AGRICULTURAL SUBSIDIES AND PROTECTION IN THE FORMER YUGOSLAV REPUBLIC OF MACEDONIA: CONTRIBUTIONS TO THE DESIGN OF MACEDONIA'S AGRICULTURAL STRATEGY

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ACRONYMS and ABBREVIATIONS

AMS	Aggregate measure of support
CAP	EU Common Agricultural Policy
CEEC	Central and Eastern European Countries
CEFTA	Central European Free Trade Agreement
CIF	Cost, insurance, and freight
CMEA	Council for Mutual Economic Assistance
CSE	Consumer subsidy equivalent
DM	Deutsche Mark
DAP	Diammonium phosphate
EFTA	European Free Trade Agreement
ERS	Economic Research Service (USDA)
EU	European Union
FAS	Foreign Agricultural Service (USDA)
FOB	Fee on board: export prices at the border of the origin country
FYRM	Former Yugoslav Republic of Macedonia
GATT	General Agreement on Tariffs and Trade
IDA	International Development Assistance (World Bank)
IMF	International Monetary Fund
MAFWE	Ministry of Agriculture, Forestry, and Water Economics
MAP	Monoammonium phosphate
MY	Marketing year
NBM	National Bank of Macedonia

NPK	Nitrogen phosphate potassasium (aka kalium)
NPC	Nominal protection coefficient
OECD	Organization for Economic Cooperation and Development
PSE	Producer subsidy equivalent
REER	Real effective exchange rate
SBA	Stand-by Arrangement
SFRY	Former Socialist Federal Republic of Yugoslavia
SOM	Statistical Office of Macedonia
SDR	Special drawing right of the IMF
STE	Sate-owned enterprises
STF	Strategic Transformation Facility (IMF)
TSP	Triple superphosphate
UHT	Ultra-high temperature (pasteurization of milk)
USDA	United States Department of Agriculture
WTO	World Trade Organization

Weights and Measures[1]:

1 hectare	=	2.74109 acres
1 kilogram	=	2.204622 pounds
1 metric ton liquid milk	=	971 liters
1 metric ton	=	2204.622 pounds
1 US dollar	=	43.2583 denars (1994 average)[2]
1 deutsche mark	=	26.6137 denars (1994 average)[2]

[1] "Tons" in this report, whether referring to US or foreign goods, are metric tons. In cases where quantities were expressed in short tons in source citations, they have been converted.

[2] Unless otherwise noted.

EXECUTIVE SUMMARY

This study was initiated to assist the Government of the Former Yugoslav Republic of Macedonia (FYRM) in developing a new policy framework that promotes competition in agricultural markets and efficiency in agricultural production. The analysis was part of the preparation for a World Bank project to support private farmers, now in progress. The study aimed to provide a learning experience for Macedonian professionals on the study team and concerned officials in ministries who will make use of its results. The study was funded by USAID/Skopje, under the Agricultural Policy Analysis Project (APAP III).

This report combines the analyses of five deficit commodities (see Ouedraogo and Shaw, 1995) and three export commodities. Macedonia imports wheat, cowmilk, sunflower seed, sugarbeet, and fertilizer (urea and NPK mix), while it exports lamb, table grapes, and wine. A background description of lamb, table grapes, and wine is provided in Appendix B. Steven Sposato presents, in a separate document, his results for three other export commodities, fresh apples, tomatoes, and cucumbers.

Analytical methods

The key analytical tools used by this study are the nominal protection coefficient (NPC) and the producer subsidy equivalent (PSE). The NPC is a ratio that compares domestic price to adjusted world price, to assess the level of protection given to the producers of a commodity. The adjusted world price is calculated differently for import and export commodities. Although the world price is often distorted, it still represents the opportunity cost for Macedonia. By providing protection (NPC $>$ 1), a government distorts the incentive to producers and transfers extra resources, broadly speaking, from consumers or taxpayers to producers. A NPC $<$ 1 means that producers or processors compete with products available in world markets without protection from a government.

The PSE is an amount of money. It represents the payment required to compensate producers of a particular commodity for the loss of income resulting from the removal of a given package of policy measures. The PSE is an Aggregate Measure of Support (AMS), such as used by FAO, OECD, USDA, and the World Trade Organization (WTO) to gauge a countries's level of support to commodities or the overall agricultural sector. The PSE can also be stated as a percent to measure the total support to the commodity as a percent of the total value of production of that commodity. Here PSEs are calculated for deficit commodities, which have more support than export commodities.

International price comparisons are also made in an attempt to assess the competitiveness of Macedonian export commodities. That is, prices in Macedonia are compared to those in competing countries for the same commodities.

Agricultural subsidies matter

On economic grounds, agricultural subsidies are objectionable for three main reasons. One major concern about agricultural subsidies is their strain on budget resources. Subsidies add to government outlays and therefore contribute to budget deficits when subsidies are not paid for by taxes. Budget deficits have major implications for macroeconomic aggregates. A large-size economy is not a license to carry subsidies, but smaller-size economies must pay even more attention to the burden of agricultural subsidies on their budgets. When subsidies claim too high a share of gross domestic product (GDP), decisive measures must be taken to remedy the problem.

A second major concern is the opportunity foregone. Agricultural subsidies are revenue foregone that could have been used for some other purposes. Given resource scarcity, especially in small-size countries, one must ask the following questions: " Is payment of agricultural subsidies the best use of resources to further development of the agricultural sector or the whole economy? Aren't there better and more opportune uses of these resources to enhance economic development, or social purposes?" One important outcome of agricultural subsidies is that they shift resources away from one group of participants to another, for example, from small, private farmers to large, social farmers. The misallocation of resources may also contribute to environmental degradation, for example, through heavy use of chemicals or environmentally-degrading practices.

A third major concern about agricultural subsidies is their serving as a **barrier to market access**. That is, trading partners are barred or must incur considerable cost to sell goods in the subsidizing country or, more disturbing, to compete in the world market against this country. This is one of the *raisons d'être* of the WTO, whose rules and regulations aim at reducing the negative impacts of agricultural subsidies on world trade.

However, not all agricultural subsidies are objectionable. Subsidizing public goods, which private firms cannot adequately provide, is deemed useful. Furthermore, the WTO grants exemptions to developing countries for certain subsidies, including all investment subsidies, even agricultural input subsidies to low-income or resource-poor producers, as well as domestic support to producers to encourage diversification from growing illicit narcotic crops. However, some of these exemptions (for example, input subsidies) may have unintended negative consequences both economically and environmentally, so that developing countries need to carefully assess their impacts before implementing them.

Scope of Agricultural Subsidies in FYRM

Agricultural subsidies used in the FYRM include price premium, input subsidies, interest credit rebate, export subsidies, and subsidies in various agricultural development programs. Price premiums, input subsidies, and interest credit rebate apply mostly to deficit

commodities (such as wheat, milk, sugarbeet, and sunflowerseed), though lamb producers also qualified for interest rebate. Export subsidy was small in 1994.

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Figure 1

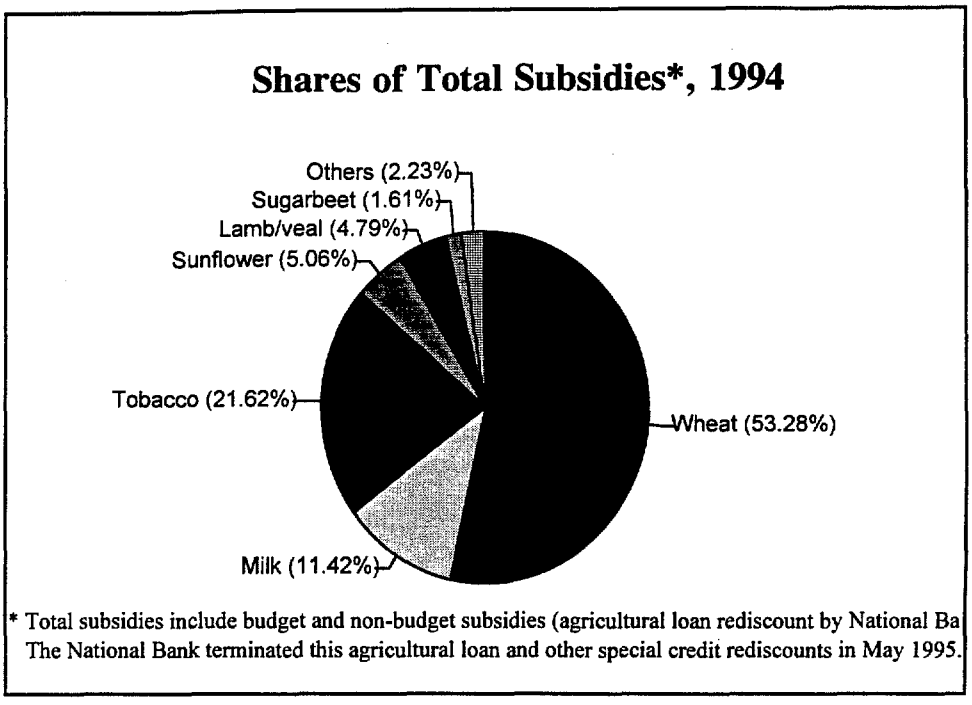
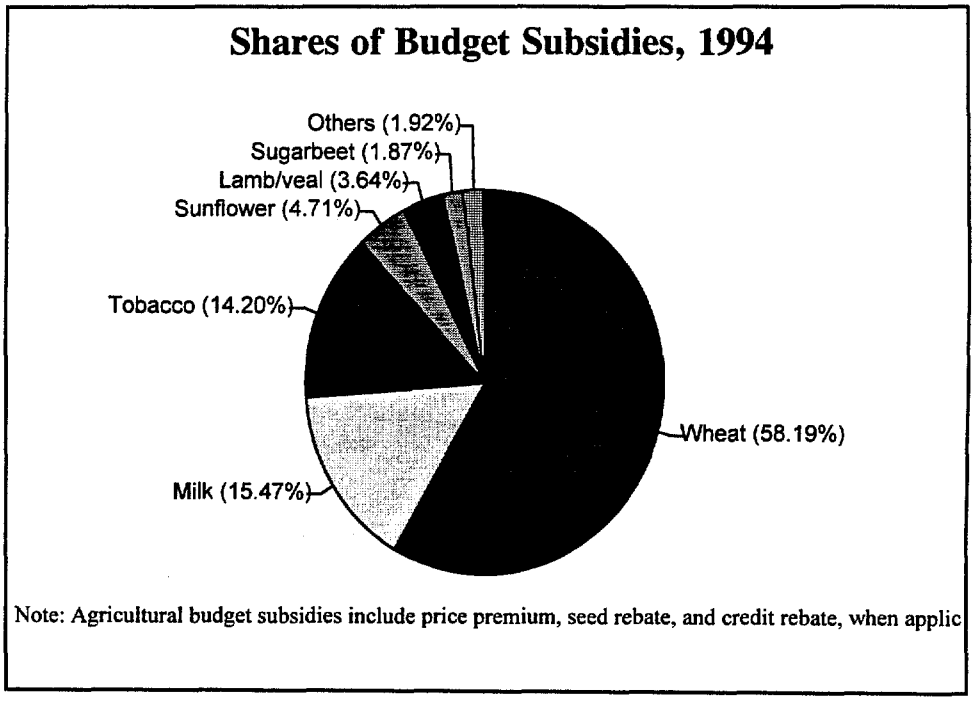


Figure 2



Highlights and Results

Wheat took the lion's share of agricultural subsidies in 1994, with 58.2%of budget subsidies (premium, seed rebate, and credit rebate) and 53.3% of total subsides, followed by milk (15.6% and 11.4%), sunflower seed (5.1% and 4.7%), and sugarbeet (1.9% and 1.6%). Agricultural budget subsidies appear small in absolute terms (less than $40 million in 1993/94), but they strain the government budget as Macedonia always struggled to pay them in full or on time. The true impact of agricultural subsidies is their opportunity cost, that is, what is lost by not using these resources in other ways to increase farm productivity.

The estimates of nominal protection coefficients (NPCs) clearly show that Macedonia provided a high level of protection for wheat, milk, cheese, sugarbeet, and fertilizer production in 1994. Only sunflower production competed without protection. The producer subsidy equivalent (PSE) is a broader measure of protection. The percent PSE for wheat was higher in Macedonia (in 1994) than in the European Union (in 1993), though those for cowmilk and sunflower, however, were lower than in the EU and the USA.

Table 1. NPC Summary Results for Deficit Commodities

	Domestic price to Producer (a)		Border price of competing import (b)		NPC (a/b)
Product	**Den/kg**	**US$/kg**	**Den/kg**	**US$/kg**	
Wheat	12.00	0.28	5.69	0. 13	2.18
Cowmilk	20.32	0.47	11.48	0.27	1.77
White cheese (belo)	150.00	3.47	51.99	1.20	2.88
Yellow cheese (kashkval)	280.00	6.47	71.69	1.66	3.91
Raw sugar	23.77	0.55	14.29	0.33	1.66
Refined sugar	24.24	0.56	17.67	0.41	1.37
Raw sunflower seed	9.65	0.22	22.11	0.51	0.44
Raw sunflower oil	24.12	0.56	33.95	0.78	0.71
Urea	7.20	0.17	5.80	0.13	1.24
NPK 15-15-15	8,800	203	4,031	93	2.18

Notes: $1 = Den 43.3 in 1994
Domestic prices based are Macedonian producer price or factory raw input equivalent, including price premium. Border prices based on actual prices for 1994 or estimates from published data; for wheat. via Burgas and Bulgaria and overland through CEEC for cowmilk and sunflower, and cheese.

Table 2. Summary PSEs and Transfers from Taxpayers and Consumers to Producers								
	Wheat		Cowmilk		Sunflower		Sugarbeet	
Transfers (million)	**Den**	**US$**	**Den**	**US$**	**Den**	**US$**	**Den**	**US$**
From taxpayers	830	19.20	144	3.34	67	1.55	27	0.62
From consumers	1,964	29.40	896	20.70	(217)	(5.02)	52	1.20
To producers (total PSE)	2,794	48.59	1,040	24.04	(150)	(3.47)	79	1.82
PSE%	69%		44%		-87%		48%	

Note: $1 = denars 43.3 in 1994
Trade via Burgas or overland through Central and Eastern Europe.

Contrary to producers of deficit commodities (except sunflowerseed), exporters of lamb, table grapes, and bulk wine competed successfully in 1994 without protection. The NPC was even (1.0) for lamb exporters, but below parity with adjusted world price for table grapes and bulk wine exporters. The NPC was 0.94 for lamb producers and 1.05 for table grapes producers selling in strong demand, local markets. Unsurprisingly, the NPC for exportables show no protection because the only policy protective measure was a paltry export subsidy (4%). Producers had no such subsidy. With a larger export subsidy in 1995 and 1996 (30%), protection increases for lamb exporters (1.24 if costs remain constant) and for farmers (NPC =1.08) who got paid higher prices in 1995 (den 80/kg).

Table 3. NPC Summary Results for Export Commodities					
	Domestic price to Exporter (a)		Border price of competing export (b)		NPC (a/b)
Product	**Den/kg**	**US$/kg**	**Den/kg**	**US$/kg**	
Lamb liveweight	89.1	2.06	88.8	2.05	1.00
Table Grapes	13.8	0.32	25.1	0.58	0.55
Bulk wine	16.6	0.38	25.3	0.58	0.66

Notes:
Macedonia export price (factorygate) includes export subsidy (and net-product for lamb)
Border prices based on c.i.f. prices in EU (Eurostat)
Bulk wine in liter
$1 = Den 43.23 in 1994

More than the agricultural subsidies, however, the high level of protective prices for deficit commodities was the driving force behind agricultural protection in 1994. Protective prices are based on cost-of-production estimates, which have a built-in upward bias on the pan-territorial and pan-seasonal administrative prices. The result is that consumers more than taxpayers shoulder the burden of supporting producers of wheat, milk, and sugarbeet. Sunflower producers, however, actually transferred resources to consumers because world prices were higher than domestic prices in 1994.

Clearly, the potential for increased agricultural exports is great in Macedonia. Agro-ecological conditions and know-how explain why Macedonian agricultural products are appreciated throughout Europe. However, constraints remain in production of lamb and grapes. Exports of lamb, table grapes, and bulk wine are constrained by border-crossing impediments and transport costs, as Greece continues to refuse transit to Macedonian exports. A great concern in wine export is the low value-added of bulk wine that Macedonians are forced to export for lack of basic supplies, such as bottles and labels, and lack of good marketing strategy. Also important, Macedonians need to think of client diversification; that is, find the best markets possible, rather than exclusively concentrate on the EU for lamb and wine exports.

According to the international price comparisons, countries to the north of Macedonia, accessible by overland routes (FYU, Ukraine, Russia, Hungary and Czech Republic), would tend, all else being equal, to show better comparisons for Macedonia than those of the Mediterranean basin or near sea ports.

Recommendations

The study suggests recommendations to strengthen agricultural development:

- **Promote more competitiveness through price signals closer to world prices.** To act on its own commitment to price signals closer to world prices, Macedonia should do away with cost-of-production. Costs-of-production have inherently a built-in bias toward price increases. An effective marketing information system is the better alternative. If price signals are needed while the government sets up this system, a reasonable alternative to cost-of-production is a moving average of border prices, such as those calculated for the NPCs in this study.

- **Design an agricultural strategy based on sustainable food self-reliance and export commodities.** Food self-sufficiency is as unsustainable as it is unwise as a strategy for Macedonia, which lacks the resources to support both food self-sufficiency and export subsidies to get rid of eventual surpluses. A more realistic approach is for Macedonia to pursue a strategy of food self reliance and agricultural export promotion. That is, the FYRM should concentrate low unit-

cost foodcrop production (e.g., wheat) in only the most advantageous areas, and shift saved resources to agricultural exports, whose foreign earnings would help pay for cheaper imported wheat.

- **Vigorously promote Macedonian agricultural exports**. Key actions are within the government's mandate, for example, cooperating with countries to eliminate impediments at border crossings, and information on world market conditions to help the private sector better plan export activities. Also the government can play a catalytic role to help shift exports from a low-value, bulk wine to a consistent quality, bottled wine product. Blending selected vintages for a consistent, large volume product should be considered. Similar actions can be taken to promote branded names for other exportable produce. It is also important for Macedonia to diversify its export market.

- **Revise trade regime to comply with WTO requirements.** Macedonia's regime of quotas, variable levies, and export subsidies run counter to WTO's requirements and should be revised accordingly.

- **Increase agricultural policies monitoring and analytical capacity**. MAFWE's monitoring and analytical capacity needs strengthening. It is difficult to design and implement a coherent agricultural strategy without accurate information on expenditures on this strategy's core commodities. Estimates of NPC and PSE, as calculated in this study, should be routinely performed by MAFWE.

- **Increase, in particular, knowledge of the private farm sector**. Better advice to private farmers can only be built on a solid knowledge of the private farm sector. Macedonia's small size and educated labor force should make it easy to establish an efficient agricultural statistical system. Such a system would allow periodic multiple purpose surveys (combining agricultural and socio-economic statistics) using established multiple sampling frames (area sampling plus list frames) for good representative data.

- **Report trade data consistently**. Appropriate, good quality trade analyses need consistent trade statistics. The Statistical Office currently reports trade data only for commodities that are viewed as important in the current year. This results in missing data for some years and makes it difficult to monitor the performance of commodities over time. This unfortunate reporting blemishes what is an otherwise excellent performance of the Statistical Office.

