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Domestic sub-national support to agriculture
*Evidence, significance, and reporting procedures in Australia, the EU
and the United States*

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Preface

This report is the result of an effort to describe and compare the evidence and significance of sub-national domestic support to the agricultural sector in Australia, the European Union, and the United States. In addition, the report investigates the procedures of reporting sub-national domestic support to the OECD for the purpose of PSE calculations, and the way sub-national domestic support is notified to the WTO.

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Summary

The growing concern about sub-national domestic support to agriculture is caused by the increased international monitoring of agricultural policies (through the WTO and the OECD) combined with the resulting problems of broadening the scope of agricultural policies to include rural development concerns.

In this study, the term ‘sub-national’ is defined as including any level of governance below a country’s (or a group of countries’) top level of governance. Australia, the EU, and the United States are selected as case studies in an attempt to describe and compare the evidence, significance, and reporting procedures of sub-national domestic support. These countries are major actors in world agricultural markets, possess considerable political power to influence international negotiation outcomes, and are able to set standards in the way sub-national domestic support is reported.

The study shows that sub-national domestic support is evident in all countries investigated, but its significance varies considerably. Measured as a percentage of total domestic support, sub-national domestic support accounted for 5% and 15% in the US and the EU, respectively, while it reached 50% in Australia. The main reasons for the differences can be found in the historical development of the countries’ governance structure in general and the evolution of the countries’ agricultural policies in particular.

Sub-national domestic support often takes the form of administration, research, training, extension, inspection, pest and disease control. These types of measures could be called ‘provision of public infrastructure’. Other examples of sub-national support take the form of environmental programs, structural programs, and rural development programs. Typically, domestic sub-national support is covered by the ‘green box’ of the WTO (i.e., support exempt from reduction commitments), and the category of general services of the PSE method. Being ‘green box’ measures, sub-national domestic support is not expected to distort trade. At the same time, examples of the EU show that the direct income effect of domestic sub-national support measures may be limited.

Sub-national domestic support is measured by the OECD as part of the PSE calculations, and notified to the WTO as a result of the Uruguay Round Agreement on Agriculture. For the EU and the US, the study compares the data used by the OECD, and notified to the WTO with data from national sources. It turns out that the OECD data and the data in the WTO notification documents are quite similar. A simple reason is that they stem from the same source. A comparison of these data with data received from national sources reveals partly considerable differences in the amount of sub-national support, especially in case of the EU. Parts of these differences can be explained by policy coverage. Here, the problem of including rural development programs in (sectoral) agricultural policies becomes evident.

In order to improve the transparency of sub-national domestic support, the study suggests to report domestic support by source of funding (i.e., level of governance) as it is currently the case for Australia—at least with regard to WTO notification documents.

1 Introduction

Support to agriculture is an ongoing and important issue in most countries in the Western world. Agricultural support can be transferred from taxpayers and consumers to agricultural producers in quite different ways. One such way is domestic support by which the government provides public expenditures to the agricultural sector. Given a country's governance structure, there will be different levels of government (national and sub-national, e.g.). This implies different sources of funding for agricultural programs.

As domestic agricultural policies more and more underlie international negotiations and reduction commitments, the standards and procedures of measuring agricultural support become a subject of growing concern. Due to its complex nature, this is especially true for domestic support at the sub-national level.

The growing interest for sub-national support may also follow a new orientation in agricultural policies. In the EU, for example, purely national financed direct payments played an important role in the recent enlargement of the EU with some Nordic countries (i.e., Sweden and Finland) and Austria. At the same time, agricultural policies tend to be re-directed from being pure sectoral policies towards becoming integrated 'rural development' policies. The strengthening of rural development as the 'second pillar' of the EU's Common Agricultural Policy (CAP) is one example. Since sub-national support commonly includes rural development measures, a delicate problem of demarcation might occur with respect to what is (narrow) agricultural policy and what is (broad) rural development policy.

This report is concerned with the evidence, significance, and reporting procedures of domestic sub-national support in selected countries. In order to keep the analysis at a manageable level, the study is restricted to Australia, the EU, and the United States. These countries are important players in the international agricultural policy context. Not only are they major actors at world agricultural markets, but they are also important players when it comes to international policy negotiations. Thus, the standards set out by these countries can be expected to have a considerable impact on the procedures applied by other countries.

For the purpose of the study, the term ‘sub-national’ is defined as including any level of governance below the top level of a country or group of countries. For the US, the ‘sub-national’ level includes the level of the Federal States and all levels below. In case of the EU, ‘sub-national’ means Member State level and any level below Member State level (Federal States level in Germany, e.g.). The level of States and Territories and any level below that level make up the ‘sub-national’ level in Australia.

In addition, the funding of agricultural policies is sometimes shared between several levels of government. In this study, the term ‘sub-national’ refers only to support measures that are fully funded at the ‘sub-national’ level defined above. To clarify this definition, consider the CAP of the EU. The funding of regional support measures is usually shared between the EU and Member States. Those support measures do not classify as ‘sub-national’ in the sense of the definition applied, although the support measures require funding at the ‘sub-national’ level. In the case of Germany, national agricultural support measures are sometimes funded by the Federal government and the Federal State governments. Those support measures qualify as ‘sub-national’ support measures in the sense of the definition applied, because the German Federal level and the German Federal State level are both defined as ‘sub-national’ levels.

In the next section, the current treatment of domestic sub-national support in the WTO notifications on domestic support and the PSE method of the OECD are discussed. The section is followed by country studies covering the Australia, the EU, and the US. A concluding section highlights the main findings of the study, and sketches a way to further improve the reporting standards regarding domestic sub-national support.

2 Measuring domestic sub-national support

There are two main ways of measuring domestic agricultural support: Notification of domestic support to the WTO, and the PSE calculations of the OECD.

The notification of domestic support is an achievement of the WTO Agreement on Agriculture, which was completed in 1995.¹ Each WTO Member country is required to notify its domestic support measures to the WTO by preparing a list of domestic support measures for a given report period. The list is submitted to the WTO Committee on Agriculture and called ‘Notification of domestic support commitments’. The rationale behind the notification requirement is to safeguard that each WTO Member country satisfies its commitment on the reduction of agricultural support. In addition, it aims at increasing the transparency of agricultural policies in the Member countries. The definition of domestic support, so-called “*Aggregate Measurement of Support*” or AMS for short, is stated in art. 1 of the WTO Agreement on Agriculture:

*“Aggregate Measurement of Support” and “AMS” mean the annual level of support, expressed in monetary terms, provided for an agricultural product in favour of the producers of the basic agricultural product or non-product-specific support provided in favour of agricultural producers in general, other than support provided under programs that qualify as exempt from reduction under Annex 2 to this Agreement (...).”*²

The specific details of the calculation method are given in Annex 3 and Annex 4 of the Agreement. Annex 3 defines the calculation of the AMS, while Annex 4 deals with the calculation of Equivalent Measurement of Support.³ Both Annexes state explicitly that “*support at both the national and sub-national level shall be included*”. They thus provide the legal basis for the requirement to include domestic sub-national support in the notifications.

¹ The text of the WTO Agreement on Agriculture can be found on the WTO website (<http://www.wto.org>).

² AMS is commonly referred to as ‘amber box support’, while support exempt from reduction is called ‘green box support’.

³ Equivalent Measurement of Support is an alternative way of measuring AMS and used in cases where “*market price support (...) exists but for which calculation of this component of the AMS is not practicable*” (Annex 4, paragraph 1 of the Agreement).

There has been some concern about the standards and procedures to notify sub-national support in the WTO Committee on Agriculture. For example, at the Committee meeting held on 30.9.1998–1.10.1998, Australia and Korea sought confirmation from the US that all State level programs for agriculture, that are notified as exempt payments (i.e., ‘green box’ support), are covered by the notifications (WTO 1998). The US responded that two State level programs are notified. The aggregate State expenditures on agricultural programs are reported under the ‘green box’, while State Credit Programs are contained in current AMS. In other words, the US notifies all domestic sub-national support measures in only two figures. It is clear that this procedure is far from being transparent. Furthermore, the US contends that these are the only State level agricultural programs for which the US was able to obtain data, but that “*to the extent possible, all sub-national expenditures on agriculture were included*”. This formulation hints that there might be other agricultural programs that are not included in the notification. In a follow-up discussion, New Zealand, Australia, and Switzerland encouraged the US to look at ways of improving its data collection methods to ensure that all State level expenditures are accurately captured in future notifications. The US procedure of notifying State level expenditures that fall into the ‘green box’ has, however, not changed in later notifications.

The OECD undertakes annual calculations of so-called ‘Producer Support Estimates’ (PSE).⁴ The PSE is a measure of support provided to agricultural producers. In principle, the measure covers both expenditures at the national level and the sub-national level (and in case of the EU, of course, at EU level). The extent as to which sub-national support measures are indeed covered by the PSE estimates, depends, however, on the ability of the OECD to obtain such data. The OECD provides an overview over the definition and sources of the PSE calculations for each country (see OECD 1999, e.g.). For the EU, the OECD contends that “*the degree of detail still varies across countries and policy coverage is not yet comprehensive, particularly for those countries for which sub-national measures are important*”. There are no such comments for the US or Australia. However, the expenditures on general services (administration, research, extension, e.g.) by Australian State governments are calculated under the assumption that the expenditures have evolved at the same rate as the increase in the consumer price index. There is no further comment as to which this procedure is reliable or not.

In conclusion, although domestic sub-national support measure shall be included in both WTO notifications and PSE-calculations, there seem to exist quite different approaches and degrees of coverage across the Member countries. This conclusion has important implications. There is a potential danger for an incorrect calculation of the PSE, and an incorrect notification of domestic support measures. This may also have an impact on a country’s actual necessity for policy reform in order to satisfy reduction commitments. In addition, cross-country comparisons may be biased due to different degrees of (sub-) national support coverage.

⁴ Prior to 1999, the PSE was referred to as Producer Subsidy Equivalents. The results of the PSE calculations together with a brief overview over the calculation method are presented in annual reports entitled “*Agricultural Policies in OECD Countries: Monitoring and Evaluation*”. A document on the PSE methodology (“*Methodology for the measurement of support and use in policy evaluation*”) can be downloaded from the OECD Website (<http://www.oecd.org>).

3 Country studies

3.1 Australia

3.1.1 Introduction⁵

The Commonwealth of Australia is characterized by a Federal state system recognizing the British monarch as head of State. It consists of 6 States and 2 Territories: the Australian Capital Territory with Canberra as the Capital, New South Wales, the Northern Territory, Queensland, South Australia, Tasmania, Victoria, and Western Australia. Prior to the achievement of Federation, each State had its own self-government. This fact partly explains the significant power held by the State and Territory governments. The Australian Capital Territory and the Northern Territory are self-governing polities with powers almost matching those of the original States.

The Commonwealth government has exclusive responsibility for the administration of a wide range of functions such as defence, foreign affairs, and trade. The Commonwealth levies and collects all income tax and a significant portion of other taxes. Part of this revenue is distributed to other levels of government, principally the States (and Territories).

State and Territory government (referred to as 'State government' in this section) mainly administer public order, health, education, administration, transport, and maintenance of infrastructure. The local governments govern areas typically described as cities, towns, shires, boroughs, municipalities, and district councils. Their powers and responsibilities cover matters such as the construction and maintenance of roads, streets, and bridges, health and sanitary services, the administration of regulations relating to items such as slaughtering, weights, and measures. Local governments' own source

⁵ This section is based on material provided by the Australian Bureau of Statistics (<http://www.abs.gov.au>).

revenue is derived from property taxes. They also rely on grants from the Commonwealth and their own State government.

