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**The Impact of the Support System of the CAP on Free Trade in the Light of the Turkey's EU Membership**

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Fachgebiet: **Europäische Integration**

Wien, im **Juni 2006**

Title:

**THE IMPACT OF THE SUPPORT SYSTEM OF THE CAP ON FREE  
TRADE IN THE LIGHT OF THE TURKEY'S EU MEMBERSHIP**

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## **Abstract**

The objective of this study is to measure the level of the European Union's (EU) Common Agricultural Policy (CAP) price support system (PSS) applied to producers in the EU-15 and in Turkey. The producer subsidy estimate (PSE) method has been used to determine protection levels for selected cereal products from the beginning of the application of the PSE method in 1986 to date. In addition, this study attempts to examine the empirical findings of the PSE in the light of CAP reforms and EU enlargements during the period 1986-2003.

The expected contribution of this study is to determine which support instruments, such as countervailing levies or direct payments (based on limited or unlimited area) against export subsidies, voluntary or compulsory set-aside measures and price interventions, are more appropriate for the CAP in reducing destabilizing effects on trade with selected products between the EU and Turkey with respect to distribution effects (how income is distributed between different groups involved in the production operation process).

Does the current PSS of the CAP have positive effects on agricultural producers in Turkey as a non-member country?

The major finding of this dissertation is the evaluation of benefits and costs of common agricultural policies of the EU on fair trade. The assessment of the PSE of the EU's CAP will be used to determine the impact of current support measures of the CAP reforms on fair trade and consumer welfare, and how the CAP measures can be reformed for the improvement of producer gain in accordance with fair trade.

Keywords: European Union, Price Support System, Common Agricultural Policy, Producer Subsidy Equivalent, Unfair Competition, Tariffs and Non Tariff Measures, Turkey.

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## Abbreviations

AASM	Associated African States and Malagasy
ARIP	Agricultural Reform Implementation Project
ASEAN	Association with South East Asian Countries
ASCU	Agricultural Sales Cooperative Unions
ACP	African Caribbean and Pacific Ocean Countries
AMS	Aggregate measures of support
BRITE	Basic Research in Industrial Technology for Europe
CAP	Common Agricultural Policy
CBI	Confederation of British Industry
CCP	Common Commercial Policy
CCT	Common Custom Tariffs
CEDEFOP	European Centre for the Development of Vocational Training
CEEC	Central Eastern and European Countries
CET	Common External Tariff
CFP	Common Fisheries Policy
CÝF	Product cost, insurance, transport cost
CIS	Commonwealth of Independent States
COMETT	Community Programme in Education and Training for Technology
COPA	Committee of Professional Agricultural Organisations
COREPER	Committee of Permanent Representatives
COST	Committee on European Co-operation in the Field of Scientific and Technical Research
CSE	Consumer Support Estimate
DG	Directorate-General
DIS	Direct Income Support in Turkey
EAGGF	European Agricultural Guidance and Guarantee Fund
EC	European Community
EC6	European Community: Belgium, France, German Federal Republic, Italy, Luxembourg, and Netherlands.
EC9	EC6 plus the United Kingdom, Eire, and Denmark
EC10	EC9 plus Greece
EC12	EC10 plus Spain and Portugal
ECC	European Community Commission
ECSC	European Coal and Steel Community
ECTS	European Credit Transfer System
ECU	European Currency Unit
EDC	European Defence Community
EDF	European Development Fund
EEA	European Economic Area
EEC	European Economic Community
EFTA	European Free Trade Area
EIB	European Investment Bank
EMCF	European Monetary Co-operation Fund
EMF	European Monetary Fund
EMPC	European Monetary Policy Committee
EMS	European Monetary System
EMU (a)	Economic and Monetary Union
EMU (b)	European Monetary Union

EP	European Parliament
EPC	European Political Community
EPU	European Payments Union
ERB	European Reserve Board
ERDF	European Regional Development Fund
ERM	Exchange Rate Mechanism
ESA	Environmentally Sensitive Area
ESC	Economic and Social Committee
ESCB	European System of Central Banks
ESF	European Social Fund
ERASMUS	European Action Scheme for the Mobility of University Students (and Staff)
ESPRIT	European Strategic Programme for Research and Development Information Technology
ETUC	European Trade Union Confederation
EU	European Union
EUA	European Unit of Account
Euro-atom	European Atomic Energy Community
EUREKA	European Research Co-ordination Agency
EUT	European Union Treaty
FAST	Forecasting and Assessment in Science and Technology
FTA	Free trade area
GATT	General Agreement on Tariffs and Trade
GDP	Gross Domestic Product
GMP	Global Mediterranean Policy
GNP	Gross National Product
GPAs	Government Purchasing Agencies
GSP	Generalised System of Preferences
ICP	International Comparison Project
IGC	Inter Governmental Conference
IIT	Intra Industry Trade
IMF	International Monetary Fund
Lingua	European Community Language Training Programme
LDC	Less Developed Country
MCA	Monetary Compensation Amount
MEP	Member of European Parliament
MIP	Minimum import price
MFA	Multi -Fibre Agreement
MFN	Most favoured nation
MNE	Multinational Enterprise
MPS	Market Price Support
NATO	North Atlantic Treaty Organisation
NAFTA	North American Free Trade Area
NCI	New Community Instrument
NFU	National Farmers Union (UK)
NIC	Newly Industrialised Countries
NTM	Non-Tariff Measures
OCA	Optimum Currency Area
OECD	Organisation for Economic Co-operation and Development
OEEC	Organisation for European Economic Co-operation

OPEC	Organisation for Petroleum Exporting Countries
PSS	Price Support System
PSE	Producer Support Estimate
RACE	Research into Advanced Communications Technologies for Europe
R and D	Research and Development
SAP	Social Action Programme
SPS	Sanitary and phytosanitary
SEA	Single European Act
SEE	State Economic Enterprises
SEDOC	European System for the Diffusion of Registered Unemployment Offers and Development
SLIM	Simpler Legislation for the Internal Market
SME	Small and medium-sized enterprise
SPRINT	Strategic Programme for Innovation and Technology Transfer in Europe
STABEX	Stabilisation of Export Earning Scheme
SYSMIN	Scheme for Mineral Products
SIS	State Institute for Statistics in Turkey
TGB	Turkish Grain Board
TEU	Treaty of the European Union
TENs	Trans European Network
TL	Turkish Lira
TR	Turkey
UA	Unit of Account
UEF	Union of European Federalists
UN	United Nations
UNCTAD	United Nations Conference on Trade and Development
URAA	Uruguay Round Agreement on Agriculture
VAT	Value Added Tax
VER	Voluntary Export Restraint
VIL	Variable import levy
WEU	Western European Union
WTO	World Trade Organisation
YES	Youth for Europe Scheme

(Selected Abbreviations relevant to the EU)

## Introduction

Throughout the world there is probably no single country that would not use protective measures in agriculture. However, there are some differences in the ways that the price support system is being implemented in various European countries. In the Common Agricultural Policy (CAP) the price support system prevents producers' losses through different support measures, such as, direct payments with set-aside measures, intervention prices, export subsidies, import quotas and production subsidies.

This study is aimed at bringing about a better understanding of the European Union's (EU) CAP price support system (PSS). The goal of this study is to assess the impact of the CAP measures in the light of the reform proposals during the period 1986-2003, and to determine the best possible measure which could be introduced into the CAP system in order to reduce the trade distortion effect between the EU-15 and Turkey (as a non member country).

In the EU's CAP the removal of trade barriers occurred after the Single European Act, but the EU, the impact of the CAP's PSS has had a negative impact on the liberalisation of trade. In the EU the aim of protection is to protect internal producers from lower cost production of the third world countries.

In the Seattle World Trade Organisation (WTO) meetings, the negative reactions of less developed countries to a reduction of the support measures in agriculture applied by the developed countries climbed to the highest level ever and continued until the WTO meetings in Japan. However, support measures are not used only in developed countries, but also in the developing countries.

The impact of the support measures are only considered in the EU's CAP. But its effects on third world country producers are also questioned. In the EU the impact of the support measures are researched for the EU-12/15 and, outside the Union, Turkey is considered as a non-member country in order to estimate the effects of such measures on selected agricultural products (cereals) trade. The support measures are researched in order to determine their effects on the producer gain, and whether the customs union theory of Viner (trade creation/ distortion effects) has been affected. Which of these support measures could reduce the trade distortion on the free market?

A free market leads to more efficient use of scarce resources which results in the maximization of global wealth and enables people to benefit economically. In such a market fair trade can be based on the comparative advantages theory, because the PSS may cause a substitution of efficient production of an exportable commodity in the third world by inefficient products of EU members.

"Removal of barriers might be accompanied by a re-segmentation of national markets via anti-competitive behaviour (e.g. cartels, abuse of dominant position, state aids)."<sup>1</sup> Accordingly, competition policy is an essential tool for preventing such behaviour and for translating efficiency gains into lower prices and better quality for consumers. However, in the Union, reform proposals are used to maintain sufficient income for domestic producers, instead of replacing the existing system with more productive and competitive new regulations.

In the last decade the impact of globalisation has contributed to trade liberalisation. The development of communication and information technology has brought not only nations, but also producers closer in the marketing of their products for consumers.

The EU follows a process of integrating the European countries into a single market. However, the implementation of a certain number of measures has encountered problems

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<sup>1</sup>European Commission: Panorama of EU Industry 97 volume1, Office for Official Publications of the European Communities, Brussels, 1997, p.31

(technical barriers and public procurement etc.). The implementation of the single market program (SMP) has contributed to globalisation of the economy and a substantial increase in the volume and effectiveness of the Community Structural Fund assistance. The implementation of the single market program and monetary union increased the attractiveness of trade and foreign investments (FDI) into the EU. The improvement of communication and information technology, the eastern enlargement of the EU and the reunification of Germany increased the impact of the EU in the world market. All these developments in the EU made an important contribution to the globalisation of the world market.

The increasing trend towards liberal economics compels the CAP to reduce trade barriers in agriculture. Especially harsh criticisms of the CAP support measures come from the WTO, which comprises of 146 members and endeavours to liberalise trade in agriculture.

In 2004 the EU enlarged its number of member countries to 25 and some other applicant countries are on the waiting list. The economic power of the EU is evident, except in the CAP. This study will analyse the impact of the support measures of the CAP by bringing about a better understanding of these measures and will estimate the best possible measure – this being the one that has the least trade distortion effect on the market.

A summary of chapters is given below:

In the first chapter of the thesis the EU is briefly introduced and the theoretical foundations of free trade, the impact of the price regulation theory (cobweb theorem) and the importance of the theory of comparative advantage are examined within the perspective of other trade theories.

In the second chapter the EU's CAP and the price support system are defined. The impact of the price support measures and the currently realised CAP reforms are analysed. The function of the CAP, its benefits and costs, and possible improvements of the CAP policies are researched.

In the third chapter the methodological background to the measurement of different levels of agricultural protection is described.

The structure of the protection and application of tariff and non-tariff measures of the CAP is analysed. The impacts of tariff and non-tariff measures of the CAP are considered only for selected cereal products (common wheat, barley, maize, and other cereals) to estimate the impact of support measures by using the PSE (Producer Subsidy Estimate) method of the OECD. It is asked, which of these measures will best fit into the CAP in order to reduce unfair trade distortion on export and import of agricultural products?

The fourth chapter attempts to examine the empirical findings in the light of the CAP reforms from 1986 to date. The impact of the CAP measures of the EU on economic parameters such as growth, employment, price, import and export are analysed.

In the last chapter concluding remarks concern the necessary policy changes that must be undertaken, both in Turkey and in the CAP support system, and finally, the findings of this research on the impact of the price support system of the CAP are interpreted.



## 1. The European Union

In the EU's CAP the application of the price support system has reduced the welfare of consumers whilst producers gain has increased during the last decade. Nevertheless the EU is attractive. The number of member countries increased from 6 in 1957 to 25 in May 2004 and there are some more eastern countries, which have applied to the Union for full-membership.

### 1.1 Theoretical Perspective of International Trade

One of the most important reasons for free trade is the increasing impact of multinational firms on world politics and economics. In the past, international trade depended on international relations between politicians. In the last decade the increasing role of multinational firms reduced the role of national states in world economy and politics. The new world order is directly related to the theories of world politics.

There have been three main approaches to world politics: "Realism on the power relations between states, liberalism on a much wider set of interactions between states and non states actors and world system theory on the patterns of the world economy."<sup>2</sup> Liberalism affects the world's economy, social, cultural and also political events. Neo-liberal economics empowers and enriches big business, especially multinational firms. Governments' debt reduction policies shift income and wealth from wages to profits. Slashed food subsidies and welfare payments cut the floor from under the labour force. Monetary policies attack wages through high interest rates and high unemployment. Consequently, it is obvious that free trade is not bringing global welfare to the nations of the world.

In the EU the notion of free trade has developed, and over time has gained in importance. In the Single European Act (SEA) 1986, all technical, fiscal and physical barriers were removed and all member countries confirmed the objective of the progressive realization of an economic and monetary union. In 1996 the SLIM Project (Simpler Legislation for the Internal Market) simplified the rules and reduced the difficulties of the single market. It simplified agricultural measures to ensure facilities for internal producers within the EU market.

The removal of the trade barriers, the foundation of customs union (1968), single market (1993) and monetary union (2002) in the EU contributed to the liberalisation of trade. However, liberalisation of trade in the world was mostly observed in the industrial sector and not in agriculture. The EU's CAP price support system, in particular, was reformed to reduce the negative effects on agricultural trade. However, insufficient reform proposals have made only a minor contribution to trade liberalisation in agriculture which affects most of the third world countries.

The impact of the EU's CAP price support system can be analysed in the light of international trade theories, which can be classified into four groups: "First, inter industry trade based on comparative advantages and specialization; second, inter industry trade based on factor endowments of a general or a sector-specific kind; third, intra industry trade; and fourth, strategic trade, which in itself is a special variety of the third classification"<sup>3</sup> These theories are briefly classified and compared to each other to bring about a better understanding of the comparative advantages theory which still has considerable importance on fair trade.

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<sup>2</sup> Baylis and Smith: The Globalisation of world Politics, 1999, p.6

<sup>3</sup> Klaus Gunter Deutsch: The politics of Freer Trade in Europe, 1999, p.70

The analyses of the impact of PSS on the market may contribute to a better understanding of the effects of the CAP support measures on trade liberalisation. In the last decade these measures had negative effects on the liberalisation of international trade. The CAP price support system in particular, is supposed to cause trade distortions in the international market. A consequence of the trade distortion effects is that some lower cost productions of exportable commodities in third world countries are replaced by the inefficient products of the European Union. Such resource allocation between third world countries and internal producers is not consistent with fair trade. Since free but fair trade is dependent on the comparative advantages theory (D. Ricardo), it is therefore necessary to verify whether or not the theory of comparative advantages still has unquestioned importance for fair trade in agriculture relative to other international trade theories.

This question can be either empirically or theoretically answered. The theoretical answer can be a conclusion in favour of the comparative advantages theory, for the reasons explained below. But the empirical answer can be found at the end of this study after the estimation of PSE for selected agricultural products.

Clarification is given below of the theoretical perspective, which is, that the comparative advantages theory is of major importance in defining free but fair trade, i.e. price support for the sustainability and equity of traders in order to decrease trade distortions.

International trade can be explained by the comparative advantages theory (Ricardo). Firstly, this theory is based on free trade and perfect competition. Secondly, comparative costs are related to technological advantage because such an advantage also plays an important role in a country becoming a trade partner. And thirdly, this theory depends on the lower relative cost of advantage on trade which allows countries to compete freely in the market on their lower relative cost advantage as a trade partner. As stated by Gilpin “Most economists believe that the international community should concentrate its efforts on creating an open multilateral world economy rather than on making regional arrangements, because a world economy based on the principle of comparative advantages and national specialisation would not only produce superior economic benefits but an open and non-discriminatory economy would also reduce international economic friction and perhaps even promote peace.”<sup>4</sup> This explanation is obviously of major importance in the argument that the comparative advantages theory supports free but fair trade.