- **Determine long-term agricultural comparative advantage.** As an input to the agricultural strategy, MAFWE should lead the effort to quantify the comparative advantage in key products to refocus the policy debate on products

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with a long-term future in European and global markets. Such a policy would reorient public and private investment away from high-cost commodities toward those with the potential to generate income and jobs for Macedonians. Macedonia's wheat is of high quality, but could doubtfully compete effectively with European wheat. In contrast, Macedonia appears well endowed to produce lamb, tomatoes, cucumbers, and grapes at higher quality and lower cost than competitors in Europe and elsewhere.

1. INTRODUCTION

The Ministry of Agriculture, Forest, and Water Economy (MAFWE) of the Former Yugoslav Republic of Macedonia (FYRM) and its development partners seek to examine the pattern and extent of agricultural subsidies and protection to determine their likely impacts, and to recommend courses of action consistent with private sector development in a country in transition toward a market economy. Agriculture was the only growth sector in the Former Yugoslav Republic of Macedonia (FYRM) in 1994. Thus, its role in stimulating economic growth is extremely important. Indeed the role of agriculture is greater than the sector's output alone reflects. Agriculture stimulates production in input industries like fertilizer and produces the inputs for other industries like food processing. Through these linkages, additional income and employment are generated. Agricultural products are also potential exports.

To take advantage of opportunities for both agricultural and other types of trade, Macedonia desires to join the European Union (EU). In addition, the FYRM is about to join the World Trade Organization (WTO). In the EU, reform of the Common Agricultural Policy (CAP) and other changes in EU agricultural policy are now under way in conjunction with the WTO (see Appendix A). MAFWE needs to be aware of a) the policy trends in Europe, b) where its own policies place Macedonia in relation to Europe and the rest of the world, and, most important, c) the implications of domestic agricultural policies for growth and employment.

MAFWE has started work to design a strategy for the "Long-term Agricultural Development of Agriculture, Forestry and Water Economy in Macedonia from 1995 to 2010" (often referred as the Agricultural Strategy 2010). The Ministry has enlisted the support of several agencies in this design, including the Institute of Economics of Macedonia, the Academy of Sciences and the Faculty of Agriculture.

The objective of this study is to contribute empirical analysis to the design of Macedonia's agricultural strategy to assist the Government of Macedonia in its move to a policy framework that promotes competition in agricultural markets and efficiency in production.

This report combines the analyses of five deficit commodities (see Ouedraogo and Shaw, 1995) and three export commodities. Macedonia imports wheat, cowmilk, sunflower seed, sugarbeet, and fertilizer (urea and NPK mix), while it exports lamb, table grapes, and wine. To measure protection, nominal protection coefficients (NPC) are calculated for the deficit commodities and three export commodities protected by export subsidies in 1994 (lamb, bulk wine, and table grapes).

Assuming away export subsidies in Macedonia (and in competing countries as well), an attempt is made to assess the competitiveness of Macedonian export commodities through international price comparisons. International price comparisons are made for export commodities such as apples, tomatoes, cucumbers, table grapes, and lamb.

2. OVERVIEW OF FYRM'S MACROECONOMICS AND AGRICULTURE

The Former Yugoslav Republic of Macedonia (FYRM) is strategically situated in the Balkans peninsula along the South-North axis from Mediterranean Greece to continental Central and Eastern Europe. The country owes most of its characteristics to this location, including to some extent its small-size (25,000 sq kilometer, 2.5 million people) and land-lockedness, and certainly its history and ecological uniqueness. Its modified Mediterranean-continental climate and varied terrain allow diversified agricultural production.

2.1 Overview of Macroeconomic Conditions

FYR Macedonia has just emerged from extremely unfavorable external conditions. Entering its third year of independence, the country has now gained widespread political recognition and is addressing the underlying economic problems inherited from the policies and institutions of the former Yugoslav federation. The challenges it faces are enormous, especially as its economic performance is severely constrained by the unfavorable external environment. Despite adverse situation, the Government is implementing an adjustment/stabilization program and has already taken several far-reaching measures in the areas of privatization, trade liberalization, and public enterprise reforms, as well as reforms in the banking and tax systems. But much remains to be done. The economic program for 1994, which has been adopted by Parliament, goes beyond short-term emergency measures and tackles the structural impediments to growth. In support of its adjustment/stabilization, FYR Macedonia has obtained support from the IMF in the form of a drawing on the Systemic Transformation Facility and will receive support from the World Bank through this Bank/IDA Economic Recovery Loan/Credit. Both are subject to confirmation of financing arrangements. Given the size of the projected financing gap for 1994 and the Government's commitment to repay arrears to the international financial institutions in the course of 1994, substantial up-front financial and development assistance from the international community is required. A support group led by the Government of the Netherlands has been helping FYR Macedonia mobilize this assistance.

2.2 Overview of Agriculture in Macedonia

Owing to its ecological conditions, agricultural tradition, rural infrastructure and farm structure (private farmers own 80% of the land), FYRM has a diversified agriculture.[3] Sheep and lamb (2.5 million head) are dominant in livestock production, followed by cattle, pigs, and poultry. Major crops include wheat and industrial crops (tobacco, sunflowerseed, and sugarbeet). Favorable soil and weather conditions allow significant production of table and wine grapes, and early fruits and vegetables, including apples, tomatoes, cucumbers, and peppers. The country takes great pride in its wine production.

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[3] Agricultural land represents 50% of Macedonia's 2.57 million ha; arable land is estimated at 662,000 ha and pasture at 640,000 ha; forests cover about 37% (950,000 ha). About 5% of arable land is irrigated.

Agriculture plays a vital role in the Macedonian economy through its contributions to Gross Domestic (or Social) Product, employment, and trade. Its contribution to GDP was the brightest spot in the ongoing difficult economic situation in Macedonia. Despite this, the agricultural sector also faces difficult structural adjustment. In 1994, primary agriculture and forests contributed about 19% to Gross Social Product (GSP) and about 15% to employment in Macedonia. In comparison, industry contributed 43% to GSP and 48% to employment, and Services 38% to GSP and 37% to employment (World Bank, 1995). These contributions are similar to those of other middle-income countries (to the extent that GSP compares with GDP). These contributions have changed only marginally since 1991.The real contributions of agriculture to the Macedonian economy are considered much larger than is reflected in its shares of output and employment. A sizable proportion of the population (45%) lives in rural areas, and thus derives its livelihood directly or indirectly from agricultural activities. Underscoring its importance in Macedonia, agriculture was the only growth sector in 1994 (7.9%). Both the industrial sector and total GSP had continued to experience lost output, - 10.5% and - 5.7% respectively (World Bank estimates).[4]

FYRM is grappling with a socialist legacy of agricultural subsidies and protection that is increasingly at a variance with its budgetary resources and attempts to promote private sector development in agriculture. Macedonia's specialization in agriculture in former Yugoslavia was supported by the budgetary resources of the much larger former federation. Little pressure existed to reduce costs of production. Such were little researched and yet costs of production served as the basis on which subsidies were set. Also, even after independence, Macedonia's socialist orientation has continued to favor the social and public farms and mostly ignored the private farm sector. The general nature and impact of subsidies are explored in the next sections.

[4] All economies in transition have experienced severe and sustained output drops, but most seem now to be recovering. The continued loss of output in Macedonia reflects the ill effects of the war in its trading partner and the blockade imposed by Greece.

3. AGRICULTURAL SUBSIDIES IN FYRM

Agricultural subsidies and protection figured prominently during negotiations of the General Agreements on Trade and Tariffs (GATT), which led to the WTO. All countries are coming to grips with the deleterious effects of subsidies both on domestic production and on international trade. What are agricultural subsidies and why do they matter? A discussion of these issues serves as a backdrop to the description of agricultural subsidies in the FYRM.

3.1 Nature of Agricultural Subsidies

The GATT (now WTO) went to great lengths to define agricultural subsidies (box) to lay the groundwork for their reduction worldwide. The WTO singled out export subsidies, defined as: a) the provision by governments or their agencies of direct subsidies, including payments-in-kind, to a firm, to an industry, to producers of an agricultural product, to a cooperative or other association of such producers, or to a marketing board, contingent on export performance; b) the sale or disposal for export by governments or their agencies of noncommercial stocks of agricultural products at a price lower than the comparable price charged for the like product to buyers in the domestic market; c) payments on the export of an agricultural product that are financed by virtue of governmental action, whether or not a charge on the public account is involved, including payments that are financed from the proceeds of a levy imposed on the agricultural product concerned or on an agricultural product from which the exported product is derived; d) the provision of subsidies to reduce the costs of marketing exports of agricultural products (other than widely available export promotion and advisory services) including handling, upgrading and other processing costs, and the costs of international transport and freight; e) internal transport and freight charges on export shipments, provided or mandated by governments, on terms more favorable than for domestic shipments; f) subsidies on agricultural products contingent on their incorporation in exported products.

There is a subsidy if:

(1) there is a financial contribution by a government or any public body involving

- a direct transfer of funds (e.g. grants, loans, and equity infusion), potential direct transfers of funds or liabilities (e.g. loan guarantees);
- government revenues are used up or not collected (e.g., fiscal incentives such as tax credits);
- a government provides goods or services other than general infrastructure, or purchases goods;
- a government makes payments to a funding mechanism or directs a private body to carry out functions which would normally be vested in the government; or

(2) there is any form of income or price support and a benefit is thereby conferred.

Source: The World Trade Organization

3.2 Issues in Agricultural Subsidies: Why Do They Matter?

All governments support agriculture through some form of subsidies or another. Governments provide assistance to agriculture usually based on a mix of social objectives, economic development policy, and political expediency. On economic grounds, agricultural subsidies may be objectionable for three main reasons.

Rationale for, and impact of, subsidies
Governments' rationale for agricultural subsidies is usually a mixed bag of social preferences, economic policies, and political courtship. Agricultural subsidies can impact severely on:

- government budget, straining the budget or contributing to a deficit,
- misallocation of resources, i.e, the subsidies could have been used more profitably somewhere else; and
- trade dislocation, where trading partners are shut out.

One major concern about agricultural subsidies is their **strain on budget resources**. Subsidies add to government outlays and therefore contribute to budget deficits when subsidies are not paid for by taxes. Budget deficits have major implications for macroeconomic aggregates. Although a large-size economy is not a license to carry subsidies, smaller-size economies must pay considerable attention to the burden of agricultural subsidies on their budgets. When subsidies claim too high a share of gross domestic product (GDP), decisive measures must be taken to remedy the problem.

A second major concern is the **opportunity foregone**. Agricultural subsidies are revenue foregone that could have been used for some other purposes. Given resource scarcity, especially in small-size countries, one must ask these questions: is payment of agricultural subsidies the best use of resources to further development of the agricultural sector or the whole economy? Aren't there better and more opportune uses of these resources to enhance economic development, or even social purposes? One unintended outcome of agricultural subsidies is that they shift resources away from one group of participants, for example, small, private farmers, to large, social farmers. The misallocation of resources may also contribute to environmental degradation, for example, through heavy use of chemicals or environmentally-degrading practices.

A third major concern about agricultural subsidies is their serving as a barrier to market access. That is, trading partners are barred or must incur considerable cost to sell goods in the subsidizing country or, more disturbing, to compete in the world market against this country. This is the one of the *raisons d'être* of the WTO, whose rules and regulations aim at reducing the negative impacts of agricultural subsidies on world trade.

Not all agricultural subsidies are objectionable, however. Subsidizing public goods, which private entrepreneurs cannot provide, is deemed useful (box). Furthermore, the WTO grants exemptions to developing countries for certain subsidies, including all investment subsidies, even agricultural input subsidies to low-income or resource-poor producers, as well as domestic support to producers to encourage diversification from growing illicit narcotic crops. However, some of these exemptions, for example input subsidies, may have unintended negative consequences both economically and environmentally, so that developing countries need to carefully assess their impacts before implementing them.

A case for agricultural subsidies
Feeder roads to increase market access, market facilities, primary irrigation network, basic agricultural research, extension and training, agricultural statistics, and market information are necessary conditions of agricultural development. The private sector cannot adequately invest in these because they cannot appropriate all the benefits of their investments. Once provided, products and services of these investments benefit all; they are public goods that only governments can adequately provide.

3.3 Scope of Agricultural Subsidies in FYRM

Agricultural subsidies used in the FYRM include price premium, input subsidies, interest credit rebate, export subsidies, and subsidies in various activities in agricultural development. Table 2.1 summarizes the forms of agricultural subsidies used by FYRM since independence.

The price premium is a bonus paid to farmers on top of a "protective" or support price set by the government. The input rebate allows farmers to acquire inputs at a discount, particularly high yielding varieties (HYV), for selected commodities. The credit rebate provides a reduced short-term interest rate to borrowers of working capital for activities such as: production of "protected" crops and milk; production of lamb and veal; stocks maintained by processors (millers, sugarbeet and sunflower seed processors) but also producers; production (multiplication) of HYV seeds; and strategic reserves of locally produced strategic commodities. With the agricultural credit rediscount, the government instructed private banks to charge agricultural loans at a rate lower than the market rate, which the National Bank reimbursed. This is a non-budget subsidy (and consequently does not appear in table 2.1) that results in money creation by the National Bank; it was terminated in May 1995 because of its inflationary nature. Export subsidies are paid to exporters to encourage export of key commodities.

The Program for Promoting the Development of Agriculture includes subsidies for improvement of breeding stock of cattle, sheep, goats, hogs, and horses; development of

pastures; promotion of fisheries, beekeeping, and earthworm farming; and land operations.[5] Livestock development is primarily an extension program.

Table 3.1 shows that agricultural subsidies in Macedonia have changed considerably over the years. A fertilizer subsidy was terminated in 1993, with the input subsidies now applying only to high yielding varieties of wheat, sunflower, sugarbeet, and also corn and alfalfa. In 1994, three credit rebate rates were applicable: 20% for production of all strategic crops (except tobacco), milk, and livestock; 15% for stocks, and production of tobacco and HYV seeds; and 10% for strategic reserves. On the other hand, export subsidies increased dramatically from 1994 to 1995 (contrary to information in Ouedraogo and Shaw, 1996).

[5] Since 1994, this program included the "protection and use of agricultural land," previously accounted for in the general government budget. This protection refers to land clearing, reclamation, as well as acquisition and consolidation by the MAFWE. Reclaimed land is offered for sale to social farms. This program and the 1991 "law for the protection and use of agricultural land" provide the Ministry with legal and financial means (though funds have been limited thus far) to intervene in the land market mostly for the benefit of public farms.

Table 3.1: Agricultural Subsidies in Macedonia: Commodity Coverage Since Independence				
Subsidy	**1992**	**1993**	**1994**	**1995**
Premium	Wheat, sunflower (20%), oilseed rape, sugar beet (15%) milk (20%)	Wheat (20%) sunflower, oilseed rape, sugar beet (15%), milk (20%)	Wheat (20%), sunflower, oilseed rape, sugar beet (15%), milk (den 3/l)	Wheat (20%), sunflower, oilseed rape, sugar beet (15%), milk (den3/l)
Input rebate	Seeds of wheat, sunflower, oilseed rape, sugar beet, rice, tobacco, alfalfa (30%); fertilizer and agrichemicals (20%)	Seeds of wheat, sunflower, oilseed rape, sugar beet, rice, tobacco, alfalfa (30%); fertilizers and agrichemicals (20%)	Seeds of wheat, sunflower, oilseed rape, sugar beet, alfalfa (20%)	Seeds of wheat, sunflower, oilseed rape, sugar beet, alfalfa (20%)
Credit rebate for working capital	For the production of wheat, sunflower, oilseed rape, sugarbeet, rice, tobacco, seed, fertilizers, milk, and selected livestock youth (50 %)	For the production of wheat, sunflower, oilseed rape, sugarbeet, rice, tobacco, seed, fertilizers, milk, selected livestock youth (50 %)	For the production of wheat, sunflower, oilseed rape, sugarbeet, milk, lambs and calves (20%)	For the production of wheat, sunflower, rapeseed, sugar beet, milk, lambs and calves (20%)
	For the storage of: wheat, corn, sunflower, raw oil, seeds, tobacco, rice, wine, fertilizers, plant protection means, seeds (40%)	For the storage of: wheat, corn, sunflower, raw oil, seeds, tobacco, rice, wine, fertilizers, agrichemicals and protection of seeds (40%)	For the storage of: wheat, corn, sunflower, oilseed rape, production of seeds, production and storage of tobacco (15%)	For the storage of: wheat, corn, sunflower, oilseed rape, production of seeds, production and storage of tobacco (10%)
	For strategic reserves of: wheat, corn, sugar, raw and refined cooking oil, rice and meat (30%)	For strategic reserves of: wheat, corn, sugar, raw and refined cooking oil, rice and meat (30%)	For strategic reserves of: wheat, corn, raw and refined sugar, cooking oil (10%)	For strategic reserves of: wheat, corn, raw and refined sugar, cooking oil (10%)
Agricultural Development Program	Cattle, sheep, goats, hogs, horses breeding, fisheries, beekeeping, worm farming, silage pits, plus extension services	Cattle, sheep, goats, hogs, horses breeding, fisheries, beekeeping, worm farming, silage pits, plus extension services	Cattle, sheep, goats, hogs, horses breeding, fisheries, beekeeping, worm farming, silage pits, plus extension services	Cattle, sheep, goats, hogs, horses breeding, fisheries, beekeeping, worm farming, silage pits, plus extension services
Agricultural export	Lambs/veal, wine and grapes, fruits/vegetables (rate n/a)	Lambs/veal, wine and grapes, fruits/vegetables (rate n/a)	Lamb/veal (4%), wine and grapes (4%), fruits/vegetables (3.2%)	Lambs (30%), veal (15%), wine and grapes (12%), fruits/vegetables (5%)

Source: Official Gazettes 1995 (Nos. 8; 17; 20); 1994 (Nos. 9; 56; 57); 1993 (11; 27; 37; 46); 1992 (Nos: 14; 24; 32; 45; 61; 82)
Notes: Export subsidies cover also tobacco and manufactured goods (Ministry of Finance).
Rates of premium (above support prices) and interest rebates are given in parentheses.

Planned budget allocations for agricultural subsidies and support depend on budgetary resources. Budget expenditures may appear small, but the Government is always straining to pay them. Faced with budgetary constraints, the Government has taken steps to reduce budget support to agriculture (box). In 1996, planned budget support would represent 2.7 percent of central government current spending down from 7.5 percent in 1994. In fact, budget expenditures usually change during the year. These actual expenditures are needed to help Government better analyze the impacts of agricultural subsidies. Table 3.2, figures 3.1 and 3.2 show estimates of actual budget expenditures and other credit support in 1994.