The contribution of the agricultural sector (including forestry and fisheries) to the gross domestic product (GDP) was 3% in 1999–2000. The sector stands for ca. 5% of total employment. According to figures from the Australian Bureau of Statistics, 409,200 persons were employed in agriculture and related services to agriculture in 2000. The number has slightly increased from 381,200 persons in 1995. In 2000, there were 144,560 establishments undertaking agricultural activity.⁶ The majority of these farms have their primary activity in agriculture. Most farms are either engaged in beef cattle, grains, sheep, dairy, or combinations of these.

The Federal system of the Australian Commonwealth implies that the funding of agricultural policies can, in principle, be provided by all three levels of government: Commonwealth government, State government, and local government. In practice, however, the Commonwealth and the States share the public funding of the agricultural sector. As will be shown below, the Commonwealth exclusively provides income insurance, producer retirement (dairy sector), and decoupled income support. Grants and subsidies for general services (administration, research and extension, e.g.), regional assistant programs, environmental programs, and reliefs for natural disasters are often shared between the Commonwealth government and the State governments. The State governments solely provide investment aids and some minor types of production-linked support.

In the following, the sub-national support measures for each of the original State and the Northern Territory are presented.

3.1.2 New South Wales

The sub-national grants and subsidies provided by the State government of New South Wales were around \$A 240 mill. in each of the two fiscal years 1998/1999 and 1999/2000. Agricultural support was reduced by ca. \$A 40 mill. in 2000/2001. Table 3.1 indicates that the amount spent on environmental programs increased in both relative and absolute numbers during 1998 and 2000/2001. In 2000/2001, environmental programs occupied almost half of the total contributions to the agricultural sector in New South Wales. Other important areas of support were research, pest and disease control and advisory and extension service.

Table 3.1 Sub-national support measures to New South Wales agriculture (mill. \$A)

	1998/1999	1999/2000	2000/2001
Research	44.8	35.2	26.0
Pest and Disease Control	43.2	28.9	17.1
Training Services	6.2	7.4	7.4
Extension and Advisory Services	40.6	24.5	17.3
Marketing and Promotion	0.4	0.4	0.4
Infrastructure Services	33.9	31.7	19.2
Natural Disaster Relief	10.1	7.1	7.5
Structural Adjustment Assistance	0.3	1.7	1.0
Environmental Programs	59.3	104.0	98.3
Total	238.8	240.9	194.2

Source: WTO 2002, 2001a, 2000

⁶ Firms with an estimated value of agricultural operations greater than \$A 5,000.

3.1.3 Queensland

The total amount of support to agriculture provided by the State government of Queensland was around \$A 200 mill. in 1998/88 and 1999/2000, while it decreased to \$A 160 mill. in 2000/2001 (see table 3.2). Among the most important programs was the Natural Resources Management Program, the Rural Industry Business Services, the Agriculture Industry Development Institutes, and the Productivity Enhancement Program. Somewhat surprisingly, the Productivity Enhancement Program does not seem to have been notified to the WTO in the 2000/01 reporting period, although it is still in existence (<http://www.qraa.qld.gov.au>). Other areas of support covered research, pest and disease control and infrastructure services. Among the notified support measures, only the grants to tobacco, that were introduced in 2000/01 with an amount of \$A 4.7 mill., are production-specific. It is claimed that tobacco may play a major role as a medical plant in the future (DPI 2001).

Table 3.2 Sub-national support measures to Queensland agriculture (mill. \$A)

	1998/1999	1999/2000	2000/2001
Research	27.5	35.8	49.4
Natural Resources Management Program		30.7	32.8
Pest and Disease Control	44.7	39.7	17.2
Training Services	1.6		
Animal and Plant Health	5.0	4.0	
Agriculture Industry Development Institutes	16.4	17.2	23.8
Rural Industry Business Services	15.6	30.0	28.5
Resource Sciences and Knowledge Business Group	30.4		
Development Incentive Scheme			2.9
Marketing and Promotion	5.8		
Infrastructure Services	27.6	13.4	5.2
Natural Disaster Relief	0.6	3.0	
Tobacco Adjustment Package		5.1	
Structural Adjustment Assistance		1.0	
Productivity Enhancement Program	22.0	26.7	
Southwest Strategy	1.3	1.6	
Desert Uplands		0.2	
Tobacco Grants			4.7
Total	198.5	208.4	160.5

Source: WTO 2002, 2001a, 2000

3.1.4 South Australia

Agricultural support provided by the State government of South Australia went mainly to research, pest and disease control, and extension and advisory services (see table 3.3).

Some of the regional assistance programs like the Riverland Rural Partnership Program and the Eyre Peninsula Strategy have been co-financed by the Commonwealth government in 2000/2001. The amount provided by the State government is therefore excluded in table 3.3 for 2000/2001. The only support measure that is notified as production-specific was the young farmer's scheme that was in effect in 1998/99.

Table 3.3 Sub-national support measures to South Australia agriculture (mill. \$A)

	1998/1999	1999/2000	2000/2001
Research	11.6	12.4	12.1
Rural Industry Adjustment Development Fund	1.1	2.7	1.5
Pest and Disease Control Programs	5.1	4.9	16.0
Training Services	1.3	0.2	3.2
Community Landcare		0.2	0.1
Property Management Planning			0.1
Rural Leadership and Associated Programs		0.2	0.2
Extension and Advisory Services	6.4	6.9	8.1
Plant and Animal Health			4.5
Marketing and Promotion	0.1		
Infrastructure Services			6.7
Eyre Peninsula Strategy	0.1		
Revegetation	0.1	0.1	0.1
National Heritage Trust		1.9	
Riverland Rural Partnership Program		0.2	
Regional Assistance	5.9	7.4	
Young Farmer's Scheme	0.7		
Total	32.4	37.1	52.6

Source: WTO 2002, 2001a, 2000

3.1.5 Victoria

The decomposition of support to agriculture in the State of Victoria is quite similar to the one in South Australia. Research, pest and disease control, and extension and advisory services dominated total sub-national support between 1998/99 and 2000/01 (see table 3.4). In addition, a considerable amount was spent on infrastructure services. The total amount of support has been quite stable during the reporting period with around \$A 150 mill.

The young farmer's scheme was the only support measure that is notified as production-specific in the WTO notification. The program assists young farmers starting-up farming with loans.

Table 3.4 Sub-national support measures to Victoria agriculture (mill. \$A)

	1998/1999	1999/2000	2000/2001
Research	21.5	21.1	42.7
Pest and Disease Control	19.7	20.6	15.8
Rabbit Management	4.7	5.2	3.8
Pest Animal Management	1.0	2.7	2.6
Pest Plant Management	7.1	9.5	6.7
Training Services	3.3	3.6	
Extension and Advisory Services	25.1	30.1	39.5
Inspection Services	3.9	4.2	
Marketing and Promotion	3.0	1.1	1.2
Infrastructure Services	40.2	48.0	30.2
Natural Disaster Relief	3.5	2.4	0.8
Land Aggregation Program	1.9	4.1	0.1
Productivity Enhancement Package	0.7		1.3
Young Farmer's Scheme	0.4	3.7	0.8
Total	136.0	156.3	145.5

Source: WTO 2002, 2001a, 2000

3.1.6 Western Australia

The total amount of State financed support to agriculture in Western Australia was around \$A 120–130 mill. between 1998 and 2001. The four most important measures were environmental programs, research, pest and disease control, and extension and advisory services (see table 3.5). In 2000/01, production-specific grants to dairy farmers were introduced in order to facilitate the restructuring of the Australian dairy industry. This measure came in addition to a Commonwealth program on dairy industry adjustment.

Table 3.5 Sub-national support measures to Western Australia agriculture (mill. \$A)

	1998/1999	1999/2000	2000/2001
Research	33.6	38.1	39.1
Pest and Disease Control	19.6	21.3	13.2
Extension and Advisory Services	14.2	15.8	18.7
Inspection Services	9.6	11.4	12.9
Marketing and Promotion	8.9	9.0	4.8
Infrastructure Services	7.2	5.0	8.9
Structural Adjustment Assistance	0.3		
Environmental Programs	22.0	20.2	24.1
Regional Assistance	12.5		
Dairy Adjustment Grants			8.2
Total	127.5	120.8	129.9

Source: WTO 2002, 2001a, 2000

3.1.7 Tasmania

The main recipients of State financed agricultural support in Tasmania were pest and disease control, extension and advisory services, and environmental programs. Due to

the smallness of the agricultural sector in Tasmania, the total amount was around \$A 20 mill. during the fiscal years 1998/99 through 2000/01 (see table 3.6).

Table 3.6 Sub-national support measures to Tasmain agriculture (mill. \$A)

	1998/1999	1999/2000	2000/2001
Research	2.4	2.3	2.3
Pest and Disease Control	4.8	4.6	4.6
Extension and Advisory Services	6.9	5.8	6.1
Inspection Services	3.0	1.2	1.2
Marketing and Promotion	0.7	0.6	0.5
Infrastructure Services	2.9	2.7	2.8
Natural Disaster Relief		0.3	0.3
Structural Adjustment Assistance		0.3	
Environmental Programs	2.2	2.8	3.0
Total	22.9	20.6	20.8

Source: WTO 2002, 2001a, 2000

3.1.8 Northern Territory

Almost one half of the sub-national support to agriculture in the Northern Territory was spent on research (see table 3.7). The total amount was around \$A 20 mill. per year. This compares to the outlays in the State of Tasmania. The Northern Territory provided a fertilizer freight subsidy which is production-specific and included in Australia's current AMS. According to the Annual Report 2000–2001 of the Northern Territory Department of Primary Industry and Fisheries, a Weed Management Assistance Scheme and Herbicide Subsidy Payments are provided (NTDPIF 2001a:97f). The Technical Annual Report 2000/2001 presents further information about the two support measures (NTDPIF 2001b). It appears that both measures are classified as “green box” support (General services—Pest and Disease Control) in the WTO notification documents and exempt from reduction. The Fertilizer Freight Subsidy is included in current AMS subject to reduction.

Table 3.7 Sub-national support measures to agriculture in the Northern Territory (mill. \$A)

	1998/1999	1999/2000	2000/2001
Research	9.6	12.0	11.7
Pest and Disease Control	3.1	2.4	2.4
Training Services	0.1	0.2	0.3
Extension and Advisory Services	5.9	4.1	3.9
Marketing and Promotion	0.6		
Infrastructure Services	0.6	0.4	0.2
Natural Disaster Relief		0.1	0.1
Land Resource Conservation	4.0	4.0	3.9
Water Program		0.2	
Fertilizer Freight Subsidy	0.3	0.2	0.3
Total	24.2	23.6	22.8

Source: WTO 2002, 2001a, 2000

3.1.9 Evaluation

The Federal character of the Commonwealth of Australia implies that the funding of support measures to the agricultural sector is split between the Commonwealth government and the State governments. Table 3.8 shows measures that were financed by the Commonwealth only, the States only, and where funding is shared between the Commonwealth and the States for the fiscal year 2000/2001. It turns out that the majority of measures is financed by one of the two levels of governance. Co-financing between the Commonwealth and the States has some importance when it comes to general services and reliefs for natural disaster. The lion's share of the States' support to agriculture is on general services (research, pest and disease control, training and extension, e.g.) and environmental programs.

Table 3.8 Australian domestic support measures by source of funding and type of measure FY 2000/2001 as notified to the WTO (mill. \$A)

	States alone	States shared	Commonwealth shared	Commonwealth alone
General services	585.6	8.4	31.8	177.1
Decoupled income support	2.9			16.9
Income insurance				20.0
Relief from natural disasters	8.8	8.8	20.9	
Producer retirement programs	0.1	0.2		10.4
Investment aids	2.3			
Environmental programs	130.1	1.0		257.6
Regional assistance programs		1.9	0.4	6.7
Wheat				1.2
Pig-meat				2.9
Sugar				16.1
Tobacco	4.7			
Dairy Adjustment Program				200.7
Dairy Adjustment Grants	8.2			
Food and Fibre Chains Program				0.8
New Industries Development Program				0.5
Young Farmers Scheme	0.8			
Fertilizer Freight Subsidy	0.3			
Total	743.7	20.3	53.1	711.0

Source: WTO 2002, 2001a, 2000

The comparison across States of support measures funded by the State governments alone reveals similar patterns (see table 3.9). In nearly all States, budget expenditures on general services amount to more than 75% of the total expenditures to agriculture. An exception is New South Wales where the total expenditures are split between general services and environmental programs.