Due to the free but fair trade approach, international trade cannot be dependent on subsidies or other non-tariff measures which cause a trade distortion for countries with efficient production of exportable commodities. As was refined and elaborated later by John Stuart Mill, the comparative advantages theory, “served as an effective weapon against the lingering restrictions of mercantilism and as a strong support of the free trade movement, and later as a defence against resurgent protectionism.”<sup>5</sup> The authors Ellsworth J. and Clark Leith stated also that the comparative advantages theory served admirably to advance the cause of free trade and that it was inadequate for other tasks. Indeed, the theory has made an important contribution to the defence of free trade, because free trade would be beneficial both for a single country and for the partner to increase the welfare of both nations.

As has been noted by the OECD, there has been, on the one hand, increasing Inter Industry trade (IIT), in intra EU trade and in intra NAFTA trade, between developed countries, and on the other hand, the Heckscher Ohline (H-O) model or Ricardo model of trade has been observed between developed and developing countries. Since 1990 the increasing impact of globalisation and neo-liberalism has had considerable effects on the world trade. “But the endeavours in the WTO for further liberalisation not only meant the

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<sup>4</sup> Robert Gilpin: *The Challenge of Global Capitalism*, 2000, p.338

<sup>5</sup> P.T. Ellsworth J. Clark Leith: *The International Economy* (6<sup>th</sup> edition), 1984, p.59

international product trade, on the contrary it was the international capital movement and labour movement, as was first observed in Seattle, that frustrated the Minister Conference 29<sup>th</sup> November till 3<sup>rd</sup> December 1999.”<sup>6</sup> An increasing trade capacity in multinational firms forced countries to support free movement of capital and labour. An increasing factor movement between countries would contribute to reducing the differences between production processes, which affected the production cost. Therefore in the last decade firms in developed countries moved to IIT and firms in less developed countries turned to the Ricardo model of trade. This is also supposed to be the H-O model of trade which is realised between developed and less developed countries.

Summarized below are the limitations which other theories (H-O model, Intra industry trade and Strategic trade) have in adequately explaining how international trade increases fair trade:

- The H-O Model: Heckscher- Ohlin theory focuses on international differences in factor endowment. Trade is explained by the relative abundance of factors and firms with highly abundant factors will export and countries with scarce factors on this product will import. Trade is dependent on inter industry trade and firms with more abundant factors will profit from trade.

The H-O theory states that economy is assumed to produce two goods and uses two factors of production which are perfectly mobile between sectors. However, in this model comparative advantage is explained by the relative abundance of factors and not relative cost of production as was explained in Ricardo’s model and it goes back to the classical approach of Ricardo.

International trade cannot be explained only on inter industry trade. World trade is comprised of intra and inter industry trade together. According to the H-O model trade is dependent on factor endowment; it implies that the relative abundance of factors is sufficient to become a trade partner. However, factor abundance is not sufficient to become a trade partner. Contrary to the H-O model trade is largely realized among developed countries which often have similar relative factor endowment.

International trade cannot be explained by the relative abundance of factors as was found with the well- known Leontief paradox.

Leontief (1953) found “that US exports were less capital intensive than US imports. This result is known as the Leontief paradox. It is the single biggest piece of evidence against the factor proportions theory.”<sup>7</sup>

- Intra Industry Trade IIT is defined as the simultaneous export and import of commodities which are grouped in the same industry. IIT was originally introduced by Balassa 1966; However, IIT received increased attention from economists after the multipurpose index which was developed by Grubel and Lloyd (1975). Intra Industry Trade entails lower costs of factor and market adjustment and considers only similar product trade. IIT can be of two types:

Horizontal: Similar qualities of products are traded

Vertical: Different qualities of products are traded.

Intra-industry trade may become beneficial for large-scale firms, because it allows them to take advantage of both the size of the market and the differentiation of products. As was also stated by Breuss, the new international trade has been based on the empirical critique of traditional trade theories. Firstly, “large amounts of world trade are realized between

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<sup>6</sup> Fritz Breuss: Reale Außenwirtschaft und Europäische Integration, 2003, p.156 (translated by author)

<sup>7</sup> Krugman and Obstfeld: International Economics, 1996, p.81

similar countries.”<sup>8</sup> This means that similar products’ trade is realised between similar countries. Let us say exported electronic goods are traded between developed countries where capital is used in almost similar proportions and labour quality is at almost similar levels in the production of similar products; and secondly, “large amounts of world trade are realized with similar products.”<sup>9</sup>

In the EU increasing IIT is supported by the developed member countries to increase the power of multinational companies in world trade. In such a product trade increasing competition in the same sector leads large companies to a dominant position and market structure tends towards oligopolistic competition which is inconsistent with free trade. Nevertheless, in IIT similar product trade creates pressure on firms to reduce product prices in order to compete in the market.

- Strategic trade: “The model of strategic trade policy as proposed initially by Brandner and Spencer 1985 is without a doubt one of the most influential ideas in both recent trade theory and trade policy.”<sup>10</sup> In the strategic trade market, based on imperfect competition, where the number of firms producing goods is lower, industries which are subsidized by the government are protected. Targeting one industry with a subsidy will draw away scarce resources from others so that strategic trade policy on behalf of one industry affects other industries in a negative way.

Such unilateral protection of firms to increase their market share may increase firms’ dominant position in the markets which then turns to an oligopolistic market.

The payments of subsidies, which are obtained from consumers to finance producers, reduce the welfare of consumers and tax payers, whilst industries, which are subsidized, increase their market share and achieve a dominant position in the market. Such subsidies may create an oligopolistic market.

## 1.2 Theoretical Considerations of Price Support Systems

In this study PSS plays a major role in the assessment of the PSS system. For this reason it is necessary to analyse the effects of the intervention price mechanism from a theoretical perspective where the impact of the PSS can be explained by the cobweb theorem.

The Cobweb theory was named by Hungarian-born economist Nicholas Kaldor (1908-1986). “The Cobweb theory stems from a simple dynamic model of cyclical demand, which involves time lag (between the response of production and change in price (most often seen in agricultural sector))”<sup>11</sup> According to this theory it is assumed that the demand for a good is a decreasing function of its current price and its supply is an increasing function of last year’s price because of the time taken to plant and harvest crops. This happens because the price of agricultural products has mostly an elastic demand.

The equilibrium price is realised where the supply and demand curves intersect each other. If any changes in the conditions of demand and/ or supply occur, then this will lead to changes in the equilibrium values of price and quantity. If demand, which is affected by the price changes, exceeds output in the first year, then the supply will be above the equilibrium level in the second year. If the demand curve is more elastic than the supply curve (absolute slope of supply curve is greater than demand curve), then demand (price) and supply tend to

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<sup>8</sup> Fritz Breuss: *Reale Außenwirtschaft und Europäische Integration*, 2003, p.109-110 (translated by author)

<sup>9</sup> Fritz Breuss: *Reale Außenwirtschaft und Europäische Integration*, 2003, p.109-110 (translated by author)

<sup>10</sup> Dirk Engelmann and Theo Norman: *An Experimental Test of Strategic Trade Policy*, WP, 2003, p.3

<sup>11</sup> N Kaldor “A classificatory note on the Determination of Equilibrium”, *Review of Economic Studies*, vol.1 February 1934, p.122-136

approach the equilibrium position. This is a stable cobweb, as shown in Figure 1.1, the amount supplied in the first period is  $0Q_1$ , but the demand curve shows that the price is  $0P_1$  in the first period (it is supposed that this is the price at which  $0Q_1$  units of products is demanded). With this  $P_1$  price in the first period the supply curve shows the amount supplied in the second period, which is shown with  $0Q_2$  and with that amount of supply in the second period the demand curve shows that the price in the second period will fall below the  $0P_2$  level. This process continues until the equilibrium level.

Therefore, if difference in price changes between first year product prices ( $P_0P_1$ ) and second year product prices ( $P_0P_2$ ) is increasingly decreased, then output and price tend to approach to the equilibrium position. This has also meant that the slope of the demand curve is smaller than the slope of the supply curve (Fig1.1).

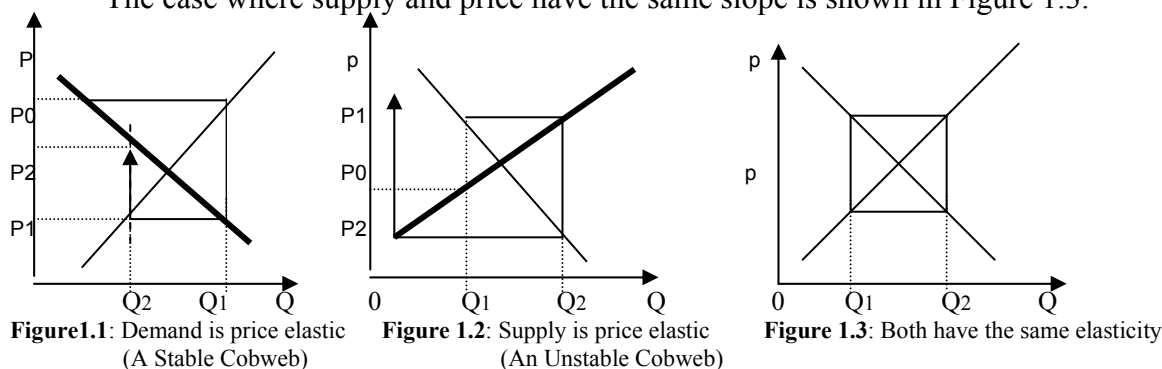
$$\text{Slope of demand curve} = \frac{P_2 - P_1}{Q_1 - Q_2} < \frac{P_0 - P_1}{Q_1 - Q_2} = \text{Slope of supply curve}$$

In the opposite case, if the supply curve is more elastic than the demand curve (absolute slope of supply curve is less than demand curve), then output and price tend to move further away from the equilibrium position. This is an unstable cobweb as shown in Figure 1.2. At price  $P_0$  supply is  $0Q_1$ , where demand is greater than supply in year1, leading price to  $P_1$ ; this gives a supply of  $0Q_2$  in year 2 and the price  $P_2$ .

Therefore, the slope of the demand curve is expected to be greater than the slope of the supply curve, which means that price and output tend to move further from the equilibrium position (Fig1.2).

$$\text{Slope of demand Curve} = \frac{P_2 - P_1}{Q_1 - Q_2} > \frac{P_0 - P_1}{Q_1 - Q_2} = \text{Slope of supply curve}$$

The case where supply and price have the same slope is shown in Figure 1.3.



Source: Sexton Robert: Microeconomics, 1995, p.282 (reproduced by the permission of author and publisher)

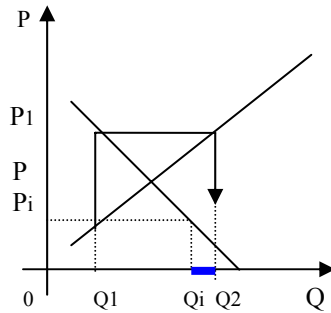
According to Ezekiel (1938), who investigated the price dynamics in the Cobweb model, there is large price instability in agriculture because “the agricultural demand function is specific. It leads to permanent price risks for farmers and these risks are large enough to jeopardize agricultural growth and development. As a consequence large efficiency gain can be expected from a direct administration of agricultural price.”<sup>12</sup>

<sup>12</sup> Agricultural trade liberalization in a world of uncertainty: discussion of the results of a world CGE model. Authors: J.M. Boussard, F. Gérard, M.G. Piketty, A.K Christensen, T. Voituriez.

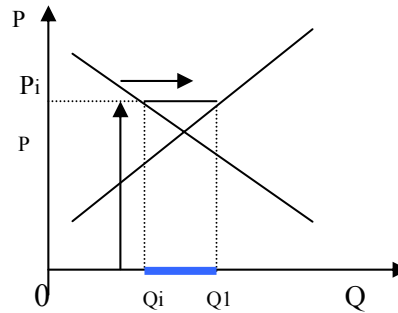
The above conditions define the fluctuation in the market. In agriculture most of the products are perishable and price fluctuation is inevitable, but within the CAP System mentioned intervention purchase reduces such fluctuations in the market.

Then, what will any intervention purchase bring into the market? Within the EU, target prices are secured by intervention prices. The intervention price is approximately 9% below the target price.

In the figure below, the impact of intervention purchasing is shown:



**Figure 1.4:** Intervention price is below market price ( $p$ )



**Figure 1.5:** Intervention price is above the market price ( $p$ )

In Figure 1.4 the intervention price is below the equilibrium price ( $P$ ). Suppose output (supply)  $0Q_1$  is less than demand in year 1. It is expected that the insufficient supply (output) will increase the products price from  $P_i$  to  $P_1$ . Increasing product price will increase the next term production (output) from  $Q_1$  to  $Q_2$ . However, the demand capacity at intervention price level is  $Q_i$ . The difference between  $Q_i$  and  $Q_2$  will be bought by the community agencies to prevent the price fluctuation in the market. This will also reduce the over production in the market.

In Figure 1.5 the intervention price ( $P_i$ ) is above the equilibrium price ( $P$ ). Suppose that this higher intervention price will increase the output to the  $Q_1$  level but decrease the quantity demanded to  $Q_i$ . The difference is the excess quantity supplied  $Q_1 - Q_i$  at price  $P_i$ . This is called a surplus. The only way for the price  $P_i$  to continue is for the overproduction to be continuously bought up by the community agencies to prevent the intervention price level. However, higher intervention price will increase again in the next year's production which causes overproduction.

As can be seen, intervention buying will prevent fluctuations and contribute to an approach towards the stable equilibrium position. However, if the intervention price is above the market price ( $p$ ) this will increase production and will not lead the market to the equilibrium position. Furthermore, overproduction and fluctuation in the market will not be prevented, although intervention purchase is implemented in order to prevent price fluctuation on the market and prevention of possible income loss to producers.

Through this procedure price fluctuations as predicted by the Cobweb theory will be prevented. Hence it is necessary to ask: Did the intervention price mechanism of the EU's CAP reduce the price fluctuation and only have a price regulation effect which is explained by the Cobweb theorem, or did it increase producer gain while consumer welfare was reduced?

In fact intervention purchase and price have been applied by the EU's CAP to prevent price fluctuation in the market. In the initial years of the CAP, incomes of the farmers were guaranteed by the intervention prices, which are 9% below the target price. The target price is usually higher than the world price in the EU and most expensive production costs (usually Duisburg region) are taken into consideration for the estimation of target prices.

However, application of the intervention price mechanism had some negative effects besides the price regulation effect. The impact of the intervention price mechanism is briefly given below.

Positive effects of the intervention price mechanism:

- Prevents price fall below the intervention price within the CAP,
- Increases the producer gain,
- Secures reasonable income for internal producers,
- Increases the production capacity of internal producers,
- Increases the market capacity of internal producers.

Negative effects of the intervention price mechanism:

- Prevents the access of third world country products into the EU market,
- Reduces the production capacity of third world country producers,
- Causes an overproduction of internal producers,
- Product prices are increased artificially,
- Replaces some efficient third world country production with inefficient production of internal producers,
- Reduces the consumer surplus and welfare,
- Reduces the income of third world country producers,
- Reduces the market capacity of third world country producers which is inconsistent with fair trade and comparative advantages theory.

The intervention price mechanism has both positive and reasonable negative effects. In this study, the application of the intervention price and some other measures such as export subsidies, set-aside and direct payments are strictly researched and analysed in the light of reform proposals of the EU's CAP which have been realised in the last decade.

Indeed, many reform packages have been applied to reduce the above mentioned effects of the intervention price, which might improve conditions for internal producers to become sufficient in production operation processes and to become more competitive on the market.