Planned Agricultural Subsidies (den Million)

	1994	1995	1996
Credit rebate	792	149	0
Price premium	761	740	415
Seed rebate	263	178	415
Export subsidy	300	363	210
Total budget support	2,116	1,430	1,010
Directed credit	598	0	0
Total financial support	2,714	1,430	1,010

Source: Government of FYRM (WB)

Table 3.2: Total Agricultural Subsidies in 1994 (million)

	Premium		Seed Rebate		Credit Rebate		Total Budget		Ag Loan Rediscount		Total Subsidy	
Commodity	Den	US$	Den	US$	Den	US$	Den	US$	Den	US$	Den	US$
Wheat	478	11.0	102	2.3	257	5.9	836	19.3	250	5.8	1,086	25.1
Milk	207	4.8	0	0.0	13	0.3	221	5.1	12	0.3	232	5.4
Tobacco	0	0.0	0	0.0	199	4.6	199	4.6	233	5.4	432	10.0
Sunflower	30	0.7	2	0.1	34	0.8	67	1.5	35	0.8	102	2.3
Lamb/veal	0	0.0	0	0.0	51	1.2	51	1.2	45	1.0	96	2.2
Sugarbeet	19	0.4	1	0.0	7	0.2	27	0.6	6	0.1	32	0.7
Other	2	0.0	8	0.2	18	0.4	27	0.6	18	0.4	45	1.0
Total	736	17.0	113	2.6	579	13.4	1,427	33.0	598	13.8	2,025	46.8

Source: Ministry of Agriculture, Ministry of Development, and Ministry of Finance
Notes: Exchange rate in 1994: $1 = Den 43.3

Figure 1

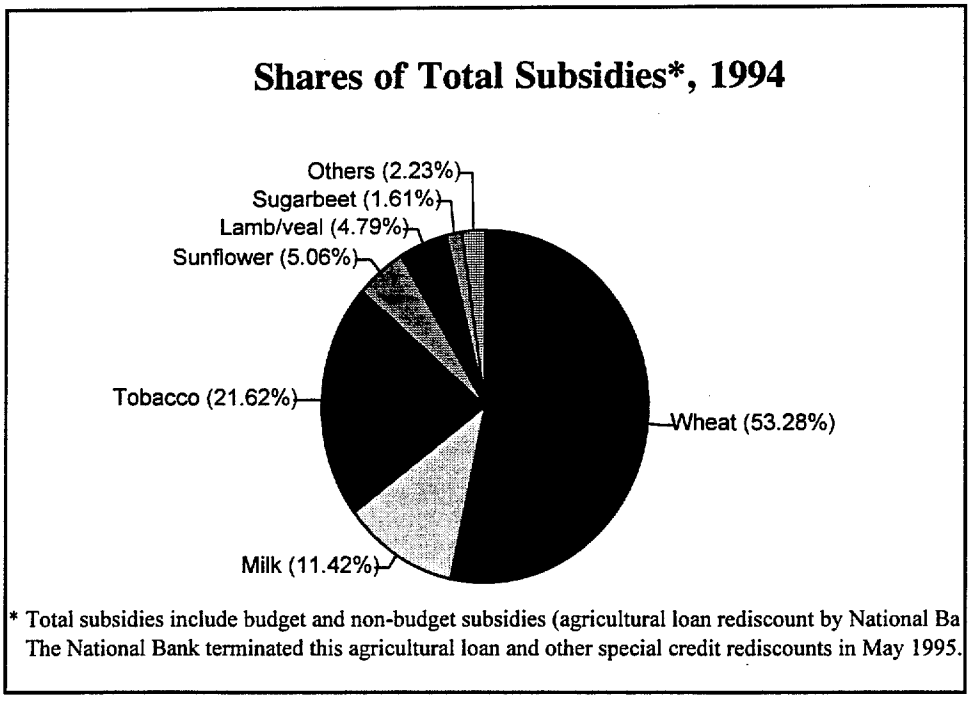
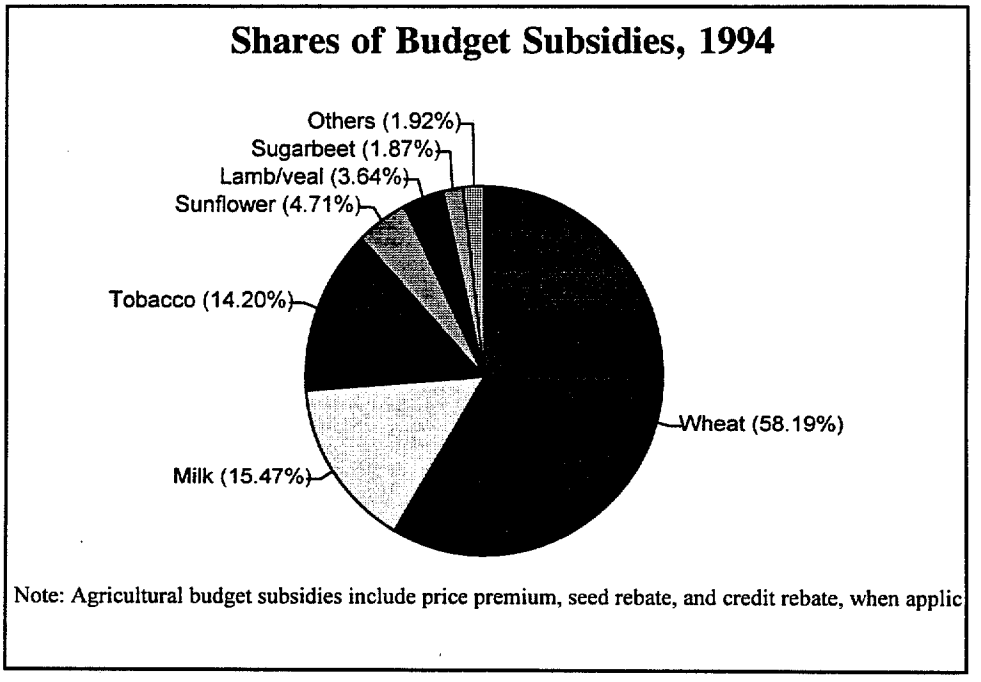


Figure 2



4. TRADE INTERVENTION: PROTECTION AND COMPETITIVENESS

Along with agricultural subsidies, governments use border measures to protect or tax domestic production. The impacts of border measures often greatly surpass that of budget subsidies. At the same time, while border measures may increase budget revenues, they seldom involve budget outlays. That explains governments' preference for border measures and the difficulty in phasing them out. The next section presents reviews the nature of and issues in border policies as background to the discussion of FYRM agricultural trade measures.

4.1 Nature of Trade Interventions

The otherwise vast arsenal of border measures can be divided into two broad categories: tariff and nontariff measures. A tariff is a list or system of duties imposed by a government on imported and exported goods and services. The tariff system usually includes a schedule of ordinary custom duties, but also exemptions and additional duties that are triggered by some special events. For example, an ordinary custom duty may be an import tax, which applies the same percent rate to all concerned commodities, regardless of their import value. A variable levy is an additional duty, which is calculated according to the import value so that all commodities in one group end up carrying the same total price, no matter what their original import value.

Nontariff measures are quantitative restrictions (QR), such as quotas and bans on imported and exported goods, and trade rules and regulations, such as licenses and sanitary regulations. By reducing the amount imported or exported, quotas and bans contribute to increase the price of the commodities affected by these measures.

4.2 Issues in Trade Intervention: Economic and Environmental Impacts

Border measures have a direct bearing on trade. Trading partners of countries with high import tariffs, quantitative restrictions and other stringent rules and regulations are severely penalized. These trading partners are similarly hurt when countries impose export taxes, export QR and stringent export licensing regulations.

More important perhaps, border measures impact considerably on economic welfare and development of the country imposing them. By raising the prices on imported goods, high import tariffs increase government revenues and result in high producer prices to benefit domestic producers of these goods. The positive impacts on government revenues and producers, however, come at the expenses of consumers who pay higher prices while reducing consumption of their favored products. Government revenues are enhanced little, if at all, in the case of import quotas and rules limiting imports, but consumers are still penalized while producers still benefit by resulting high prices. Usually, a large number of consumers are taxed to support a small number of producers. Furthermore, a group of producers may benefit proportionally more than others, introducing unfairness in the distribution of the country's resources. Finally, producers are attracted to specific crops and commodities, in which a

country may have little comparative advantage or which contribute to environmental degradation.

On the other hand, border measures on export commodities impact negatively on producers while they benefit consumers. Government revenues increase with export taxes, but little, if at all, with nontariff measures on exports. All the same, these border measures contribute to decisions of producers to move away from commodities where the country may have enjoyed comparative advantage, to other commodities, perhaps with little comparative advantage but great potential to degrade the environment.

4.3 Scope of Trade Intervention in Macedonia

Macedonia's border measures are inherited from former Yugoslavia. The basic import tariff ranging from 0% to 25% appears simple and liberal. However, it has a cascading structure, with low rates on raw materials and high rates on final goods using these raw materials. Overall, Macedonia's trade regime is further complicated with import taxes; special duties (box) to protect agriculture; import quotas, bans and licenses; export quotas, bans and licenses; compensation or approval of barter trade (for example on banana imports and apple exports), and exemptions. There are no export taxes, however.

Variable import levies (special duties) contribute substantially to the protection of domestic commodities in FYRM. They are larger than the price premiums. Furthermore, in 1995, they represented 60% of the guaranteed price for wheat (Den 10/kg); 31 percent of the reference price for milk (Den 16.25/l, which is 65% of the retail price of den 25/l); 32 percent of the guaranteed price for sugarbeet (den 2/kg, a drop from the den 2.5/kg of 1994); and 10% percent of the guaranteed price for sunflower. Variable import levies run counter to WTO's requirements; it is one area in which Macedonia needs to revise its trade regime.

Known as the "LB regime," seasonal import quotas apply to certain fresh fruits and vegetables during the production and marketing season in Macedonia. For tomatoes, imports are commonly restricted between March 15 and January 15 of the following year. During the two months leading up to the onset of the quota, imports are labeled with a sticker declaring them "LB" or free of import quotas. In 1995, the import quota for tomatoes during the ten-month season was zero. The quota for cucumbers is applicable seven and one-half months from February 15 to October 31, excluding the month between July 15 and August 15, during which the quota is suspended. During this period, for 1995, the quota on cucumber imports was zero. Throughout the year, tomatoes and cucumbers could be exported without restriction.

Export quotas have also been used to prevent the outflow of "strategic" commodities, those considered essential to survival. Quotas continue to affect both imports and exports, but the list of those goods subject to restrictions is growing shorter. Of 7,200 goods on the international trade roster, some 150 currently qualify for import quotas in Macedonia, about 2%. Likewise, some 130 of these goods, about 2%, are also subject to export quotas.

Administrative decisions made through an inter-ministerial committee (including Finance, Foreign Affairs, and Economy) regarding which goods will be subject to quotas in the coming year are announced annually in the Official Gazette. Auctions for licenses to trade in these goods occur four times per year under the aegis of the Ministry of Foreign Affairs, coinciding with the beginning of each quarter. Local newspapers publicize the auctions in advance, and they are open to any legal enterprise.

In recent years, the government has chosen to replace most quantitative trade restrictions with tariffs and levies, in keeping with international trends and guidelines for increased transparency under the WTO. The LB regime and the other quota restrictions appear to represent the only nontariff barriers to trade apart from those relative to phytosanitary standards and other internationally recognized barriers in food trade for reasons of health and freshness. Exemptions, however, have the potential to distort actual protection. Given at the discretion of the administration, they make the trade regime less transparent and add to the burden of the customs office that implements them.

4.4 Measures of the Impacts of Subsidies and Trade Intervention

The key analytical tools of this study are the nominal protection coefficient (NPC) and the Producer Subsidy Equivalent (PSE). The NPC is a ratio that compares the domestic price to an adjusted world price of a commodity of the same quality, at the same location.[6] It measures the level of protection given to the producers of a commodity (box). The world price of a commodity is the "opportunity cost" for Macedonia, that is, during the period of analysis, the country can obtain the commodity at this price on the world market. For lack of better alternative, the NPCs for lamb, table grapes, and bulk wine use European Union's import values.

The NPC measures protection

A positive protection (NPC > 1) means that government policy results in consumers' paying more than the world price, or that the government is taxing its citizens to pay producers a higher price, or both. By providing protection, a government distorts the incentive to producers and transfers extra resources from consumers or taxpayers to producers. As a result, producers produce the commodity beyond the point where they are efficient. They waste domestic resources when those resources could produce something else more efficiently. When prices are distorted, consumers or taxpayers are deprived of income that they could spend on other necessities.

Despite its simplicity, the NPC is an important tool. It enters in the calculation of Producer Subsidy Equivalent (PSE) and Consumer Subsidy Equivalent (CSE). The PSE is an amount of money. This amount would fully compensate all producers of a commodity for the

[6] The adjusted world price is calculated differently for import and export products (Tsakok, 1990). For importables, one starts with the export price (f.o.b.) of a major exporter of the product, then adds freight and insurance to Macedonia. For exportables, one starts with the import price (c.i.f.) of a major importer, then subtracts freight and insurance to Macedonia. In both cases, products may have to converted to the appropriate form.

loss of income that would result from the removal of policies affecting that commodity. Policies affecting a commodity include both policies that are specific agricultural policies and trade policies specific to the commodity. Thus, the PSE is the value of all commodity-related policies to producers.

The PSE is an aggregate measure of support (AMS) used by OECD and other organizations and the WTO. It is used to gauge a country's level of support to a) the producers of a specific commodity or b) the agricultural sector overall. To calculate the support to the sector, the values of the PSEs for individual commodities are added together. The PSE can also be stated as a percent. Then the PSE is the total support to the commodity as a percent of the total value of production of that commodity.

The PSE is a broader measure than the NPC. The PSE includes not only the subsidy due to the distortion of the producer price, but also budgetary subsidies that are paid to producers. Thus, it is a more complete measure of the subsidies going to producers. In the PSE calculated in this study, the effect of the price premium paid to producers is included in the "price wedge," so it is not necessary to include it as a separate component of the PSE. The "price wedge" is the difference between the domestic and world prices expressed as an amount of money; it is the price difference multiplied by the number of tons of the commodity produced.

In this study NPCs were calculated for wheat, cow milk, white cheese (*belo*), yellow cheese (*kashkval*), raw sugar, refined sugar, sunflower seed, sunflower oil, urea, and NPK (15-15-15), lamb, table grapes, and bulk wine for the year 1994. PSEs were calculated for wheat, milk, sunflower, and sugarbeets. As an amount of money, the PSE (CSE) represents the payment required to compensate producers (consumers) of a particular commodity for the loss of income resulting from the removal of a given package of policy measures. The PSE can also be stated as a percent; then it is the total support to the commodity as a percent of the total value of production of that commodity.

The WTO uses the PSE as an Aggregate Measure of Support (AMS)
The PSE is an aggregate measure of support (AMS) currently used by FAO, OECD, and USDA. The WTO assesses a country's progress in reducing protection through the measure of Total AMS, which is the sum of all domestic support provided in favor of agricultural producers, calculated as the sum of all (AMS) for individual agricultural products.

Besides the NPC and PSE, there are many other tools that measure the impacts of subsidies and border policies (Tsakok, 1990; Masters, 1995). The effective protection coefficient (EPC) is another measure of protection. The EPC is a ratio as is the NPC. The EPC compares value added (i.e., value of output less value of inputs) at the domestic prices of the outputs and inputs with value added at the equivalent world prices of these same outputs and inputs. While the NPC captures the impact on prices of the final output, the EPC captures additionally the impact of the cascading tariff from raw materials to final output. Compared to

NPC, however, additional data on production costs and the world prices of these inputs are needed to estimate the EPC.

Other tools beside NPC and EPC are even more demanding in data. NPC and EPC measure protection rather than comparative advantage of commodities. Comparative advantage determines whether the country as a whole saves on its scarce domestic resources in producing a commodity, which is importable or exportable. The policy analysis matrix (PAM) and Domestic Resource Cost (DRC) measure comparative advantage by looking into the whole commodity subsector: production, transformation, marketing and consumption. Their data requirements are quite extensive. Currently, however, little such empirical data exist in the FYRM to attempt these studies. Farm and agricultural marketing surveys are sorely needed, particularly costs of production on private farms under various conditions (box).

Costs of production information

Anecdotal evidence strongly suggests that most Macedonian private farmers, and social farms as well, do not adequately measure their total costs of production. Thus far, MAFWE relies on costs of production data collected on just a few social farms, with little empirical verification, to suggest subsidies. Costs of production will be needed not to set subsidies, but rather to help farmers make decisions appropriate to a market economy, that is, to increase productivity in producing goods for the most promising market.

Part 5 analyses deficit commodities and three export commodities (lamb, table grapes, and bulk wine) using NPC measures. The NPC on deficit commodities reflect trade measures, including producer subsidies and import taxes and restrictions, as well as any inefficiencies in the marketing system. On the other hand, the NPC on export commodities reflect the export subsidies and market inefficiencies. In particular whenever there is protection at the export level and not at the farmgate level, the NPC suggests market power on the part of the export.

Because the export subsidy is the only trade measure that could cause a divergence between domestic and adjusted world price, an alternative approach is used that compares international prices of major competitors of Macedonia for the export subsidies. Rather than a measure of protection, this approach is an attempt to gauge the competitiveness of Macedonia facing exporting countries selling in the same international market. Part 6 addresses international price comparisons.

5. ANALYSIS OF SELECTED COMMODITIES USING NPC COEFFICIENTS

This section summarizes key results of the study on deficit commodities, wheat, cowmilk, sugarbeet, sunflowerseed, and fertilizer (see Ouedraogo and Shaw, 1996). The section dwells much more on exportable commodities, which were not included in the first study.[7]

5.1 Deficit Commodities

Deficit commodities include wheat, cowmilk, sugarbeet, sunflowerseed, and fertilizer. This section provides a short summary of results reported in Ouedraogo and Shaw (1996).

5.1.1 Wheat

The results indicate that protection levels range from +59% for the American wheat to +118% for the French wheat. Predictably, protection is high when the border price is calculated assuming Thessaloniki as the port of entry and rail transport to the border.

The PSE represents 52% to 69% of the value of the wheat production at domestic price. Rather than trying to match other countries' protection, such as the EU and US, Macedonia should look at the opportunity cost that represents the PSE and at alternative uses of these resources to promote agricultural productivity and competitiveness. Given that the EU and US have pledged to reduce their level of support, Macedonia would need also to review its support given to wheat to reduce misallocation of resources.

5.1.2 Milk

Macedonian milk producers enjoy 77% protection levels compared to world producers . Protection of Macedonian cheese producers is also substantial. NPCs indicate 188% protection levels for makers of *belo* (hard white) cheese, and 291% for makers of *kaškaval* (soft yellow cheese). Domestic producer prices for these cheeses are based on reported unit costs of production in vertically integrated companies that market the cheese through their own stores. The prices are therefore analogous to wholesale levels.

The PSE for cowmilk is equal to 44% of the value of cowmilk production at the domestic price. Though large, this level of protection for milk in Macedonia in 1994 was smaller than that in the EU and USA, where milk enjoys heavier protection (Table 5.5). Here again, Macedonia should not feel content to match other countries' support for cowmilk, instead it should think of the opportunity cost of the PSE.

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[7] Ouedraogo and Shaw (1996) drafted the section on deficit commodities. The section on lamb, table grapes, and bulk wine was drafted by Ouedraogo, following the same methodology.

Table 5.1: NPC Summary Results for Deficit Commodities, 1994					
	Domestic price to Producer (a)		Border price of competing import (b)		NPC (a/b)
Product	**US$/kg**	**Den/ton**	**US$/ton**	**Den/ton**	
Wheat	0.28	12.00	0.13	5.49	2.18
Cowmilk	0.47	20.32	0.27	11.48	1.77
White cheese (belo)	3.47	150.00	1.20	51.99	2.88
Yellow cheese (kaskval)	6.47	280.00	1.66	71.69	3.91
Raw sugar	0.559	23.77	0.33	14.29	1.66
Refined sugar	0.56	24.24	0.41	17.67	1.37
Raw sunflower seed	0.22	9.65	0.51	22.11	0.44
Raw sunflower oil	0.56	24.12	0.78	33.95	0.71
Urea	0.17	7.20	0.13	5.80	1.24
NPK 15-15-15	0.20	8.80	0.09	4.03	2.18

Note: All domestic prices based on Macedonian farmgate or factory raw input equivalent, including price premium. Border prices based on actual prices for 1994 or estimates from published data. Border price for wheat via Burghs and Bulgaria and overland through CACHE for cowmilk and sunflower, and cheese.