Nearly all support measures fall into the category of support measures exempt from reduction commitments ('green box'). There are only few exemptions. Queensland provides grants for tobacco production, and Western Australia provides dairy adjustment grants in addition to the Federal dairy adjustment program. In the Northern Territory, there is a fertilizer freight subsidy and arrangements to eradicate noxious weeds (herbicide subsidy payments and weed management assistant scheme).

Table 3.9 Australian domestic sub-national support measures by State and type of measure FY 2000/2001 as notified to the WTO (mill. \$A) ¹⁾

	NSW	NT	QLD	SA	VIC	ACT	TAS	WA
General services	87.5	18.4	126.6	82.7	142.4	1.0	17.5	109.5
Decoupled income support			2.9					
Relief from natural disasters	7.5	0.1			0.8		0.3	
Producer retirement programs			0.1					
Investment aids	1.0				1.3			
Environmental programs	98.3	3.9		0.1		0.7	3.0	24.1
Tobacco			4.7					
Dairy Adjustment Grants								8.2
Young Farmers Scheme					0.8			
Fertilizer Freight Subsidy		0.3						
Total	194.3	22.7	134.2	82.8	145.3	1.7	20.8	141.8

1) NSW: New South Wales, NT: Northern Territory, QLD: Queensland, SA: Southern Australia, ACT: Australian Capital Territory, TAS: Tasmania, WA: Western Australia.

Source: WTO 2002, 2001a, 2000

The total amount of grants and subsidies provided by the State governments varies from State to State. In 2000/2001, New South Wales spent most budget support (\$A 194 mill.), while the Australian Capital Territory had the lowest amount (\$A 1.7 mill.). One reason is, of course, the size of a State's agricultural sector. Another reason may be a State's willingness and financial means to support its own agriculture. Table 3.10 accounts for the former by indicating the level of support per unit of land and farm. The numbers reported in table 3.10 should be interpreted with care due to the definition of the terms 'agricultural land' and 'farm'. Different definitions of these terms will almost automatically lead to different numbers. With the exception of Victoria and Tasmania, State support to agriculture is around 1–3 \$A/ha. Calculated per farm, the level of State support lies around \$A 5,000. Here, the exception is the Northern Territory which only has 361 establishments with agricultural activity.

Table 3.10 Australian domestic sub-national support measures per ha and per farm by State for FY 2000/2001

	Agricultural land ¹⁾ (\$A/ha)	Farm ²⁾ (\$A/farm)
New South Wales	3.1	4,512
Northern Territory	0.4	62,909
Queensland	0.9	4,419
Southern Australia	1.4	5,272
Victoria	10.9	3,929
Australian Capital Territory		17,957
Tasmania	11.6	4,817
Western Australia	1.3	10,388

1) Area of establishments with agricultural activity.

2) Establishment undertaking agricultural activity with an estimated value of agricultural operations greater than \$A 5,000.

Source: WTO 2002, ABS 2002a, 2002b

The OECD's PSE calculations for Australia contain estimated budget expenditures of State governments on extension and advisory services, disease and pest control, disaster

relief programs, research and product development, inspection services, export assistance (i.e., marketing), rural adjustment, and land and water conservation (OECD 1999). These policy areas are quite comparable to the 'green box' measures notified in the WTO. In its calculations, the OECD assumes that the budgetary expenditures of State governments increase at the same rate as the consumer price index, and that the relative shares of the different policy areas are fixed. The fertilizer freight subsidy in the Northern Territory and the Western Australian Dairy Adjustment Grants do not seem to be included in the Australian PSE figures provided by the OECD.

In conclusion, the investigation of domestic sub-national support measures to the agricultural sector in Australia indicates that around 50% of the total domestic support is provided by the State governments alone. There are only a few measures that are co-financed by the Federal government and the State governments. Furthermore, there are no major differences in the patterns of support across States. This result may surprise somewhat since the Australian States (and Territories) enjoy a relatively high degree of sovereignty. The reason lies not so much in the legalness of providing sub-national support (i.e., national competition policy), but rather in a mutual political consent of treating sub-national support measures alike across States (Kemp 2002). Support for general services like research, training and extension, and pest and disease control dominates the State government's monetary values to agriculture. The majority of sub-national support to agriculture fits into the 'green box' classification of the WTO. There are, however, some minor exemptions concerning production-related support measures such as a freight subsidy and a herbicide payment in the Northern Territory. It is hard to calculate the direct income effect of the domestic support measures provided to Australian agriculture. As a rule of thumb, one could argue that 'green box' measures are characterized by a relatively low degree of direct income effect, while production-related support has a higher degree. Given that, and having in mind the high level of 'green box' support, the direct income effect of the support measures seems to be rather limited.

3.2 EU

3.2.1 Introduction

The European Union consists of currently 15 countries, but the first group of Central and East European countries is expected to join the EU soon. The EU's responsibility for a Common Agricultural Policy can be traced back to the treaty of Rome on the foundation of the European Economic Community (EEC) from 1957 that also defines the modalities for State aid. The Common Agricultural Policy (CAP) is one of the fields of policy for which the EU has most decision-making power and financial responsibility. Nearly 50% of the Union's budget are consumed by the CAP.

In principle, the EU has the sole responsibility for the market policy (including price policy), while the Member States are responsible for social policy (i.e., welfare measures), tax policy, and what one could call the provision of 'public' infrastructure like administration, extension, and research. Within EU Member States with a federal structure, responsibility may be shared between the Federal level and the Federal State level. Often, the governments at the Federal State level administer programs within the field of structural and regional policy, although those measures can partly be co-financed by the EU or the Federal government. Hence, there is a mix of different functional spheres of responsibility such as decision-making, implementation, and finance that makes the distribution of responsibilities in agricultural policy matters a complex and difficult task (Thoroe 2000:187).

Expenditures involving the Common Market Organizations are solely financed by the EU through the EAGGF Guarantee.⁷ These expenditures include among others the majority of direct payments on acreage and numbers of animals. The accompanying measures of the CAP reform 1992 (i.e., environmental programs, afforestation of agricultural land, and early retirement) are also financed by the EAGGF Guarantee, but require co-financing by the Member States. As an effect of Agenda 2000, the funding of other important rural development measures (i.e., LFA support, investments grants and improvement of the market structure) has been transferred from EAGGF Guidance to EAGGF Guarantee (EU 1999). The national expenditures of the Member States are either targeted to co-finance EU programs (i.e., accompanying measures and rural development) or are purely national programs. As part of its competition policy and in order to maintain the single market, the EU sets strict limits for the implementation of national support programs for agriculture.

The break down of total CAP expenditures by Member State and source of funding are shown in table 3.11. Since the EU only reports total national (and sub-national)⁸ expenditures, some simplifying assumptions have been necessary to split up national expenditures into purely national programs and the co-funding of EU programs. For example, it is assumed that the level of cofinancing of the EAGGF Guarantee is 50% for rural development measures (accompanying measures, LFA support, e.g.). The corresponding level of cofinancing of the EAGGF Guidance is set to 40%. As a consequence of this procedure, it is clear that changes in these levels will directly change the calculated amount available for purely nationally funded programs. In order to support—or challenge—the numbers reported in table 3.11, additional country studies will be presented below. There, the amount of national support has been calculated by using solely data from the respective EU Member countries.

On the overall level of the EU-15, sub-national domestic support is estimated to € 8,611 mill. or 15% of the total expenditures in 2000.⁹ In absolute terms, the amount of national programs is highest in France, followed by Finland and the Netherlands. Finnish sub-national domestic support consists mainly of nationally funded so-called ‘Northern Aid’ that was part of EU accession in 1995. Northern Aid accounts for almost all nationally funded support and stands for around 30% of total support to Finnish agriculture (MTTL 2002). Some EU countries have quite low purely national contributions to their agriculture. This is the case for some Southern Member States (Portugal and Greece), but also Ireland, Sweden and Germany. According to the figures reported in table 3.11, the share of national programs relative to total expenditures is highest in Finland and the Netherlands (ca. 48%) and lowest in Portugal, where sub-national domestic support is almost nonexistent. The relative importance of national programs is over 20% in Belgium, France, Austria and Sweden. In Germany, the relative importance is only 6%.

⁷ European Agricultural Guarantee and Guidance Fund.

⁸ It appears that the data include both national expenditures and sub-national expenditures. In fact, in a footnote to the relevant table it is stated that ‘not all regional expenditures’ are included in the case of Spain and Italy.

⁹ Note that the definition of sub-national domestic support in case of the EU includes payments at the national level.

Table 3.11 Domestic support to EU-agriculture by Member State and source of funding in 2000 (mill. €)

Member State/ Source of funding	Common Market Organizations ¹⁾		Rural development ²⁾		Rural development ³⁾		National programs ⁴⁾ (sub-national support)		Total	National programs in % of total	National programs (€/ha)	National programs (€/AWU)
	EU	EU	EU	EU	Member States	Member States						
Belgium	882.3	35.1	37.4	357.6	1,312.4	27.2	256.5	4,839.2				
Denmark	1,051.4	33.6	33.7	252.3	1,371.0	18.4	93.0	3,303.0				
Germany	5,030.1	988.0	1,143.1	456.9	7,618.1	6.0	26.6	707.8				
Greece ⁵⁾	2,478.9	115.3	73.7	61.3	2,729.2	2.2	15.6	106.1				
Spain	5,505.9	529.7	536.1	835.9	7,407.6	11.3	28.9	883.0				
France	8,415.7	677.9	724.9	2,518.1	12,336.6	20.4	84.1	2,480.7				
Ireland	1,229.2	348.5	366.3	30.7	1,974.7	1.6	7.0	165.2				
Italy	4,559.1	1,015.8	1,207.9	447.1	7,230.0	6.2	29.0	376.7				
Luxembourg	19.5	9.6	9.6	22.4	61.1	36.7	176.6	5,215.8				
Netherlands	1,025.0	54.7	55.8	1,034.2	2,169.7	47.7	521.5	4,705.2				
Austria	585.3	440.5	444.0	440.0	1,909.8	23.0	129.0	2,603.8				
Portugal ⁵⁾	660.5	593.8	289.4	5.6	1,549.3	0.4	1.4	10.5				
Finland	477.8	329.0	337.0	1,048.0	2,191.8	47.8	476.1	9,605.9				
Sweden	614.6	160.5	168.5	251.5	1,195.1	21.0	81.9	3,444.7				
UK	3,725.7	233.3	261.9	849.1	5,070.0	16.7	52.3	2,510.6				
EU-15	36,261.0	5,565.4	5,689.2	8,610.8	56,126.4	15.3	63.9	1,398.4				

1) Total expenditures of EAGGF Guarantee minus expenditures on rural development (i.e., accompanying measures and LFA support).

2) Total expenditures of EAGGF Guidance and expenditures of EAGGF Guarantee on rural development.

3) Assuming that for every Member State EAGGF Guarantee co-finances 50% of total expenditures and EAGGF Guidance co-finances 40% of total expenditures.

4) Calculated as difference of total national expenditures and national expenditures on EU-programs (i.e., rural development).

5) EAGGF Guidance is assumed to co-finance 75% of total expenditures.

Source: Own calculations based on BVEL (2002), EU (2001), BMLFUW (2001).