The impact of reform proposals is analysed only for producers, because there is only transfer from consumer and tax payer to producers, but there is no transfer from producers to consumers.

In this study the best possible PSS are researched and reform packages are questioned to determine: whether CAP reforms were applied to reduce negative effects of support measures or if they mostly contributed to maintaining the income of internal producers.

### **1.3 The Perspectives of Protection**

In the following section perspectives of protection are briefly explained to give a better understanding of reasons for protection.

#### **1.3.1 The Reason for Protection**

In the last decade expected utility from the CAP reforms on reducing the market price support and demands of the WTO nations on liberalization of the world trade has not been achieved for every nation. Some of the people and nations became richer while other nations, especially in the third world, became poorer than ever before. According to UN Human Development report in 2000, at the end of 1990, 20% of the world's richest population who

live in developed countries have 80% of the world's products and 20% of the world's poorest population have only 1% of the world's products.

It is obvious that the fear of nations of free trade is the reason for this poverty. On the one hand, the danger of free trade with low-wage countries in East Asia required higher barriers to restrict their exports into Europe. On the other hand, less developed countries, which depend on the agricultural sector, became poorer then ever because of these protections. Is it actually the solution to be an opponent of liberalisation or it is better to demand more cooperation to reduce income disparities?

### 1.3.2 The Protection and the CAP

In the CAP system, the reason for protection is obviously planned mostly to prevent the loss of internal producers. The higher cost of production and marketing difficulties increase producers' surpluses and compel the CAP system to support producers with different measures. The application of the support can be divided in three sub-sections. These are:

- **Market price support:** Market price support means a price intervention mechanism. This is used to prevent market price stability and to secure producers' reasonable prices. This is done by intervention prices. Producers' incomes are supported with intervention purchases, direct payments for set-aside measures and storage costs. Producers are supported with different payments, which increase the cost of the CAP budget.
- **Internal protection:** Internal protection is given to protect producers from exporters outside the Union. This can be dependent on the 'community preference' principal, which implies products of community origin are bought in preference. There are different protections against third world country producers such as direct payments, common custom tariff (CCT), variable import levies, quotas, voluntary export restraint (VER). Direct income support, especially, which was introduced by the Mac Sharry reform has enhanced producer income in the last decade. However, finance of direct payments is costly for the CAP budget.
- **External protection:** It comprises export subsidies, which are given to boost the export of internal producers and to reduce the surplus amount which causes a serious problem for producers within the CAP.

In the last decade negative reactions of third world country producers against the CAP measures have been mostly concentrated on the export subsidies, which were directly reflected in the exported product prices. However, all these measures are directed at the protection of producer gain while consumer surplus unfortunately is reduced.

The Maastricht treaty stipulates in article 130v that, in all political areas, the EU has to consider the goal of a sustainable economic and social development of developing nations. There must be a radical reform in the mutual agricultural policy between EU and non-member countries to reduce the trade distortion between countries. In the CAP, support measures not only prevent imports, but also destroy local markets through aggressive subsidies of food exports. It is stated that, "if the protection is adopted as a mean correcting domestic distortion not only will the result be that economic welfare will fall short of the maximum obtainable, but economic welfare may even be reduced below what it would be under a policy of free trade."<sup>13</sup> Therefore, it is important to estimate the impact of protection on the welfare of consumers and producers' gain. It might be less distorting if bilateral trade agreements consider the nations welfare as a whole instead of producers' gain which might reduce the welfare more than in cases where trade relations are based on comparative advantages.

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<sup>13</sup> Jagdish Bhagwati: International Trade, 1987, p.236



Legal (explicit) protection;

The annual fixing of the intervention price determines the overall level of support for producers. The fixing of intervention prices (and, following them, threshold prices) influences the prices of products in the market and secures the prices and incomes of producers.

In the first half of the 1980s, surplus and the financial burden which was imposed on the CAP budget, forced the Commission to introduce a new quota system. The policy for trading with third world countries imposes higher tariffs on imports into the Community. Furthermore, exports are controlled through use of licenses.

The implicit apparent protection;

Imports are only allowed to cover internal production deficits and it is not permitted to compete in the internal market.

Domestic producers are granted export subsidies.

The implicit support occurs when budget transfers or income support with the help of export subsidies do not directly affect consumers or market prices. Such support could consist of deficiency payments, input subsidies, infrastructure subsidies, etc. Some of such programs are commodity or group specific. Some are very general, such as agricultural research funding. Some subsidies that should be included in Producer Subsidy estimates (PSEs) may not appear explicitly in government budgets or accounts. Subsidies may be concessionary, such as tax concessions affording farmers some additional allowances that reduce their tax bills. The value of such concessions would not usually appear in a budget statement. Another example is concessionary energy (e.g. electricity) charges. Again, the value of these may not be explicit. Sometimes they will be estimated when, for example, the government has to pay compensation to the electricity company for charging less to farmers.

### 1.3.3 Maintenance of Domestic Protection

The mercantilist approach still has importance within the economy: "Selling is good, buying is a regrettable necessity. Buying at home is preferable to buying abroad, if price and quality are not egregiously sacrificed. Buying at home is thought to enhance the national welfare, - buying abroad some other country's."<sup>14</sup> The motive for using protection is to promote certain social and economic objectives in economic and regional development in a country. This is also stated by three major principles of the CAP, one of which is the 'community preference' principal. It implies that products of EU origin are bought in preference. This community preference principle later is also supported by the realisation of the SEA in 1986, which removed technical fiscal and physical barriers, and the Maastricht Agreement (1993), which secured monetary and economic integration within the EU. Hence the EU countries cooperate to increase their trade capacity between member countries and contribute to each other to increase the competition outside the Union against the third country producers.

In the CAP system application of measures is directed by the Commission and not local governments; furthermore, some protective measures, such as market support, intervention purchase, direct income support, production and export subsidies are given by the Commission to increase the capability of internal producers. Import licences are also obtained by the Commission and not by the governments of member countries. Therefore, producers in member countries are dependent on Commission decisions and not governments, making it increasingly difficult to suggest that the members are in competition with each other.

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<sup>14</sup> Finger and Olechowsky: The Uruguay Round, 1988, p.22

### 1.3.4 Maintenance of Employment

Protection of employment is needed when unemployment is high and subsequently the government raises the import restrictions to substitute local production with imports. By doing so, production of domestic goods will increase. Any increase in production capacity also contributes to increase employment.

This is, however, very superficial and is questionable. Firstly, “it is not very effective in creating jobs, because an increase of application capacity requires the existence of a sufficient source of input and technological equipment. Secondly, protection may reduce employment if a protected industry is a source of inputs to other industries. Protection of imports will raise costs of inputs and reduce employment in the industry which uses protected materials. Thirdly, what starts as a temporary measure to ease the pain of adjustment to new foreign competition becomes a permanent measure that impedes adjustment and lowers the standard of living of those other than the direct beneficiaries of the import restriction in the long run.”<sup>15</sup>

### 1.3.5 Protection of Balance of Payments

The balance of payments can be defined as a record of the economic transaction between one country and the rest of the world. A balance of payments deficit means excessive purchases of foreign goods and services or excessive investment overseas. A balance of payment surplus can occur when export of goods and services exceed import or excessive foreign investment. A reduction in interest rates or restrictive exchange control will correct the supply. The balance of payment deficit can be corrected by; imposing tariffs, import quotas, imposing exchange control or increasing interest rate to reduce overseas investors. Therefore, countries prefer to use support measures to reduce their balance of payments deficits. However, this can only be effective in the short run. In the long run, governments can correct the balance of payments deficit by reducing the demand in the economy for all products, or reducing inflation rates, or encouraging currency depreciation, which will increase the export amount, because domestic products become cheaper while imported products become more expensive.

### 1.3.6 The Political Economy and Protection

Protection of the domestic market is required to support domestic production, but economic benefits of protection are always affected by political decisions. It is stated in the EFTA bulletin: “protectionist measures result from either political pressure at home or abroad or the self serving initiatives of politicians in promised rewards for past votes or with a regard to future election.”<sup>16</sup> Actually, protection depends on the power balance between those in the country who demand protection, namely producers, and those who are hurt by the protective measures. In fact, by doing this, the welfare of the nations tends to diminish due to the protective measures having a negative effect on the nation as a whole, because most countries are not capable of being self-sufficient in producing commodities in all sectors. In this case international cooperation and trade is required to cover the demands of the nations as a whole by using the comparative advantages method.

In fact governments are also trapped on the one side by producers who have the power in their hand to force the politicians to fulfil their wishes and on the other side by consumers

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<sup>15</sup> Ellsworth and Leith: *The International Economy*, 1984, p195-196 --

<sup>16</sup> Senti R.: *New Protectionism in Foreign Trade*, EFTA Bulletin 4/1985, p.16

who expect to maximize their utility with products which are offered by the producers with relative lower cost must be considered to secure the social welfare. This has meant that political decisions must consider both producer gain and consumer welfare to prevent welfare loss of consumers; something which was experimented on in the last decade with non-tariff measures in the CAP.

### 1.3.7 Liberalism versus Protectionism

The ideology of neo-liberalism is the worship of the "market". In the last decade an increasing trend of liberal economics has contributed to liberalisation of trade. However, it is observed that in the last decade protection of trade has also increased. On the one side liberal trade compels countries to reduce restrictions on trade and on the other side non-tariff trade barriers prevent the full implementation of the free trade approach. In fact, liberalisation of trade has mostly been achieved in the industrial sector, but in the agricultural sector the before mentioned non-tariff measures have steadily increased the trade distortion.

The strategy of neo-liberal economics includes privatisation, reduced social expenditures, union busting, land enclosure, lower wages, higher profits, free trade, free capital mobility and the accelerated modification of nature.

In the era of Reagan and Thatcher neo-liberals concentrated all their efforts on three fundamental points: "free trade in goods and services, free circulation of capital, freedom of investment"<sup>17</sup> Until that time, governments had been interfering with the efficiency of the economy through protectionism, government subsidies, and government ownership. According to a set of policies, commonly called the 'Washington Consensus' and formulated by IMF, the World Bank and the US treasury, countries "focus on stabilization, liberalization, privatisation. It is based on a rejection of the state's activist role and the promotion of a minimalist, non-interventionist state."<sup>18</sup> The neoliberal economic approach consists of individualism and non-interventionist policies.

According to the defenders of neo-liberalism, in the short term, there may be some problems such as rapid liberalization of financial and capital markets, adaptation of new technology and regulations for privatisation to reduce the role of the government in the economy, but in the long run, these problems are supposed to diminish if the adaptation of these measures are settled in the economic system.

### 1.3.8 Social dimension of Protection

The protests of 30 thousand people against to the WTO meetings in Seattle in 1999 were not casual. Since 1990 the income gap between rich and poor people has steadily increased. Similar protests have been observed in Prague, Melbourne and in Geneva; although during the Seattle protests the demands of the labour unions in the USA contradicted the demands of less developed countries' representatives. The demands of the labour unions in the USA concentrate on the quality of labour and environmental standards; this will increase the protection level of developed countries against that of third world countries' exports. The results of these meetings compel the EU and other developed country producers to reduce the amount of protection on agricultural products. The application of environmental measures creates technical barriers to third world country producers. For the CAP, the application of technical barriers will increase the trade capacity in the market while external producers

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<sup>17</sup> Susan George: Twenty Years of Elite Economics and Emerging Opportunities for Structural Change Conference on Economic Sovereignty in a Globalizing World, 1999

<sup>18</sup> <http://www.progressive.org>, June 2000, interview with Josef Stiglitz

reduce their trade capacity in the market. In the world market, the application of these measures may only contribute to increasing the trade distortion against third world country producers.

The abyss between rich and poor is deepening. In the UN Human Development report (2000) it was stated that there are three million people earning a living of less than 2 dollars per day. According to this report, the properties of the 200 richest people in the world are more than the income of the 2.5 billion poorest people. Furthermore, the properties of the three richest people in the world (in the USA) are higher than the GNP of the 48 poorest countries. The income inequality in the world is illustrated in the figure below. The income inequality between poor and rich has risen during the period 1988 - 1993. The percentage of the poorest people who have a 10% share in the world income has reduced from 0.88% to 0.64%, whilst the percentage of the richest 10% share in the world income has increased from 48% to 52%. The Gini coefficient (a measure of inequality) has also increased within this period.

**Table1.1:** Income Inequality in the World

Inequality Values	1988	1993	% change
Gini Coefficient, World	0.63	0.67	6.0
Most poor 10% share in the world income	0.88 %	0.64 %	-27.3
Most rich 10 % share in the world income	48 %	52 %	8.3

Source: Yuri Dikhanov and Michael Ward: Measuring the Distribution of Global Income, World Bank statistics considered, 1999

It is important to note that the existence of an equitable social and economic system at international level is required. There are two important components necessary to secure this system. These are: equitable income distribution and an international law system.

Increasing losses on the losing side reflect a reduction on the winning side eventually, because in economics there is a basic rule: reducing the income of people will reduce demand or consumption capacity and this will reduce the next term production and profit.

## 2. The CAP of the European Union

The shortage of agricultural products after the Second World War pushed member states to coordinate and collaborate their agricultural policies at national EU level. In the EU the Common agricultural policy (CAP) came into effect in 1962. In the CAP agricultural production was strongly stimulated by a price support system for the protection of the internal producers from third countries producers in order to increase the marketing possibilities of agricultural products, in addition to stabilizing agricultural product prices, thereby ensuring a fair standard of living for the agricultural producers of the six original members of the EU.

There are three basic principles defined in 1962 that characterise the CAP, and consequently, the common organization of the market (COMs). These are:

- “- No barriers on intra community trade in farm products,
- Preference for EC supplies in intra community agricultural trade,
- Common financial responsibility for CAP policies.”<sup>1</sup>

These basic principles of the CAP are briefly defined as, market unity, community preference and financial solidarity. The market unity has meant that all agricultural products within the Union are protected against lower prices of imported products and the community preference has meant “the products of community origin are bought in preference to imports.”<sup>2</sup> The third principle of the CAP was defined as financial solidarity which was obtained by the European Agricultural Guidance and Guarantee Fund (EAGGF), founded on 4 April 1962. The EAGGF consists of guarantee and guidance sections. The guarantee section was founded to finance CAP support measures and the guidance section to be the planning part of the CAP.

Since the CAP was established and funded by the EAGGF, its initial mechanisms were harmonizing price support mechanism, controlling imports and agreeing institutional prices which have meant target price and intervention price.

The EEC reached agreements on three important objectives for the CAP policies: “First, it eliminated national agricultural support systems. Second, it replaced the national systems with a Community-wide agricultural support system. And third, agricultural protection between EEC countries was eliminated.”<sup>3</sup> CETs (Common External Tariffs) were put into effect to meet these objectives. This was the first step to protect internal producers from foreign competition (by non-members), while customs duties were abolished within the Union. For agriculture, instead of fixed tariffs the EEC adopted a system of variable import tariffs or levies (which persisted until 1995). It entailed setting Minimum Import Prices (MIPs) with variable import levies (VILs) equal to the difference between the MIP and the lowest c.i.f. (cost insurance freight) offered by importers at the Community borders.