Table 5.2: Summary PSEs and Transfers from Taxpayers and Consumers to Producers of Deficit Commodities, 1994								
	Wheat		Cowmilk		Sunflower		Sugarbeet	
Transfers (million)	**Den**	**US$**	**Den**	**US$**	**Den**	**US$**	**Den**	**US$**
From taxpayers	830	19.20	144	3.34	67	1.55	27	0.62
From consumers	1,964	29.40	896	20.70	(217)	(5.02)	52	1.20
To producers (total PSE)	2,794	48.59	1,040	24.04	(150)	(3.47)	79	1.82
PSE (%)	69%		44%		-87%		48%	

Note: $1 = Dear 43.259 in 1994
Trade via Burghs or overland through Central and Eastern Europe.

5.1.3 Sugarbeet

Nominal protection coefficients comparing Macedonian raw sugar made from beets with imported raw sugar indicate that Macedonian beet producers are highly protected. Assuming a port of entry at Burghs for the raw sugar imports, the NPC indicates protection of domestic beet production at 66%. With raw sugar inputs entering Greece at Thessaloniki and traveling to the Macedonian border by rail, nominal protection is 81%.

The size of transfers for sugarbeets is the smallest of the four commodities for which PSEs were calculated. In 1994, transfers to producers from taxpayers were Den 27 million and transfers from consumers were den 55 million for trade via Burghs. If Macedonia were trading via Thessaloniki, transfers from consumers would have been higher (Den 63 million) because of the smaller border price via Thessaloniki. Transfers from taxpayers would have remained the same.

5.1.4 Sunflowerseed

In contrast to those for wheat, milk, and sugarbeet, nominal protection coefficients for sunflowerseed indicate that domestic producers are negatively protected, that is, producers operate at a disadvantage compared with their counterparts elsewhere in the world. Comparing the domestic price with international prices in 1994 yields an NPC of 0.44 assuming that imports come through Burghs; the NPC is 0.57 if the port of entry is Thessaloniki.

The breakdown of the PSE for sunflower shows transfers from taxpayers to producers in the amount of Den 67 million, but transfers from producers to consumers of Den 217 million. If Macedonia could have traded through Thessaloniki in 1994, the size of the negative transfers from producers would have been much lower (Den 124 million) since the producer price would have been much closer to border price. It should also be noted that though consumers benefited from transfers from producers, they still lose from the import tariff imposed to protect producers.

5.1.5 Fertilizer

The results of the analysis suggest that, especially in comparison to NPK imported for direct marketing and use by Macedonian farmers, the domestic product is not competitive, with a protection level of 118%. Comparisons to mixes of individual ingredients, the factory continues to enjoy protection but at a lower level: 43% for NPK and 24% for urea. The FAO study also suggested levels of protection in this range.[8] The sources of protection in this case stem exclusively from import taxes on competing inputs, but factory management reports that

[8] FAO 1994, Working Paper 7. The conversion factor for NPK 15:15:15 was calculated at 0.68, for an implied NPC of 1.47.

lower prices for imports are cutting deeply into their market. The factory continues, however, to sell its products in part because it can mix ingredients according to specific needs.

5.2 Lamb, Table Grapes and Wine Exports

Export commodities analyzed here include lamb, table grapes, and bulk wine. International price comparisons are made for lamb, table grapes, apples, tomatoes, and cucumbers by Steven Sposato. It should be noted that no estimates of producer subsidy equivalent (PSE) are provided for export commodities. Measures supporting these commodities are reduced to the export subsidy, which is already included in the price wedge between domestic and world price. A PSE adds no other information (except for lamb, for which the credit rebate though also apply).

5.2.1 Lamb

Lamb comes readily to mind as the main product in which Macedonia would have comparative advantage. Indeed, the quality of Macedonian lamb is recognized across the region and in Western Europe.

5.2.1.1 Policy Measures Affecting Lamb

Major policy measures affecting the lamb subsector include the lamb export subsidy, and the interest subsidy on lamb production. There are also subsidies for breeding, pasture improvement, village rehabilitation. The measures protecting sheepmilk and cheese production, including price premium (only for milk) and tariffs, have an indirect impact on lamb production as well. (Appendix B provides background information about lamb production and exports.)

The export subsidy for lamb increased dramatically, 650% percent, from 1994 (4%) to 1995 (30%) when the Chamber of Commerce successfully argued with the Government for the increase to compensate for the weak export price denominated in Italian Lire. The Chamber of Commerce had argued that Italian Lire had dropped 25% relative to the stronger Macedonian Dear and that exporters were still paid the same price denominated in Italian Lire. The export subsidy is paid to exporters, not producers. Theoretically, producers benefit from its trickle down effect but the extent of this trickle down is difficult to assess given the spottiness of the data. Exporters, however, contend that without the subsidy producer price would have to drop by a similar amount, for example, from Den 70/kg to below 50/kg (about 28.5%). Exporters still maintain, though, that the export subsidy is very small. There is usually a delay of a few months before they are paid the subsidy. As for all export subsidies, there is still a lack of information about how much lamb export subsidy does get paid by the Ministry of Finance.

Ouedraogo and Shaw (1996) provided an estimate of the size of the interest subsidy in lamb/veal production in 1994 (where lamb's share is about 95% based on head count). The subsidies for village rehabilitation in the mountains, pasture improvement and lamb breeding

are somewhat linked with extension services. Total size and allocation of these subsidies to lamb production proper (compared to mutton and sheepmilk production) could not be estimated. Given the size of these ancillary subsidies relative to the size of lamb production in Macedonia, the per unit subsidy on lamb is likely to be negligible.

5.2.1.2 Measures of Protection

The NPC for lamb measures the protection or lack thereof of Macedonian lamb relative world prices . The NPC is the ratio of the domestic price to the world price adjusted for freight and local marketing costs, with both prices measured at the same marketing stage, for example, the farmgate or the factorygate. The calculation uses EU import values (Eurostat) for lack of data to reconstruct the c.i.f. price in Italy from New Zealand, the main exporting country to Italy.[9] Macedonian, milk-fed baby lamb is of better quality than New Zealand's range-fed lamb; a quality premium[10] of 1.5 brings New Zealand's prices to the level of Macedonia's. Italians prefer the Macedonian lamb, which is milk-fed, younger, smaller (5-8 kg) and exported fresh to New Zealand's lamb, which is range-fed, older, heavier (15 kg and above) and frozen for export. Though Macedonian and New Zealand's lambs are clearly two different products, the comparison is still warranted, as Italians would consume New Zealand lamb if they lacked Macedonian lamb (as happened when the EU banned Macedonia's lamb export in the early 1990).

The NPC at the slaughterhouse reflects the impact of the export subsidy (4% in 1994) theoretically paid to exporters. Without the export subsidy, the NPC turns slightly unfavorable. The NPC at the farmgate is 0.94. (World price adjusted for transport of den and marketing cost from slaughterhouse to farmgate is den 74.3, while domestic farmgate price is den 70/kg.) Since there is no direct policy measure at the farm level, the unfavorable NPC at the farmgate reflects market power of wholesalers and exporters, or a possible cross-subsidization effect from milk and cheese production. These calculations, however, are sensitive to the data used, so that one must exercise great caution in interpreting the results.

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[9] We are aware that the CAP distorts trade. For example, if importers have to pay high levies for low priced imports, they may have little incentive to buy from lower-cost exporters. However, the import values reported by Eurostat are c.i.f. prices, which exclude import taxes levies (Eurostat Methodological Notes, 1996). This validates the use of Eurostat import values, despite the caveat that they are not the best alternatives.

[10] For lack of better data, this premium is based on the average C.I.F price difference between fresh and frozen lamb from India (1.3) and Australia (1.7) landed in the United Arab Emirates in 1995 (Australia livestock council 1996).

Table 5.3: NPC for Lamb, 1994								
Lamb	Prices in denars/kg							NPC
	Exporter price carcass	Factory-gate price livew.	c.i.f Italy carcass	Shipping Italy-Skopje carcass	Franco factory gate livew.	Net by-products	Adjusted world price	
		[a]	[b]	[c]	[d]	[e]	[d+e]	[a/(d+e)]
Macedonian lamb vs. New Zealand lamb via Durres	173.9	89.1	194.5	14.6	84.7	4.1	88.8	1.00

Notes:
1. Exchange rates (1994): Den 43.3 per $; 26.6 per DM; 51.22 per ECU; and 25.75 per Lire 1,000
2. Exporter price of den 173.9/kg converted from Italian lire 6,500 /kg (1994)
3. Domestic price (factorygate liveweight) is export price carcass + subsidy (4%) converted (.47%) in liveweight + net-product accruing to exporter.
4. c.i.f. price Italy is import value of New lamb landed Italy, adjusted by quality premium of 1.5.

5. Shipping to Italy from most anywhere in Macedonia (DM 5,500 for 10 tons)
6. Franco factorygate (slaughterhouse) is c.i.f. - shipping converted to liveweight
7. Conversion factor is 47% (8 kg carcass for 17 kg liveweight)
8. Net by-product: skin/wool (DM 6/kg) + entrails (den 80/lamb) - processing (den 1700/lamb)
9. Conversion, freight, processing, by-product, prices: Stokopromet and various sources
10. Marketing cost and transport (for farmgate price not shown): Stokopromet, FAO, various sources.

5.2.1.3 Constraints and Opportunities in Lamb Export

The NPCs suggest that farm producers have no protection from government measures (subsidies to improve breeding stock of lamb are not considered here.) Even exporters have little protection, although the increase of the export subsidy from 4% to 30% has certainly increased this protection (NPC of 1.24 with 1994 cost data), with possibly a trickle down effect on farmgate price. In 1995, for example, the farmgate price was raised to den 80 /kg and NPC at the farmgate would be 1.08 (with 1994 cost data).

The slow growth rate of lamb production may be traced to missed opportunities in lamb exports three years in a row since 1991. The insecurity in the lamb export sector led some producers to emphasize sheepmilk and cheese production (as supported by visits to sheep farmers around Skopje in 1995). A more thorough study of the interactions between lamb and sheep dairy production would shed considerable light on the lamb subsector.

In the long run, however, the future of lamb production and competitiveness hinges on the aging of Macedonia's farm population along with the depopulation of villages caused by steady rural outmigration. The drudgery of sheep herding contributes further to reduce the supply of herders and increase production costs. Lamb producers would need to think about

consolidating sheepherding to reduce production costs. At the same time, producers should reflect on increasing their bargaining power vis-a-vis exporters, a few of whom yield considerable bargaining power.

The opportunities in lamb exports are real, however. With the end of sanctions against Serbia and the end of sanitary restrictions imposed by the EU, lamb exports appear to have rebounded. Furthermore, the EU has relaxed some of its restrictions, so that the quota needs no longer be filled in two short periods; Macedonia may export lamb all year around within its quota limit. This will contribute to ease the capacity bottlenecks at slaughterhouses.[11] during peak periods. For example, uncharacteristically, lamb has been exported to Italy in May.[12] Officials report that 95% of the quota has already been filled. Furthermore, Macedonia can boost value added in exporting lamb cuts directly to supermarkets and other meat wholesalers.

Ultimately though, as with most other exportable commodities, Macedonia needs to develop export markets outside the EU.[13] Grass-fed rather than milk-fed and slightly older and fatter lambs may significantly reduce production and attract a strong demand in the Middle East. These consumers pay considerable attention to the color of fatty tissue; the preference is for white over yellow, which is associated with cornfed lambs (Jeff Metzell, personal communication).

5.2.2 Table grapes

Table grapes stand out as one of a few agricultural exports on which Macedonia stakes its economic future. Macedonians recognize grapes as a domestic product with international appeal, a commodity in which the country may well have a distinct comparative advantage. On average, approximately 90% of the production of table grapes and wine is exported.

5.2.2.1 Policy measures affecting table grapes production and export

Nationally, investment in the sector has been slight in the last five years due to budget constraints and the fact that grapes are not considered strategic among the crops cultivated in Macedonia. German aid—about 4 million deutsche marks—helped to finance an irrigation system in Veles and Kavadarci in 1994. Further investment will be needed to rebuild portions of the Tikveš kombinat in Kavadarci lost in the floods of July, 1995. (Appendix B provides background information about table grapes production and exports.)

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[11] This could be seen as a trade-off for better prices at peak demand periods. Thus far, however, it appears that Italy has been to use its monopsonic power to negotiate prices to its advantage.

[12] Though Stokopromet is the only one doing it thus far.

[13] Macedonians are exploring the possibility of exporting lamb to Kuala Lumpur by air. However, introduction of a regular line from Skopje to Kuala Lumpur has been postponed until next year because Skopje airport cannot accommodate large-bodied airplanes. This postponement threatens the arrangements for the export of lamb meat to Malaysia (communication from Gary Ender).

Direct support to table grapes export comes from the export subsidy, which applies to table grapes and wine. This subsidy is paid to exporters of table grapes, all social enterprises. There are no trade measures that would impact negatively on table grape production and export.

5.2.2.2 Measure of Protection

The NPC for table grapes measures the protection or lack thereof of exporters or producers in 1994. The NPC at the factorygate, here, exporters of table grapes, such as Tikveš, is very unfavorable. The export subsidy (4% in 1994), even when paid, adds little. However, the NPC at the farmgate is 1.1. (Domestic farmgate price is den 19.5/kg, with marketing and transport costs similar to those of lamb, for an adjusted world price of den 18.2/kg.) Since there is no subsidy at the producer level, such a measure may simply indicate a natural protection for a perishable product for which local demand is very strong. Indeed, local demand for table grapes is stronger than that for winegrapes, for which the agrokombinats are more likely to impose a fixed, low price. Note, however, the likely high margin of error involved in these data. For example, the Statistical Office estimates that the local producer price for private farmers is den 12.5/kg (NPC would be 0.7).

Table 5.4: NPC for Table Grapes, 1994

Table Grapes	Prices in denars/kg				NPC
	Exporter Price + subsidy	c.i.f Germany	Shipping Germany-Tikveš	Adjusted world price	
	[a]	[b]	[c]	[b-c]	[a / (b-c)]
Macedonian grapes vs. Turkey's via Serbia	13.8	34.1	9	25.1	0.6

Notes:
1. Exchange rates (1994): Den 43.3 per $; 26.6 per DM; 51.22 per ECU; and 25.75 per Lire 1,000.
2. Macedonia table grapes f.o.b.Tikveš includes 4% of export subsidy (Tikveš, other sources).
3. c.i.f. price of Turkey table grapes in Germany (Eurostat).
4. Shipping in refrigerated trucks without backhauling, DM 6800 for 20 tons (Tikveš, other sources).

5.2.2.3 Constraints and Opportunities in Table Grapes Export

The greatest constraint to increased exports and new markets in Europe for refrigerated table grapes is transport. Exports of table grapes take place in 15- to 18-ton cooler trucks. For example, prior to the imposition of sanctions, Lozar Veles was able to export at a transport cost Veles to Frankfurt of DM 1500 to 2000 per truck. Since the sanctions, the cost has more than tripled to DM 6-8000/truck. Environmental requirements regarding packaging for the German and EU markets have increased marketing costs even more than the transport constraints. With costs of up to 90 pfennigs for a container with the necessary recycled content, designed to hold 5 kg of grapes at roughly 40 pfennigs/kg, Lozar has used 45% of sales revenue just to package the product. Transport consumes another 23% (at 45

pfennigs/kg), and companies like Lozar must cover production and profit with only 30 to 32% of the gross sales revenues from table grapes. While the export subsidy, if it were applied to table grapes as well as wine, would help to offset some of these constraints, it is unlikely that the subsidy would be sufficient to offset the transportation problems associated with grapes. That is why companies like Lozar are focusing increasingly on wine exports, which are not as sensitive to travel. In addition, the market for bulk wines, although competitive, is less variable than the consumer market for fresh fruit.

With the end of sanctions and the glut of transport services, transport costs should ease considerably. The rail system does not yet offer a viable alternative. Exporters would have to trade off lower per unit cost for delays, which occur at rail changeovers across borders. Thus far, airfreight has not been attempted on any commercial scale.

5.2.3 Wine

Wine making is an age-old activity in Macedonia, where archeological findings suggest a bubbling wine trade predating the Roman Empire's conquest of the Balkans region. Over the years, Macedonian wine has been traded throughout the region. Under the former SFRY, Macedonia provided 80 % of Yugoslavian wine exports.

5.2.3.1 Policy Measures Affecting Wine

Wine export subsidy is on the books, but no official record of actual expenditures exist. As with most other subsidies, exporters report that subsidies are paid late if ever. Exporters generally think that the export subsidy rate of 4% is not significant. Other government policies have a more profound impact on wine production, including the pending privatization of social farms and restitution of land, rehabilitation of irrigation system and pricing of irrigated water, and the rules and regulations governing the "*appellation controlée*" label and production. (Appendix B provides background information about lamb production and exports.)

5.2.3.2 Measures of Protection

Estimates of NPC for wine are fraught with issues of product differentiation. In particular, quality bottled is a unique, highly differentiated product rather than a commodity. Even wine from the same cellar differ in quality one year apart. On the other hand, bulk wine may be as an undifferentiated product. However, fewer and fewer countries export wine in bulk, so that no dominant exporter of bulk wine and a world price for bulk wine exist.

The NPC for Macedonian bulk wine is calculated by comparing it to Moroccan bulk wine similar with similar market entry to the EU. Here, Eurostat data offers little help as they tend to lump all sorts of wine. The NPC for bulk wine indicates that no protection is offered to Macedonian exporting bulk wine to Germany. As with table grapes, the export subsidy is too small to play any consequently role, as wineries would like to repeat.

Table 5.5: NPC for Bulk Wine, 1994					
	Prices in denars/kg				
Bulk wine	Exporter Price + subsidy	c.i.f Germany	Shipping Germany-Tikveš	Adjusted world price	NPC
	[a]	[b]	[c]	[b-c]	[a / (b-c)]
Macedonian bulk wine vs. Morocco's via Serbia	16.6	32.8	7.5	25.3	0.7

Notes:
1. Macedonia bulk wine f.o.b.Tikveš includes 4% of export subsidy
2. Exchange rates (994): Den 43.3 per $; 26.6 per DM; 51.22 per ECU; and 25.75 per Lire 1,000
3. c.i.f. price of Morocco bulk in EU (USAID/Morocco)
4. Shipping in tanker DM 55000 per 25,000 liters (Tikveš)

5.2.3.3 Constraints and Opportunities in Wine Export

Constraints to winegrape production are weather related: drought, early frost, and diseases. Despite the risk of drought in August, farmers are apparently cutting back on irrigation to contain cost and because an irrigated vine is more susceptible to early frost, such as the one in early November 1995. According to the extension service, farmers fear overproduction, which will contribute to lower prices. Another constraint is private farmers' lack of bargaining power when it comes to sale of winegrapes. Contrary to table grapes, which can be sold on the domestic free market, there is no domestic market for winegrape (except among farmers) so that farmers face the monopsonic power of agrokombinats regrouped in the Chamber of Commerce.

The major constraint to wine production faced by the agrokombinats is their financial insolvency, and the uncertainty faced by management as to their future with the privatization. Equipment needs upgrading and there is lack of cash flow to buy basic supplies, such as bottles and labels. Even Tikveš shuts down for lack of these basic supplies. Management of these wineries are also acutely aware of their lack of marketing acumen to increase value added to Macedonian wine.

Prospects for wine exports appear brighter than for most other exportables, however. Several factors account for this potential: Macedonians have mastered the technique of wine production; the product is of good quality; it is storable; the potential appreciation in value added is very good. Incremental investment has the potential to increase value.

