous farm products in Canada that are exported to the United States by western provinces and imported from the United States by eastern provinces. For these products agricultural policy is more complex because of open borders and competing interests. In the last ten years Canada has moved from commodity price supports for specific products to more general farm income stabilization program that is available to all farmers. In both cases funding came largely from the general revenues of the national government. With income stabilization there has been a greater effort to involve provincial funding and matching contributions from farmers.

Provinces are engaged in a number of specific aspects of agricultural policy. Perhaps the most important is land use. Provinces establish land use regulations either directly or through local governments. They have also imposed restrictions on land ownership, in some cases by limiting non-resident purchases of farm land. Provinces are also responsible for the operation of the agricultural extension service, which provides technical support to farmers and for the creation and supervision of marketing agencies for farm products. The vast majority of these actions are financed through general tax revenues at the provincial level.

Program design is increasingly carried out through a federal-provincial consultation process. This follows a standard pattern for much of Canadian policy and reflects both the strong powers and differing conditions of the provinces. In the process, the national government typically proposes specific types of actions and provinces respond to the initial offer. Through negotiation a revised policy may develop if sufficient consensus is found. This policy may contain a common core and variations to meet the needs and capacities of different provinces.

Agricultural policy examples

Prairie Farm Rehabilitation Administration (PFRA)

The Prairie Farm Rehabilitation Administration was created in the 1930s by the national government to provide emergency relief to drought stricken farmers in the Prairie provinces of Alberta, Saskatchewan and Manitoba. It had two main functions, to help relocate farmers from environmentally fragile lands and to encourage better land use in the western provinces. The first task entailed buying land in areas where cultivation was not feasible and moving families either to more productive land or to urban areas. The second task was to convert more fragile lands to better uses and to provide farmers with improved cultivation techniques so soil erosion could be reduced, and water supplies enhanced.

PFRA introduced summer fallow practices, the use of shelterbelts to stop wind erosion, and the construction of dugouts to provide water supplies for farm households and livestock. They also implemented a community pasture system that provided a common property pasture for farmers in a region to support cattle production. While much of these actions would normally be clear provincial responsibility, the three provinces were virtually bankrupt at the time and supported the intervention. Because the fiscal capacity and technical skills of the national government were superior to the provinces there was clear benefit.

Following the 1930s PFRA continued to work in the prairies primarily in small and large scale water projects, providing trees fro shelterbelts and in management of community pastures. Clearly all of these activities have a combination of public and private good attributes and they could in principle be provided by local or provincial governments, especially since the national benefits are limited. However once the national government introduced the program and it developed a client base, there was popular local support for its continuation.

St Lawrence action plan

Canada and the province of Quebec are jointly supporting a project to enhance water quality in the St. Lawrence river. While the project has multiple dimensions, one of them is managing the adverse consequences of agricultural production on water quality. Pesticide residues are found in most of the tributaries and in the main stream of the upper reaches of the river. The major source of pesticide pollution is herbicide runoff from row crops. Up to 50% of the herbicide applied in Quebec is in the St. Lawrence basin and limiting its use will require better management practices by farmers to maintain yields while reducing the use of herbicides.

Both the provincial government and the Government of Canada play key roles in the process. The province provides extension/training support to educate farmers and has the authority to manage land use practices in the basin. The national government provides much of the research base for integrated pest management systems and has river management authority on the navigable portions of the river. Because of the complex nature of the problem and the division of responsibility under the Canadian constitution, this type of joint project is required to effectively manage an environmental improvement strategy.

Green cover

Agriculture and Agri-Food Canada has established a program similar to the US Conservation Reserve that is designed to take environmentally sensitive prairie farmland out of crop production. Farmers who have cropped eligible land are eligible to convert up to 25% of each quarter section they own to permanent grassland or wood-lot. The Government provides an initial payment to establish the new cover crop and a final payment once it is established. Contracts to maintain the land in the cover crop for ten years are required.

A second element of the program that is jointly funded with Ducks Unlimited Canada is to examine the impact of different agricultural management practices on land in the immediate vicinity of micro-watersheds. The focus is on large ponds, wetlands and other minor streams that provide significant local wildlife habitat. By examining impact of practices such as, bank fencing, buffer strips and grass covered flood-ways on water quality advice on better practices can be provided to farmers.