A part of the legislative and executive powers of the CAP was transferred to the Union Organs, as was done for other common policies. However, agriculture has required special treatment compared to other policies. The primary reason given is the very nature of agriculture. Only in the agricultural sector, do the weather conditions, crop and livestock diseases and many other factors, which often elude human control, affect the quantity and quality of the products. The diversity of member states, which is on the increase with each enlargement of the Union, creates more difficulties for the unification of their agricultural markets. This was the reason for providing further justification for an interventionist agricultural policy. Because of this, Member States are not able to make any unilateral decision which deals with agriculture. They have to accept and apply the decisions of the Union. "The common market therefore had not only to align structurally different agricultural

<sup>1</sup>Ritson and Harvey: The CAP and the world Economy, 1991, p.2

<sup>2</sup>Nicholas Moussis: Access to European Union, 1997, p.435

<sup>3</sup>David M.Wood and Birol Yesilada: The emerging European Union, 1996, p.151

systems, but also to iron out tenaciously held privileges resulting from the interplay of national political institutions.”<sup>4</sup> These are given in the form of price guarantees, farm income aids, export subsidies and import restriction etc. However, different structural, social and economic developments affect the application of these measures in member countries, which reinforce the need for blending into one common agricultural policy. Since the CAP was founded, the mentioned difficulties have been reduced. In the common market organisation the agricultural policies of member countries are dependent on the CAP measures and application.

In 1968 the Customs Union came into effect; this removed the custom duties between member countries while common external custom tariffs began to apply. The agricultural sector in the European Communities has an important role for the economies of the member countries. On the one hand, agriculture depends on variable conditions, such as, climate, rainfall, soil etc., and on the other hand, the permanent prosperity of this sector in the European Union depends on the policies which are going to be applied. The CAP policy in the EC has become more important for the agricultural sector than for others such as transport, trade, etc.

The Rome Treaty, stabilization of the agricultural sector in the European Communities has been put into effect by article 39 (Common Agricultural Policy of the EC):

“These objectives contained in Article 39 of the Rome Treaty are:

1. To increase agricultural productivity,
2. To ensure a fair standard of living for farmers,
3. To stabilize markets,
4. To ensure availability of supplies,
5. To ensure that supplies reach consumers at reasonable prices.”<sup>5</sup>

However, application of these policies in the European Communities was not effective enough because of the diversity of agricultural conditions in the member states. Intervention of the member state governments in the agricultural sector caused many problems.

Arable crops and reform of the CAP system were rather important subjects within the CAP agenda. From the beginning years of the EU-6 to date more than half of the utilized agricultural area (UAA) is arable land. In the EU-12 approximately 115,400 million hectares of fields were used as arable land and in 1996 it was increased to 135,260 million hectares (1 hectares = 2.47 acres) after the fourth enlargement of the EU. However, the consequence of the compulsory set-aside measure within the CAP system reduced this amount to below 130,809 ha in 2002.

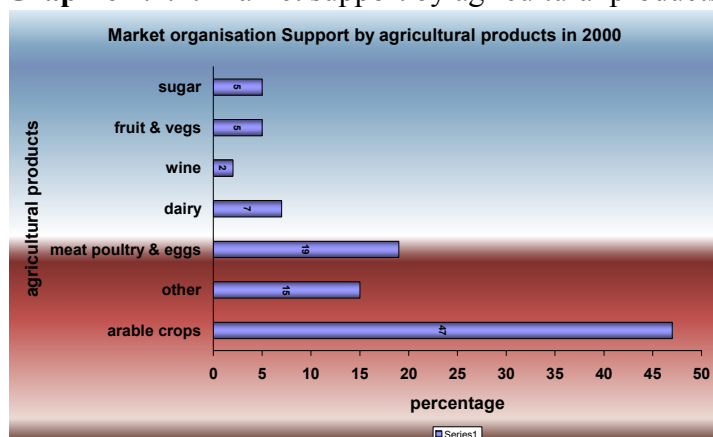
In 1957 after the formation of the EEC (EU), there were approximately 7 million farms of which the largest farms by size (about 70 ha) were in the UK and the smallest were in Greece (less than 5 ha) (see tables 2.1.2 and 2.21). The EU covers approximately 3.2 million km<sup>2</sup> and has currently approximately 376 million EU-15 plus 74 million CEEC’s inhabitants. The utilized area is 1,30 million km<sup>2</sup> or 40% of the total surface area. The five largest countries- France, Spain, Germany, UK and Italy together possess 80% of all agricultural land in the EU-15.

The amount of people who were employed in agriculture was approximately 9.5% of the total population in 1980s. But the share of employed people in agriculture was reduced to 5% in 1996 (see Graph 2.1.2).

The cereals (wheat, barley, oats, and rye) are grown mostly in all member countries which covers approximately 28-30 percent of the total utilized areas. 47% of the CAP support measures are used to finance the cereals.

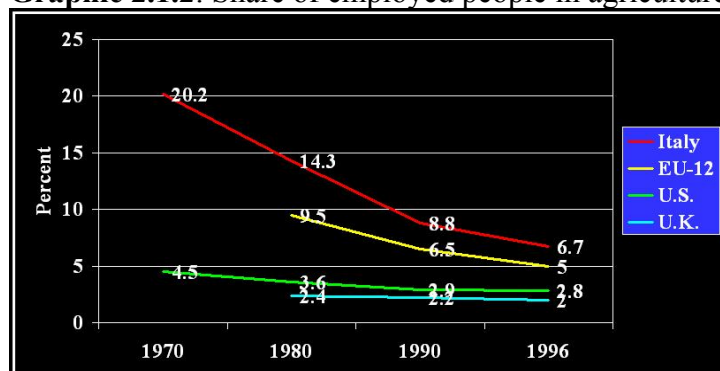
<sup>4</sup>Nicholas Moussis: Access to European Union, 1997, p.424

<sup>5</sup>Agricultural policy, <http://europa.eu.int/pol/agr/en/info.htm>, August 1998.

**Graphic 2.1.1:** Market support by agricultural products in the CAP of the EU in 2000

Source: adopted from <http://www.choosefoodchoosefarming.org/cap/where2.htm>

As shown in the graph below the share of employed people was about 9.5% of total employment. The share of employed people in agriculture was reduced almost 50 % between 1980 and 1996, and currently it is estimated at about 4 per cent of total employment. An important decrease has been observed in Italy, where about two thirds of agricultural employment has been reduced. In the UK the share of employed people in agriculture was 2.4% in 1980. However, a small decrease was also observed in 1996.

**Graphic 2.1.2:** Share of employed people in agriculture

Source: European Commission the Agricultural Situation in the EU 1998 Report, p. T/116

The related period in the table given below is especially selected to show the impact of the set-aside measure which had considerable impact on the CAP after the MacSharry reforms in 1992. Within the CAP system the voluntary set-aside measure was first introduced in 1988, yet there was a very small decline in land use. However, the previous plan which was introduced by Mansholt in 1968 had a considerable effect, replacing small scale farming with large scale farming on arable land.

The second phase of the set-aside measure which comprises a compulsory set-aside measure in the CAP system was first introduced by MacSharry in 1992. Besides the voluntary set-aside measure, the compulsory set-aside measure had contributed to reducing the land use in the CAP. Approximately 15 % of the arable land ceased to be used for farming. However, as shown in the tables below, farm numbers were declining as they grew in size. This also meant that 50 hectare and more utilized agricultural areas increased, whilst there was a decrease in small-scale farms between the period 1987 and 2000. Consequently, the utilized agricultural area in almost all member countries except the UK, Spain, France, Portugal and Germany was reduced (see tables below).

**Table 2.1.1:** Number and area of holdings (x1000) in EU -12/ 15

EU-12/ 15	Farm size class (ha UAA)	Holdings			
		X 1000			
		1987	1995	1997	2000
	0- 5	3,411	4,193.6	3,901.7	3,903.2
	5- 20	2,099	1,742.3	1,686.9	1,525.6
	20- 50	946	848.4	802.0	738.4
	≥50	473	585.7	598.5	603.4
	Total EU 12	6,929	::	::	::
	Total EU 15	:	7,370.0	6,989.2	6,770.7

Source: Europe EU Commission Agricultural statistics: The 2003 Agricultural Year – (Farm structure). And Eurostat: European Commission DG 6 for Agriculture FAO and UNSO and 1987 data from Baldwin and Wyplosz: The Economics of European Integration,

In the table below, the decline in arable land use for cereals from 1990 to 1999 is given. During this period a decline in land use was observed in EU 12, whereas a small increase in land use was observed through to the end of the decade in EU 15. However, similar reductions in cereal production have not been observed. Although the set-aside measure was planned to reduce the production amount in the CAP, as indicated in the table below, neither the set-aside measure, aimed at cutting arable land use by approximately 15 % in member countries, nor the production amount was reduced in the last decade.

**Table 2.1.2:** Use of Cereal Area and Production in the CAP of the EU between 1990- 2000 (mn ha/ tons)

Year	Area		Production	
	EU-12	EU 15	EU-12	EU 15
	m ha	m ha	m tonnes	m tonnes
1990	<b>35.8</b>	n/a	<b>170.2</b>	n/a
1991	35.9	n/a	181.3	n/a
1992	35.2	n/a	168.6	n/a
1993	32.3	35.2	165.4	178.1
1994	31.9	34.8	162.1	174.3
<b>1995</b>	<b>32.7</b>	<b>35.6</b>	<b>165.1</b>	<b>177.7</b>
<b>1996</b>	<b>33.9</b>	<b>37.0</b>	<b>191.8</b>	<b>205.9</b>
1997	34.9	38.1	190.9	205.7
1998	34.1	37.4	197.7	210.9
1999	<b>33.3</b>	36.5	<b>188.5</b>	<b>201.4</b>

Source: <http://www.statistics.defra.gov.uk/esg/evaluation/setaside/fullrep.pdf> (original from Eurostat)

In the table below arable UAA in the EU CAP is given. As in the table above for cereal products, a similar decline was also observed in all arable land use. However, the above-mentioned decline was observed only for small scale farming and not for large scale farming. In 1987 land use of less than 5 hectares declined from 8,915 to 7,008 and land use of 5 to less than 20 ha fell from 21,353 in 1987 to 17,229 in 1997. Arable areas of less than 50 hectares reduced from 29,505 in 1987 to 25,459 in 1997. However, arable land use of above 50 ha increased from 22,101 ha in 1987 to 25,784 in 1997. And finally land use of 100 ha and more increased from 33,526 to 53,211 in a related period of time.

After the fourth enlargement of the EU UAA land use continued to reduce, but as previously explained the mentioned decline was not observed for member countries such as Germany, Spain, France, and the UK, where large scale farming exists.



In the EU-12 UAA increased between 1987 and 1993. In 1996 after the fourth enlargement of the EU UAA there was a slight decrease until 2004. (see table below)

**Table 2.2:** Utilized agricultural area UAA by size classes of holdings (1000 hectare)

Area	1987	1989/90	1993	1996	1997	2004
Total EU 12 or 15 after 1995: less than 5 ha	<b>8,915</b>	8,157	7,384	:	<b>7,008</b>	:
Total EU 12 or 15 after 1995: From 5 to less than 20 ha	<b>21,353</b>	18,607	17,024	:	<b>17,229</b>	:
Total EU 12 or 15 after 1995: From 20 to less than 50 ha	29,505	27,129	24,799	:	25,459	:
Total EU 12 or 15 after 1995: From 50 to less than 100 ha	<b>22,101</b>	22,957	23,734	:	<b>25,784</b>	:
Total EU 12 or 15 after 1995: 1100 ha and more	<b>33,526</b>	42,732	46,012	.	<b>53,211</b>	:
Tot EUR 15	:	:	:	135, 260	134, 261	133, 293
Total EUR 12	115,400	119,581	118,953	:	:	:
Germany	11,842	17,048	17,022.1	17,335.0	17,335	17,048
Spain	24,796	24,531	24,713.7	30,286.0	29,649	24,531
France	28,058	28,186	28,107.2	30,215	30,168	28,186
United Kingdom	16,751.1	16,498	16,382	16,149	15,858	16,499

Source Eurostat: Agriculture statistical yearbook, 1997, p.127-128.

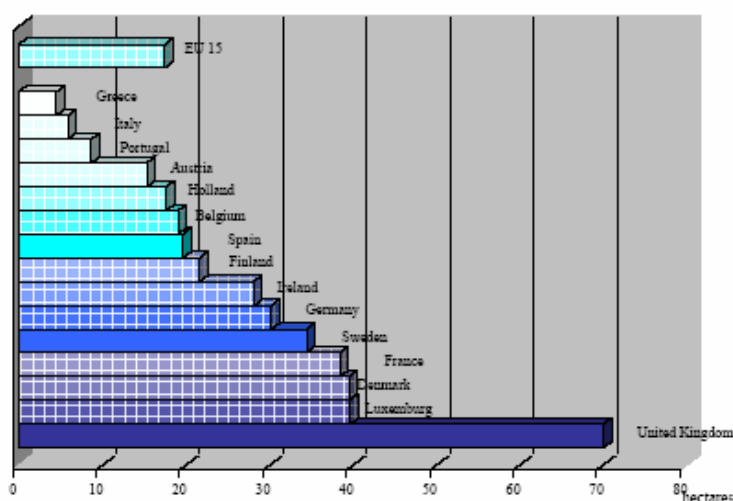
1996 and 1997 data from Eurostat European Commission, DG for Agriculture FAO and UNSO table: Key EU agricultural statistics and UAA data for EU-15 between 1997- 2002 period from [http://europa.eu.int/comm/agriculture/agrista/2003/table\\_en/en354.htm](http://europa.eu.int/comm/agriculture/agrista/2003/table_en/en354.htm) , Europe EU Commission Agricultural statistics: The 2003 Agricultural Year-from table: basic statistics.

1997 data from BMLF: Grüner Bericht 2000, Wien, 2001, p.231 and 2004 data from BMLF: Grüner Bericht 2004, Table: Landwirtschaftliche Betriebe in der EU

Farm sizes in member countries are illustrated in the graphic below. The average farm size in the EU is about 20 ha, the lowest sizes of farms of about 5 ha were found in Greece and the highest with 70 ha were found in the UK. However, farms of above 50 ha and more were observed only in the UK, After the MacSharry reform, farm sizes in member countries such as Germany, Spain, France, and Portugal steadily increased as shown in the table below.

**Graphic 2.2.1:** The farm size in the EU countries

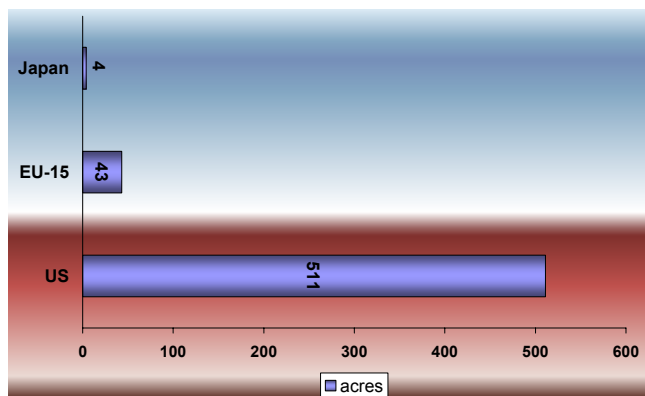
*Average size of farms in the EU member countries, 1995*



Source: Eva Laczka and Peter Szabo: Definitions of Farm in the Agricultural Statistics of Hungary and the EU.

In the graphic below, average farm size and number of farm sizes in the EU are compared with the US and Japan to bring about a better understanding of the EU farm structure on the world farm size scale. The farm size is, on average, considerably smaller than U.S. farms, but the number of these small farms in the EU is higher than in Japan and the US (see graphic below).

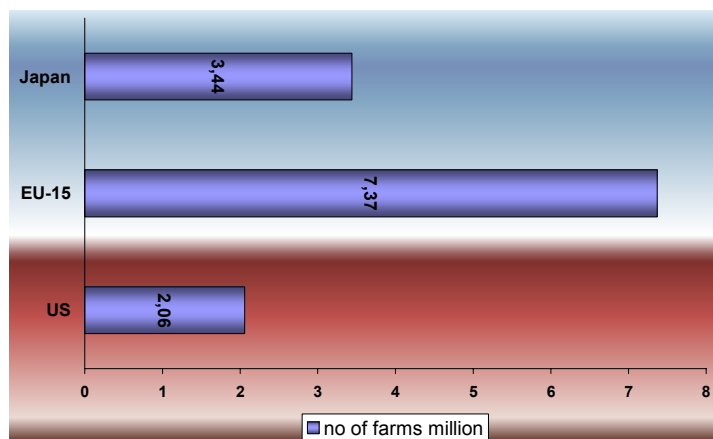
**Graphic 2.2.2: Average farm size**



Source: Adopted from EU Commission, the Agricultural Situation in the European Union, 1998 Report, p. T/24.