6. INTERNATIONAL PRICE COMPARISONS

This section attempts to measure the competitiveness of Macedonia through the use of international and domestic price data of Macedonia's competitors for apples, tomatoes, and cucumbers.[14]

6.1 Macedonia's Fruits and Vegetable Exports

6.1.1 Fruit Exports

Hard and soft deciduous fruits are produced throughout the region and to varying degrees compete against one another for consumer preference. The area devoted to fruit production varies significantly from as little as 0.4 % of total cultivable land in the Czech Republic and Russia to 7.13 % in Moldova and more in the Former Yugoslav Republic of Macedonia. [15] he principal fruits grown by country are indicated in the following table:

Table 6.1. East European Fruit Growing, by Country[16]

Country	Fruits
Poland	Apples, pears, black currants, strawberries,sour cherries
Czech	Apples, pears, sweet cherries, plums
Slovakia	Apples, pears, sweet cherries peaches
Hungary	Apples, sour cherries, plums peaches, pears
Bulgaria	Apples, plums, peaches, cherries
Romania	Apples, plums
Slovenia	Apples, pears, plums, peaches
Croatia	Plums, apples, cherries, pears
FYM	**Apples, plums, pears, apricots**
Bosnia-Herz.	Plums, apples, pears, sweet cherries
Yugoslavia	Plums, apples, sour cherries, pears
Estonia	Berries and stone fruit

[14] This section is drafted by Steven Sposato.

[15] Data from Agra Europe, "Fruit and Vegetable Markets", August 1995, FYM, own estimates. Note: Various editions of "FVM" were used in developing the information in this section.

[16]Agra Europe, FVM, op. cit.

Macedonia is unique in being a major producer of apricots, although significant quantities are also produced in Bulgaria. While apples are produced throughout the region, the South is favored in the production of soft fruits: plums pears and peaches. Macedonian Fruit Production. Production of peaches, apricots and pears have been hurt severely in recent years by "fire blight" disease. Even in the production of apples which have, by far, the largest share of domestic and export markets, Macedonia's sub-Mediterranean climate can give it certain advantages in seasonal marketings and varieties produced.

Eastern Europe has been a large importer of fruits since the break-up of the CMEE. In 1995 apple imports to Poland totaled 45,000 tons to the Czech Republic 47,000 tons and to Russia 80,000. Much of these imports had their origin in Western Europe with the aid of 'export restitutions'. As production is put back on the market, i.e., trees pruned, fertilized and cared for, in addition to up-graded and new plantings, the region should be able to rapidly regain its internal market. Potential competition from Moldova, Georgia, Armenia and Azerbadjan will also begin to emerge as will more substitution from tropical fruits as incomes grow and diets reflect changing taste and expanded choice.

Processing of fruits is another area in which the region is behind and which can provide ample growth in support of farm prices and consumer choices. Frozen fruits and an expanded use of fruits of fruits in processed foods will assure that local produce plays a role in changing food consumption patterns as ready to eat foods comprise a greater part of the consumer budget. Dried fruits, especially apricots, are another conservation technique, exploited in the past and currently, with room for further expansion.

6.1.2 Vegetable Exports

Vegetable consumption and trade throughout Eastern Europe and the New Independent States of the Former Soviet Union is limited by severely inadequate processing. In much of the region frozen vegetables are unavailable and canned or bottled varieties of poor quality, limited availability and frequently in industrial size containers unsuited to the average consumer. The situation is the legacy of the de-emphasis of investment in the sector which characterized priorities on heavy industry and defense of the old Soviet empire. What emphasis on food production which did occur after 1970 tended to be meat and livestock, and consequently grain, as the food of choice for Soviet style planners.

Although the situation was not so acute in the former Yugoslavia, similar investment and consumption patterns prevailed. Consumption of vegetables in Eastern Europe averages about 50-70 kg./capita. This compares to average annual consumption averaging 100 - 120 kg./person in Western Europe. Consumption is, furthermore, heavily skewed in the East to fresh season varieties, pickled or other varieties which conserve well naturally in the Winter. These latter include potatoes, cabbage and to a lesser extent carrots. Indeed if potatoes are considered for their starch value rather than as a vegetable, the disparity in consumption patterns becomes even greater.

Shortness of the fresh growing season in much of the region and the lack of processing implies that production is in surplus even at relatively low levels. Prices are extremely low in season and high or simply non-existent, as their are no sales, out of season. The impact on diet and food expenditure is also noticeable. Certain nutritional deficiencies are marked in the region, life span shorter and food budgets, lacking a low cost source of calories and vitamins during much of the year, are high relative to house hold incomes. Indeed since the transition food expenditures average from 40 -60 percent of family income, this for a diet low in meat and vegetables, while high in basic starch components, bread, porridge and potatoes. Clearly investment in processing has potential returns for numerous economic agents.

Outside the region the European Union is by far the largest market. While significant external barriers to trade exist, especially in peak season, a significant amount of trade, nevertheless, takes place. Fruit, nut and vegetable imports to the European Union in 1993 totaled $17.9 billion and estimates place imports of processed fruits and vegetables as high as 40 % of total market value. This in spite of direct market support measures in addition to the external barriers.

Leading suppliers to the fresh vegetable market of the EU are the Canary Islands -- an administrative area of Spain with a special trading relationship --$207 mil. in 1993; Morocco $146 mil. and Kenya $39 mil. Morocco participates in access privileges to the EU as part of the "Mediterranean Initiative" while Kenya enjoys privileges extended under the Lomé Convention. Fresh and seed potato imports totaled $151 mil., with $54 mil. from Cyprus, $43 mil. from Egypt and $30 mil. from Morocco. All these countries participate in privileged access of one form or another.

Although the EU imports approximately twice as much horticultural product as it exports, a more than ample $8.98 billion was exported in 1993, much of this with the aid of export subsidies. Eastern Europe and the New Independent States of the FSU accounted for approximately one-fifth of these exports, Eastern Europe taking somewhat more than half of this total. Wine and beer are the largest horticultural categories exported by the EU but since the transition in Eastern Europe, the Union has been able, with the aid of subsidies, to increase market share there in other categories as well.

There are several reasons for the increase in EU exports to the East. In addition to targeted subsidies, the ability to bring in high quality processed product from throughout the EU and early season produce and citrus from Spain and Portugal, have helped EU exporters to Eastern Europe. Growing income disparity in the East has also segmented the market and created demand for luxury food products. The lack of maintenance and investment in what East European processing did exist is also a factor.

Macedonia exported limited quantities of tomatoes and cucumbers to Germany and France in 1993 and 1994 while importing somewhat larger quantities of "other vegetables" (processed and fresh) through Bulgaria. The lifting of the embargo by Greece and the end of the war in Bosnia-Herzegovnia may provide an opportunity to revive the Macedonian vegetable trade.

6.2 Methodology of International Price Comparisons

With the exception of a small export subsidy for lamb meat and table grapes (4 percent) and for fruits and vegetables (3.2 percent) (1994 rates), there are currently no other support or protective measures for the fruits, vegetables and wines considered here.[17] The nominal protection coefficient should, therefore, all else being equal and markets functioning well, show parity between the price received by Macedonian farmers and the equivalent exporter world price minus the export subsidy, transport and marketing costs.

As we know from experience and numerous studies, markets do not always provide perfect price consistency, especially for small countries where diseconomies of scale may provide a natural barrier of protection or, conversely, niche opportunities can be exploited for many years before larger producers decide to compete and bring the price down to international levels.

A straight forward comparison of observed Macedonian prices with those of foreign producers will give us, therefore, an indication of the potential competitiveness in a third country and on the domestic market. Other factors to be considered are transportation and marketing costs. Unfortunately, information for this latter is lacking in most instances, but assumptions as to the comparison of foreign marketing costs to Macedonian will illustrate how our observed competitiveness ratio changes. The simple comparison we will examine is stated below:

$$\frac{DP}{IP}$$

where; DP = domestic price and IP = international price

Prices are compared both at the farm gate and including transport costs to a common point (see Table 6.1: Price Derivations). Marketing costs are not included because of the difficulty of collecting the data. Prices are compared for several producer countries with those of Macedonia. It should be noted that the international fruits and vegetable market is very thin with certain commodities not traded at all. Other fruits and vegetables are traded in the off season when southern production can fill demand on northern markets. Quality and seasonal differences cause wide swings in prices. For this reason there are few standard international price comparisons, so that we tried to compare as broad a spectrum of producers and markets possible, given the difficulty of gathering the data.

The ratio used here is a particularly simple measure of comparison in so much as it tells one which commodity costs more without addressing at all the question of why. Potential subsidies(either foreign or domestic) on production, marketing or transportation subsidies, not

[17]Export subsidy rates increased considerably in 1995 to 12 % for wine and table grapes, 5 % for fruits and vegetables. Comparable international price data for 1995 were not available. There were still no additional support or protective measures in 1995 or 1996.

considered in the comparison, will have an impact on the ratio.[18] With this caveat in mind, when more complete data is absent the ratio can serve to tell us the competitive state of imported goods versus local on the domestic market or their relative potential in third country markets.[19]

As Macedonian import data was poor and in some cases commodities were not imported, the international price was compared at the farm level in one or more competing countries, Macedonia and competitor("@ Farm Gate"), and reconstructed at the Macedonian border ("w Transport"), including transportation costs but net of marketing costs.[20] [21] There are no applicable border duties or tariffs for the commodities considered.

Table 6.2 shows price ratios (DP/IP w/transport costs and at the farm gate) for apples, tomatoes, and cucumbers, table grapes and lamb. Comparative price data (IP) from Bulgaria was used for apples (1993 and 1994), from Morocco and Egypt for tomatoes (1994), from Egypt for cucumbers (1994), from Morocco and Egypt for table grapes (1994) and Bulgaria (1993) and from Bulgaria for lamb (1993). Table 6.3 (Price Derivation) and Table 6.4 (Shipping Costs) show the data used to derive the data in Table 6.2 In Table 6.3, both (IP) and (DP) are indicated and prices with transportation are given for both domestic prices and international prices as a combination of farm gate + marketing (no observation) + transportation.

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[18]As noted above there are no direct Macedonian subsidies or protection measures involved except for the export subsidies. Different domestic and foreign tax regimes may also provide hidden subsidies or impediments which affect the price.

[19]see also: Agricultural Trade, Organization for Economic Co-operation and Development(OECD), Paris, 1984 pp. 76-77.

[20]see Agricultural Trade, OECD, op. cit. for a justification for comparing farm prices net of transportation and marketing. While the methodology ignores natural transportation and marketing barriers it will tell us comparative opportunity at the farm level.

[21]Prices for Macedonia, Egypt and Bulgaria are taken at the farm gate, Moroccan prices are FOB and, therefore, include some marketing costs. Transport costs are added as indicated.

Table 6.2. International Price Comparisons Domestic Price/International Price				
Commodity	Year	w/Transport 1/	@ Farm Gate	Source: International Prices
Apples	1994	2.9	4.0	Bulgaria
	1993	1.0	1.2	Bulgaria
Tomatoes	1994	0.74	1.27	Morocco & Egypt
Cucumbers	1994	1.9	3.0	Egypt
Table Grapes	1994	0.57	0.73	Morocco & Egypt
	1993	2.8	2.8	Bulgaria
Lamb	1993	1.13	1.18	Bulgaria

Note: 1/ To Macedonian border.

6.3 Results

Fruits and vegetable prices vary greatly according to season year, quality and variety. These comparisons are consequently quite unreliable ones to draw any general conclusions from, especially given the limited data available. However, Macedonia does not appear to have any significant price advantage in major fruits and vegetables and may not even be competitive in its own markets during all but peak season.

Absent the natural barrier provided by transportation, Macedonian prices at the farm gate are in all cases save that of table grapes (Morocco and Egypt but not Bulgaria) considerably higher than in competitor countries. When transportation to Macedonia is included the situation improves, but Macedonia only becomes competitive in tomatoes and reaches parity in apples(1993 only) and near parity in lamb (1993).

Apples, although competitive at the border in 1993, use a year of comparison when the Bulgarian crop was affected by drought and disruptions resulting from the transition. In 1994, a year of more normal production for the two countries, Macedonian production is three times as costly even when considering higher transportation costs to bring the Bulgarian product to Macedonia. Even for tomatoes, where an average of Moroccan and Egyptian prices shows those of Macedonian producers to be one fourth lower including transportation, the explanation may lie more in the data. Both Morocco and Egypt produce more early and off-season tomatoes than the peak summer production in Macedonia. During the off season demand is in excess of supply and both prices and margins will be high. Comparing tomatoes produced during the same period - - data which we did not have -- may well show Macedonian production as more costly.

Table 6.3. Price Derivation for International Price Comparisons ($/kg)

	Year	Farmgate	Marketing cost	Transport	Domestic Price	International Price
		(a)	(b)	(c)	a+b +c	a+b+c
Apples						
Macedonia	1994	0.56	NA	0.02	0.58	- -
	1993	0.24	NA	0.02	0.26	
Bulgaria	1994	0.14	NA	0.02	- -	0.20
	1993	0.20	NA	0.06	- -	0.26
Tomatoes						
Macedonia	1994	0.30	NA	0.02	0.32	- -
	1993	0.20	NA	0.02	0.22	
Morocco	1994	0.30	NA	0.19	- -	0.49
Egypt	1994	0.17	NA	0.15	- -	0.37
Cucumbers						
Macedonia	1994	0.71	NA	0.02	0.73	- -
	1993	0.27	NA	0.02	0.29	
Egypt	1994	0.23	NA	0.15	- -	0.38
Grapes 3/						
Macedonia	1994	0.37	NA	0.02	0.39	- -
	1993	0.52	NA	0.02	0.54	
Morocco	1994	0.64	NA	0.19	- -	0.83
Egypt 4/	1994	0.37	NA	0.15	- -	0.52
Bulgaria	1993	0.13	NA	0.06	- -	0.19
Lamb						
Macedonia	1994	1.51	NA	0.02	1.53	- -
	1993	1.16	NA	0.02	1.18	
Bulgaria	1993	0.98	NA	0.06	- -	1.04

Notes: 1./Farm gate, except Morocco F.O.B. 2./ to Macedonian

Table 6.4 Shipping Costs For the Derivation of International Price Comparisons

Overland ($/km/ton		
Type	Container	Truck
Non-refrigerated	0.14	0.08
Refrigerated	0.17	0.10
Maritime, Refrigerated Container* ($/Transit)		
Casablanca-Thessaloniki	3,850	
Alexandria -Thessaloniki	3,100	

Notes: * Refrigerated 2500 cu. ft; max. 67,000 lbs., approximately 44,000 lbs. effective wt.

Competitive comparisons in third country markets would tend to show Macedonia either equally (i.e., not change significantly the ratio calculated) or less competitive depending on where the third country was situated relative to the competitor. Countries to the north of Macedonia, accessible by overland routes (FYU, Ukraine, Russia, Hungary and Czech Republic), would tend, all else being equal, to show better comparisons for Macedonia (i.e., at least maintain the price differential and perhaps show slightly to Macedonia's advantage), than those of the Mediterranean basin or near sea ports. Because the comparisons for apples and cucumbers were so unfavorable in 1994, transportation in and of itself could not usually compensate and render Macedonian production price competitive.

The situation especially for table grapes (vs. Egypt and Morocco)and, somewhat, for lamb appears better but the limited data does not permit us to draw strong conclusions. Other competitors in the grape market as Bulgaria which have climates better suited to grape production appear to be more competitive still.

7. CONCLUSIONS AND RECOMMENDATIONS

This study has highlighted several important issues regarding the agricultural sector in Macedonia (see also Ouedraogo and Shaw, 1996). Based on these findings, it draws implications and suggests recommendations for agricultural policy and development in Macedonia.

7.1 Highlights and Findings

Key highlights and findings of the study include the overall high level of protection for most of the deficit commodities, but no protection for exportables under review; the strain of agricultural subsidies on the budget; the high level of domestic prices of deficit commodities supported by a tariff regime, some elements of which run counter to WTO requirements; the great potential of export commodities.

7.1.2 High protection for import commodities, not for export

The estimates of nominal protection coefficients clearly show that Macedonia provides a high level of protection for deficit commodities (wheat, milk, cheese, sugarbeets, and fertilizer) production, except sunflowerseed. On the other hand, Macedonians export lamb, table grapes, and bulk wine without protection. In 1994, the small export subsidy (4%) had little impact on the protection of deficit commodities. Wheat is protected the most. Based on the relative producer subsidy equivalent (PSE), wheat in 1994 was more protected than in the EU and US (in 1993), while cowmilk was less protected. Clearly, the sanctions against Serbia, one of Macedonia's largest trade partners, and the blockade imposed by Greece resulted in high transport costs. While these costs provided some natural protection for Macedonian commodities competing against imports, they penalized export commodities. Unfortunately, if the opening of borders in 1995 brought these transport costs down as expected, only import commodities benefited from transit through Thessaloniki because Greece still refuses to allow exports of Macedonian products via Thessaloniki. Another disadvantage of Macedonian exports, according to Macedonians, stems from their small bargaining power vis-a-vis European importers.

7.1.3 Strain of budget subsidies

Agricultural subsidies contribute marginally to producer subsidy equivalents (PSE) for all commodities investigated, and appear small in absolute terms (less than $50 million in the 1993/94 production season). Nonetheless they are a strain on the government budget, as the government has always struggled to pay them in full or on time. Notably, planned budget allocations for agricultural subsidies (excluding the extension program) have steadily increased their shares of central government revenues, MAFWE's budget, and the agricultural sector Gross Social Product. Budget subsidies obligated in 1994 accounted for 93% of MAFWE's total budget, 7% of the central government revenue, and 9% of the agricultural sector GSP. MAFWE appears to be consumed by the implementation of these subsidies at the expense of other critical roles in support of agricultural development. The true impact of agricultural

subsidies may very well be their opportunity cost, that is, what the Ministry of Agriculture loses by not using these resources in other ways to increase farm productivity in Macedonia. Alternative uses of these resources include focused research, extension beyond primary production, and market information.

7.1.4 High support prices of deficit commodities

More than budget outlays for subsidies, however, the high level of support (or protective) prices imposed on buyers was the driving force behind agricultural protection of deficit commodities in 1994. Support prices are what attract producers, not the premium, or the even harder-to-get credit rebate. The price wedge between the domestic and border prices claims an overwhelming share of the PSEs for wheat (70%), milk (90%), sugarbeets (80%), and sunflower (almost 1.5 times the size of the negative PSE). Protective prices are based on cost-of-production estimates, which have a built-in upward bias on the government imposed pan-territorial and pan-seasonal protective prices. High-cost producers have no incentive to become more efficient if they are assured of recovering their costs whatever they may be. The price of wheat, for example, even accounting for quality differences, is much higher in Macedonia than in neighboring countries.

7.1.5 Untapped high potential of export commodities

It is to the credit of Macedonians to have kept export of lamb, table grapes, and wine at the level they achieved in 1994 given the difficult external conditions. In spite of these achievements, however, Macedonia's potential in exporting good quality products has been barely scratched. These exports remain low-value added exports, particularly bulk wine. In addition, perhaps too much emphasis is put on trying to export to the European Union and not enough in exploring other markets, including Eastern and Central Europe, the US, the Near East, and Africa, particularly CFA-devalued countries where most European goods are priced out of range. In exporting to Europe, Macedonians have to quickly take advantage of the new trend of direct distribution to grocery stores. While the quality requirements are taxing, the rewards in high prices are substantial.

7.1.6 International Price Comparisons

Countries to the north of Macedonia, accessible by overland routes (FYU, Ukraine, Russia, Hungary and Czech Republic), would tend, all else being equal, to show better comparisons for Macedonia than those of the Mediterranean basin or near sea ports.

7.2 Implications and Recommendations

These issues have considerable implications for agricultural policy and development, as Macedonia begins to examine the changes necessary to pursue its transition to a market economy and integrate its agricultural policy within Europe and the WTO.