On a per hectare-basis, national support is highest in the Netherlands, Finland and Belgium ranging from 521 €/ha to 256 €/ha. The per hectare-amount of national support in France is significantly lower (84 €/ha), although the absolute amount of national support is highest in France. Calculated as payments per annual working unit (AWU), Finland pays the by far highest amount of national support (9,605 €/AWU). The list of countries that is significantly above EU-average includes Belgium, the Netherlands, France, Austria, but also Denmark, Sweden and the UK.

In the following, three EU Member States are analyzed in more detail: Ireland, Germany, and Austria. Ireland represents the case of a small EU-member State with a strong agricultural sector. Germany and Austria are characterized by a distinct Federal structure of governance. Germany is one of the six original Members of the Union and represents a large country, while Austria is a rather small country that recently joined the EU. In the case of Germany, an analysis on its own is conducted for the Federal State of Bavaria. Bavaria is supposedly among the few German Federal State that has both the financial ability and the political desire to support its own agriculture close to the limits set out by EU and German competition policy and State aid rules.

3.2.2 Ireland

The republic of Ireland is divided into 26 counties. The local governments and authorities have a couple of functions such as providing services such as roads and bridges, fire services, water and sewerage services and drainage. Local authorities have also an important function in relation to pollution control and animal control. Agricultural policy matters, however, are the responsibility of the Irish Department of agriculture and food (DAFF).

Agriculture is still an important sector of the Irish economy, although it is declining at the expense of the industry sector and the service sector. The contribution of the Irish agri-food sector¹⁰ to the country's gross domestic product was 9,2% in 2001 (DAFF 2002:10). The corresponding share of the agricultural sector alone was only 3,2% in the same year. The agricultural sector employed 6,6% of all employed persons in Ireland in 2001 (DAFF 2002:11). The corresponding number for the whole agri-food sector was 9,7%.

The public expenditures to the agricultural sector in Ireland are shared between the EU and the Irish government. Table 3.12 illustrates the decomposition of agricultural support in Ireland by the source of funding for the year 2001. The contributions of the EU amounted to € 1,541 mill. (or 56.3% of total support). Most of these expenditures concern support measures that are solely financed by the EU. Ireland spend around € 1 200 mill. on its agricultural sector. Around 30% of the total public expenditures (or € 803 mill.) are due to programs that are solely financed by the Irish government.

¹⁰Agriculture, food, drinks and tobacco.

Table 3.12 Domestic support to Irish agriculture by source of funding in 2001

	mill. €	%
EU	1,541	56.3
... of which financed at EU-level only	1,225	44.7
... of which co-financed with Ireland	316	11.5
Ireland	1,198	43.7
... of which financed by Ireland only	803	29.4
... of which co-financed with EU	394	14.4
Total	2,738	100.0

Source: Own calculations based on DAFF 2002

The type of domestic sub-national support measures financed by the Irish government is somewhat similar to the ones that were found in Australia. Important areas of sub-national support are research and testing, animal health, and the funding of State bodies (i.e., boards) that are given responsibilities for special issues. In the light of the outbreak of BSE in several EU Member States in November 1999 and the outbreak of Foot-and-Mouth disease in the UK in February 2001, it is not surprising that a significant share of public expenditures is devoted to prevent new outbreaks through disease control and eradication programs. In addition, the Irish government aims at rebuilding the trust of the consumers in Irish food through the National Beef Assurance Scheme.

Table 3.13 lists selected domestic sub-national support measures to the Irish agricultural sector for the years 1999–2001. As a consequence of BSE and the outbreak of foot-and-mouth disease in 2001, a considerable amount of money has been used for disease control and eradication in the beef sector. Around € 200 mill. have been spent for that purpose in 2001 compared to ca. € 100 mill. in the two years before. Other recipients of sub-national support programs are various Irish boards and funds, such as Teagasc, Bord Glas, Bord Bia, Bord na gCon and the Horse and Greyhound Racing Fund. Teagasc is the Agricultural and Food Development Authority with responsibility for providing advisory, training, research and development services targeted towards the Irish agricultural and food industry and rural communities. Bord Glas, the Horticultural Development Board, is responsible for assisting the production, marketing and consumption of horticultural produce. Bord Bia works in partnership with the industry to promote Irish food and beverages and to develop markets for commercial advantage. The aim is to increase the sales and exports of Irish food and beverages by developing long-term relationships between Irish companies and overseas buyers. Bord na gCon is the State body responsible for the development of all aspects of the greyhound industry.

The direct income effect of the domestic sub-national programs in Ireland is estimated to be zero in all cases where Boards, Funds or other organizations are involved. Although there might be no doubt that the activities of the Boards and Funds help farmers to increase their income, they are not viewed as measures targeted towards farmers directly.

Table 3.13 Selected domestic sub-national support measures in Ireland 1999–2001 (mill. €)

	Monetary value			Estimated direct income effect (in % of monetary value) ¹⁾
	1999	2000	2001	
Research & Testing	76,9	5,6	5,7	0
Grants to Farm & Rural Development Organizations	0,0	0,1	0,1	?
Teagasc Grant-in-Aid for General Expenses	0,0	69,3	80,4	0
Teagasc Grant-in-Aid for Superannuation Purposes	0,0	10,9	12,8	0
Improvement of Livestock	0,5	0,3	0,3	?
Bovine Tuberculosis & Brucellosis Eradication	81,7	74,6	63,8	0
General Disease Control & Eradication	16,5	25,3	128,9	0
Cattle Breeding Authority	0,4	0,4	0,4	?
Cattle Tags & Registration	5,8	5,6	4,8	?
National Beef Assurance Scheme	5,5	3,1	5,5	?
Bord Glas Grant-in-Aid for General Expenses	2,5	2,5	3,4	0
Bord Bia Grant-in-Aid for General Expenses	10,0	12,9	17,0	0
Grant-in-Aid to the Irish Horseracing Authority	20,8	22,9	10,2	0
Bord na gCon Grant-in-Aid	6,7	8,3	6,3	0
Assistance for the Non-Thoroughbred Horse Industry	0,3	0,3	0,6	0
Horse and Grayhound Racing Fund	0,0	1,5	58,9	0
Western Development Commission	0,6	0,6	2,7	0
Total	228,0	244,0	401,9	

1) '?' indicates that not enough information has been collected in order to determine the estimated direct income effect.

Source: DAFF var.iss.

3.2.3 Germany

The Federal character of Germany implies that agricultural subsidies are subject to three different levels of funding: The EU level, the Federal government level (*'Bund'*), and the Federal State level (*'Länder'*). Consequently, support measures can be provided by each of the three levels—either in combination with other levels or alone.

Table 3.14 Domestic support to the agricultural sector in Germany by source of funding in 2000 ¹⁾

	mill. €	%
EU	6,442.3	63.3
... of which financed at EU-level only	4,851.6	47.7
... of which co-financed with Federal level only	0.0	0.0
... of which financed with Federal State level only	288.4	2.8
... of which co-financed with Federal level and Federal State level only	1,302.3	12.8
Federal level (<i>'Bund'</i>)	1,776.1	17.5
... of which financed at Federal level only	810.7	8.0
... of which co-financed with EU only	0.0	0.0
... of which co-financed with Federal State level only	254.6	2.5
... of which co-financed with EU-level and Federal State level only	710.9	7.0
Federal State level (<i>'Länder'</i>)	1,956.3	19.2
... of which financed at Federal State level only	906.7	8.9
... of which co-financed with EU only	288.4	2.8
... of which co-financed with Federal level only	169.7	1.7
... of which co-financed with EU-level and Federal level only	591.4	5.8
Total	10,174.7	100.0

1) Agriculture, forestry, and fisheries.

Source: Own calculations based on BVEL (var. iss.), Bundesregierung (2001).

According to figures provided by the Federal German Ministry of Agriculture, the total amount of domestic support to the German agricultural sector was a little more than € 10 billion in 2000 (see table 3.14). It is important to be stressed that the agricultural sector here is defined as agriculture, forestry and fisheries. Around two-thirds of that amount was financed by the EU, while the share of the Federal State level (*'Länder'*) is slightly higher than the share of the Federal level (*'Bund'*).

Near half of all domestic support, or € 4,852 mill., comes through purely EU-financed programs (i.e., direct payments for acreage and animals). There are no programs co-financed between the EU and the German Federal level only. The majority of EU programs that require national co-funding, are shared between the *Bund* and the *Länder*. This is true for LFA-support, and most programs within rural development. A speciality of German agricultural policy are the EU agro-environmental programs (part of the accompanying measures of the 1992-reform of the CAP), that are shared between the EU and the *Länder*. Around 25% of all expenditures made by the *Länder* go into the agro-environmental programs. This is due to the fact that the German constitution defines agricultural structural policy (including rural development) as a national issue that has to be co-financed by the *Bund* (60%) and the *Länder* (40%) through the so-called 'Concerted action on agricultural structure and coast protection' (*'Gemeinschaftsaufgabe Agrarstruktur und Küstenschutz'*—GAK). Since agro-environmental programs are considered to have a local (rather than national) impact, they cannot be financed through

the GAK (Schlagheck 2001:10). Therefore, the German *Länder* manage their agro-environmental programs directly with the EU.

Sub-national domestic support to German agriculture comes from programs financed at the Federal level alone, programs financed at the Federal State level alone, or programs co-financed by both levels. According to table 3.14, sub-national domestic support measures to German agriculture amounted to € 2,142 mill. or 21% of total domestic support. The majority of the sub-national programs (€ 1,117 mill.) were financed by either level, while co-financed measures reached € 425 mill. in 2000.

The most important programs financed at the Federal level only include a fuel tax allowance for fuel used for agricultural purposes (€ 450 mill. in 2000) and a program to enlarge the size of single fields through exchange (*Flurbereinigung*) (€ 177 mill. in 2000). This program aims at dampening the effects of the Inheritance Act in Southern Germany that requires the splitting up of the farm (and the farm land) equally between all heirs. In addition, the Federal Government provides support for small, usually farm-owned, distillation plants (€ 122 mill. in 2000).

3.2.3.1 Bavaria

From an agricultural perspective, Bavaria is probably the most interesting German Federal State. One third of all German farms are located in Bavaria, and 86% of the total land area is agricultural area (including forestry). Around 13% of all jobs are connected with the agro-food sector. In addition, the Bavarian government is known for a long tradition of strong political and financial support for its agriculture and its farmers.

Total domestic support to Bavarian agriculture amounted to € 1,550 mill. in 2000 (see table 3.15). The EU spent more than 60% of total budget support to Bavarian agriculture. The Bavarian governments spent around € 370 mill. (or 24%) on its own agriculture, while the Federal government contributed around € 200 mill. (or 13%). 43% of all public expenditures to Bavarian agriculture were financed at the EU level only, while 20% of total support was financed through EU programs that require co-financing at the Federal level and/or Federal State level.

Table 3.15 Domestic support to Bavarian agriculture by source of funding in 2000 ¹⁾

	mill. €	%
EU	982.8	63.4
... of which financed at EU-level only	670.8	43.3
... of which co-financed with Federal level only	0.0	0.0
... of which financed with Bavaria only	158.1	10.2
... of which co-financed with Federal level and Bavaria only	153.9	9.9
Federal level ('Bund')	196.2	12.7
... of which financed at Federal level only	93.9	6.1
... of which co-financed with EU only	0.0	0.0
... of which co-financed with Bavaria only	9.9	0.6
... of which co-financed with EU-level and Bavaria only	92.3	6.0
Federal State level: Bavaria	370.4	23.9
... of which financed by Bavaria only	154.5	10.0
... of which co-financed with EU only	147.8	9.5
... of which co-financed with Federal level only	6.6	0.4
... of which co-financed with EU-level and Federal level only	61.6	4.0
Total	1,549.4	100.0

1) Excluding research, extension and administration.

Source: Own calculations based on BStMLF (2001).