Finally in the graph below, the number of farms is also compared with the US and Japan. In the EU the number of farms is very high compared to the US and Japan. However, as illustrated in the table above, the average size is very low compared to the US.

**Graphic 2.2.3: Number of farms**



Source: Adopted from the Agricultural Situation in the European Union, 1998 Report, p. T/24.

After a quick glance at arable land use, average farm size and number of farms and people employed in the CAP of the EU, a brief description of the CAP support system, the need for CAP support measures and their financial burden on the CAP budget can now be explained to bring about a better understanding of the CAP.

The CAP was actually founded to support the agricultural producers and to increase the self-sufficiency of internal producers in the EU. However, application of the intervention price mechanism and some other measures, which were planned to protect the internal producers from third countries, had negative effects on product prices in and out of the Union. In particular, application of the price support system and some other protective measures,

especially import tariffs, had increased the imported product prices up to the EU level for protecting internal producers.

When the EC first started, the original six member states of the Union were net importers of cereals and oilseeds and they were only just self-sufficient in livestock products. Through time application of the CAP reforms has negatively affected the production capacity of internal producers. In particular, the first reforms which were put into effect by the Mansholt plan increased the production capacity enormously and caused an over production in some products. In the following years application of the Uruguay round and MacSharry reforms changed and reduced such over production, but increased the incomes of internal producers. However, increasing transfers from consumers to producers has reduced the welfare of consumers whilst producer gain has increased. The impact of the CAP reforms is explained comprehensively in the coming chapter.

The CAP Resources,

In the CAP of the EU there are four types of resources to finance the Community budget. These are:

- Variable import levies in agriculture,
- Custom duties, which are obtained from member countries,
- VAT (value added tax). This was determined by the Luxembourg agreement in 1970

and

-The net contributor of the EU member countries based on their GDP (stated in the Delors package in 1987).

In fact the above mentioned resources are mostly used to finance the European agricultural and guidance Fund (EAGGF), which covers two thirds of the CAP budget. Incomes of the EAGGF are obtained by “variable import levy, sugar tax which is in the common market system and payments of the milk producers, funds which are taken from the over quotas production, taxes taken from cereals.”<sup>6</sup>

In the EAGGF approximately 90% of expenditure goes to finance the Guarantee section, which is used to finance; the price support system, export and production subsidies to producers, compensatory payments to cover the price difference between members, intervention purchase and storage costs.

“The Guarantee Section's main purpose is to fund expenditure arising from the common organisation of the markets and agricultural prices, rural development measures accompanying market support and rural measures outside Objective 1 regions, expenditure on certain veterinary measures and information measures relating to the CAP; the Guidance Section funds other rural development expenditure not funded by the Guarantee Section, including the Leader Initiative.”<sup>7</sup>

In short, the guarantee section finances the common market policies given to support producers for the implementation of common market organizations in agriculture. These can be divided into four categories: Market intervention, export refunds, agri-environmental measures and direct payments. The guidance section is the community's structural funds. It constitutes the market policy and forms the structural policies such as investment aids, grant for farmers, compensatory payments in less favoured areas and training programmes. Approximately 10% of the EAGGF expenditure goes to finance structural policies of the guidance section.

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<sup>6</sup>Ridvan Karluk: Avrupa Birliği ve Türkiye, 1996, p.217

<sup>7</sup>Activities of the EU Summaries of Legislation: Regional policies Structural Policy Reform  
<http://europa.eu.int/scadplus/leg/en/lvb/l60013.htm>.

The increasing CAP expenditure of the EU is given in the table below. The CAP expenditure increased rapidly from 2% in 1970 to 42%, 39% of which was given to finance the guarantee section and only 3% was used to finance the guidance section.

**Table 2.3:** Rapid increase of the CAP expenditure is illustrated (in 100 mn/ ECU)

	1970	1980	1990	1995
Guarantee	2,0	11,2	29,2	39,1
Guidance	-	0,4	1,6	3,1
EAGGF	2,0	11,6	30,8	42,2
<b>Total Budget</b>	<b>2,4</b>	<b>16,8</b>	<b>49,1</b>	<b>76,1</b>
1 as percentage of 3	97	96	95	93
3 as percentage of 1	88	70	63	56

Source: Williem Molle: The Economics of European Integration, 1997, p.262

In the CAP system structural changes have been concentrated within the guidance section of the EAGGF “on the objectives 5a (adaptation of farm structures) and 5b (development of rural areas), for which it is the only source of aid and, (development of regions whose development is lagging behind), where it operates jointly with other funds while taking special responsibility for aspects relating to rural development.”<sup>8</sup> The EAGGF Guidance section is applied especially for objective 5 and also objective 1 (regions lagging behind in development) to provide aid. In table below, applications of these measures have been shown.

According to Table 2.4, expenditure on Objective 1 increased from 1989 to 1993, expenditure on Objective 5a also increased, but to a lesser extent, except in 1993 because payments to producers for the first time of advance came in the form of a compensatory allowance. This increased the amount of expenditure on Objective 5b reflecting the emphasis which was put on rural development.

**Table 2.4:** EAGGF Guidance section expenditure trend by objective. (ECU/ mn)

	1989	1990	1991	1992	1993	2004 (Euro/mn)
Objective 1	862.13	1,081.16	1,440.83	1,634.68	1,599.22	127.543
Objective 5a	516.20	743.81	631.25	701.33	923.88	:
Objective 5b	26.86	44.00	260.15	475.80	508.64	2.721
Transitional measures	56.80	56.70	75.93	63.00	61.65	8.411
Total	1,461.99	1,925.68	2,408.16	2,874.81	3,093.40	182.458

Source: The Agricultural Situation in the European Union 1994 report, 1995, p.125 and 2004 data from <http://www.uni-konstanz.de/FuF/Verwiss/GSchneider/lehre/European%20Integration%20SoSe04/folien2004-12.pdf>,

The EAGGF guidance section gives finance measures for speeding up the adjustment of agricultural structures between the 1994-1999 programming periods. Below, objective 5a is briefly described to bring about a better understanding of these measures:

“1. Market policy accompanies measures which help re-establish the balance between production and market capacity where the financing of such measures is not provided for under the EAGGF Guarantee section.

<sup>8</sup>Nicholas Moussis: Access to European Union, 1997, p.441

“2. Concrete measures to encourage the installation of young farmers of either sex,  
3. Measures to improve the efficiency of the structures of holdings especially investments aimed at reducing production costs, promoting quality, improving the living and working conditions and promoting the diversification of production”<sup>9</sup>

There are also some other measures, such as, to support farm incomes and to maintain viable agricultural communities in less favoured areas, measures to improve the marketing and processing of agricultural and forestry products. These measures are good enough to improve the existing conditions. However; the process for reaching these goals was not described.

Financial assistance by the EAGGF for the promotion of the rural development is also supported with the measures below (objective 1),

“i-the commercial, diversification, re-orientation and adjustment of production potential,

ii-the promotion quality labelling and investment for quality of local or regional agricultural and forestry products,

iii-individual collective land or pasture improvement,”<sup>10</sup> drainage systems improvement, encouragement for tourist and craft investment. Development and exploitation of woodlands and protection of the environment are the other measures related to rural development.

Development of the rural area is concerned with objective 5b; where 9% of the population of the fifteen (now 25) member countries are located in these regions. Measures co-financed by the EAGGF concern, not only the production, but also processing and marketing of agricultural products, development of tourism and environmental protection.

The EAGGF guarantee section secures the improving, processing and marketing conditions for agricultural products, environmental measures, early retirement etc. The EAGGF expenditure is shown in the table below.

**Table 2.5:** EAGGF expenditure of the CAP before and after the MacSharry reform (ECU/mn)

	1989	1990	1991	1992	1993	1994
Guideline	28,624	30,630	32,511	35,039	36,657	36,465
Expenditure Financed within the guideline	24,406	25,069	30,961	31,119	34,590	32,960
Margin	4,218	5,561	1,550	3,920	2,067	3,505
Total expenditure	25,871	26,454	31,784	31,950	34,590	32,960

Source: European Commission: The Agricultural Situation in the European Union 1994 report, 1995, p.114

The guideline for 1994 was set at ECU 36,465 million; the initial budget for this financial year provided for appropriations amounting to that, not including the appropriations entered in respect to the monetary reserve (ECU 1 billion).

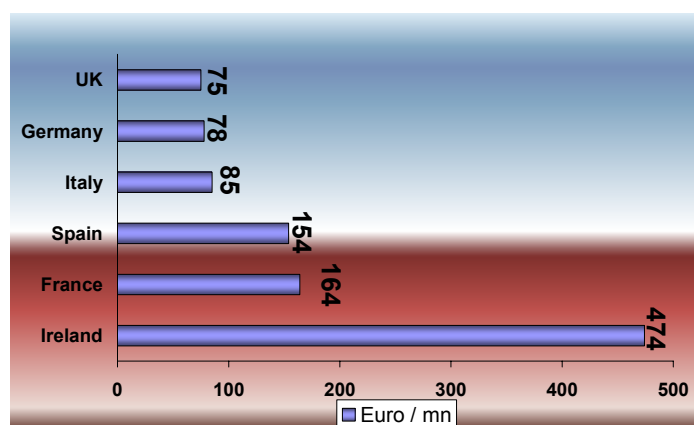
On comparing the above measures, which are financed by the EAGGF guarantee section, to other recent reforms there are many similar measures which were adopted to improve the CAP policy. But each time it was seen that EU prices were not below those of the world market. Farmers have often had to be granted prices above world rates to encourage them to keep production at a level sufficient to guarantee internal demand in periods of world shortage. In the Union, the Commission sets up the guide (target) prices each year which are

<sup>9</sup>Nicholas Moussis: Access to European Union, 1997, p.442

<sup>10</sup>Nicholas Moussis: Access to European Union, 1997, p.442

higher than the world prices. These higher product prices affect the effectiveness of the CAP policies. CAP overproduction and higher expenditure rates especially still have considerable importance. In the second half of the eighties when Spain and Portugal joined the EU CAP mentioned expenditures were higher in most of the less developed members relative to other developed members. For example, “in 1986 the average aid from the EAGGF to Germany was 19.7%, for France 24.6%; and for Greece, Portugal and Spain only 7.8% aid was given from this fund.”<sup>11</sup> In 1998 CAP expenditures were mostly distributed to producers in Ireland, in France and in Spain. However, member countries such as Germany, UK and Italy, which are net contributors of the CAP budget, received less financial support from the CAP spending (see graphic below).

**Graphic 2.3:** CAP spending per capita, 1998 (Euro/ mn)



Source: Adopted from the Economist, February 3, 2001, p. 51

In the EU, countries are mostly supported through direct payments. The countries which become full members of the EU develop their trade capacity with the EU members, while reducing their trade capacity with non-member countries (trade creation effect). On the one hand, non-member countries lose their trade partners, and on the other, access for non-member countries products into the EU market was restricted by high custom tariffs. In the CAP agricultural products are protected from third countries' cheaper products. The PSS of the CAP secures the internal producers through different support measures such as intervention purchase, export and production subsidies, import levies, direct payments, voluntary export restrains (VER) and import and production quotas.

The EU's CAP comprises an area without internal borders in which the free movement of goods, persons, services and capital is ensured. The reform proposals were planned to achieve a common market without internal barriers. There were three types of barriers in the Union which were removed by the SEA in 1987. These are: physical, technical and fiscal barriers. “Physical barriers are defined as frontier controls, technical barriers as non tariff barriers, such as health and safety regulations, and fiscal barriers as differing taxes between member states.”<sup>12</sup> The starting point of the CAP was to remove the frontier control in order to establish a common market between member countries, which was secured by the SEA in 1987, and improved with the Maastricht agreement in 1993. This was based on the liberal economic principal and contributed to liberalization of the trade within the Union by ensuring the economic and monetary integration of the EU.

However, liberalization of the trade within the Union was not sufficient for the trade partners outside the EU. The demands of the GATT (WTO) on the CAP, for the liberalization

<sup>11</sup>Ridvan Karluk: European Union and Turkey, 1996, p.217

<sup>12</sup>Ritson and Harvey: The CAP and the world Economy, 1991, p.166

of world trade and the negative impact of the price support system (PSS) of the CAP, compelled the EU Commission to reform CAP measures. But reform proposals, which would contribute to the liberalization of trade, were unfortunately planned to support producers with export subsidies, import levies or direct payments to enable them to maintain their production in the market, which increased producers gain whilst consumer welfare was reduced.

## 2.1 The Functioning of the CAP

For the CAP there are two aspects, the first one is “a price support mechanism, which attempts to create a unified market for agricultural produce throughout the community”<sup>13</sup>; and the second one “a structural policy, which attempts to influence such factors as the nature of the workforce, the size of farms, their efficiency, the methods they employ and the technology they use.”<sup>14</sup> The structural part obviously plays an important role in the EU’s CAP. However, the price support system and, nowadays, income payments have been by far the most important and controversial aspect of the CAP.

Main indicators of the CAP are shown in Table 2.6.1: The numbers for 1985 and 1998 estimate that production and consumption in the EU has increased with varying yearly increases throughout the decade 1985-1998. Overall extra-EU exports of food, drink and tobacco usually exceed extra-EU imports. The trade balance has remained positive throughout the period 1985-1998.

**Table 2.6.1:** Food, drink and tobacco, main indicators in current prices (ECU/ mn)

	1985	1990	1993	1995	1998
Apparent consumption	33,408.0	41,537.5	45,047.0	50,933.7	57,431.0
Production	337,572	420,458	459,389	521,081	589,480
Extra EU exports	24,672	24,977	30,768	35,965	40,660
Extra EU Imports	21,180	19,894	21,850	24,220	--
Trade balance	3,492	5,083	8,919	11,745	15,170
Employment (1000)	2,418	2,451	2,402	2,488	2,430

Source: Selected data, Eurostat: Panorama of EU industry 97, 1997, p. Chapter 3-2

In Table 2.6.2 the EU’s share in world cereals trade has been indicated. After the Mac Sharry reform from 1993 to 1996 (except 1996) the import of cereal products slightly increased whilst export of cereals was in decline. From the beginning of the year 1996 to 2000 import of cereals decreased whilst export of cereals increased. Against this trade of cereal products both in export and import were reduced by 2001.

The price support mechanism sets out to guarantee minimum prices for farmers for much of their produce, which is shown in the above world prices, to prevent fluctuation on the internal market and to promote the income of farmers.