7.2.1 Policy Implications

Price supports. Macedonian policy makers and producers are quick to complain of unfair competition from heavily supported European competitors. The temptation among policy makers is to increase price supports to European levels. Such a strategy is ill-advised, not only because European price levels are declining and will continue to decline with CAP reform and compliance to WTO. It is also ill-suited to the demands of modernization of Macedonia's agriculture, since the CAP applied to Western European agriculture, which is more mechanized, better able to realize economies of scale, more capital-intensive and less labor-intensive than agriculture in Macedonia and other CEECs. In addition, if current requirements are in place when Macedonia gains accession to the WTO as a developing country, total subsidies, including the production premiums and input and credit rebates as measured by the AMS at levels over 10%, will have to decline 13.3% over ten years, though input subsidies for low-income farmers may remain in place. (Industrialized countries are required to reduce their AMS 36% over 6 years from the 1986-1988 base year.) Finally, Macedonia's budgetary resources may not afford these price supports.

Trade regime. Import quotas and tariffs, including the variable levies on key commodities, will require review. The quota system in Macedonia has been largely dismantled, but a few remain for key agricultural products. For these quantitative restrictions, even the public auctioning of import licenses is likely to run counter to the GATT regulations on quota restrictions. Macedonia may be allowed to convert these measures as bound import tariff rates, as long as they are administered in a non-discriminatory fashion to all member states, by converting the quotas in tariff equivalents and the special levies as import tariffs. Export incentives will also have to decline. The current rules also dictate that export subsidies will have to decline 24% in value terms and 14% in volume terms, on a product-by-product basis.

Border crossing. Taxes and administrative hassles at border crossings severely undermine Macedonia's agricultural exports. Unpredictable rises in border crossing taxes -- some legal, others not -- as well as delays, unnecessarily test contractual arrangements among exporters, transporters, and importers of Macedonian products. As important as it is for Macedonia to join the EU in the future, it is even more crucial today for Macedonia to work with neighboring and transit countries to set up reliable and predictable border crossing procedures.

7.2.2 Recommendations

Most of the recommendations below are those of the study on deficit commodities (Ouedraogo and Shaw), and several are now being implemented by Macedonia and its development partners, including USAID and the World Bank. For the sake of completeness, these recommendations are listed with the others that pertain specifically to those export commodities treated here.

- **Promote more competitiveness through price signals closer to world prices.** Producers, particularly in economies in transition, need price signals to help decide on which commodities to grow. Macedonia has now committed itself to price signals closer to world prices. To achieve this objective, Macedonia should do away with the use of cost-of-production to fix support prices. Cost-of-production estimates have a built-in bias toward price increases because high-cost producers have no incentive to be efficient when they are assured of covering their costs. Furthermore, current data on costs of production represent a limited number of social farms and retain more political than empirical value. An USAID-funded activity is underway to provide better empirical estimates of production costs, not for price fixing but to inform Macedonians on social and private farmers' real conditions. Instead of using cost of production to fix prices, the government should provide an efficient market information, including information on cost of production, marketing costs, and world market conditions, to help producers make better decisions. If price signals are needed while the government sets up this system, a reasonable alternative to cost-of-production is a moving average of border prices, such as those calculated for the NPCs in this study.

- **Design an agricultural strategy based on sustainable food self-reliance and export commodities.** Understandably, a siege mentality is perceptible in Macedonia because of its recent experience with the UN sanction against Serbia and the Greek blockade. However, food self-sufficiency in all key agricultural commodities is as unsustainable as unwise a strategy. Macedonia lacks the resources to support both food self-sufficiency and export subsidies to get rid of eventual surpluses. Occupying scarce resources in costly production denies Macedonia the opportunity to use them in more promising export commodities. A more realistic approach is for Macedonia to pursue a strategy of food self reliance and export commodities. With such a policy, it can concentrate low unit-cost wheat production in only the most advantageous areas, while it shift resources to agricultural exports, whose foreign would help pay for cheap imported wheat. Given the highly competitive nature of world wheat market, Macedonia would hardly feel hostage to any exporter, particular when sanctions against Serbia and the blockade imposed by Greece are removed.

- **Vigorously promote Macedonian agricultural exports.** Concerting with other countries to smooth border crossings is within the government's mandate in a market economy. As noted, the Government can provide information on world market conditions to help the private sector better plans export activities, and particularly diversify export markets. MAFWE can play also a catalytic role in the market. Subsidies that would have been spent on high-cost deficit commodities should be redirected to vigorously promote Macedonia's exports. For example, an urgent, high payoff task is to help wineries shift from bulk to bottled wine export. Several observers note that blending Macedonian wine of selected vintages provides an attractive and consistent product with large enough volume to satisfy the requirements of exporting to EU and US markets. MAFWE and other offices can help bring private wineries together to test such a prospect, and then set up conditions for an eventual *appellation controlée* for the product. Similar actions can be taken to promote branded

names for other exportable produce. MAFWE can also study the quality and sanitary requirements of selling high-value lamb and veal cuts to the EU.

- **Revise trade regime to comply with requirements of the World Trade Organization.** Macedonia's regime of quotas, variable levies, and export subsidies run counter to GATT requirements. This trade regime should be revised accordingly. These quotas, variable levies, and export subsidies can be converted to tariffs. It would be better to phase them out and shift resources to more productive agricultural activities. This would promote more competitiveness in Macedonia's agriculture. Such an effort is now underway with World Bank's assistance.

- **Increase the capacity to monitor and analyze agricultural policies**. MAFWE needs to strengthen its monitoring and analytical capacity in critical areas of agricultural policy. There still does not exist a coherent and comprehensive information on the implementation of agricultural subsidies. It would be extremely difficult for Macedonia to design and implement a coherent agricultural strategy without empirical information on how much it actually spends on the key agricultural commodities that are at the core of this strategy. The narrow focus of MAFWE on primary production is a disservice when data and analysis are needed beyond the farmgate to understand the impact of policies on agriculture. Estimates of NPCs and PSEs, as calculated in this study, should be routinely performed by MAFWE to inform the ministry and the Government, and also to better advise farmers on their constraints and opportunities as Macedonia moves toward a market economy. The World Bank-funded private farmer support project now under way holds promises of upgrading the skills of extension agents and MAFWE's staff for such a strategy. In no small way, this study and other USAID-funded land study underway can be credited for getting key students and staff of the Agricultural Faculty to reject "cost-price" notion to reason now in terms of cost of production and market price.

- **Report trade data consistently**. More appropriate and better quality analyses will be performed when the Statistical Office provides more consistent trade. Currently, commodities are not grouped consistently. Also, the Statistical Office reports trade data only for commodities that are viewed as important in the current year. This results in missing data for some years, and makes it difficult to monitor the performance of commodities over time. These unfortunate considerations blemish what is an otherwise excellent performance of the Statistical Office.

- **Establish an agricultural statistical system focusing more on the private farm sector**. Better advice to private farmers can only be built on a solid knowledge of the private farm sector. At all levels of public decision making regarding agriculture, more emphasis should be given to the private sector. This is an urgent plea, since land privatization legislation under way may one day put all land in private hands. USAID-funded efforts to analyze production costs is an important step forward. Given its small size and its educated labor force, Macedonia can quickly established an efficient agricultural statistical system that would allow the collection of good

representative data of farm conditions. Multiple purpose surveys (combining agricultural, natural resources, and socio-economic statistics) using multiple sampling frames (area sampling plus list frames) are recommended. Albania- with a similar size and possibly less skilled labor- already implements a similar system.

- **Conduct analyses to determine long-term agricultural comparative advantage.** Clearly, Macedonia's competitive edge appears in livestock and early season fruits and vegetables. However, quantifying this edge, particularly compared to more heavily supported commodities, is crucial for the design of Macedonia's agricultural strategy. MAFWE should lead the effort to refocus the national agricultural policy debate to those products that have a long-term future in European and global markets. Whereas Macedonia's wheat is of high quality, it is doubtful that it will compete effectively with European wheat in the long term. In contrast, lamb, tomatoes, cucumbers, table grapes, and wine are commodities that Macedonia can produce at higher quality and lower cost than competitors in Europe and elsewhere. MAFWE should be at the forefront of designing policies that will reorient public and private investment away from the production of high-cost commodities toward those with the potential to generate income and jobs for Macedonians. To do so, it must lead the effort to quantify the comparative advantage in these and other products. Cost of production data collected by an USAID-funded project alleviate some of the analytical constraints of such a study. In a similar way, efforts should be made to collect and analyze marketing costs and prices, particularly for growers of perishable crops. Results of these studies would be used in such analytical tools as the domestic resource cost (DRC) or policy analysis matrix (PAM) to analyze Macedonia's long-term agricultural comparative advantage.

BIBLIOGRAPHY

Anon., "Fischler hints at pre-enlargement changes to CAP," *East Europe Agriculture and Food Monthly*, No.151, April 1995.

Associates for International Resources and Development, *Economic Comparative Advantage and Incentives in Livestock Production and Trade in West Africa's Central Corridor*, Cambridge, MA, January 1993.

Blejer, Mario I., Guillermo A. Calvo, Fabrizio Coricelli and Alan H. Gelb, eds., *Eastern Europe in Transition: From Recession to Growth?*, World Bank Discussion Paper 196, Washington, May 1993.

Brauning, Roberto, and Christine Hellemaa, "Labor Support Needed for Reform in Central and Eastern Europe," *IMF Survey*, Washington: May 22, 1995.

Buckwell, Allan E., "Can the CAP survive Polish Accession?" 2nd Annual AGRA EUROPE Conference on Agribusiness and the Food Industry in Central and Eastern Europe, April 6th-7th 1995.

Cochrane, Nancy J., *The Liberalization in Yugoslavia and Poland*, Agriculture and Trade Analysis Division, Economic Research Service-USDA, Staff report no. AGES 9058, Washington, August 1990.

Cornick, Jorge, Thomas L. Cox, and Brian W. Gould, "Fluid Milk Purchases: A Multivariate Tobit Analysis," *American Journal of Agricultural Economics*, February 1994: 74-82.

Economist Intelligence Unit, *Bulgaria, Albania 1st quarter 1995,* London, 1995.

Economist Intelligence Unit Limited, *Greece 1st quarter 1995*, London, 1995.

Eurostat, Extra European Union statistics (94-95), *Methodology*, European Union Commission, 1996

European Union. *Official Journal of the European Communities*, Volume 31 L. 147 (14 June 1988) Volume 30 L 346 (18 December 1987); Volume 27 L 314 (4 December 1984); Volume 20 No. L 329 (22 December 1977); Volume 18 No L 183 (14 July 1975); Volume 18 L. No. 102 (22 April 1975); No. 148 (28 June 1968).

Claeyé, Etienne, *Phare Progress and strategy paper: Agriculture*, European Commission, Directorate General for External Economic Relations, Phare Information Office, June 1994.

FAO, *Food outlook*, global information and early warning system on food and agriculture Rome, No. 3/4 (March/April) 1995.

FAO, *Former Yugoslav Republic of Macedonia Private Farmer Support Services Project, Preparation Report*, Report No. 76/94 CP-MCD 4, 21 June 1994.

FAO, *Transition and price stabilization policies in East European agriculture*, FAO Economic and Social Development Paper 125, Rome, 1994.

GATT, Information and Media Relations Division, GATT *FOCUS* newsletter and news releases (various issues), Geneva.

Hoekman, Bernard M., *Trade Laws and Institutions-Good Practices and the World Trade Organization,* World Bank, Washington, April 1995.

International Agricultural Trade Research Consortium, *Bringing Agriculture into GATT-Potential Use of an Aggregate Measure of Support*, (undated).

IMF, *Albania,* IMF Economic Review, Washington, July 1994.

Kaminski, Bartolomiej, *The Foreign Trade Dimension of the Market Transition in Poland-The Surprising Export Performance and its Sustainability,* International Trade Division, International Economics Department, World Bank, Washington, June 1993.

Kaminski, Bartolomiej, *The Significance of the "Europe Agreements" for Central European Industrial Exports,* International Trade Division, International Economics Department, World Bank, Washington, June 1994.

Kaminski, Bartolomiej, and Alexander Years, *ACCEDE Trade Barriers Faced by Successor States of the Soviet Union,* International Trade Division, International Economics Department, World Bank, Washington, September 1993.

Macedonian Information Center, *MC News*, daily issues June-August 1995.

Macedonian Information Center, *Republic of Macedonia-basic data*, Skopje, June 1995.

Masters, Williams A., Guidelines on National Comparative Advantage and Agricultural Trade. APAP III Methods and Guidelines No. 4001, Agricultural Policy Analysis Project, Phase III (APAP III). Bethesda: Abt Associates Inc.

Moore, Curtis, *Green Paper,* United States Information Agency, December 1994.

Murarcaliev, Aleksandar, *Production, preparation and putting on the market the agricultural products in Macedonia,* Info Soft Ing, Skopje, 1995.

Nallet, H., and A. Van Stolk, "Relations between the European Union and the Central and Eastern European countries in matters concerning agriculture and food production," Report to the European Commission, Brussels, June 1994.

ACCEDE-Directorate for Food, Agriculture and Fisheries-Committee for Agriculture, "Some Quantitative Implications of Aligning Agricultural Policies in Central Europe with the Common Agricultural Policy of the EU," AGR/EW/EG (95) 8, Paris, 31 January 1995.

Orlowski, Witold M., "Price Support at any Price?-Costs and Benefits of Alternative Agricultural Policies for Poland," draft, World Bank, May 1995.

Peeters, Jean-Pierre, and Maya Draganova, *Phare Progress and strategy paper: Food aid*, European Commission, Directorate General for External Economic Relations, Phare Information Office, June 1994.

Petkovski, Mihail, Goce Petreski, and Trajko Slaveski, *Stabilization Efforts in the Republic of Macedonia,* RF/RL Research Report, Vol. 2, no. 3, January 1993.

Recovery Group (The) and The Sparks Companies, *The Context for the Crisis Management at Agroindustrial Kombinats in Macedonia,* Skopje, October 1994.

Recovery Group (The) and The Sparks Companies, *A.D. A.K. "Lozar" Titov Veles*, Draft Report, Skopje, October 1994.

Republic of Macedonia, *Official Gazette of the Republic of Macedonia*, Skopje, issues from 1990-95.

Republic of Macedonia Ministry for Agriculture, Forestry and Water Economy, *Implementation of the Program for Encouraging the Development of Agriculture in 1994,* Skopje, February 1995.

Rollo, J.M.C., "Reform of the AAP: the beginning of the end or the end of the beginning?," *EG Agriculture*, January 1992.

Sachs, Jeffrey D., "Russia's Struggle with Stabilization: Conceptual Issues and Evidence," *Proceedings of the World Bank Annual Conference on Development Economics 1994*, World Bank, Washington, 1995.

Slaveski, Trajko, " The need and the way for implementing rapid and mass privatization program in the Republic of Macedonia," draft Skopje, November 1994.

Statistical Office of Macedonia, *Macedonia basic economic data*, No. 10, Skopje, 1995.

Statistical Office of Macedonia, *Monthly Statistical Bulletin of the Republic of Macedonia*, issues 1994 1-12 and 1-2 1995, Skopje.

Statistical Office of Macedonia, *Realized Production from early cultivations of fruits in the Republic of Macedonia in 1994*, Skopje, December 1995.

Statistical Office of the Republic of Macedonia, *Realized production from late cultivations of fruits and grapes in the Republic of Macedonia in 1994*, Skopje, March 1995.

Statistical Office of Macedonia, *Statistical Yearbook of the Republic of Macedonia*, 1993 and 1994, Skopje.

Tsakok, Isabelle, *Agricultural price Policy: A Practitioner's Guide to Partial Equilibrium Analysis*, Ithaca: Cornell University Press, 1990.

Tangermann, Stefan, and Timothy E. Josling, "Pre-accession agricultural policies for central Europe and the European Union," Final Report, University of Göttingen and Stanford University, 12 December, 1994.

Tweeten, Luther, *Agricultural Trade: Principles and Policies*, Boulder: Westview Press, 1992.

USDA/ERS, *EUROPE-International Agriculture and Trade Reports-Situation and Outlook Series*, WRS-94-5, Washington, September 1994.

USDA/ERS, *Sugar and Sweetener-Situation and Outlook Report,* SSSV20N1, Washington, March 1995.

USDA/FAS, "Bulgarian Oilseed Update September 1994," Agworld consular information series (via internet), May 1995.

USDA/FAS, "Bulgarian Grain and Feed Update September 1994," Agworld consular information series (via internet), May 1995.

USDA/FAS, *Dairy: World Markets and Trade*, Circular Series FD 1-95, Washington, April 1995.

USDA/FAS, *Grain: World Markets and Trade*, Circular Series FG 4-95, Washington, April 1995.
[add oilseeds source].

USDA/FAS, "Greece Agricultural Situation Report September 1994," Agworld consular information series (via internet), May 1995.

USDA/FAS, *Oilseeds: World Markets and Trade*, Circular Series FD 4-95, Washington, April 1995.

Vogel, Stephen J., Mark Lundell, and Sherman Robinson, *Adjustment in Hungarian Agriculture: Policy Reform and Trade Shocks*, USDA/ERS (with the International Food Policy Research Institute and the World Bank), Washington, July 1994.

Winters, Alan L., and Zhen Kun Wang, *Eastern Europe's International Trade,* Manchester University Press, Manchester, 1994.

World Bank, *An Agricultural Strategy for Albania,* Washington, October 1992.

World Bank, *Farm Restructuring and Land Tenure in Reforming Socialist Economies-A Comparative Analysis of Eastern and Central Europe,* World Bank Discussion Paper 268, Washington, February 1995.

World Bank, "Former Yugoslav Republic of Macedonia Private Farmer Support Project," draft, Agriculture and Environment Division, Country Department I, Europe and Central Asia region, March 1995.

World Bank, *Improving the Supply of Fertilizers to Developing Countries, A Summary of the World Bank's Experience*, Asia Technical Department, World Bank Technical Paper Number 97, Industry and Energy Series, Washington, 1989.

World Bank, *Poland: Policies for Growth with Equity,* A World Bank Country Study, Washington, December 1994.

World Bank, *World and Regional Supply and Demand Balances for Nitrogen, Phosphate, and Potash, 1991/92-1997/98*, World Bank Technical Paper Number 206, Washington, July 1993.

Zanga, Louis, "Albanian Foreign Trade," *RFE/RL Research Report*, Vol. 3, No. 24, 17 June 1994.

Zanga, Louis, "The Albanian Economy: Progress Despite Massive Problems," *RFE/RL Research Report*, Vol. 2, No. 46, 19 November 1993.

APPENDIX A

A.1. The European Union and the World Trade Organization

Macedonia's intention to join the European Union and the World Trade Organization (WTO) is clear. Officials believe that in the future Macedonian agricultural policy will be "just like Europe's." What is less clear is what European agricultural policy will be in five or ten years, since the Common Agricultural Policy (CAP) is currently under internal reform to be concluded in 1996, and since the EU has pledged additional changes over the next six years in order to meet its obligations as a member of the WTO. The WTO launched operations on January 1, 1995 as a result of the successful conclusion of the Uruguay Round of the GATT.

A.1.1 Accession to the WTO and EU

Accession of the FYRM to the EU is blocked both by Greek non-recognition of Macedonia as a state and by the large number of countries ahead of Macedonia in line for accession. The procedure for admitting the FYRM to the Council of Europe was postponed from September 1995 to January 1996, in response to Greek opposition, and may be postponed again.[22] However, the EU has become more sanguine in recent years to enlargement. In contrast to the caution over expansion voiced in 1989 through 1991 as the Soviet Union disintegrated and the Central and Eastern European countries (CEECs) began their transformation, the EU agreed in June 1993 to eventual membership of the six CEECs that currently hold Association Agreements with the EU: Bulgaria, Czech Republic, Hungary, Poland, Romania and Slovakia. The EU expanded in June 1994 from its original twelve to fifteen members by signing accession agreements with the European Free Trade Agreement (EFTA) countries: Austria, Finland, Norway, and Sweden.[23] Next in line after the Association countries are likely to be the Baltic states.