Table 3.16 Selected domestic sub-national support measures in Bavaria 1999 and 2000 (mill. €) ¹⁾

Name	Source of funding	Monetary value		Estimated direct income effect (in % of monetary value)
		1999	2000 (e)	
Support for collective use of machinery etc.	Federal State	42.4	37.6	100
Marketing	Federal State	13.0	12.2	0
Bavarian investment aid and 'starting help'	Federal State	12.0	14.8	100
Program "Safe food" (incl. meat control)	Federal State	9.6	10.6	0
Cultural Landscape Schemes (KULAP B & C)	Federal State	7.3	5.1	100
Bavarian rural district renewal	Federal State	40.6	39.1	0
Quality improvement (cultivation, breeding)	Federal State	3.6	4.2	0
Support to Bavarian Farmers' Union	Federal State	1.8	1.7	0
Agricultural water management (GAK) ²⁾	Federal and Federal State	19.7	12.3	n.a.
Renewable resources	Federal State	14.2	15.5	0
Fuel tax allowance	Federal	94.0	n.a.	100
Education	Federal State	5.4	6.3	0

1) Programs worth more than € 1.3 mill. in 1999.

2) *Gemeinschaftsaufgabe Agrarstruktur und Küstenschutz (GAK)*

Source: BStMLF (2001)

Sub-national domestic support comprises expenditures financed at the Federal level only, expenditures financed at the Federal State level only, and expenditures co-financed at the Federal level and the Federal State level. Federal programs amounted to € 94 mill. or 6% of total domestic support, while pure Bavarian programs reached € 155 mill. or 10% of total expenditures. Support measures co-financed between the Federal level and the Bavarian level accounted for € 17 mill. or 1%. In total, sub-national domestic support to Bavarian agriculture was € 266 mill., or 17% of total domestic support, in 2000. This share is somewhat lower than the share for Germany as a whole. One explanation may be that a typical feature of Bavarian agriculture is the relatively high share of programs financed between the EU and the Bavarian government only. More than one half of all domestic support financed between the EU and the Federal State level only goes to Bavaria.

Important sub-national support measures are listed in table 3.16.

The sub-national domestic support measures in Bavaria range from investment aid to support for collective machinery use and the improvement of the marketing of Bavarian agricultural products. The most important single sub-national support measure from a budget perspective is the fuel tax allowance financed at the Federal level only. Among the pure 'Bavarian' measures are the support for collective use of machinery etc., the Bavarian rural district renewal, and expenditures for renewable resources.

Some of the sub-national support measures have a direct income effect for farmers, such as the fuel tax allowance or the support for collective use of machinery. Other programs like marketing or quality improvement may help farmers to maintain or even increase the sales of their produce, but they do not increase the farmers' income as such. Programs like the Bavarian rural district renewal are broad support measures targeted to improve rural development. In this program the agricultural sector is considered to be only one, although an important, element.

Not included in the figures in table 3.15 and table 3.16 are expenditures for some environmental programs administered by the Bavarian Ministry for the Environment. Parts of these programs are intended to farmers. In addition, extension provided by the Bavarian Federal State agencies and the Ministry of Agriculture are free of charge for farmers.

3.2.4 Austria

The republic of Austria became a member of the EU in 1995. Austria is made up by nine Federal Provinces (so-called '*Bundesländer*'): Vienna, Lower Austria, Upper Austria, Salzburg, Carinthia, Styria, Tyrol, Burgenland and Vorarlberg. As a consequence of the Federal structure of the Austrian State, the tasks of agriculture and forestry are shared by the Federal Ministry of Agriculture, Forestry, Environment and Water Management (BMLFUW) and the Offices of the Governments of the Federal Provinces. The BMLFUW is responsible for the implementation and accomplishment of the CAP in Austria in general. Moreover, its responsibilities include among others national support measures, extension, education and research, market policy, and trade policy. Austrian agricultural policy is also accomplished on the part of the Federal Provinces through the agricultural divisions of the Offices of the Provincial Governments. The Offices are responsible for the implementation of subsidies for agricultural and forestry enterprises and the improvement of the infrastructure in rural areas.¹¹

The contribution of the agricultural sector to the GDP was 1,3% in 1999. In the same year, the agricultural sector occupied around 4% of the total labor force.

¹¹ The description of the share of responsibilities between the Federal State and the Federal Provinces in agricultural policy matters is taken from the BMLFUW's homepage (<http://www.lebensministerium.at>).

Table 3.17 illustrates the sources of support to Austrian agriculture in 2000. Total support was nearly € 2,000 mill., and the EU stood for more than 53% of agricultural budget support. The remaining 47% were almost equally shared between the Federal level and the Federal Provincial level. The vast majority of EU programs was either financed solely by the EU (24% of total budget support) or co-financed at the Federal level and the Federal Provincial level (27% of total budget support). No programs have been financed at the Federal level only, and the amount of pure programs at the Federal Provincial level was very small (2.4% of total budget support).

Table 3.17 Domestic support to Austrian agriculture by source of funding in 2000

	mill. €	%
EU	1,041.8	53.4
... of which financed at EU-level only	462.2	23.7
... of which co-financed with Federal level only	58.8	3.0
... of which financed with Federal Provincial level only	0.0	0.0
... of which co-financed with Federal level and Federal Provincial level only	520.7	26.7
Federal level ('Bund')	471.8	24.2
... of which financed at Federal level only	0.0	0.0
... of which co-financed with EU only	3.6	0.2
... of which co-financed with Federal Provincial level only	72.3	3.7
... of which co-financed with EU-level and Federal Provincial level only	395.9	20.3
Federal Provincial level: ('Bundesländer')	435.9	22.4
... of which financed by Federal Provincial level only	46.4	2.4
... of which co-financed with EU only	0.0	0.0
... of which co-financed with Federal level only	159.0	8.2
... of which co-financed with EU-level and Federal level only	230.5	11.8
Total	1,949.4	100.0

Source: Own calculations based on BLFUW (2001).

Sub-national domestic support measures are comprised by pure programs at the Federal level, pure programs at the Federal Provincial level, and programs that are shared between the Federal level and the Federal Provincial level. The total amount of such sub-national support was € 278 mill. or 14.3% of total domestic support in 2000. Most of this support was co-financed between the 'Bund' and the 'Bundesländer' (€ 231 mill.), while only € 46 mill. stem from programs administered at the Federal Provincial level.

The most important Austrian support programs are listed in table 3.18. Many of the programs fall into the categories regional support, structural support, and improvement of market conditions. Their direct income effect is limited. Three support measures have been identified of having a full direct income effect: the support for collective use of machinery etc., interest allowances in investment programs, and the contribution to the management of alpine pastures.

Table 3.18 Selected domestic sub-national support measures in Austria 1999–2001 (mill. €) ¹⁾

Name of program	Source of funding	Monetary value			Estimated direct income effect (in % of monetary value)
		1999	2000	2001	
Support for collective use of machinery etc.	Federal and Federal Provincial	5.5	5.7	5.5	100
Renewable resources	Federal and Federal Provincial	17.0	16.4	5.8	0
Quality improvement (plants, seeds, breeding, milk) ²⁾	Federal and Federal Provincial	36.2	40.0	35.8	0
Interest allowances in investment programs	Federal and Federal Provincial	28.0	24.6	82.7	100
Agrarian operations	Federal Provincial	0.5	0.4	0.4	0
Marketing	Federal and Federal Provincial	12.4	9.6	7.0	0
Contribution to the management of alpine pastures	Federal Provincial	3.3	2.3	2.3	100
Road-development in rural areas	Federal Provincial	73.5	67.6	64.3	0
Extension	Federal and Federal Provincial	75.0	75.3	72.2	0

1) Programs worth more than € 0.4 mill. in 1999.

2) Quality improvement for milk only at the Federal Provincial level.

Source: BLFUW (2001)

3.2.5 Reporting procedure

The EU Commission is responsible for the notification of domestic support measures to the WTO and for the provision of data for the PSE calculations of the OECD.

Concerning the WTO, the EU does not distinguish between the sources of funding in their notification documents on domestic support (WTO 2001c, e.g.). Instead, overall data for the EU-15 are delivered—often in a very aggregated way. For example, the EU's 'green box' (i.e., measures exempt from reduction commitments) is comprised of 19 single numbers following the classification of 'green box' measures in Annex 2 of the Uruguay Round Agreement on Agriculture. The reporting procedure of the EU concerning notification in the WTO makes it impossible to analyze the significance of sub-national domestic support. It makes it also impossible to verify which sub-national domestic support measures are contained in the notification document.

Regarding the OECD, the EU Commission usually receives data on national expenditures for agriculture from the Member States. These data are processed by the EU Commission and then delivered to the OECD that uses the data for the PSE analysis. The different elements of the PSE allows to distinguish between sources of funding, i.e., national expenditures (in case of the EU at the Member State level and below) are shown explicitly. This allows, at least to some extent, the analysis of sub-national domestic support measures using the PSE database. It is important to stress that national expenditures in the case of the EU include national co-funding of EU programs. These expenditures are not defined as sub-national domestic support in this study. Therefore, sub-national domestic support will usually be lower than the national expenditures on agriculture.

Table 3.19 Domestic support to agriculture in the EU by data source in 1998–1999 (mill. €)

	1998	1999
<i>EU</i>		
EAGGF, Guarantee (rural development) ¹⁾	1,847	2,588
EAGGF, Guidance	4,367	5,580
National expenditures	13,027	13,975
Total	19,241	22,144
<i>OECD</i>		
National expenditures	12,229	13,005
<i>WTO</i> (1998/1999)		
'Green box'	19,168	

1) Total expenditures of EAGGF Guarantee minus expenditures on rural development (i.e., accompanying measures and LFA support).

Source: EU: Table 3.11, p. 17, OECD (2002a), WTO: WTO (2001c).

Table 3.19 makes an attempt to compare data provided by the EU Commission with data in the PSE database and data in the WTO notification document for the years 1998 and 1999. There are clear parallels between the amount of national expenditures published by the EU and the amount of national expenditures used by the OECD. The national expenditures measured by the OECD were € 12,229 mill. and € 13,005 mill. in 1998 and 1999, respectively, while the corresponding numbers provided by the EU

Commission were € 13,027 mill. and € 13,975 mill., respectively. Recalling the reporting procedure for the PSE database, one possible explanation could be that the EU Commission reports the national expenditures that the Commission collects from the Member States. This explanation is reinforced by the fact that the EU Commission lists the OECD as one data source in the respective table containing national expenditures on agriculture (EU 2001). As a conclusion, the similarity of national expenditures reported by the EU Commission and the OECD is probably not by chance, but due to the same data collecting process.

A comparison of the sum of national expenditures, expenditures of EAGGF Guidance and the rural development part of EAGGF Guarantee with the total amount of the 'green box' in the WTO notification document reveals related similarities. The numbers for the EU are € 19,241 mill. and € 22,144 mill. for 1998 and 1999, respectively, while the EU has notified € 19,168 mill. in the marketing year 1998/99. Again, the closely related numbers seem to be a result of the data collecting process.

3.2.6 Evaluation

The complex structure of EU agricultural policy making together with several levels of governance at the Member State level makes it quite difficult to draw a comprehensive picture of the significance of domestic sub-national support measures. Such a comprehensive analysis would require to collect national data in all member countries. Therefore, an attempt has been made to collect such data for Ireland, Germany, and Austria. A comparison of these data with data on national expenditures provided by the EU Commission for the year 2000 is shown in table 3.20.

Table 3.20 National expenditures and sub-national domestic support to Ireland, Germany, and Austria by source of data in 2000 (mill. €)

	National expenditures		Sub-national domestic support	
	EU-Commission	National data	EU-Commission ¹⁾	National data
Ireland	397	1,198	31	803
Germany	1,600	3,732	457	2,142
Austria	884	908	440	278

1) Based on own calculations (see table 3.11, p. 17).