<sup>13</sup>Lintner and Mazey: The European Community Economic and Political aspects, 1991, p.94

<sup>14</sup>Lintner and Mazey: The European Community Economic and Political aspects, 1991, p.94

**Table 2.6.2:** The EU's share in world cereals trade (mn/ tons)

			1993		1996		1998		2000	2001		
				%		%		%		%		
I M P O R T	Wheat and flour Wheat equivalent	World	116.4	100.0	113.3	100.0	119.1		125.8	100.0	120.7	100.0
		EU 12	1.2	1.0	2.2	1.9	:		:	:	:	:
		EU 15	1.4	1.2	1.9	1.7	3.7	3.1	4.2	3.3	0.3	0.3
	Other cereals	World	115.3	100.0	125.9	100.0	101.4	100.0	118.6	100.0	114.9	100.0
		EU 12	3.4	2.9	5.3	4.2	:	:	:	:	:	:
		EU 15	3.5	3.0	4.8	3.8	2.9	2.8	3.4	2.8	3.8	3.3
	All cereals	World	231.7	100.0	239.2	100.0	220.5	100.0	244.5	100.0	235.6	100.0
		EU 12	4.6	2.9	7.5	3.1	:	:	:	:	:	:
		EU 15	4.9	3.0	6.7	2.8	6.6	3	7.6	3.1	4.1	1.7
E X P O R T	Wheat and flour Wheat equivalent	World	119.3	100.0	112.0	100.0	121.7	100.0	129.5	100.0	125.3	100.0
		EU 12	21.5	18.0	13.7	12.2	:	:	:	:	:	:
		EU 15	21.9	18.4	13.6	12.1	16.4	13.4	21.2	1.6	15.1	12.1
	Other cereals	World	116.0	100.0	121.7	100.0	105.8	100.0	119.5	100.0	111.0	100.0
		EU 12	8.2	7.1	6.4	5.3	:	:	:	:	:	:
		EU 15	9.2	7.9	6.9	5.7	7.9	7.4	19.7	1.6	14.2	12.8
	All cereals	World	235.3	100.0	233.7	100.0	227.5	100.0	249.0	100.0	236.3	100.0
		EU 12	29.7	12.6	20.1	8.6	:	:	:	:	:	:
		EU 15	31.1	13.2	20.5	8.8	24.3	10.7	40.9	1.6	29.3	12.4

Source: [http://europa.eu.int/comm/agriculture/agrista/2003/table\\_en/en41.htm](http://europa.eu.int/comm/agriculture/agrista/2003/table_en/en41.htm) (EU's share in cereal trade)

Since 1968 many regulations and reforms have been realized. Especially, during the Uruguay round, agricultural subventions were decreased to reduce negative effects of support measures, such as, trade distortion and price fluctuations in the world market. After the Agenda 2000, measures were taken in the European Union such as environmental friendly production and cutting market support prices, increasing direct payment to farmers, maintaining the landscape and contributing to the vitality of the countryside, in order to reach the CAP's planned goals which are stated in the Rome treaty article 39. However, achievement of CAP goals is not simple. First of all the price support policy within the Union reduces the effective functioning of the price mechanism. Price mechanism is a process which means any changes in prices affects and changes the capacity and types of goods and services that are produced. In any market price is dependent upon the supply and the demand for the products and services including transportation costs trade taxes etc, which affects and changes market prices. But in the EU's CAP interventions to support internal producers affect and change the market prices. However, support measures can be applied for producers who have comparative advantages and for consumers in order to secure their welfare.

An important function of the CAP's PSS is the prices which are applied within the CAP system. In fact, prices in the CAP are fixed each year after a lengthy series of negotiations between the Council of Ministers and representatives of member states. It is, however, important to note that besides the economic effects, the political worries of politicians also have an important influence on the determination of price support measures of the CAP.



#### Agricultural prices:

There are three types of roles which prices play in the CAP: “They guide production, trigger intervention mechanism, and secure common external protection.”<sup>15</sup> Each of these three functions will be analysed in turn. In agriculture products differ depending on time and place, but they are similar in quality. Because of these variations between the EU members, it is not easy to fix the agricultural product prices in the Community. However, the basic idea is very simple; first, the Council of Ministers determines the desired internal product prices for each product in advance. This is the support price, known as the target price (Guide price).

The Guide price is the ideal price for the EU, offering farmers a standard of living they should be entitled to while taking into account the needs of consumers. It is estimated from intervention prices which are set each year by the Council in accordance with both changes in the cost of living and supply and demand in each market. The target price is the highest price. It is very high relative to the world prices because the target price is fixed according to the highest production cost of the Union. For example, for cereals the highest production cost is in Duisburg, which is used for the calculation of cereal prices.

Before October, the Commission fixes the intervention prices for the internal products. The market prices are determined by adding the profit rate and transportation costs to the intervention price. Therefore, EU farmers will be able to estimate their income before planting. According to the CAP “a target price is fixed for each good covered by the price support mechanism, as is an intervention price (sometimes as much as 30 per cent lower than the target price) below which the market price is not allowed to fall.”<sup>16</sup> Target price is estimated for the products, which is in the common market regulation. These are cereals, sugar, milk, olive oil and sunflower seeds.

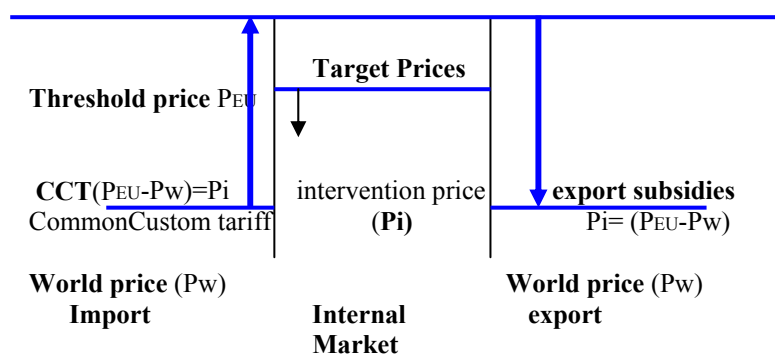
Intervention prices: These are the guaranteed prices for the producers, who are allowed in the Union market to sell their products. This floor price is, somewhere near, but below, the target price, usually fixed at 9% below the target prices (see figure below). Such intervention buying is done by member states’ agencies. If prices fall below the intervention level, which means not selling at the target price, community agencies purchase the required quantity to push the price up to the desired levels. The surpluses, which are bought by community agencies, are either stored or subsidized for export. For fruit and vegetables, which cannot be stored, there are withdrawal prices where producers below these prices stop selling and send their products for distillation, to charities, or for destruction until the desired market prices are obtained. The payments of these are almost equal to the difference between intervention price and world price. Such surpluses from time to time are distributed to hospitals, old people, to the poor or the starving in the third world.

The intervention measure is tied to a storage system. Stock levels are still excessively high, such that serious imbalances between supply and demand exist, which must, in principle, be corrected by lowering the intervention prices. Lower intervention prices will also help to reduce the amount of the surplus. Intervention prices are applied to cereals, sugar, butter, milk powder, cheese, olive oil, sunflower, seeds, pig’s meat, cattle and veal and tobacco.

In the figure below the price support mechanism has been illustrated. As can be seen, on the one hand, the amount of import tariff (variable levy) has considerable effect on the prevention of imported products, which increase the product price of imported products up to the EU level. On the other hand, application of export subsidies reduces exported product prices to the world price level.

<sup>15</sup>Nicholas Moussis: Access to European Union, 1997, p.436

<sup>16</sup>Lintner and Mazey: The European Community Economic and Political aspects, 1991, p.95

**Figure 2.1:** Relationship of main CAP price support mechanisms

Prices outside the Union;

**Sluice-gate price:** Sluice-gate price is calculated on the cost price of pig meat and poultry products. It is applied to support internal product prices from imported products. If imported product prices are lower than internal product cost prices, then an amount of levy is used to increase the imported product prices up to internal production costs.

**Threshold price:** This is the price for the imported products (see figure above). It is the sum of the difference between target prices and highest production cost within the Union plus transport and distribution costs (usually from Rotterdam Harbour to Duisburg). It is applied to cereals, milk and olive oil. By means of the variable levy, import product prices are increased to the threshold prices to protect internal producers.

**Indicator Prices:** These prices are applied for fruit and vegetables, wine and some fishery products to protect internal products from imported products. Import of those products can only be done with the minimum internal production costs. This minimum price is called the indicator price.

**Export Subventions.** There were various subsidies to the export. The desired price and the integrity of the market are also protected by subventions for export and levies for import. The method of setting the price of products is the main cause of the surpluses. If the internal price has been set at a level that generates surpluses, then it is clear that the subvention rate would be high enough to protect internal production, and levies would be high enough to exclude all imports to protect local producers.

“In theory, therefore, prices would not normally ever fall below the intervention price or rise above the target price for long.”<sup>17</sup> The variable levy calculation is the same as the threshold price. It is applied especially to cereals, milk and olive oil.

The variable levy is adjusted according to the variation between the EU consumption and production onto third country providers, which discourages these countries from subsidizing their exports. The price support system unfortunately does not only support the large-scale efficient farmers, but also supports the less efficient farmers too. The system of import levies and export subsidies are phased out under the Uruguay round agreements.

### 2.1.1 The Benefits of the CAP

If the policy is seen in the light of its aim, the success of the CAP will be better understood. “The CAP policy was conceived against a history of 80 years of cyclical fluctuations in demand, prices and rural prosperity.”<sup>18</sup> As is well-known, the agricultural depressions of the period 1918-1939 were devastating in the United Kingdom. After the

<sup>17</sup>Goodman S. F.: The European Union, 1990, p.129

<sup>18</sup>Goodman S. F.: The European Union, 1990, p.115

Second World War food shortages in Europe, which were severe from 1943 to the early 1950s, led to the foundation of the CAP in the European Communities. Briefly, rural poverty in Europe was a mainspring of political and social unrest.

The EU's CAP was founded particularly to improve the member countries' prosperity which was destroyed during the Second World War. The foundation of the CAP took eleven years to support and secure in the agricultural sector. In the last decade an increasing trend of trade liberalization and the impact of the WTO on the world compelled the EU's CAP to reduce the support measures and protection in agriculture. Especially after the Uruguay Round substantial progressive reductions in agricultural support measures were observed for a fair, and market oriented agricultural trading system.

One of the important benefits of the CAP is "self-sufficiency in agriculture."<sup>19</sup> According to Linter, this has led to balance of payment advantages and also food abundance. In the CAP, less effective small-scale producers are supported by EAGGF, which have comparative disadvantages in the market relative to the large-scale producers. In principle, farmers have always tended to enter markets where prices have been high enough in the recent past and to leave those where prices have been low. Many small-scale producers do not have the luxury of choice as to what to produce. Because of their land conditions, technique and machinery may all be specific to one type of production. Therefore, CAP finances some of the domestic producers to be able to maintain their insufficient production in the expense of the welfare loss to consumers.

A second important benefit of the CAP is the price support system (PSS), which secures higher income levels for producers. In the CAP, existence of the PSS prevents farmers from losses despite the important role that the price elasticity of demand plays on agricultural markets. In agriculture, advance mechanization and new plant techniques cause rapid productivity growth and increases in supply. These outpace modest increases in demand, but exert downward pressure on farm prices.

The demand for most agricultural products or food is price inelastic. The degree of inelasticity plays an important role for farmers, food processors and policy makers. "When a 1 percent change in price calls forth more than 1 percent in quantity demanded, the good has price elastic demand."<sup>20</sup> The demand of consumers is changed if there is any change in the food price; this shows that there are close substitutes at existing market prices on these products. These products are in the luxury goods category, because demand elasticity of basic foods is between zero and 1 ( $0 < e < 1$ ). These are in the necessary foods category. The impact of the elastic demand on consumer behaviour is inversely proportional to price changes. This means any price increase reduces income levels of consumers. But "when a 1 percent change in price evokes less than a 1 percent change in quantity demanded the good has price-inelastic demand."<sup>21</sup> This indicates that substitution of this product is not easy, and that it is in the necessary goods category. For the producer, inelastic demand means that revenue will decrease when price decreases.

In agriculture, processing, packaging, and branding of food etc. are expensive and financial support is needed to overcome such production costs before marketing.

On the one side, agricultural products are perishable and need to be consumed within a short period which affects the market price of products. On the other side, income elasticity of demand for agricultural products is low; Engel's law suggests that consumers increase their expenditure for food products (in % terms) less than their increases in income. This implies demand expansion must arise largely from the increase in the population to increase the demand capacity of products.

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<sup>19</sup>Valerio Lintner and Sonia Mazey: The European Community, 1991, p.97

<sup>20</sup>Samuelson Nordhaus: Economics, 1998, p.65

<sup>21</sup>Nordhaus: Economics, 1998, p.65

Agricultural product prices fluctuate more heavily than other product prices. Either subsidy or price support is required to prevent this price fluctuation. Farm product prices are not stable, especially in the short term, because most of the products are perishable and storage of these products is costly. Therefore, most of the products, especially in summer, are cheaper than ever. And for this reason, the Commission proposes guarantee prices for certain products, such as cereals, one year before planting. These target prices assist producers to estimate their income. The guarantee prices relative to the world market are high and encourage producers to plant more than demand, which causes over production. These plantings which are dependent on the Commission prices affect the number of seasonal workers who are employed in agriculture. Therefore, prevention of these problems requires new price regulations. Regulation of prices in the European Union is more difficult than in other countries. It is difficult to expect similar product quality and price, which, in the south of Europe is less costly than in Northern Europe because of the difference in labour wages and climate differences. The levels of economic development differ from one region to another, which affects the wages. In the southern European countries the level of wages is lower than in the other advanced countries of Central Europe. Especially after the eastern enlargement the wage differences between member countries increased, which then increased the price differences between similar products in member countries. However, the CAP support system contributes to a reduction of regional disparities between member countries. In the Union price equation on similar products trade between member countries is one of the important objectives of the CAP.

Besides this, transport and production costs differ from one region to another. Therefore, prices, which are fixed by the Commission every year, cause higher profits for some farmers while others do not share the same rate.

In the EU, liberalization is directed to the free market profit economy. But this does not imply a shift to a total laissez faire. In the CAP the economic structure is dependent on the high-regulated market. In this market standard price theory is taken into consideration. In standard price theory production price plays an important role in fixing the market price. Market price (supply price) is determined not by the average prices (or costs) of producers, but by the price (costs) of the marginal producers, as is done in the CAP.

In the agricultural sector, impact of the price elasticity of demand / supply and the existence of a low-income elasticity of demand for some foods causes a price fluctuation in the market. But in the CAP, the price support system reduces the impact of the price fluctuation on the market. The important problem is to determine suitable support measures to reduce the negative effects of price instability.

In agriculture, mainly fruit and vegetables, which are perishable, needs to be consumed as soon as possible after marketing. These seasonal product prices tend to decrease if they are produced in excess of demand.

In the CAP, application of the price support system is used sometimes for political reasons. The fear of losing voters forces politicians to support farmers in maintaining their inefficient production which increases the production costs of domestic producers.

In time, it was seen that the application of these policies (such as: intervention purchase and storage, export subsidies, domestic support commitments) reduced the ability of the CAP to reach its planned goals as stated in article 39 of the Rome treaty.

In the WTO meetings from Seattle to Doha producers often raised objections to these applications. It is expected that in the future reform proposal member states will acquire more responsibility, such as contributions to the finances of the CAP budget.

The third benefit is that “the CAP has enabled European agriculture to experience rapid technological change and productivity increases in recent years.”<sup>22</sup> The price support system may generate higher profits for efficient farmers. These higher profits, on the one hand, have induced them to increase the levels of investment and research and also to increase the production capacity or to use modern technology. On the other hand, this very increase in productivity has contributed to the problem of surpluses in the community. The nature of the demand for agricultural products is that part of it comes from industry and the other part from domestic consumers. The use of agricultural products in the food industry like fruit juice, jam, fruit and vegetable conservation etc. will reduce surplus and storage costs. In the manufactured food processing industry those perishable products in agriculture, after a serial process like packaging dehydration and freezing, will become long-lasting products. The extension of durability of agricultural products can help to smooth out seasonal fluctuation in supply.

The fourth benefit is: “The CAP has to a large extent succeeded in achieving the objective of a single and unified market in European agriculture.”<sup>23</sup> The contribution of the CAP to integrating the agricultural sector of the Western European countries should not be underestimated. Especially after World War II the food shortage was overcome throughout the Europe by using the measures of the CAP system. However, in the Western European countries, most of the smaller producers survive by producing a specialized product to a narrow section of the market, or by giving outstanding personal service and quality. But most such small-scale production in the CAP system is unfortunately not efficient enough to compete in the market. Besides their finance problem which increases the burden of the CAP budget, it is obvious that maintenance of such small scale producers cannot be dependent on their economic utility; indeed, vote expectations of the politicians play a major role.