Currently, the FYRM holds observer status in the Council of the General Agreement on Tariffs and Trade (GATT) and has been assigned a working party to examine its request for accession to the WTO. As of July 3, 1995, the CEECs that had participated in the Uruguay Round and signed the Marrakesh Agreement in April 1994, effectively becoming full members of the WTO, include the Czech Republic, Hungary, Poland, and the Slovak Republic.[24] Romania, which also signed at Marrakesh, is a full member with developing country status.

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[22] Because of that, FYRM is not officially considered a PHARE country, and must rely on status as a recipient of humanitarian aid in order to participate in the EU-financed PHARE program.

[23] The EU-15 comprises Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden, and the United Kingdom. Norway, although admitted, had not acceded to the EU as of July 1995.

[24] The Czech Republic, Hungary, Poland, and the Slovak Republic are the four signatories to the Central European Free Trade Agreement (CEFTA), a free trade area planned for implementation no later than 1 January 2001 and currently under examination by the General Secretariat of the GATT in Geneva.

Bulgaria, which did not sign, is nonetheless expected as an Association Agreement country to become a full member soon with developing country status. Like Macedonia, Albania, Bulgaria, and Croatia have been assigned accession working parties and hold observer status as of July 5, 1995.

Thus, the current atmosphere for accession of the FYRM to the WTO in the medium term is favorable. Its accession to the EU appears less favorable due to impediments stemming from Greek opposition in the short term, and more importantly the structural reforms needed for this accession.

A.1.2 Changes under the Uruguay Round and the CAP

The Round commits developed countries to reduce total agricultural subsidies as measured by the Aggregate Measure of Support (AMS) by 20% over a 1986-88 base period (including rates of less than 5%). Export subsidies must be reduced on a product-by-product basis by 36% in value terms and 21% in volume terms over a 1986-90 base. Developed countries have six years to phase in the reforms. Developing countries must reduce their agricultural subsidies 2/3 of the level agreed to by developed countries (i.e., 13.3%) as measured by the AMS. Developing countries have ten years, instead of six, to implement the changes and the reductions apply to subsidies only over 10%. Developing countries may maintain input subsidies *for low-income farmers* (emphasis added), investment subsidies, and export subsidies related to export marketing and internal distribution. Export subsidies must fall by 24% in value terms and 14% in volume terms (again 2/3 of the developed country commitment).

Import tariffs are the protection of choice under the GATT. Member states may impose import tariffs as long as they are applied in a nondiscriminatory fashion. As member nations sign bilateral agreements on tariffs, these rates become "bound," that is, considered as upper limits and unchangeable unless the changes meet specific criteria set out by the GATT. There are no requirements with respect to the structure of tariffs or the increase of unbound tariff rates.

By contrast, quantitative restrictions on imports are forbidden (GATT Article XI) unless they are used for balance-of-payments reasons (Article XII), in which case they must be nondiscriminatory (Article XIII) unless specifically waived (Article XIV). Import licensing rules are carefully laid out to standardize procedures across member nations, reduce transaction costs, level access to foreign exchange for licensed and non-licensed importers, and discourage denial of licenses on the basis of minor documentation irregularities.

A1.3 The Cap: A Moving Target

Not only is the CAP in the midst of significant internal reform, but Europe's accession to the World Trade Organization has contracted European policy makers to implement additional reforms that overlap, extend, and, in some cases, conflict with CAP reform.

The CAP is governed by three principles: open internal markets, common financing, and preference for EU members. Notwithstanding the reforms, these principles are likely to drive the formation and implementation of European agricultural policy, both during and after expansion of the European Union.

In general, the reform of the CAP involves replacing price support with income support. The intention of this reform is to shift the cost burden of agricultural support from consumers, who are penalized by higher food prices, to taxpayers. The goal is to increase the transparency of the cost of support programs through redirecting the pathway of support away from the multiple levels of forward and backward linkages from producer to consumer, toward direct allocations to farmers through government budgets. Additionally, this strategy increases the control of governments over equity of the cost burden. Since food makes up a larger portion of expenditures of lower-income than higher-income consumers, policy makers have little control in a price-based system over the extent to which poorer households disproportionately bear the cost of farmer support. Shifting away from price support to income support allocated through state budgets, and financing that support with tax revenues, increases the control of policy makers over actual spending levels and the relative burdens on households at different income levels.

The CAP reform is based on proposals put forward by the former EC Commissioner for Agriculture, Ray MacSharry. The MacSharry approach centered on a 35% cut in cereal prices over three years, anticipating flow-through price reductions on human and animal food products and cuts in livestock prices. The proposals also stipulated payments to farmers for "set-asides," areas of traditional cultivation in cereals and oilseeds with the goal of reducing area cultivated by 2 million hectares, and the elimination of grain export subsidies. The overall fall in grain production was to be 160 million tons. Other reductions in the prices of milk (10%) and beef (15%), were to be accompanied by increases in direct income payments to producers, with an overall impact of increased budget expenditures from state governments. The actual ongoing CAP reform, scheduled for completion in 1996, implies a roughly 30% cut in cereals and beef prices (reform of milk production support had been planned in the form of large cuts in production quotas, but has since been abandoned in the face of grave opposition). Some elements of the CAP will remain unaffected by both internal and GATT reform by virtue of the "green box," a set of criteria exempting policies that are perceived to have positive environmental effects and to be non-trade distorting.

Already, the CAP reform has meant an overall decrease in farmer support and a shift toward taxpayers and away from consumers in bearing the cost. According to the OECD, in 1992 (prior to the onset of CAP reform) transfers from European consumers to agricultural support totaled an estimated $84 billion, while transfers from taxpayers were $63 billion. In

1995, transfers from taxpayers and consumers will each total roughly $50-55 million.[25] (According to USDA, transfers in 1992 from US consumers totaled an estimated $27 billion, while transfers from taxpayers were $60 billion. Overall US support of agriculture today is about 40% of European support.).

[25] Current EC Commissioner for Agriculture Franz Fischler commented in April 1995 that the shift away from price support to income support was the right decision, and must be accompanied by reduced state intervention in agricultural markets. He stressed, however, that additional changes in the CAP in preparation for accession of CEECs were less important than coping with the structural differences between the EU and CEECs' agricultural sectors, including farm size, land tenure etc..

A.2 THE EU MARKET FOR EXPORT CROPS[26]

The EU market is by far the largest in the region, and one of the world's largest, importing $17.9 billion in horticultural products in 1993.[27] Of this total Latin America had the largest regional share at $8.3 billion.

The competitiveness of Latin American produce is explained in part by seasonal factors, Southern Hemisphere produce coming on to the market in Winter when fresh locally produced products are non-existent. For those countries competing within normal Northern Hemisphere seasons, the EU has very high seasonal duties for fresh produce. Peak season tariffs range from 22 percent for grapes to 18 percent for tomatoes, 17 cauliflower, 16 strawberries and 14 percent for apple. Processed fruit and vegetable tariffs are even higher, ranging from 18 percent for frozen vegetables, 15-26 percent for frozen fruit and 20 percent for canned fruit and vegetable products. Addition of sugar to a canned product can result in further significant levies imposed under the "common sugar regime".[28]

A.2.1 Trade and Customs Regime

As mentioned above the EU applies a system of ad valorem "Common Customs Tariffs" to third country imports. These tariffs may vary from country to country and on a seasonal basis. Special tariffs have been negotiated between the Community and the African, Caribbean and Pacific (ACP) countries which are members of the Lomé Convention, with Cyprus, Israel, the Maghreb(Algeria, Morocco and Tunisia, the Mashraq (Egypt, Jordan, Lebanon and Syria) as part of the 'Mediterranean Initiative' and with Poland, the Czech Republic, Slovakia, Romania, Bulgaria, the Republic of Bosnia-Herzegovina, Croatia, Slovenia, Malta, Turkey and the former Yugoslav Republic of Macedonia.[29]

In addition to the "Common Customs Tariff" the Community operates a system of "reference prices" and additional "levies" on an extensive list of "sensitive products" during periods of peak local supply. The list of products which is covered under the "reference price" and levy system includes:

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[26] This section is drafted by Steven Sposato

[27] Data is for the EU-12. Effective January 1, 1995 Austria, Finland and Sweden joined the Union bringing the total to 15.

[28]. See also: "European Imports of Horticultural Products in 1993", World Horticultural Trade & U.S. Export Opportunities, Economic Research Service, USDA, April 1995.

[29]. See also: The CAP Monitor, abstract of European Union regulations affecting the Common Agricultural Policy, ch. 13. A. Fruits and Vegetables. 24/8/93.

Table A.2.1: Reference Price Products and Applicable Dates

Fruits	Period Covered
Apples	July 1 - June 30
Apricots	June 1 - July 31
Table Grapes	July 21 - Nov. 30
Cherries	May 1 - August 10
Plums -group I	June 11- Sept. 30
-group II	August 1- Sept. 30
Peaches	June 11 - Sept. 30
Citrus	various[30]
Vegetables	**Period Covered**
Tomatoes	April 1 - Dec. 20
Cucumbers	Feb. 11 - Nov. 10
Courgettes(Squash)	April 21- Sept. 30
Aubergines (Egg Plants)	April 1- Oct. 31
Endives	Nov. 15 - March 31
Cabbage	Nov. 1 - May 31
Artichokes	Nov. 1 - June 30

The "reference price" system in effect through July 1995 assured that little or no produce can enter the Community at prices lower than the prevailing "reference price" during its period of application. If the entry price for at least 30 percent of imports from a given country were 0.6 ECU/100kg. or more below the level of the reference price for a given period, the Commission imposed a levy on subsequent imports of that product. This levy was equivalent to the difference between the reference price and the average of the last two entry prices. 'Third' country suppliers gained no advantage from trying to supply the Community at low prices. In practice then they tended to respect the price or withhold supplies to avoid paying countervailing charges.[31]

In addition to contróls at the border the Community practiced, and continues to practice, market support through paid withdrawal of produce by producer associations, member state market intervention (i.e., purchase and disposal), export subsidies and production aids for canning and processing. While a small amount of state purchased product

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[30]. Four types of citrus are covered (Lemons, Orange hybrids, Sweet Oranges, Clementines), with varying reference periods.

[31] CAP Monitor, op. cit.

is used in schools and hospitals or sold for feed, vast quantities of produce are disposed of as solid wastes, creating potential pollution problems.

A.2.2 Post Uruguay Round

The spirit of the negotiations concluded as part of the Uruguay Round and creation of the World Trade Organization mandated sweeping changes in the "Common Fruits and Vegetables Policy", as with all similar policies of member countries of the WTO. The reality, however, appears to be far more similar to pre-July 1995 protectionist policies than to a more liberalized trade regime.

WTO requirements for a phased in reduction of 20 percent in national agricultural support measures had already largely been met in the cereals and dairy regime and may only affect modestly the "Common Fruits and Vegetable Policy". To what extent this regime will participate in the overall 30 percent reduction in export subsidies also remains to be seen, especially as surpluses in wheat and dairy have begun to decline, lowering the necessity for subsidies. (Unusually high world wheat prices are also playing a role).

The most significant deficiency of the new regime, however, is a system of border controls which strongly resembles the old reference price system and which would appear to have the same effect, that is prevent produce from entering the EU market during peak seasonal periods at competitive prices.

The same "reference periods", or periods of peak seasonal protection and additional duties, used under the "reference" system still prevail. The dates have been modified somewhat, as they were periodically under the old system, the new dates are given in Table II. The method of calculation of what was previously a "reference price" but what is now called the "standard import value" has been changed. During the periods of peak supply the SIV is calculated at 70 percent of the average price on a list of representative markets, given in Table A.2.3

The importer is given a choice among three prices on the basis of which to calculate his supplemental duty. The lesser of a) the FOB price plus insurance and freight, provided this is no more than 8% greater than the SIV; 2) a "deductive value" wherein the "customs duty" is first included than deducted for calculation of the supplemental duty; 3) the SIV. Under systems (1) and (2) the importer must make a deposit equivalent to the difference between the calculation under that option and the SIV. Since this deposit is only refunded if the importer can show that the actual sale of his product occurred at a price higher than the SIV, the SIV plus supplemental duty is the minimum entry price under the new system. This for all intents and purposes replicates the protections of the old "reference price" system and would appear to violate the strictures of the WTO agreements against variable levies. Until challenged and changed, however, a process which can take years, this will be the system importers face.

Table A.2.2 Periods of Application of the Standard Import Value (SIV)

Commodity	Application Period	Entry Into Force
Fruits		
Apples	July 1 - June 30	July 1, 1995
Apricots	June 1 - July 31	June 1, 1995
Table Grapes	July 21- Nov. 20	July 21, 1995
Cherries	May 21 - Oct. 10	May 21, 1995
Peaches, Nectarines Plums	June 11 - Sept. 30	June 11, 1995
Pears	July 1 - April 30	July 1, 1995
Citrus	- - by fruit --	- - by fruit --
Vegetables		
Tomatoes	Jan. 1 - Dec. 31	Jan. 1, 1995
Cucumbers	Jan. 1 - Dec. 31	Jan. 1, 1995
Courgettes (Squash)	Jan. 1 - Dec. 31	Jan. 1, 1995
Artichokes	Nov. 1 - June 30	Nov. 1, 1995

Table A.2.3: Representative Markets for Calculation of Standard Import Values (SIV)

Country	Market(s)
Belgium/Luxembourg	Antwerp, Brussels
Denmark	Copenhagen
Germany	Hamburg, Munich, Frankfurt, Cologne, Berlin
Greece	Athens, Thessalonki
Spain	Madrid,Barcelona, Seville, Bilboa, Zaragosa, Valencia
France	Paris (Rungis), Marseille, Rouen, Perpignan, Dieppe, Nantes Bordeaux, Lyon, Toulouse
Ireland	Dublin
Italy	Milan, Bologna
Netherlands	Rotterdam
Austria	Vienna (Inzerdorf)
Portugal	Lisbon, Porto
Finland	Helsinki
Sweden	Helsingborg, Stockholm
Great Britain	London

This system of high customs duty combined with supplementary levies clearly continues the 'preference communautaire' which characterized the pre-WTO system. This

combines with disposal measures, export subsidies and producer aids which have been only modestly reduced from previous levels. The EU market is one which is difficult to access on a 'cost' competitive basis. Still much trade takes place, even seasonally, as exporters have developed "niche" markets where local production is lacking or particular quality or taste factors support their sale.

While there have been no formal challenges to the system yet within the WTO, even the complex application of the current regulations has been challenged from inside the Union. The "European Union of The Fruit and Vegetable Wholesale Import and Export Trade (EUCOFEL)", an importer association has written the Commission challenging a number of the regulations as being unfair or unwieldy. Their July 6, 1995 letter scores the frequent unavailability of the "SIV" calculations, in a timely fashion, the excessive marketing margins used in the calculation of the difference between the "SIV" and the "CIF" price and the fact that perhaps as much as two-thirds of the trade is directly contracted for by wholesalers (i.e., supermarkets and chain purchases) and does not pass through the "representative" markets.

On the export side subsidies have allowed the Union to develop a two-way trade with many of the surrounding regions, where price considerations alone would have normally dictated a unidirectional trade. This is true in Eastern Europe as well, where the disarray in production over the last few years, coupled with significant subsidies and quality advantages, have allowed the Community to penetrate local markets. The task for Macedonian farmers, producers and traders will consequently be two fold, to recapture traditional markets of the East while developing "niche" market exports to the Union, in preparation for the day when barriers will be reduced.

APPENDIX B

PRODUCTION AND EXPORTS OF LAMB, TABLE GRAPES, AND WINE

B.1 Lamb

B.1.1 Lamb Production

Lamb production reached 2.5 million head in 1994, slightly over 1 per habitant. Over 1992-1994, however, lamb production increased little on average because of decline in the social sector (box). In 1992, despite its smaller share in lamb production, the social sector slaughtered nearly three times more lambs than the private sector. Since then, however, the social sector has lost its lead. Its output dropped some 86 percent the following year and has not recovered since.

Lamb Production: Average 1992-1994

Items	Private	Social	Total
Share	93.1%	5.9%	100.0%
Growth	+3.0%	-5.0%	+2.4%

Lamb slaughter (thousand head)

Year	Private	Social	Total
1992	389	1,046	1,435
1993	279	146	425
1994	382	220	602

Source: Statistical Office of Macedonia

Macedonian sheep is a local and crossbred German Wutternburg-local stock, producing milk and meat. An ewe produces 2 to 3 lambs in two years. Sheep husbandry follows an age-old pattern. In the spring, sheep graze in the plains; in the summer they are herded up to communal mountain pastures for cheese production; in the fall they return to the valley areas; and in the winter sheep are fed hay and grain in stables. Winters, however, are usually mild so that sheep spend only a couple of months in stables. This pattern of an extensive sheep herding with long periods in isolated mountains is facing increasing constraints, as farm populations dwindles in mountain villages and the numbers of herders decline.

B.1.2 Lamb Export Market

The European Union, i.e., Italy, is Macedonia's main export market for slaughtered lamb. (No live animals have been exported since 1992, according to the Chamber of Commerce.) This is a niche market: Italians demand young (8-week) and small (5-8 kg dressed carcass) lamb, whereas the world standard is 15 kg and above. Fatter lamb (10 kg and above) was exported in the recent past to Greece (before the Greek blockade), former Yugoslav republics and the Middle East. The primary market remains Italy, with exports are highly concentrated in two periods: Easter (about 2/3 of export) and Christmas (1/3 of export).

Macedonia's main competitor for the Italian market is New Zealand, which dwarfs all other exporters to Italy and to the entire EU as well. Macedonia, however, feels little pressure from its competitors because its lamb is a highly differentiated product. The milk-fed Macedonian lamb arrives fresh in Italy as opposed to New Zealand's range-fed, deep frozen lamb. Bulgaria and other countries in Central and Eastern Europe lack adequate processing facilities (slaughterhouses) to compete against Macedonia. For example, whereas Macedonia boasts of 8 slaughterhouses approved by the EU for lamb export, Bulgaria has only 2. Hungary and Slovakia have none, so they can only export live animals (Stokopromet, personal communication).

Competitors in the EU and Italian Lamb Import Markets, 1994

Countries	Total EU	Italy
Macedonia	0.2%	4.3%
New Zealand	88.5%	85.0%
Bulgaria	0.3%	3.4%
Hungary	0.1%	2.1%
Slovakia	0.1%	1.5%
Others	10.8%	3.7%
Total	100%	00%

Source: Eurostat

The EU allocates yearly quotas to exporters, including 1,700 tons of lamb carcass to Macedonia, 1,800 tons to Bulgaria, and 260,000 tons to New Zealand (verbal communication, Stokopromet, 1996). Though Macedonia's quota appears small relative to its total lamb production, Macedonia has yet to take full advantage of it. Until 1995, EU's sanitary restrictions played a major part in this missed opportunity. Foot-and-mouth disease plagued the Balkans in the early 1990. In March 1993, for example, the EU banned all lamb export from the Balkans, which benefited Hungary and Slovakia (see box above). In 1994,[32] temporary EU health restrictions, which Macedonian thought unwarranted, coincided with the height of Easter season; Macedonia resorted to fatten lambs to 10 kg for export to Croatia and Jordan (by airfreight).