Source: Table 3.11, p. 17, table 3.12, p. 19, table 3.14, p. 21, and table 3.17, p. 25

Table 3.20 reveals considerable differences between data collected in the Member States and data provided by the EU Commission. The only exception are the national expenditures for Austria, and to some extent the figures for sub-national domestic support in that country. In the case of Ireland, national expenditures according to national data (i.e., DAFF) are almost three times higher than the national expenditures provided by the EU Commission. In the case of Germany, the corresponding coefficient is greater than 2.

The differences can be explained to some extent. Since the EU Commission collects its data for the purpose of the PSE analysis and the WTO notification, support measures that are targeted towards general rural development may have been skipped. In the case of Germany and Ireland, those support measures are included in the national data. Moreover, the German data include also budget expenditures for forestry and fisheries. In other words, the coverage of the national data is wider than the coverage of the data of the EU Commission. Both the PSE analysis and the WTO notification measure support to agriculture only. This issue raises, however, a principle question: What is an agricultural support measure, and what is a rural development program? Often, the re-

recipients of rural development programs are still farmers. In the light of the recent developments of the CAP where rural development (the second pillar of the CAP) is expected to be strengthened, the demarcation between agricultural support measures and rural development programs might become a delicate issue; also with respect to the PSE analysis and a prospective WTO agreement on agriculture (possible changes in the 'green box' as a result of the current negotiations, e.g.).

Another reason for the differences in sub-national domestic support in table 3.20, may be the distribution of national payments between purely national financed programs and national contributions to EU programs. The EU Commission does not publish such a distribution. Therefore, it has been assumed that the rural development part of EAGGF Guarantee co-finances 50% of total expenditures, and EAGGF Guidance co-finances 40% of total expenditures. Sub-national support to agriculture would have been underestimated in the analysis of the data provided by the EU Commission if the real share of EU co-financing had been significantly higher than the assumed share. But even if one would assume a share of EU co-financing of 75%, the corresponding numbers in table 3.20 change very little. Sub-national domestic support to Germany based on the EU data, for example, would increase from € 457 mill. to € 818 mill. still leaving a difference of more than € 1,300 mill. The reason is that the total expenditures made by EAGGF Guidance are relatively small such that the share of co-financing plays a minor role in the overall picture.

Although there are several reasons for the large differences reported in table 3.20, the possibility that not all sub-national domestic support measures have been captured by the EU Commission cannot be excluded. If that should be the case, then the PSE estimate and domestic support notified to the WTO may be too low. In its comments on the estimates of support to EU-agriculture, the OECD States with regard to the coverage of national policies that *"although significant progress has been made, the degree of detail still varies across countries and policy coverage is not yet comprehensive, particularly for those countries for which sub-national measures are important"* (OECD 1999). This study reinforces this comment, and indicates that more progress is needed in order to get a comprehensive picture of (sub-) national agricultural policies in all EU Member States.

3.3 USA

3.3.1 Introduction¹²

The USA is a Federal organized State in which the Federal level derives its power from the 50 Federal States. Based on the constitution, agricultural policy matters are treated at the Federal level as well as at the Federal State level and the local level. The Federal level has, however, the major responsibility for agricultural policy. This is because most farm production is not consumed in the same state right away, but sold to other states or exported to third countries. Since agricultural policy, therefore, involves inter-state trade and external trade, it is to a large degree a Federal and not a State responsibility (Harvey 2002).¹³

At the Federal level, agricultural policy matters are handled by the U.S. Department of Agriculture (USDA) with its many agencies, services and programs. At State level,

¹² This section is mainly based on the Economic Research Service at the U.S. Department of Agriculture (<http://ers.usda.gov>).

¹³ For the same reason, dairy policy has a higher degree of State influence compared to other commodity policies as will be shown in the case of California.

each State has its own Department of Agriculture. It varies from State to State, however, how they are organised and what other services the Departments of Agriculture provide. Federal level have usually decentralised service centres in each State that handle the contact with the farmers and other who are entitled to information or funding over USDA's budgets.

An important source of information on Government finances is the U.S. Census Bureau, which is a part of the U.S. Department of Commerce. Among other services, the Census Bureau provides data that can be used as a first overview of public expenditures to the agricultural sector differentiated by different levels of Government: Federal level, State level, and local level. The Census Bureau operates with different function codes for the different types of Governmental activities. For the purpose of this study, the most important function code is code '59' called 'Other agriculture'.

Table 3.21 shows sub-national net expenditures to U.S. agriculture by the different States (including local Governments) for the years 1997–1999. The net expenditures are calculated by subtracting expenditure code A54 ('Other agriculture') from revenue code E54 ('Other agriculture').¹⁴ Code E54 covers expenditures for the development, improvement, promotion, and conservation of natural resources for agricultural purposes; and the regulation and inspection of agricultural products and establishments. Examples include support and promotion of agricultural associations, fairs, livestock and poultry shows, agricultural boards and advisory commissions, provision of agricultural extension services, agricultural experiment stations and other research activities, promotion, improvement, and control of livestock production and dairy products, promotion of improved methods to store, pack, label, and market farm products, promotion of the sale or consumption of agricultural goods, regulation of the quality, safety, and handling of agricultural products, such as inspection, licensing, and standardization, protection of crops and stocks from predatory animals and other natural hazards. Expenditure code E54 does not cover distinctive activities for the conservation of soil or water resources including flood control and drainage (code E57) and State activities at other natural resources (code E59).

Revenue code A54 includes receipts from sale of products from agricultural experiment station farms, revenue from agricultural fairs and shows, agricultural laboratory charges (such as milk testing fees), Federal Government sale of surplus crops and commodities; and other related agricultural charges. The Code excludes fees related to regulation or inspection activities, and charges or fees relating to the inspection and marketing of commodities.¹⁵

The States are ranked according to their total sub-national net expenditure to agriculture. According to the numbers reported in table 3.21, California turns out to be the state that provides most sub-national domestic support. In 1999, Californian agriculture received more than US-\$ 500 mill. in sub-national support. Florida (US-\$ 360 mill. in 1999) and Texas (US-\$ 246 mill. in 1999) follow at second and third place. The list is followed by important agricultural States in the Midwest like Illinois, Ohio, and Iowa. In total, sub-national net expenditures to US agriculture increased from around US-\$ 3,800 mill. in 1997 to around US-\$ 4,300 mill. in 1999. The expenditures increase in nearly every State except for some minor States like New Jersey, North Dakota, Maine, and West Virginia.

¹⁴ The other item codes of the Census Bureau related to agriculture concern public expenditures at the Federal level only.

¹⁵ These fees are included in code T28 which covers licenses (including examination and inspection fees) required of persons engaged in particular professions, trades, or occupations, taxes on insurance companies based on value of their policies, and charges or fees relating to the inspection and marketing of commodities (seed, feed, fertilizer, gasoline, oil, citrus fruit, e.g.).

Table 3.21 Sub-national net expenditures to US agriculture by State for fiscal years 1997–1999 (mill. US-\$) ¹⁾

State	1997	1998	1999
California	496.2	484.0	509.7
Florida	332.1	343.0	363.1
Texas	201.8	216.5	246.5
North Carolina	163.7	175.7	189.4
Georgia	142.5	149.2	153.8
Minnesota	111.7	125.7	149.8
Illinois	114.8	124.8	140.3
Louisiana	116.4	123.5	138.5
Ohio	111.6	114.4	126.7
Michigan	106.3	127.1	122.3
Iowa	114.6	119.9	119.8
Washington	88.7	106.1	109.3
Kentucky	85.7	89.0	96.0
Alabama	84.4	89.4	95.4
Pennsylvania	88.9	97.5	95.2
New York	76.2	96.6	91.4
Kansas	78.7	83.3	90.7
South Carolina	65.9	67.5	88.9
Nebraska	77.1	80.6	85.5
Oklahoma	73.4	74.9	84.8
Tennessee	71.8	75.3	82.2
Mississippi	55.9	75.3	82.0
Arkansas	68.8	76.6	79.3
Arizona	71.3	73.9	74.5
Missouri	65.5	67.0	71.4
Oregon	63.3	62.4	69.1
Indiana	56.8	58.6	60.2
Wisconsin	51.4	53.3	56.6
Maryland	46.0	43.0	47.7
New Jersey	49.9	48.2	47.0
Colorado	32.6	42.8	45.8
Utah	39.0	45.6	44.3
Hawaii	38.0	41.0	43.8
Idaho	37.0	39.0	41.7
Virginia	36.5	40.3	41.5
North Dakota	58.0	47.3	36.4
New Mexico	32.3	30.6	33.6
Montana	26.9	30.5	32.7
South Dakota	30.4	27.6	30.5
Maine	29.4	27.2	27.8
West Virginia	28.2	19.0	23.1
Nevada	19.3	19.4	21.5
Wyoming	18.1	18.5	19.9
Vermont	20.1	20.2	18.4
Massachusetts	12.8	16.0	17.6
Connecticut	15.4	14.7	15.7
Delaware	4.6	4.3	14.6
Alaska	13.8	14.4	13.8
Rhode Island	1.7	3.9	3.7
New Hampshire	0.8	1.3	0.2
Total	3,826.4	4,025.7	4,293.7

1) Item Code E54 (Other Agriculture: Current operations incl. assistance and subsidies) minus item code A54 (Other Agriculture: Charges).

Source: U.S. Census Bureau (var. iss.)

Partly based on the information provided in table 3.21, the following four States have been selected for a closer examination of their sub-national domestic support to agriculture: California, Illinois, Texas, and Wisconsin. These States are all major producers of agricultural products, but differ with respect to their production structure and geographic location.

3.3.2 California

California is a leading State when it comes to agriculture. Dairy products, grapes, nursery products, and cattle and calves are among the most important products calculated on a cash receipts basis. In 1998, 7% of all jobs in California were related to agricultural production and processing, while agriculture's share of the State's total value added was 6% (Kuminoff *et al.*, 2000:104).

The Californian Department of Food and Agriculture (CDFA) provides general services within animal health and food safety, inspection, marketing, and plant health and pest prevention. Marketing activities include the promotion of exports through the Agricultural Export Program. Activities within this program include the participation in trade shows, the coordination of trade missions, the organization of media events, and the support of "generic" California promotions and developing materials.

A speciality of Californian agricultural policies is the dairy policies which is administered by the Dairy Marketing Branch within CDFA. California operates its own marketing order system that differs from the system used in other US States. The Californian milk marketing order involves specific minimum prices according to the end use of the milk. A higher price is required for milk used for fluid milk products. The pricing policy generates additional revenue from consumers purchasing fluid milk products. These revenues are transferred back to dairy farmers who own milk quota. According to Sumner and Hart (1997:5), the monetary value of the Californian dairy policy was US-\$ 154 mill. in 1997.

Similarly, California has its own irrigation water policy, because irrigated water is a key input for agriculture in the State. The policy implies that surface irrigation water is provided to farmers at prices which are below costs or potential market prices. Based on calculations in Sumner and Hart (1997:4), the total benefit of the irrigation water policy to Californian farmers was US-\$ 236 mill. in 1997.

3.3.3 Illinois

The State of Illinois represents a typical State in the Mid-West. Illinois is among the top five States in terms of agricultural output. Around 80 % of the land area is used for agricultural purposes. The State is a major producer of crops (i.e., corn and soybeans), but there is also a significant production of hogs. Nearly 25% of the labor force is employed in the agricultural sector (including the agro-food industry). That makes food processing the main manufacturing activity in Illinois. One quarter of total exports stem from agriculture. This ranks Illinois second largest nationally in the export of agricultural commodities.