The European Union’s anti-monopoly laws contribute very little to producers in order to maintain their production during the integration process which is financed by the CAP.

### **2.1.2 The Disadvantages of the CAP**

The faults of the CAP policies are seen to consist of lack of equity and efficiency. The policies, applied in the community, are not always put into effect because of their efficiency for the agricultural sector, but sometimes for political reasons such as vote expectations for the next term election. Therefore, politicians have sometimes applied politically unpopular decisions to increase their vote capacity for the elections. Due to this process the effective role of the CAP has been reduced. The disadvantages of the CAP can be summarized as below:

First of all “the CAP has resulted in high food prices and welfare losses for European consumers.”<sup>24</sup> The price support system which was enforced in the Community has caused higher prices for most agricultural products compared to the world market. These higher prices cause welfare losses in the EU.

According to the principle of the Comparative Advantages theory, “comparative costs of a good are low in a country which has a comparative advantage in producing it and high in a country with a comparative disadvantage.”<sup>25</sup> In the CAP, economically less rational decisions of politicians have reduced the effective application of this principle. The share of small-scale producers in the CAP plays an important role in the decision-making process. The social and political need for protection for small-scale producers reduces the effective

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<sup>22</sup>Lintner and Mazey: The European Community, 1991, p.98

<sup>23</sup>Lintner and Mazey: The European Community, 1991, p.99

<sup>24</sup>Linterr and Mazey: The European Community, 1991, p.99

<sup>25</sup>Cem Alpar and Tuba Ongun: World Economy and International Economic Foundations, 1985, p.26

application of price support systems (PSS). In fact, the CAP was founded to increase productivity in agriculture and welfare of the nations.

On the one hand, the CAP was founded to increase the productivity and marketing of the CAP products, but higher incomes of producers resulted from direct payments of the community agencies and not from profit of their production for the market. On the other hand, price intervention was contributed in the CAP system to balance the market prices. Even if it is used as a protective measure it has a preventive role on price fluctuation in the market.

In fact import tariffs prevent imported product access but they stimulate development of internal production. However, the amount of protection must be carefully determined to reduce the negative effects on trade. In economics it is known that export and import can balance each other and there is no need to protect them. But it is obvious that most protective measures reduce the welfare of consumers and the nation. Furthermore, some NTMs (such as export and production subsidies) increase the cost of the budget. In a case where there are not any trade restrictions there are also losers, namely producers and governments, who receive tariff revenues.

In fact, whether there are tariff or non-tariff measures, both have negative effects on the welfare of the nations. These protections increase the consumer prices which reduce the real income of consumers. Due to the import levies, the prices of the imported products are increased up to the threshold price level of the EU. The import levies protect domestic producers from imported products.

Especially after the eastern enlargement of the EU, those producers with costly production methods in the EU may direct their production operation process towards the new members where production cost is lower because of the cheaper labour force. This will also contribute to increased competitiveness between domestic producers in the world market.

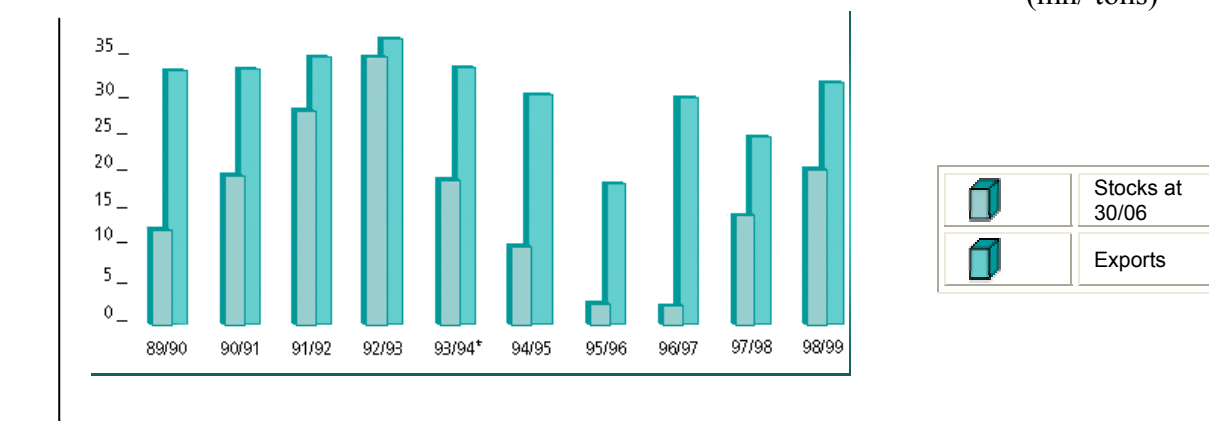
The second important disadvantage of the CAP is the creation of surpluses. The Commission set support prices too high every year, especially for cereals. "As a consequence, because most other agricultural products are related to cereals, either as competitive arable crops or as users of cereals based feeding stuffs most other agricultural prices had similarly to be set at relatively high levels."<sup>26</sup> The Commission fixes high product prices one year before planting, especially for cereal products, which direct many producers to increase their product capacity (see Graph below). Increasing product capacity is a required intervention measure to prevent the price fall and fluctuation in the market (see Cobweb theorem in 1.3). If there is an excess supply in the market, the market price will fall below the intervention price, which is set at 9% below the guide (target) price. As a result of this, intervention supply is withdrawn from the market until the market price increases to match the intervention price. This intervention in the CAP is the main cause of surpluses. According to Lintner, there are two main reasons for the CAP surpluses: "Supply side factors, higher prices have directly increased production, while productivity has increased as a result of high levels of investment and research and development in the industry. Demand side factor, the income elasticity of demand for food in the EC countries is low (estimated at around 0.2)."<sup>27</sup> In the developed countries an increase in income will not be directed towards basic foods, but usually people tend to spend their money on basic foodstuffs and services. And another fact is that the population of the European countries is not growing fast enough to generate additional demand for basic food products. In the EU though, all export subsidies and marketing of surplus in the world market is hindered by higher product prices. Insufficient marketing of the surplus compels Community agencies to distribute this over-production to the third world or even to destroy it. The reason for this is the expensive storage costs of these products.

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<sup>26</sup>Ritson and Harvey: *The CAP and the world Economy*, 1991, p215

<sup>27</sup>Lintner and Mazey: *The European Community*, 1991, p.99

**Graph 2.4:** Changes in the level of intervention stocks (or public stocks) of cereals and exports (cereals in grain form or after first-stage processing, including for food aid)  
(mn/ tons)



Source: The EU Commission: CAP Reforms: The Arable Crops Sectors, July 1999  
[http://europa.eu.int/comm/agriculture/publi/fact/cereals/index\\_en.htm](http://europa.eu.int/comm/agriculture/publi/fact/cereals/index_en.htm)

The third possible impact of the CAP is income transfers. When imports originate from non-member countries an import tariff is imposed so that the import price plus the levy equals the threshold price. The import revenue goes to the European Union budget. In other words: “It has redistributed income from the rest of the world to European farmers and governments, through import replacement and the variable levy.”<sup>28</sup> Another possible income transfer can occur when the producers in member countries sell their products within the community at market prices, which are higher than the world prices. Consumers in the EU are compelled to pay more money than non-member countries’ consumers to buy food products. This is the cost of the tariffs, which are imposed on imported products, reducing the welfare of the consumer.

The fourth disadvantage is that when “the CAP raises the intervention prices it favours the more productive farms, which are usually the larger farmers, due to their larger output unit of capital invested.”<sup>29</sup> This means that the impact of intervention price is related to the capacity of production which affects the cost of production and also product prices. In the EU most of the small-scale producers have higher production costs relative to the large-scale producers; therefore, intervention price can only prevent the loss of small-scale producers, whilst large-scale producers profit from this intervention.

The fifth possible impact of the CAP is the adverse effects on non-member countries. Non-member countries are able to trade their products among themselves without any restriction. But “The CAP has depressed world agricultural trade and has denied farmers in other countries fair access to one of the world’s most important markets.”<sup>30</sup> There are a large number of products which are cheap and effectively produced in the rest of the world and which are displaced in the EU market by more expensive goods produced by farmers in EU member countries. This has been the result of the higher internal prices and the import levy which CAP applies to it. Such policies depress the world market prices by increasing world supply and cutting world demand, which means that CAP causes a reduction of world trade and increases EU export at the expense of third world countries. Briefly, CAP policies increase the prices of imported products and prevent their access to the EU market.

<sup>28</sup> Lintner and Mazey: The European Community, 1991, p.99

<sup>29</sup> Guglielmo Carchedi: For Another Europe, 2001, p.217

<sup>30</sup> Lintner and Mazey: The European Community, 1991, p.99

Another important effect is that the CAP expenditure has dominated the EC budget. Escalating costs of the CAP have forced member countries to increase the size of the budget, which has caused political crises in recent years. The reason for the budget cost increase is the financing of the surplus generated by the above equilibrium prices. This causes a downward pressure on agricultural prices in the world, because higher product prices in the EU stimulate less developed countries by using their access opportunity into the EU market to increase production capacity on similar products.

The sixth possible impact of the CAP can be defined as, the more you produce the more subsidies you effectively get. "One estimate (CEC July 1991) is that 80% of the CAP spending goes on only 20 % of farmers who are overwhelmingly bigger and richer than the rest"<sup>31</sup> This means that the lion's share of the indirect subsidies goes to the large and efficient farms, which cover only 25 per cent of total farms. Consequently there has been a decline in the number of small farms and an increase in the number of large farms, because subsidies are directly related to the production capacity.

Another possible disadvantage can be summarized, in that the CAP is unresponsive to consumer demands since it is subsidies rather than what consumers want that tends to determine what is produced. Instead of consumer preferences, producers tend to increase their production capacity where the price support mechanism encourages them to do so.

Finally "the employment and balance of payments benefits of the CAP have been achieved at the expense of job and trade in other sectors."<sup>32</sup>

### 2.1.3 How the CAP might be improved

The European Union agricultural markets of the member States are organised in various ways at national level. Structural measures of the CAP are still required to develop the farms into viable enterprises which can survive in international market conditions. According to the Buckwell report; "the LEADER program is a model initiative trying to address problems of rural development primarily by creating new, bottom up, institutional structures for economic development in rural areas. This, it is hoped, will lead to stimulation of new enterprises, thereby providing new employment, diversifying away from traditional commodity production and developing local specialities based on the characteristics of the regions."<sup>33</sup>

Since the mid -1960s the CAP has objected to improving productivity and welfare in agriculture. But the lack of knowledge of many farmers and less effective production prevents the improvement of agricultural production at the desired level to achieve self- sufficiency in this sector. Under the CAP system less effective and expensive labour forces reduce the competition of domestic producers. In the CAP labour productivity would be increased in four ways: "Raise production, lower production costs and improve farm organisation, increase the real price of agricultural commodities or reduce the agricultural working force."<sup>34</sup> In fact under the CAP system there is over-production, especially for cereals, sugar, milk and milk products and meat and meat products. Thus, it is not possible to increase production anymore, especially for these products. Lowering the production cost can be done either by lowering the labour wages. It is not easy to apply this reduction or use high technical methods which is a very expensive process for those small-scale producers. Raising the production is already supported with production subsidies and production quotas, but small to medium scale

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<sup>31</sup>Guglielmo Carchedi: For Another Europe, 2001, p.217 (translated by the author)

<sup>32</sup>Lintner and Mazey: The European Community, 1991, p.104

<sup>33</sup>DG VI Buckwell Report –Towards a Common Agricultural and Rural Policy for Europe, p.3

<sup>34</sup>Rosemary Fennell: The CAP, 1997, p.95



producers have higher prices, and even if they are artificially subsidized for the market they have market difficulties. The size of the labour force since the Mansholt plan has reduced. Especially Application of the set-aside measures and early retirement, in particular, has reduced the amount of employed people in agriculture. But higher product prices and over production is still a considerable problem in the CAP.

In the agricultural sector, farmers are not sufficiently informed about the planned goals. In the long run, mechanisation will be increased to replace the insufficient labour force, using machines for raising productivity in agriculture.

In the CAP system decisions are not only taken for economic utility but also for political reasons. This has meant CAP reforms were not put into effect to increase agricultural productivity but also to maintain reasonable incomes for producers even if inefficient production is maintained. The reason for this is the vote expectations of politicians to secure their survival. This is also criticised in the Buckwell report: "An alternative interpretation, preferred by its severest critics, is that its survival is explained by the power of the lobbies of those who have captured the benefits of the CAP and that it is a sign of the political failure of EU policy decision, institutions, and procedures."<sup>35</sup> Such criticisms will bring about a better understanding as to why these policies had no success on CAP policies which had indefensible distribution impacts and were ineffective in delivering desired objectives to survive the CAP. But, nevertheless the CAP has always been involved in considering new proposals to increase its effectiveness in the Union. "The CAP does indeed have to be transformed. It should change from being essentially a centralised commodity policy to becoming a major component of more comprehensive, integrated and decentralised rural policy."<sup>36</sup>

Finally, it is important to mention the impact of the Agrimonetary system which was introduced in 1995 to reduce the CAP costs and to avoid dramatic price changes due to currency fluctuations in the different member states. In this system most agricultural support prices and payments within the CAP were set in ECU's and then these amounts were converted into national currency terms using an exchange rate mechanism which was known as 'agricultural conversion rates' or 'green rates.'<sup>37</sup> However, on 1<sup>st</sup> January 1999 after the introduction of the single currency the agrimonetary system changed with a fixed exchange rate within the Euro zone (except UK, Denmark and Sweden - for them European Central Bank exchange rates are considered). It is obvious that within the Union there is no need for separate currency conversion but outside the Union an exchange rate mechanism is still maintained. Under this system more dependence on direct payments rather than price support has been given for internal producers. Direct payments on the one hand reduce the disadvantage of the farmers as a result of the loss of green rate freeze: "Green rates applying to all direct payments were frozen in member states (including the UK) which experienced appreciable revaluations between 23 June 1995 and 31 December 1998 and then until 1 January 1999. The frozen rates were set at a rate up to a limit of 11.5% higher than the green rate applicable to other CAP payments."<sup>38</sup> Through time increasing amounts of direct payments have contributed to covering the farmers' losses and have reduced the effects of the intervention price mechanism in the market. However, increasing direct payments to producers have increased the spending of the CAP budget.

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<sup>35</sup> DG VI Buckwell Report –Towards a Common Agricultural and Rural Policy for Europe, p.3-4

<sup>36</sup> DG VI Buckwell Report –Towards a Common Agricultural and Rural Policy for Europe, p.4

<sup>37</sup> Green rates: Green rates have been mostly abandoned in favour of market exchange rates

<sup>38</sup> Guide to the Agrimonetary system and Euro after 1 January 1999, p.2

## 2.2 Major instruments of the EU's CAP:

Before explaining the support instruments of the CAP a short glance at the agricultural production and trade may contribute to distinguishing the products of the agricultural trade. In the EU's CAP, agricultural production is dominated by livestock products (including dairy), grains, vegetables, wine, fruits, and sugar.

Major export commodities include grains (wheat and barley), sugar, dairy products, poultry, pork, fruit, vegetables and wine, which are supported with guaranteed price and intervention measures. Poultry products receive only customs protection and beef is supported with guaranteed prices and direct aids to complement production.