Additional constraints accounted for the fact that Macedonia filled only 84% of its EU quota in 1995. Only dressed lamb at 8 slaughterhouses that are inspected and approved by the EU may be exported to the EU. At the height of each short export season, slaughterhouses must work at high capacity to ready lambs. Furthermore, the issuing of the EU-instituted import license by Italian authorities often drags on, resulting in lost sales. Also, until 1995, Italian have imposed a minimum export price, which in fact acts as a fixed price. Because this price is set in Italian Lire, Macedonian lamb producers have taken the brunt of the Lire depreciation relative to the Denar. Finally, though Greece ended its blockade in fall 1995, it has steadfastly refused to allow transit goods with "Republic of Macedonia" as country of origin.

During the Greek blockade and the sanction against Serbia, Macedonia trucked lamb to Durres, Albania, and then ferried them to Bari, Italy. As mentioned above, the end of the

[32] An irate official commented that "It appears that every year, the EU makes up a disease that prevents Macedonia to export lamb there. In 1994, coincidently, the health ban lasted 7-10 days, just enough for Macedonia to miss a large chunk of the Easter marketing season.

Greek blockade has changed nothing for the lamb export: in 1995 and 1996, only about 20 tons of lamb slipped through Greece en route to Italy. The end of sanction against Serbia, however, opened up Serbia and Slovenia as transit to Italy (Milan). Despite this longer detour, transport still cost less than going through Albania because of Albania's poor road conditions and unlawful taxation, which borders on banditry.

Twelve enterprises share the lamb export market as compared to only one in 1991, as was the case in former Yugoslavia.[33] (In 1991 the EU had licensed only one firm in an attempt to control foot-and-mouth disease.) However, two firms among the 12 dominate this sector, accounting for over 85% of export volume. In 1995, the four-firm concentration measure was 95.5; that is, four firms accounted for 95.5% of sales volume. Other exporters are quite small. In fact, some of these smaller firms may exporting by necessity and not by design. For example, an agricultural input supplier has been exporting lamb because the agrokombinats it supplies have resorted to paying their debts in kind with dressed lambs ready for export.

Nonetheless, the number of lamb exporters is a sign of easy access to this market. The Chamber of Commerce licenses lamb exporters (who must then apply for the EU license), but there has been thus far no competition for the EU quota since it remains unfilled. Would-be exporters make a down payment representing ten percent of their expected export value. Exporters lose the down payment if they fail on their own to deliver their quota. As mentioned, some firms get their supply of lambs through barter with agrokombinats that run lamb production and slaughterhouses. Large exporters also rely on wholesalers who purchase lambs at farmgate for truck delivery to slaughterhouses. Wholesalers' margin is reportedly five percent of producer price.

The social farm sector gets a better price than the private sector (den 80/kg liveweight compared to den 70/kg). The price differential reportedly accounts for better, more consistent quality product in larger lots offered by agrokombinats. For example, whereas one social farm may offer 4,000 to 5,000 lambs for sale, private farmers sell between 5 and 500 lambs lamb, often of inconsistent quality.

[33] Then, only 6 firms were registered for international trade, with one or two dealing with agricultural products. Today, Macedonia counts some 6,000 licensed firms, some being one-person firms (Chamber of Commerce, personal communication).

B.2 Table Grapes

B.2.1 Table Grape Production

Macedonia has 35,000 ha planted to grapes, of which 75% is private land. Of an average annual production of 220,000 tons, 60% is white grapes, and 40%, red. 60,000 to 70,000 tons are table grapes; the rest is destined for wine.

As with most other products, the production of grapes is fairly evenly split between the public sector and private farms, though the latter own most 75% of the vineland. Yields differ and are primarily a function of irrigation (all public sector vineyards are irrigated). Non-irrigated land, which characterizes most of the private land, yields an average of 9 tons/ha, whereas irrigated vineyards produce an average of 15 tons/ha.[34] Curiously, given the emphasis on grapes as an export crop, Macedonian production has declined markedly since 1980, from well over 300,000 tons to 200,000 tons (dipping as low as 140,000 tons in 1993). One reason is the age of the vineyards: 60% of the vines are more than 20 years old, and vineyards are exhibiting productivity declines.

Grapes are also especially prone to weather vagaries. Drought and prolonged dryness can permanently damage productivity. Droughts in the years between 1989 and 1994 reduced the harvest, but 1995 promises to be far better. Floods and hail also cause severe damage. In 1995, Tikveš produced 45% less grapes because of drought and then hail. As a result, exports in 1996 were 35% less than in 1995.

Table grape varieties include sultana (seedless grapes) and Afusali (more than 50% of the total table grape production), both used for export, as well as Kralitza, a type that is consumed domestically due to poor durability in transport. Wine grapes include purely local varieties (Vranec, Krastočija, Smederevka, Zilavka, and Tamyanika) as well as international varieties (Chardonnay, Dramize, and Semillon). Eighty percent of the wine produced is exported in bulk and mixed for re-export in Germany and Slovenia. (Macedonian winemakers bristle at the lack of international credit received for wine that is labeled as coming from another country). The balance is bottled in Macedonia for local consumption or for export to specific markets.

B.2.2 Table Grapes Export

Despite strong Latin American competition in table grapes and high protection for wine production in the EU, Macedonia has begun to carve an important niche in the regional market for both products. In 1994, exports of fresh grapes totaled 12,688 tons with a total value of US$3.5 million. Exports increased more than tenfold over 1993, when they totaled 1073 tons worth $ 279,000.

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[34] Lupcho Uskovski, advisor to the Minister of Agriculture on grapes and wine, personal communication, July 1995.

Serbia topped the list of 17 destinations for Macedonian table grapes in 1994, importing 50% of the product. Albania imported 23%, and was followed by a long list of importers of far smaller amounts: Bulgaria (9%), Czech Republic (4%), Croatia and Slovakia (3% each), and Slovenia and Austria (2% each); Poland, Russia, Sweden, and Bosnia Herzegovina each bought about 1% and five additional countries received considerably less than 1%: Hungary, Cameroon, Greece, Germany and Grenada. In 1994, the best price was obtained in Grenada, which paid 57¢/kg. However, the average price in 1994 was 32.4¢, and the trade-weighted price for all grape exports was 28¢/kg.

In 1993, importers included Albania (31% of exported grapes), Czech Republic (28%), Croatia (13%), Serbia (11%), Bulgaria (7%), Slovenia(5%), Poland (3%) and Sweden and Hungary, each purchasing 1% (with additional countries buying very small quantities). The average 1993 price was 31¢/kg and the trade-weighted price was 28¢, as in 1994.

However, table exports to Serbia and Albania in those years owed considerably to the sanctions against Serbia, which impeded exports to Austria, the Czech Republic, and former Yugoslav republics. For example, whereas Tikveš sold to Albania and Serbia during the sanctions, in 1996 it resumed its export to Austria (about 1 to 1-5 million kg) and the Czech republic (200,000 kg). They exported about 1 million kg to former Yugoslav republics.

B.3 Wine

B.3.1 Wine Production

The main vineyards are in the Central region: Kavadarci, Negotino, Veles, Strumica, Skopje, Ovčepole, and Kočcani. These regions possess the requisite mix of ecological conditions, grape variety, and methods of cultivation for good quality winegrapes. Macedonia has enacted quality control (*appellation controlée*) law recognized by the EU, to promote its wine. Vintages include "noble" French vines, such as Cabernet Sauvignon and related Merlot, Sauvignon Blanc, Semillon, Chablis, and German Riesling. Local vintages include reds such as Vranec and Kratoshiga, and whites such as Smedervevka, Belan, and Zublaganka.

In 1991,[35] former Yugoslavia ranked 10th in wine production with 153,000,000 gallons of wine (Grollier, 1995) of which Macedonia accounted for about 80%. The high variability of wine production parallels that of grape production, which is highly dependent on weather conditions. Official statistics suggest a downward trend in wine production since the late 70s. Fortunately, wine has a long storage life, so that the yearly variability of wine production has no dramatic effect on the supply of wine. Wine production is about 60% red and 40% white.

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[35] Then, Hungary ranked 11th (121 million gallons), Romania 12th (117 million gallons), Australia 14th (104 million), and Bulgaria 18th (57 million). Ahead of former Yugoslavia were Italy and France, far ahead of others, then Spain, the United States, Argentina, the former USRSS, Germany, Portugal, and South Africa (Economic Services Department, Wine Institute; Office International de la Vigne et du Vin, Paris).

Private farms dominate winegrape production; however, social farms have considerably more means, including larger farms and irrigation schemes and therefore higher yields . All commercial wineries are social enterprises. Almako, a private company has recently established a successful wine bottling for export under its private label. Private farmers do produce home-made wine and brandy (rakia) for home consumption and sale (box).

Uses of winegrape by one private farmer

One private farmer used his 1995 production of 7.5 tons of grapes as follows:

- 60 % sold to social winery
- 40% used about equally for:
  - Wine and brandy for home use;
  - Wine (20%) and brandy (80%) for sale;
  - Sale to other farmers for local wine and brandy.

Brandy is more profitable than wine. Lack of capital to buy bottles prevented the farmer from producing more brandy for sale.

Tikveš, in Kavadarci, is the largest winery of Macedonia (25 % of total capacity), followed by Povardje, in Negotino, (15 %). Others include Lozar (Titov Veles), Skovin (Skopje), Ovecpole, Vinal (Stip), and Vinojug (Gevgelija). These 7 wineries account for 75% of wine capacity in Macedonia. Most of these wineries, however, are in dire financial straits. Even Tikveš had to suspend production in May, 1996 for lack of bottles and labels.

B.3.2 Wine Export

About 90% of Macedonian wine is exported; the local market absorbs only ten percent. Though the former Yugoslavia ranked 10th in world wine production in 1991, it ranked only 15th in wine consumption per capita (5.84 gallons). (By contrast, France topped all countries with a consumption of 17.65 gallons per capita, closely followed by Portugal, Italy and Luxembourg; Germany was 12th with 6.90 gallons per head).

Demand for table wine has increased steadily in Europe since the end of World War II. World wide wine production, from new regions such as California, has responded vigorously to this demand and particularly to high prices of fine European wines. There is now almost a permanent overproduction of wine. In the 1990s, health conscious European consumers have cut back on wine consumption. However, fine wine will likely continue to be in high demand, with marketing playing an important role in price increases.

Macedonia's wine exports rose about 19 % in 1993 to $ 8,343 million over 1992's sales abroad of US$ 7,021 million. After dipping in 1991 (-17.8%), following the break-up of former Yugoslavia, sales have rebounded and growth has averaged an healthy 18% over 1992-93. Dating back to ancient times where caravans carted Macedonian wine to Budapest and Vienna,

Competitors in the EU and German Wine Import Market, 1994

Countries	Total EU	Germany
Macedonia	8.5%	21.3%
Hungary	10.3%	18.1%
Bulgaria	16.9%	10.7%
USA	7.8%	2.1%
Australia	17.5%	1.5%
Others	30.0%	46.2%
Total	100%	100%

Note: By volume of exports
Source: Eurostat

Macedonian wine has always enjoyed a good reputation through Central, Eastern as well as Western Europe, particularly Germany. Macedonian winegrape is rich in sugar and low in acidity, and thus produces wines with strong alcohol content. Many northward European countries, such as Slovenia, Croatia and Germany, buy Macedonian bulk wine to blend with their weaker, more acidic wines. Bottled wine is exported to Great Britain and Central and Eastern Europe. Thus far, the US market remains virtually untapped: Tikveš had an agreement with an US importer based in Wichita, Kansas, but this is hardly the point of entry for penetrating the US market. Small quantities are exported to the US to meet demand from expatriate Macedonians, for a value of $6,000 in 1993 and only $4,000 in 1994 (USDA/FAS: US imports of Agricultural Products from Macedonia).

Germany has become the largest importer of Macedonian wine. Adding the UK also an important destination and France a minor one, the EU is now the main export outlet for Macedonian wine. Macedonia ranks 5th among some twenty countries that exported wine to Germany in 1995, according to German trade statistics (Weinwirtschaft, No. 10, May 10, 1996).[36] The top three in the German wine import market are all EU members (Italy, France, and Spain in that order); the fourth, Cyprus, has special relationships with the EU. Eurostat 1994 data show that excluding EU-members, Macedonia's share of the EU wine import market was 8.5% behind Australia (17.5%), Bulgaria (16.9%), and Hungary (10.3%), and in front of the USA (7.8%). However, Macedonia, was the leader in the German market with 21.3%, followed by Hungary (18.1%) and Bulgaria (10.7%).

Among the top ten exporters to Germany in 1995, including EU countries, only Macedonia, Romania, and Bulgaria increased their volume sales over the previous year. Macedonia registered the best performance in growth in volume as well of value sales (box). For over 30 years, Germans have cooperated with Tikveš winery in supplying equipment and technical know how so that the quality of Tikveš wine satisfies German tastes.[37]

Macedonia's Performance in the German Wine Market, 1995

Growth 1995-94 (%)

Countries	Volume	Value
Macedonia	+46.3	+42.2
Cyprus	-22.7	-12.7
Bulgaria	+19.6	+35.2
Hungary	-8.3	-11.0
Romania	+39.6	+29.5
Croatia	-55.4	-33.4
South Africa	+90.6	+62.6
Tunisia	-18.1	-29.1
USA	+46.7	+35.5

Source: Weinwirtschaft, May 1996'

[36] Data from Macedonian and foreign sources vary widely. Furthermore, Macedonia's Statistical Office does not publish a consistent time series of trade data. Only data for commodities with "significant shares" are reported, so that as conditions change, a commodity is included in trade statistics one year, but taken off the list the next year.

[37] German wine is generally low in alcohol content (9%) varying from dry to extremely sweet. Also Germans tend to enjoy their wine drunk alone rather than taken with food (Grollier, 1995).

The EU, however, imposes a quota[38] for Macedonian wine. Thus, sales growth of Macedonian wine may soon bump again this quota. (At an annual average growth rate of 18%, sales double in 4 years.) Fortunately, even with a flat growth rate in sales volume, Macedonia can increase export value by exporting more value-added, quality wine. In the case of Macedonia, it means selling bottled wine with good names at higher prices instead of bulk wine at low price. For example, though Italy's wine exports to Germany dipped 2.3% in volume, It still gained 4% in value over 1994.

B.4 Apples

Table B4.1 shows Macedonian apple production from a low of 48,400 tons in 1993 to a peak of 93,300 in 1989. Production in 1992 and 1993 at 87,600 and 71,700 tons have returned to near their pre-independence levels. Apple production is nearly four times that of plums the next largest fruit produced (excluding vineyard production) and totals slightly more than all other fruits combined excluding grapes.

Most apples are for domestic production, somewhat less than half of production being exported. Major production regions are: Resen ("Macedonian Plod" and "Agroplod"), Tetovo ("Zik Tetovo") and Ohrid ("Gradinar). The most significant problem faced by producers and exporters alike is the limited availability of Ultra-low Oxygen (ULO) storage. This makes it more difficult to keep fruits beyond the harvest season and opens the market to incursion by foreign fruit while limiting Macedonian exports to seasonally peak periods when prices are lower.

Macedonian apple exports totaled 33,274 tons in 1993 ($4.8 million and 26,657 tons in 1994 ($7.0 mil.). Other fruits (of which table grapes) were the next largest category exported 6,959 tons ($1.4 mil.) in 1993 and 7,843 tons ($1.6 mil.) in 1994, followed by apricots, pears, peaches and plums.

Table B.4.1: Macedonian Exports of Principal Fruits, 1993, 1994

Fruit	1993 Tons	$x 000	1994 Tons	$ x 000
Apples	**33,274**	**4,828**	**26,657**	**7,000**
Other Fruit*	6,959	1,413	7,843	1,601
Apricots	705	284	372	167
Pears	284	55	241	89
Peaches	141	50	130	65
Plums	45	15	30	13

* includes table grapes

[38] One official reported that the quota was 30,000 tons; however, German trade statistics put Macedonia's export to Germany alone at 30,701 tons in 1995. The trade agreement between the EU with former Yugoslavia gave this country a total quota of 545,000 hl (54,500 tons) of wine at reduced duty. The agreement was suspended in 1991 and was renegotiated with individual republics.

Slightly more than one-third of 1994 apple exports 9,929 tons went to Bulgaria while among fruit exports only small quantities of "Other Fruit" went to the EU market, 376 tons to France and 87 tons to Germany. Exports to Bulgaria may indeed represent transshipment resulting from the embargo. In 1994 Macedonia exported a, for it, record quantity of fruit & vegetable juices to the United States valued at $1.749 million, $1.194 million in 1993. Exports of fruit and vegetable juices to the United States fell sharply
(-68%) in the first eight months of 1995.

B.5 TOMATOES

Tomatoes are a vegetable of choice for Macedonian and regional consumers but one which is in chronic oversupply as well. The Macedonian market is largely a fresh seasonal market with only a small percent of production going for processing as tomato sauces. The processed production additionally is largely from the agricultural "Kombinats" as opposed to the small private farms. Early tomatoes from March through June are in demand on the market and command high and usually profitable prices. This in spite of production costs during this period which are usually higher under glass and plastic than open field production. Peak summer production, on the other hand, is abundant with much of the crop going unused for lack of storage and demand.

The largest regional market, that of the European Union, is also chronically oversupplied. Prices on the EU tomato market collapsed in 1992 and have not fully recovered since. Several factors within the EU have contributed to oversupply problems. Low natural gas prices in the Netherlands have traditionally subsidized green house production there. Direct subsidies for green house production are given in France. In Spain state investment has increased water availability and the low prices applied for irrigated acreage have given producers incentives to expand production there. And finally a sharp increase in available supply and imports has recently occurred from Morocco.

Even processing is not a ready solution for tomatoes, as for other vegetables, as processed tomato products worldwide are under acute competitive pressure, oversupplied with margins low to negative for many producers.

While the Northern tier countries of the EU are deficit producers, the Community is oversupplied from the South and green house production in the Benelux and France, in addition to winter supplies from Southern Hemisphere and Lome producers. West German production,, for example, is only 6-7% of total consumption but even this market is a difficult one for local producers during their peak summer months. Expansion of the EU to include Austria, Sweden and Finland will not necessarily lead to a rebalancing of the market, due to the untapped production that will become available from the traditional suppliers in the South. These markets additionally become isolated from competitive and off-season producers as Macedonia which might otherwise compete successfully.

Macedonia has a significant amount of early production, approximately 12,000 tons from March to June, grown under glass and plastic.. This production would appear well suited to supply markets in the Northern part of Eastern Europe as Budapest, Prague and with the end of the war and embargo, Belgrade and Sarajevo. Looking beyond these markets competition within the Mediterranean region is legion with Israel, Egypt, Morocco, Turkey and Bulgaria all having large and competitive productive capacities. Some price comparisons with principal competitors are given in the text.

B.6 CUCUMBERS

While small by comparison to tomatoes, cucumber production, especially for pickling, has been a mainstay of vegetable consumption in Eastern Europe and the Balkans. Macedonia, where approximately 37,000 tons of cucumber fresh and processed are produced each year -- more than half under glass and plastic -- is no exception.

Over $1 million dollars in pickled cucumber products were exported from Eastern Europe to the United States in 1994, the only EE vegetable product exported in significant quantities there. Pickled cucumbers accounted for a large part of of the $708,000 in processed fruit and vegetable products exported by Macedonia to the United States in 1994 . Local skill in pickling techniques, familiarity of importers with the source and quality of the product as well as relationships with the exporters and their banks all facilitate expansion of this trade. Unlike fresh product markets this semi-processed markets can support longer bulk shipping times and be competitive on distant markets. It is consumed throughout the year and consequently can absorb surplus seasonal production. See a price comparison with some other regional producers for the raw product in the text. As pickling is a semi-processed stage, prices of the raw product account for a significant proportion of the final price.