4. The United States – Financing agricultural policy - The level of government[25]

Overview

The United States has a federal system of government with a national government and fifty states. While there is considerable variability in the relative size of the states, no individual state is large relative to the nation as a whole. The national government is relatively powerful compared to the states. This reflects both the diverse interests of the states and also a series of judicial decisions and historical event that have reinforced a predominant role for the central government.

The national government plays a much larger role in some parts of the country than in others. Those states west of the Mississippi river still have a large preponderance of federal lands, in some cases over half their area. This presence significantly alters the relations among national, state and local government. Conversely, state governments control relatively small amounts of land, primarily in the form of parks or nature reserves.

A distinct feature of the US system of government is the highly responsive nature of the national legislature to local concerns. Because the electoral fate of a legislator largely depends upon his or her local popularity there is considerable interest in providing local public projects within federal legislation. This "ear-marking" tends to make local interest a central feature in the implementation of national policy.

Local governments are not mentioned in the US Constitution and derive their powers and responsibilities form acts of State legislatures. Counties are the major sub-state unit of government and counties or their equivalents, fully exhaust the territory of the states. In some states sub-county units, such as townships also exist. Cities are typically located within a county, but there are some aberrations. The powers of local government not only vary from state to state, but may also vary within a state, with larger population units having broader powers.

Structure

National/state relations

While the original 13 colonies assigned specific powers to the national government through the Constitution, there has been a steady strengthening of national government powers relative to the states over time. The national government has expanded its areas of responsibility and its sources of revenue as the economic and social structure of the country evolved. While tariffs and excise taxes were the initial main source of funds, they have been supplanted by individual and corporate income tax at the national level. States also rely on income taxes for their primary source of revenue but tend to have relatively low rates of taxation to limit relocation of individuals and firms. These self-imposed limits on tax revenues provide an effective limit on the size and scope of state government. There is only limited harmonization between state and national income taxes.

While the national government provides some direct transfers to state governments it is restricted to conditional grants for specific programs, in particular health care and public assistance. Unconditional grants to the states do not exist and there are no equalization programs. Nevertheless there are large national outlays in every state. These come through a variety of federal agencies including, health and welfare, transportation, agriculture, defence and housing. While states may have some influence on the

25. This section was prepared by a consultant, Professor David Freshwater, Department of Agricultural Economics and Martin School of Public Administration and Public Policy, University of Kentucky, United States.

nature of the specific project the main program design is established in Washington, and often so is the specific project. This system allows the national government to effectively by-pass the state and directly deliver support at the local level, even in functions that have a formal role for the states.

State/local relations

Local governments are created by legislation in each state. All states have implemented a county based system of local government and use these counties as the basic unit of local government. States assign different powers to county governments, typically on the basis of population, and there is considerable variability in powers across states. Typically, county governments are relatively strong with significant local political support. The willingness of the national government to by-pass states and deal directly with local communities provides a degree of autonomy to local government that is not implied by state statutes.

Local governments rely primarily on property taxes and licenses for their revenue, but there is a growing use of taxes on earnings. Historically, the main responsibility of local governments was education and local infrastructure. However, more states are moving to equalization grants to jointly fund education, due to judicial requirements for equality of educational opportunity.

Agricultural policy

Initially, the United States was a predominantly rural and agricultural society. Agriculture was the basis of most of the initial colonies and motivated the early westward expansion. The westward expansion in the nineteenth century was accomplished by successive waves of farm settlement. Thus, the United States and Canada share a development heritage based on attracting farmer immigrants and of agricultural policy supporting the settlement process.

While the Constitution is largely silent on the division of responsibility for agriculture, policy development in the United States has led to the national government having a dominant role. While all states have Departments of Agriculture they are largely focused on regulatory functions, such as, quality standards, market promotion and certification and licensing. By contrast, USDA continues to have offices in the vast majority of counties simply to manage its programs at a local level.

The limited role of states in agricultural policy largely reflects two factors, the first is the crowding out effect of national policy, which offers comprehensive support for most agricultural functions and the second is the relatively limited fiscal capacity of the states that leads to significant fiscal pressure. In addition, while the national government has adopted cost share or matching criteria by the state for many of its other programmes (for example, health care, welfare, environment), it largely continues to fund all the costs of agricultural programmes.