Several agencies and departments serve the agricultural sector. Most important is the Illinois Department of Agriculture (IDA). The IDA is involved in marketing and promotion measures like product logo programs, trade shows, and industry tours, animal health and animal welfare services, and inspection and regulation. Due to the importance of exports, the department has representatives in foreign countries who work to locate local buyers. In addition, the department is responsible for environmental programs directed at the use of pesticides and fertilizers. Some programs are targeted directly towards farmers.

The *AgriFIRST Grant Program* has an annual budget of US-\$ 3 mill. Its aim is to provide exploratory and feasibility funding for projects that raise farmers' share of profits from the processing of raw commodities. More specifically, AgriFIRST is concerned with the following issues: Lend economic support to Illinois farmers to capture higher returns for their investment in agriculture initiatives; provide critical economic support to food processors, manufacturers, wholesalers, retailers, agribusiness, and others who work to nurture and expand the food and fiber industry in Illinois; provide grants and technical assistance for new and expanding agriculture-related businesses; and help finance feasibility studies, business and marketing plans, technical advice and other types of financial assistance needed for innovative food and fiber enterprises to expand or get off the ground.

Another grant program is *Conservation 2000 - Sustainable Agriculture* with an annual appropriation of US-\$ 0.75 mill. Projects eligible for grants are linked to research, outreach and education.

Another important public agency for Illinois agriculture is the Illinois Farm Development Authority (IFDA), which is an independent, self-funded State agency that offers agricultural loans through different programs.

The *Beginning Farmer Bond Program* is directed towards the purchase of capital assets including farmland, farm improvements, and new equipments. The maximum loan size is US-\$ 250,000.

The *State Guarantee Program for Restructuring Agricultural Debt* allows farmers to consolidate existing debt. The loans are made through a local lender who receives an 85 % guarantee on the principal and interest of the loan. The maximum loan is US-\$ 500,000.

The *Specialized Livestock Guarantee Program* provides family sized livestock operations the access to capital needed to enter, upgrade or expand their livestock business. Loans are made the same way as for Restructuring Agricultural Debt.

The *Value Added Stock Purchase* supports farmers who plan to purchase stock in value added entities that further process their commodities. Loans are made through local lenders as for the State Guarantee Program for Restructuring Agricultural Debt and the Specialized Livestock Guarantee Program.

The *Young Farmer Guarantee Program* allows farmers to make capital purchases that will expand or upgrade their operation. Loans are made through local lenders as for the three programs mentioned above. The loan proceeds may be used for the purchase of farm related capital assets including farmland, machinery and breeding livestock. The maximum loan size is US-\$ 500,000.

The *State Guarantee Program for Agri-industries* is designed for farmers and agribusinesses that wish to diversify into new enterprises or to further process existing crops or livestock. Loans can be made to farmers or agribusinesses to purchase property, equipment etc that with the purpose of growing and development of new crops or livestock not customarily grown in Illinois or the further processing of grain or livestock grown in the State.

3.3.4 Texas

The Texian agricultural and food sector is the second largest industry in the State. Nearly 20% of the labor force are employed in some form of agriculture. Texas is probably most known as a major beef producing State, but the State has a rather diversified portfolio of products with both livestock and crops. About 78 % of total land area is used for agricultural purposes. The number of farms was about 226,000 in 2000.

The Texas Agricultural Finance Authority (TAFA) is responsible for the administration of several State programs.¹⁶ TAFA is a public agency within the Texas Department of Agriculture and works in partnership with banks or other agricultural lending institution through different programs eligible to agricultural and rural businesses and communities.

The *Agricultural Financial Assistance Program* provides financial assistance to eligible agricultural businesses that are or plan to be engaged in innovative, diversified or value-added production, processing, marketing or exporting of an agricultural product or other agricultural-related rural economic development projects. The program provides a guarantee, not to exceed US-\$ 1 mill., direct loan of up to US-\$ 250,000 or by providing assistance to lending institutions.

The *Young Farmer Loan Guarantee Program* grants loans to farmers aged 18–39 who wish to establish or enhance their farm or ranch operation or to establish an agricultural purposes.

The *Farm & Ranch Finance Program* consists of loans for purchasing farm or ranch land used for agricultural purposes.

The *Linked Deposit Program* facilitates commercial lending at below market rates for eligible projects; alternative crops, value-added business, businesses in declared disaster areas, use/purchase of water-conservation techniques or equipments, enhancing or maintaining rural economic development.

The *Rural Development Finance Program* aims at enhancing the State's economic development. Applicants must be located in rural areas, show evidence of creation or retention of employment and prove their ability to repay a loan.

The commitment volume for the different programs is shown in table 3.22. It is important to note that the numbers reported in table 3.22 are not total support to the farmers, but the volume of the loans committed by TAFA through the different programs.

The Linked Deposit Program and the Agricultural Financial Assistant Program turn out to be the two most important programs provided by TAFA. The total amount of loans increased significantly from a little more than US-\$ 5,000 mill. in 1998 to more than US-\$ 22,000 mill. in 2001. For the year 2002, the amount is reduced by one half compared to the year before.

Table 3.22 Commitment volume of programs administered by the Texas Agricultural Finance Authority (TAFA) for the fiscal years 1998–2002 (mill. US-\$)¹⁾

	1998	1999	2000	2001	2002
Linked Deposit Program	1,369.1	6,114.6	3,900.3	12,734.9	4,295.6
Agricultural Financial Assistance Program	3,709.5	8,989.8	10,372.5	8,739.0	5,818.5
Young Farmer Loan Guarantee Program	-	571.8	542.3	717.6	189.0
Farm & Ranch Finance Program	42.8	285.0	112.6	n.a.	n.a.
Total	5,121.4	15,961.2	14,927.7	22,191.5	10,303.1

1) No data on the commitment volumes for the *Rural Development Finance Program* have been included in TAFA (2002).

Source: TAFA (2002)

¹⁶ http://www.agr.state.tx.us/eco/finance_ag_development/index.htm.

3.3.5 Wisconsin

Wisconsin is famous for its dairy industry and known as «the cheese State». 52 % of the State total farm receipts are from dairy products. Around 20% of all persons employed are linked to the agro-food sector. Domestic support to agriculture is provided by several Departments and public agencies.

The Wisconsin Department for Agriculture, Trade and Consumer Protection (DATCP) is responsible for most agricultural matters in the State. Among other activities that range from marketing activities, export services for Wisconsin businesses, market research and development, to environmental programs, DATCP offers the Agricultural Development and Diversification (ADD) Grant Program.

The *Agricultural Development and Diversification (ADD) Grant Program* is a program DATCP invites proposals for developments and diversification projects that are expected to add value to or improve utilization of agricultural resources; and will create new enterprises and opportunities in the food and agricultural industry. Projects may include developments of new agricultural products, crops or enterprises, markets for existing products, technologies etc. A total of up to US-\$ 400,000 was available for the program in 2002. The maximum grant award is US-\$ 50,000 per project.

The Wisconsin Department of Revenue (DOR) is responsible for two programs to protect farmland that are financed through the State income tax.

The goal of the *Farmland Preservation Credit Program* is to preserve Wisconsin farmland by means of local land use planning and soil conservation practices and to provide property tax relief to farmland owners. To qualify for the credit, farmland must be 35 acres or more and zoned for exclusive agricultural use or be subject to a preservation agreement between the farmland owner and the State. In addition, participants must comply with soil and water conservation standards set by the State Land Conservation Board. In 2001, 21,400 farmers claimed Farmland Preservation Credits amounting to US-\$ 17.2 mill.

The *Farmland Tax Relief Credit Program* provides direct benefits to all farmland owners with 35 or more acres. The credit is computed as a percentage of the first US-\$ 10,000 of property taxes up to a maximum credit of US-\$ 1,500. In 2001 58,400 farmers received Farmland Tax Relief Credits totalling US-\$ 11,9 mill.

Both programs are paid through the State income tax or as a cash refund if the credit exceeds income tax due. In 2000, the total direct benefit for the two programs was US-\$ 34.2 mill.

The Wisconsin Department of Commerce (DOC) provides the Dairy 2020 Early Planning Program.

The goal of the *Dairy 2020 Early Planning program* is to encourage and stimulate the start up, modernization, and expansion of Wisconsin dairy farms. Since 1996, the program has provided more than US-\$ 1,7 mill. The grant may be used only to cover the cost of having an independent third party provide the professional services necessary to assist the applicant in the start-up, modernization, or expansion of a Wisconsin dairy farm. Examples of necessary services include activities such as the preparation of a comprehensive business plan. The program co-finances up to 75% of the eligible project costs with a maximum amount of US-\$ 3,000.

Several loan programs are offered by the Wisconsin Housing and Economic Development Authority (WHEDA):

The purpose of the *Credit Relief Outreach Program (CROP)* is to purchase services or consumable goods necessary to produce an agricultural commodity. The commodity must be planted and harvested for consumption within the term of the loan. Livestock is eligible if purchased, fed, and sold within the term of the loan. CROP features 90% guarantees on loans of up to US-\$ 30,000 made by local lenders.

The *FARM* program gives access to credit by guaranteeing a loan made by a local lender. The maximum loan guarantee is the lesser of the farmer's net worth, 25% of the loan amount, or US-\$ 200,000.

The *Beginning Farmer Bond* can be used to purchase a farm including land, equipment, livestock, or buildings. As a requirement, the beginning farmer must have less than US-\$ 250,000 in net worth, and the farm must be the primary livelihood. A prospective farmer must also demonstrate adequate training and experience in the type of farming for which the loan will be used. The maximum loan is US-\$ 250,000. Loan terms and credit decisions are negotiated between the beginner and the lender, and approved by WHEDA. Beginner Farmer Bonds can be used with other loan programs.

The *Agribusiness Guarantee* helps small businesses to develop new products using the State's raw commodities. A small business is eligible to the program if it is located in a municipality with a population under 50,000, purchases a substantial percentage of its raw agricultural commodities from Wisconsin suppliers, and develops a new product, method of processing, market, or improved marketing method for a Wisconsin product, or, produces a specialty cheese product that is new to the business. The maximum guarantee is 80% on loans up to US-\$ 750,000.

3.3.6 Reporting procedure

The OECD receives its data for the calculation of the PSE for US agriculture from the USDA. The data include also figures for State expenditures. The USDA is also responsible for providing data for the WTO notification documents on domestic support.

According to the notification of US domestic support to the WTO, domestic support funded at the Federal State level (excluding State credit programs) accounted for a little more than US-\$ 3 billion in the years 1997 and 1998 (see table 3.23). This amount was ca. 5% of total domestic support.¹⁷ The notification document contains only two programs at the Federal State level: the State credit programs notified as non-product specific AMS, and the aggregated State expenditure on agricultural programs contained in measures exempt from reduction commitments ('green box').

The two abovementioned programs notified to the WTO are also covered by the calculation of the PSE for the US (OECD 1999). In addition, the OECD includes energy payments in its PSE calculations.¹⁸ These payments are not notified to the WTO.

Table 3.23 Domestic sub-national support to US agriculture by source of data 1997–1999 (mill. US-\$)¹⁾

	1997	1998	1999
U.S. Census Bureau	3,826.4	4,025.7	4,293.7
OECD	3,066.7	3,334.3	3,572.7
WTO	3,067.0	3,334.0	n.a.

1) State expenditures on agriculture excluding State credit programs.

Source: OECD (2002b), WTO(2001b), U.S. Census Bureau (var. iss.)

Table 3.23 compares the data provided by the U.S. Census Bureau with the data used by the OECD, and the data notified to the WTO. State credit programs are excluded in

¹⁷ The relative small share of State expenditures is supported by Bullock (2002).

¹⁸ Federal and State exemptions or reductions in excise and sales taxes on diesel fuel for farmers relatively to the standard rate taxes on fuel.

table 3.23.¹⁹ It turns out the data used by the OECD and notified to the WTO coincide, while the data provided by the U.S. Census Bureau are higher than those for the OECD and the WTO.