The principle exception to this is the Cooperative Extension programme, established as a three-way cost share between national, state and county governments. In the last two decades, states have taken on a larger share of extension funding as federal contributions have been reduced. However, the relative contribution of state and county to local extension programs varies considerably by state. Some states fund by far the largest share, while counties fund a higher percentage in other states. At the local level, Extension may be financed from general revenues or from a specific tax. Obviously, the nature of Extension now varies considerably from state to state, even though it still appears to be a national program.

Agricultural policy continues to cover the same main areas as programmes initiated in the 1930s. These include direct support for farm income and various conservation and food safety programs. While the specifics of the programs have changed and the relative share of various programs adjusts from Farm Bill to Farm Bill, the main structure has remained stable. The only major exception to this was the 1996

Farm Bill which moved significantly away from crop price support. The 2002 Bill returned to the traditional structure.

Direct support payments are provided to producers of specific crops, and some minor animal products. Large sectors of US agriculture, including cattle, pork, and fruits and vegetables do not receive price support payments. Some of these sectors receive other forms of support. For example: cattle producers in the western states have access to federal lands for grazing; fruit and vegetable producers in the West receive irrigation water that has large embedded federal subsidies; and, Federal legislation allows farmers to form marketing associations that can limit production and bargain for higher prices.

Because the majority of public lands in the United States are controlled by the national government, states have limited direct control over land. They do, however, have considerable indirect control. States can impose environmental regulations and land management practices to meet state standards. They also can regulate land use, primarily through the delegation of zoning powers to local governments. Many states have also capped local property tax assessments on farmland and have established "right-to farm" laws that protect farm operations from local controls.

The national government, because it plays the dominant role in agricultural policy, establishes the direction for agricultural interventions. The main mechanism are the periodic Farm Bills, which establish the legislation for the various activities of the Department of Agriculture. Congress and the executive branches play major roles in establishing farm policy, as do various interest groups. Funding for these activities come through annual appropriations and a considerable portion of the authority available to USDA is unused because no funds are appropriated.

Virtually all USDA programs are financed from general funds, although there are some cost recovery charges paid by users. These, however, typically flow back to the Treasury and do not remain in USDA. In the case of environmental programs there is a greater tendency to use cost-share approaches where the farmer is responsible for a significant portion of the project cost.

Conservation reserve

The Conservation Reserve was established in 1986 Farm Bill to address two concerns. The first was that excess farm production overhung the market and was depressing prices. This lowered income for farmers and triggered high government outlays for price supports. In addition, environmental groups were concerned that, in an effort to increase income, farmers were converting marginal lands that were either environmentally fragile or provided habitat benefits to cropland. The Conservation Reserve provided a means to recognise both concerns.

Farmers were able to submit bids for payments to remove some of their property from production on a long term basis. Farmers indicated the minimum price they would accept to remove a given quantity of land and USDA accepted the lowest bids from each county. Since less productive land was more likely to be bid into the Reserve and was most likely to provide the largest conservation benefits multiple objectives were addressed. Farmers were restricted in how they could manage the land to ensure that it did not depress prices for other commodities and to meet environmental goals. Ten to fifteen year contracts ensure that land remains in the reserve for a significant period of time. Further since the Conservation Reserve has been included in subsequent farm bills there has been an opportunity for land to be re-enrolled.

Purchase of development rights

In numerous urban areas, local government have been concerned about the effects of urban sprawl. One strategy that has been employed with varying degrees of success is the purchase of development rights from farmers by local governments. Under this scheme, the farmer agrees to sever the right to convert farmland to an alternative use from the property deed. This can either be for a specific period of time or in perpetuity. Typically the farm also receives property tax benefits in form of lower assessment rates to reflect the diminished value of the property.

The community recognises that the farm provides a local public good visual amenity that is largely an externality for the farmer. By purchasing the right to convert the land to alternative uses the community assures that it continues to receive the amenity. Local governments are best positioned to act on behalf of community residents because they can aggregate demand. While the program has functioned effectively in some places it is challenged by the relatively high market value of farmland in proximity to urban areas and the limited amount of funding available for land purchases. This has led communities to only purchase rights for defined periods. While temporary protection is provided there will be considerable difficulty in renewing the protection if development pressures build over time.

Part III.

Preliminary conclusions

Pursuant to the work on multifunctionality, this report explores the appropriate level of government at which policies related to the environment or other aspects of the multifunctionality of agriculture should be designed, implemented and financed. The basic tenets of fiscal federalism are examined in the light of knowledge about the public good and spatial characteristics of different NCOs and negative externalities of agriculture. With a view to assessing the extent to which the principles defined in fiscal federalism operate in practice, actual policy implementation in a number of countries and regions is examined.

The main recommendations of fiscal federalism concerning the appropriate level for designing, implementing and financing policy measures would seem to be relevant in the case of agriculture. Essentially, if the objective relates to income distribution, policy should be a national matter. This is also the case if non-use values predominate in demand for an NCO (or if there are significant regional spillovers). To the extent that NCOs are local public goods, with use values predominating, funding by sub-central government is most appropriate.

The importance of this issue arises from the growing sense that many non-commodity outputs of agriculture have their greatest impact in a relatively small spatial areas. This means that they are typically local public goods or spatially bounded externalities. Commodity markets are largely national in scope and commodity outputs can be readily transported from one region to another subject to transport cost limitations. In contrast, local public goods and externalities are specific to a place and cannot be moved. Of the most commonly enumerated non-commodity outputs — environmental effects, both positive and negative, wildlife effects, cultural and historical aspects, rural development effects and food security — only the latter does not have a strong spatial component. For all the rest, the nature of the output must be defined in a specific location for it to be fully described and its value determined.

Despite the changing emphasis in the agricultural policy debate away from commodity and income issues to issues related to externalities and public goods, this report finds that in practice agricultural policy remains highly centralised. This is the case in federal states as well as in unitary states. This situation reflects the continuing dominance of commodity and market policies that, by definition, need to be implemented at the national level, but also reflects historical and constitutional factors related to the original division of responsibilities. Thus, in the United States both policy design and financing are largely a matter for the federal government although implementation is carried out by the States and this has long been the situation. Similarly, in Canada, although responsibility for policy design is shared between the federal government and the provinces, the greater fiscal strength of the national government has meant that financing is predominantly a national matter. The continuing strong role of central government in Korea is a reflection of that country's constitutional structure but also of the belief that commodity based support programmes implemented with the help of border protection measures are best able to assure production of commodities as well as the NCOs most prized by Korean society. In the EU as in many OECD countries, most of the support given to agriculture continues to be delivered through market mechanisms that are, by definition, supra-national in character, or through payments that are not regionally or spatially differentiated. However, the on-going regionalisation of agricultural policies is bringing about some diversification reflecting the preferences of citizens and the needs of the agricultural sector. The impact of supra-regional levels remains, however, important through co-financing mechanisms in particular.

Some examples of shifts have been found that would seem to be consistent with the principles of fiscal federalism as applied to agricultural policy. This is most marked in the European Union, where recent reforms, including the shift from Pillar 1 to Pillar 2, allow for considerably more flexibility in policy design and implementation at the national or sub-national level (depending on whether countries are organised as federal or unitary states) against a background of frameworks and rules set in Brussels. The main conclusion is that where such flexibility exists, considerable diversity in policy emerges. Differences reflect a combination of factors ranging from the nature of the agricultural production systems, the capacity of the region to provide co-financing, and societal demand as reflected in political processes and structures. There would also seem to be at least some confirmation of the idea that decentralisation would favour the development of innovative approaches (under very specific conditions) or would allow a different distribution of aid than under supra national or national measures.

Available time and resources have meant that only a preliminary and incomplete analysis of the issues has been possible in the context of the current project. Although the scope of this paper has been limited to policy issues that arose in the work on multifunctionality, the question of the appropriate level of government at which to design or fund different policy measures could also be posed across the whole spectrum of agricultural policy issues. Several aspects have been omitted or barely touched upon, including the implications of decentralisation or devolution for administrative costs, or for local democracy including the risk of capture by interest groups. Nonetheless, this study has touched upon some of the issues that are likely to become increasingly important as agricultural policy continues to move away from commodity orientation that dominates the current policy set.