The explanation for the coincidence of the OECD data and the WTO data is quite obvious. They stem from the same source (i.e., the USDA), and have been accepted by the OECD and the other WTO Members, although there has been a discussion in the WTO about the US reporting procedure on State programs (see p. 6).²⁰

The data provided by the U.S. Census Bureau are around US-\$ 700–800 mill. higher than those used by the OECD and notified to the WTO for the years 1997–1999. One reason may, of course, be different coverage. Concerning expenditures on the one hand, function code 54 ‘Other agriculture’ is very broad including support and promotion of agricultural associations and fairs. On the other hand, it is not clear whether all State agricultural programs are covered by code 54. For example, some environmental programs may be listed in code 59 ‘Other natural resources’. The same is true for fees and charges. As mentioned before, not all fees and charges related to agriculture are covered by code 54.

3.3.7 Evaluation

The study of the four Federal States California, Illinois, Texas, and Wisconsin indicates the existence of a wide range of domestic sub-national support measures for the agricultural sector. The States’ Departments of Agriculture provide general services to the State’s agriculture. Policy measures at State level are mostly limited to administration, research and extension, environmental purposes, marketing, and export promotion. In addition, there are several favourable loan programs and State credit programs. From that point of view, both the PSE estimates and the notification document on domestic support seems to capture the *types* of sub-national domestic support. The overall *significance* of the State programs (i.e., the monetary value at State level) has been approximated by the financial statistics of the U.S. Census Bureau. There is a discrepancy in the data which can be partly explained by different policy coverage.

¹⁹ Data on State credit programs are listed separately in the WTO notification documents, and included in the PSE estimates.

²⁰ In the US PSE estimates, the total amount of State expenditures in the US is kept constant for the years 1999–2001, because the last available figure is the one for 1999 (OECD 2002c).

4 Conclusions

The study has identified different standards and procedures of the coverage of domestic sub-national support to agriculture in the PSE calculations and in the notification of domestic support to the WTO. Generally speaking, the more complex the sharing of responsibilities with regard to decision-making, implementation, and funding, the greater the potential danger of mis-specification and under-reporting.

In case of the EU and the US the notification procedures do simply not allow to re-examine whether sub-national support measures are reported or not. The EU and the US only report data at the aggregate level. In addition, the description of the data source is insufficient. The Australian procedure seems to be more transparent. In the WTO notification documents, Australia splits support measures with regard to Commonwealth funding and State/Territory funding. This standard improves verification significantly.

In order to evaluate the qualitative impact of different degrees of coverage of domestic sub-national support to agriculture, this study has made an attempt to evaluate the significance of sub-national support measures in Australia, the European Union, and the United States. The percentage share of domestic sub-national support varies significantly in these countries. In Australia, such support accounts for around 50% of all domestic support. For the EU as a whole the corresponding number is 15% according to data provided by the EU Commission. For Ireland, Germany, and Austria the numbers are 2%, 6%, and 23%, respectively. Based on national data, the share of sub-national support as a percentage of total domestic support was 30% in Ireland, 21% in Germany, and 14% in Austria in 2000. According to the US notification on domestic support, State programs accounted for around 5% of total domestic support in 2000.

A major reason for the differences may be sought in the respective countries' governance structure and the historic development of a country's agricultural policies. The original six Australian States were independent when they formed the Commonwealth, and are still quite independent when it comes to legislation and agricultural policy. Therefore, the share of sub-national domestic support is relatively high, but, of course, influenced by Federal competition policy. In addition, the overall domestic support to Australian agriculture is quite low compared to other countries. The EU's responsibility for a Common Agricultural Policy can be traced back to the treaty of Rome. Recent developments in the EU (Eastward enlargement, strengthening of rural development,

e.g.) may lead to an increase in the share of sub-national domestic support in the future. Agricultural policies in the United States involve inter-state trade and exports to third countries. These policy issues are Federal business, and explain the low share of sub-national domestic support in the US.

It is important to note that the percentage share of sub-national domestic support should not be confused with the overall level of domestic support. It is well-known that overall domestic support in Australia is much lower than in the US and in the EU (OECD 1999).

Despite the rather high differences of the percentage shares in the countries reported above, the type of domestic sub-national support measures are quite similar. Generally speaking, domestic sub-national support falls typically within the 'green box' of the WTO (i.e., support exempt from reduction commitments), and in the category of general services of the PSE method. Common sub-national support measures include what one could call the 'provision of public infrastructure', namely administration, research, training, extension, inspection, pest and disease control etc. The direct income effect of domestic sub-national support measures is limited, as the examples of Ireland, Bavaria and Austria have indicated. Since sub-national support usually fits the 'green box', one might ask for the reasons to postulate a stricter discipline on reporting routines, since 'green box' measures are exempt from reduction commitments anyway. The question of tighter notification standards is, of course, a principal one. In addition, the current WTO negotiations on a further liberalization of agricultural policies (and further reduction of agricultural support) may potentially lead to changes in the definition of 'green box' measures. If, hypothetically, some current 'green box' categories become subject to reduction commitments (tighter disciplines), then the question of notification standards becomes indeed an urgent one. But there is also a general desire of more transparency of agricultural policies. Although the Uruguay-round and the development of the PSE method have made important contributions towards more transparent agricultural policies, the example of sub-national support indicates, that much can still be done.

One possibility to increase transparency might be to notify domestic support with regard to their source of funding. This should not be too difficult for WTO Member countries. Currently, the US and the EU only report data at the aggregate level. But these data are the result of some underlying calculations made in Washington and Brussels. It should not be too problematic, at least from a principal point of view, to include these underlying calculations as part of the notification documents.

References

- ABS (Australian Bureau of Statistics). 2002a. *Agriculture – Characteristics of Australian farms*. (WEB: <http://www.abs.gov.au>, as of 10 July 2002).
- ABS (Australian Bureau of Statistics). 2002b. *Agriculture – Land used for agriculture*. (WEB: <http://www.abs.gov.au>, as of 10 July 2002).
- Bundesregierung. 2001. *Bericht der Bundesregierung über die Entwicklung der Finanzhilfen des Bundes und der Steuervergünstigungen gemäß §12 des Gesetzes zur Förderung der Stabilität und des Wachstums der Wirtschaft (StWG) vom 8. Juni 1967 für die Jahre 1999 bis 2002 (18. Subventionsbericht)*, Berlin, 26.7.2001.
- BStMLF (Bayerisches Staatsministerium für Ernährung, Landwirtschaft und Forsten). 2001. *Agrarbericht 2000*, München. (WEB: <http://www.stmelf.bayern.de>, as of 31 January 2002).
- BMLFUW (Bundesministerium für Landwirtschaft, Forsten, Umwelt und Wasserwirtschaft). 2001. *Grüner Bericht 2000*, Wien. (WEB: <http://www.lebensministerium.at>, as of 13 February 2002).
- Bullock, D. 2002. Personal communication, 19 September 2002.
- BVEL (Bundesministerium für Verbraucherschutz, Ernährung und Landwirtschaft) (var.iss.): *Agrarbericht der Bundesregierung*, Bonn.
- DAFF (Irish Department of Agriculture, Food and Rural Development). 2002. *2001/2002 Annual Review and Outlook for Agriculture, Food and Rural Development*, Dublin. (WEB: <http://www.irlgov.ie/daff/Publicat/publicat.HTM>, as of 17 July 2002).
- DAFF (Irish Department of Agriculture, Food and Rural Development). 2001. *2000/2001 Annual Review and Outlook for Agriculture, Food and Rural Development*, Dublin. (WEB: <http://www.irlgov.ie/daff/Publicat/publicat.HTM>, as of 17 July 2002).
- DPI (Queensland Department of Primary Industries). 2001. *Biofactory plants a possibility*, News Release from the Queensland Department of Primary Industries of 26 October 2001. (WEB: <http://www.dpi.qld.gov.au/news/NewsReleases/7705.html>, as of 11 July 2002).
- EU (1999): *CAP Reform: Rural Development, Brussels*. (WEB: http://europa.eu.int/comm/agriculture/publi/fact/index_en.htm, as of 24 September 2002).
- EU (2001): *Agriculture in the European Union – Statistical and economic information 2001*, Brussels. (WEB: http://europa.eu.int/comm/agriculture/agrista/2001/table_en/index.htm, as of 24 September 2002).
- Harvey, D. 2002. *US farm policy*. Course material to AEF372 “World Agricultural Policies”, University at Newcastle upon Tyne, UK. (WEB: <http://www.staff.ncl.ac.uk/david.harvey/AEF811/AEF811.5/POL5.html>, as of 9 October 2002).
- Kemp, D. 2002. Personal communication, 10 July 2002.
- Kuminoff, N.V., Sumner, D., Goldman, G. 2000. *The Measure of California Agriculture 2000*, University of California Agricultural Issues Center, Davis.
- MTTL. 2002. *Finnish Agriculture and Rural Industries 2002*, Agricultural Economics Research Institute, Helsinki, Finland.

- NTDPIF (Northern Territory Department of Primary Industries and Fisheries). 2001a. *Annual Report 2000-2001*.
(WEB: http://www.nt.gov.au/dbird/dpif/pubcat/annual_report/annual.shtml, as of 11 July 2002).
- NTDPIF (Northern Territory Department of Primary Industries and Fisheries). 2001b. *Technical Annual Report 2000–2001*.
(WEB: http://www.nt.gov.au/dbird/dpif/pubcat/annual_report/annual.shtml, as of 16 July 2002).
- OECD. 2002a. *European Union: Total Support Estimate*, PSE-database, Paris.
- OECD. 2002b. *US: Total Support Estimate*, PSE-database, Paris.
- OECD. 2002c. Written communication, OECD, Paris, 17 September 2002.
- OECD. 1999. *Producer and Consumer Support Estimates – OECD Database*, 1999 edition, CD-ROM, OECD, Paris.
- Schlagheck, H. 2001. „Förderung der ländlichen Entwicklung in Deutschland am Beispiel der Agrar-Umweltprogramme“, pp. 8–14, in: WWF (ed.): *Die Agrar-Umweltprogramme – Naturschutz in ländlichen Räumen, Tagungsband zur Podiumsdiskussion am 22. Januar 2001 im ICC Berlin*, Berlin.
- Sumner, D. & D. Hart. 1997. *A Measure of Subsidy to Californian Agriculture*, AIC Issues Brief No. 2, July 1997, University of California Agricultural Issues Center, Davis.
- TAFA. 2002. Written communication, Texas Department of Agriculture, 13 September 2002.
- Thoroë, C. 2000. “The Hierarchy of Agricultural Policies: European Union, Federal Republic and Federal States”, pp. 187–208 in: Tangermann, S. (ed): *Agriculture in Germany*, DLG Verlag, Frankfurt.
- U.S. Census Bureau (var. iss.): *State and Local Government Finances* (WEB: <http://www.census.gov/govs/www/index.html>, as of 8 September 2002).
- WTO. 2002. *Notification concerning domestic support commitments for the fiscal year 2000/01 – Australia*, G/AG/N/AUS/41 of 21 March 2002.
- WTO. 2001a. *Notification concerning domestic support commitments for the fiscal year 1999/00 – Australia*, G/AG/N/AUS/36 of 20 June 2001.
- WTO. 2001b. *Notification concerning domestic support commitments for the marketing year 1998 – USA*, G/AG/N/US/36 of 26 June 2001.
- WTO. 2001c. *Notification concerning domestic support commitments for the marketing year 1998/98 – European Communities*, G/AG/N/EEC/30 of 22 March 2001.
- WTO. 2000. *Notification concerning domestic support commitments for the fiscal year 1998/99 – Australia*, G/AG/N/AUS/30 of 9 March 2000.
- WTO. 1998. *Summary report of the meeting held on 30 September – 1 October 1998*, G/AG/R/16 of 28 October 1998.