Most agricultural import products are not suited to the climate of northern Europe. Therefore, import products such as soybeans and soybean products, coffee, cocoa, tea and spices, are not restricted. "Cereals, milk and milk products and beef are supported with guaranteed prices through direct aid. Cotton, feeding stuffs and tobacco are supported through maximum guaranteed quantities (MGQ) which are national guaranteed production quotas. Tropical products, banana (MGQ), citrus fruits, some seasonal fruits and vegetables, which are from Community guaranteed production quotas (MGA), wine with national surplus quotas, milk and sugar national production quotas, are restricted with maximum guaranteed areas (MGA)."<sup>39</sup> The EU also imports large quantities of animal feed to supplement domestically produced supplies.

In the third chapter the application of measures on agricultural products is more fully explained.

### 2.2.1 Tariffs

A tariff measure is the simplest trade restriction. It can be either specific, which is a fixed sum per unit or ad valorem, or a proportion of the value added. A tariff raises the price of a good in the importing country and lowers it in the exporting country. As a result of these price changes consumers in importing countries lose out while consumers in exporting countries gain. Producers in importing countries gain, while producers in exporting country lose. Besides the consumer and producer, governments gain from tariff revenue. The tariff measure is easy to collect, but it is important to remember that the reflection of tariff revenues on the social welfare is dependent on the political view of the government.

The impact of the tariff measures is explained in the third chapter.

### 2.2.2 Non-Tariff Measures

The non-tariff measures are divided into two parts according to their direct and indirect effects. Quantitative measures, such as, import quotas and VER restrict import directly, while levies, minimum price requirements and technical standards have an indirect effect on imports.

The use of variable levies and threshold prices is a foundation of the CAP and applies to important food items such as cereals, sugar, beef and dairy products. Tariff quotas limiting imports quantitatively apply to fresh fruit and vegetables, meat and tobacco manufactures.

Imports of live animal, milk products sugar and honey are sometimes prohibited for health and sanitary reasons.

Non-tariff measures can be classified into five major sections. These are:

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<sup>39</sup> EU Parliament Fact Sheets: Agricultural Markets Policy Common Organisations of the Market Legal Basis,

- 1- Subsidies: Intervention purchasing to support prices,
  - Direct payments (Coupled or decoupled)
  - Production quotas to prevent over production,
  - Variable import levies and quotas (or Voluntary export restrains =VER) to protect domestic producers from import,
  - Export subsidies to encourage exports,
  - Subsidies for storage of over production,
  - Monetary compensatory amounts VER (Voluntary export restrains),
- 2- Anti-dumping measures,
- 3- Safeguard: Mainly to prevent a sudden surge of imported products on the domestic products. Consequently, an importing country needs to impose, for a temporary period, border controls.
- 4- Technical barriers: Technical specifications such as sanitary, phytosanitary and health regulations.

There are three differing perspectives on the effects that the technical measures have on trade:

“First, if a country has some strength in product standards which promotes the quality of the domestic products, technical standards can promote exports and reduce imports for this country through non price competitiveness. Second, non-tariff barriers may act as an impediment to imports, but can also be a barrier for export, as national product specificities may not be accepted by consumers in other countries. Third, in the economic integration literature it is argued that the existence of standards which are accepted across countries promotes intra industry trade.”<sup>40</sup>

5- Government procurements: This measure actually was not covered by the GATT (WTO) measures, but governments may discriminate against foreign suppliers in favour of domestic suppliers to protect producers from imported products.

There are also some other non-tariff measures, which cause a restriction on the trade. These are given briefly below:

- Environmental friendly production requirements,
- Food safety for health and hygiene requirements,
- Protection of domestic producers for protection of rural livelihoods,
- Promotion of rural development,
- Elaboration of measures on narcotic drugs; restrictions on raw materials, which could serve to
- Refinement narcotic drugs, cocaine, acetone, sulphuric acid etc
- Fiscal reasons: tobacco, alcoholic beverages, which are subject to added taxes.
- Import restrictions on certain products
- Security reasons, such as, war materials, firearms, munitions, etc
- Animal health and phytosanitary reasons
- Corruption: different items were subject to import restrictions due to lobbying and bribery in the industry
- Special dispositions: on a variety of products, salt regale, importation of legal currency (coins) etc.

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<sup>40</sup> Michael Landesmann and Robert Stehrer: Trade Structures, Quality Differentiation, and Technical barriers in CEEC-EU Trade, 2002, p.1

## **2.2.3 Exchange Regime Trade Barriers and Impact of the Financial Flow**

### **2.2.3.1 Impact of the Exchange Regime on Trade**

In the Union, exchange rates of different currencies were creating difficulties for trade, such as, deficit or excess of balance of payments. Exchange rate difficulties were required to be facilitated. As a consequence of this, in 1972, the ERM was introduced into the Union to reduce exchange rate difficulties. In 1975 the ECU (European Currency Unit) was put into effect to convert national currencies into the ECU value to facilitate the exchange rates of national currencies. In the EU, the ECU, a national unit of exchange, was based on a basket, or weighted combination of the currencies of nations belonging to the European Community. The ECU was created by the European Community with the aim of eventually making it the single currency of a unified western European economy. The ECU is increasingly used in commercial banking transactions because its relative stability renders it more suitable than a national currency for fixing contractual terms.

In 1979 the European Monetary System (EMS) was put into effect to reduce all the above given difficulties. EMS covers ERM, ECU, EMCF (European Monetary Cooperation Fund) and VSTF (Very Short Term Financial Facilities).

In January 2002 the new currency 'Euro' was put into circulation. The single currency reduced the difficulty between member states. First of all, it perceived lower transaction costs. It removed the exchange rate mechanism between member countries. It removed the Commission fees to the banks. The single currency in the EU gives consumers the advantage of being able to compare the price differences between member countries to find the most suitable and cheapest products in order to optimise its utility. The globalisation effect and its contribution to communication and information technology especially facilitate the sales options of internal producers. They can market and sell their products via the Internet. The Internet access to products contributes to consumers comparing product quality and product prices, which enhance their utility. Such transparency makes the product prices clear when comparing them with similar products, increases the competition, and forces producers to reduce and to equalize the product prices.

There is also a negative impact of a single currency which occurs when a country falls into an asymmetric shock "The term refers to any serious distortion in a particular country, region or industrial sector that goes against the prevailing cycle in a given economic area."<sup>41</sup> This may also affect the other member countries' economies. Monetary policy was in the hands of the European Central Bank (ECB), which acted in the interest of the euro zone as a whole and could not respond to local problems especially in small member countries. The new system was powerless to prevent the increase in unemployment that, for example, might result from such a shock without directing fiscal transfers between countries to compensate for the loss of national monetary sovereignty. Such a solution would require political union, which was not on the stated agenda.

### **2.2.3.2 Impact of the Financial Flow on the Customs Union**

The customs Union has not only meant the introduction of free trade, but it has also contributed to creating similar domestic institutions between nations i.e. convergence and economic practices. These convergences in macro economic performance are difficult to realize. It is obvious that the economic performance of the nations cannot be easily changed. Convergence between countries is required but realisation of this is not easy.

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<sup>41</sup> Herald Tribune, The world Daily Newspaper, Economic Achilles Heel: An Asymmetric Shock to System By Barry James

The Customs Union does not compel nations to replace their existing institutions and it is not the reason for domestic change. As a consequence of the Customs Union, countries become a part of trade, which is created by Customs Union. The Customs Union has meant free trade, financial flow and more profit. However, it requires many constitutional changes and series of negotiations in a country to accept and adopt their domestic institutions into the customs union.

The Customs Union has also meant free financial flow. Foreign direct investments by multi national firms especially accelerate financial flow between member countries. In the past, political stability and central location made Switzerland a financial centre, with hundreds of banks. However, nowadays globalisation affects and increases the financial flow between countries enormously.

Completely open international financial flow may be secured to protect the economy from financial crisis. According to Robert Gilpin, a “completely open and unregulated international financial system is the best solution to the problems resulting from international financial flows.”<sup>42</sup> He believes that the IMF and the World Bank controls monetary and financial matters as a ‘true lender of last resort’ causing harm to those economies in crisis. Such interventionist policies of the EU, IMF and World Bank may also encourage reckless behaviour by firms, as was seen in the Asia crisis. On the one hand, in the unregulated market those investors or borrowers will be better off knowing that in a crisis no single person or agency will rescue them, but on the other hand, without any financial guarantee (like IMF or the United States), no-one will invest outside the USA and Europe.

It is obvious that intervention in the financial market is required to maintain economic development, because fluctuation causes uncertainty in the product prices in foreign currencies, and may be harmful for foreign trade. In cases where prices are increased foreign trade also reduces. A diminishing of foreign trade reduces production and results in low employment capacity. On the other hand increasing the price will affect the economies in a positive way.

“The floating exchange rate theoretically secures the autonomy in monetary policies. But during the globalisation, effects of the foreign exchange rate may be not considered.”<sup>43</sup> Since the abolition of the Bretton Wood System (1973) many countries have continued to peg their currency to the US dollar. In fact, pegged exchange rates may be used to bring down higher inflation in short run stabilization programs. Later “perhaps in response to surging capital inflows and the risk of over-heating, more flexibility is likely to be required to help relieve pressure and to signal the possible need for adjustments to contain an external imbalance.”<sup>44</sup> Instability of exchange rates create difficulties and are required to move toward full capital account convertibility for the economic globalisation, as it is done in the EU.

In the European Union, the European Monetary System began in March 1979 with eight of the nine members of the EU participating in its exchange rate mechanism (ERM). At that time differences in inflation rates across members of the ERM were as large as 10 percentage points. This made it difficult to maintain stability in the ERM since, with fixed exchange rates; differences in inflation translate directly into changes in relative prices, which shift competitiveness across countries. Inflation rate differentials narrowed across Europe by the Mid 1980s. In 1999 the European Monetary Union was founded, and was expected to reduce the negative effects of liberalisation on economic parameters such as export, import, stability on price policy etc. It is obvious that monetary globalisation is not simple and it may cause economic instability.

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<sup>42</sup> Robert Gilpin: *The Challenge of Global Capitalism*, 2000, p.329

<sup>43</sup> Jaques Adda: *La Mondialisation de l'économie*, 2001, p.116

<sup>44</sup> Philip King: *International Economics and International Economic Policy*, 2000, p.263

## 2.3 The Price Support System within the EU

The price support system (PSS) of the EU's CAP was put in to effect to stabilize market and to secure reasonable income for internal producers, as is defined in article 39 for CAP objectives. "However, the fact that EU prices are higher than world prices will have a more significant effect on both production and consumption and consequently on trade and farmers' revenue."<sup>45</sup> This implies application of CAP support measures not only excessively enhance the income of internal producers but also decrease the welfare of consumer.

### 2.3.1 According to the Rome Treaty: Subventions

According to the 92<sup>nd</sup> article of the Rome treaty, a proposal of the Commission to the Council gives subvention for financial promotion either to less developed regions to create a unified market, or to a sector for structural adaptation. However subventions are not only given to reduce the regional disparities in the CAP of the EU it is also given to increase the competition of internal producers against lower cost production of the third world countries in the world market.

Indeed in the 1980's the EU's cereal export was successfully increased. However, the Mac Sharry reform, which negatively affected the market support and subsidies, reduced the EU's export up to 2000. But after 2000 the decline in price gap between EU and world cereals increased the export share of the EU producers (see table 2.7.2). The impact of the CAP and subsidies had a considerable effect on trade increase. As a consequence of support measures, domestic producers increased their trade capacity in the market. Application of these measures (such as export and production subsidies, import levies etc) creates an unfair competition in the market for domestic producers. The need for this protection, on the one hand, secures a reasonable income and market for domestic producers. On the other hand, some efficient production of exportable commodity in the third world countries is replaced by the insufficient production of internal producers.

In the CAP, Common Market Organizations consist of four basic categories. These are:

"Intervention prices comprise almost 70% of agricultural products such as; cereals, wine, cattle and pig meat, and some fruit and vegetables and fishery products.

In the CAP approximately 21% of production is protected from cheaper products of third countries. These are cereals, wine, some fruit and vegetables and egg.

Subvention is also given to some imported products to cover domestic demand with cheaper products, such as wheat, olive oil, tobacco, sheep meat.

According to the production amount (5% of total production) lump payments for cottonseed, linen, fodder, hemp etc."<sup>46</sup> These regulations are used to protect the internal market. In fact 50% of the EAGGF Guarantee section expenditure is used to finance and support milk and milk products, cereal, rice and olive oil.

Major instruments can be given, such as: monetary (compensatory) amounts, export subsidies, promotions for small and medium sized enterprises (SME), tax exemption or reduction, lower interest rate credit, intervention buying to support prices, subsidies for storage of surplus.

For the CAP there are two aspects: The first one is "a price support mechanism, which attempts to create a unified market for agricultural produce throughout the community"<sup>47</sup>; and

<sup>45</sup> Mergos G., Stoforos C., Mishev P. and Ivanova N.: Analysing agricultural policy reforms under transition in Bulgaria, 2001, Pages 488

<sup>46</sup> Karluk Prof Ridvan: EU and Turkey, 2002, p.245

<sup>47</sup> Lintner and Mazey: The European Community Economic and Political aspects, 1991, p.94

the second one “a structural policy, which attempts to influence such factors as the nature of the workforce, the size of farms, their efficiency, the methods they employ and the technology they use.”<sup>48</sup> According to the author, Linter, the structural part of the CAP is potentially of great importance but the price support system has been by far the most important and controversial aspect of the CAP.

The price support mechanism sets out to guarantee minimum prices for farmers for much of their produce, which are set higher than supply, demand, and world market prices, to encourage farmers to produce more than they would in a free market. Obtaining these expectations, many regulations and reforms in the European Union are required to reach the planned goals. These can be summarized in the light of the CAP objectives which are defined in article 39:

- Making the community self-sufficient in important food items,
- Providing a reasonable livelihood for people who work on the land,
- Increasing agricultural productivity to guarantee reasonable prices for consumers and
- Promoting European integration by achievement of a unified market in a key area of economic activity.

Since January 2002 the Euro has been in circulation, and the positive effect of the monetary compensatory amounts (MCA) increased. Therefore, the loss from the exchange rate has been overcome within the Union (except three Member States). The Euro increases the competition power of the EU. Fiscal integration reduces interest rates and therefore the cost of financing. Free movement of goods and labour force is also expected to increase in the coming decade.

### 2.3.2 Monetary Compensatory Payments

The producers within the EU were protected by different support mechanisms. There were four types of compensation payments in the CAP, which are given below.

- “a- Direct payments to farmers whose income were due to fall because of the lowering of cereal prices,
- b- Improvements in social, welfare payments to farmers and their families,
- c- Aids for the improvement of productivity and the rationalisation of agriculture,
- d- Aids to producers of durum wheat (Commission 1963 (f)).”<sup>49</sup>

Payments were given only temporarily and independent of the price of agricultural products.

### 2.3.3 Direct and Indirect Subsidies

In 1973 direct aid to farm incomes as a preventive measure for the structural changes needed in agriculture was introduced. The direct payments were designed to compensate farmers for the reduction in price support.

In CAP policy many reform packages have been applied to improve conditions of the internal farmers. However, it has often met with difficulties. In the first years of the CAP, incomes of the farmers were guaranteed by the intervention prices. However, the system of the intervention varies from one country to the other. But they are mainly divided into two categories: “Direct income aid system for farmers, which existed in the UK before entry to the community, was called deficiency payments and the other category the system of price

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<sup>48</sup>Lintner and Mazey: The European Community Economic and Political aspects, 1991, p.94

<sup>49</sup> Rosemary Fennell: The CAP, 1997, p.92

support on the internal combined with external protection.”<sup>50</sup> These direct income aid system and price support measures which were chosen for the EEC’s for agricultural protection were also recommended at the Stresa Conference,

In the CAP application of direct aid to farmers is given to those who are in less favoured areas or those who cease farming or for the replacement of price support with direct payment. “Such a policy, which would bring farmers as a whole into the category of those socially assisted, is wrong in principle, is costly to apply and is difficult to manage.”<sup>51</sup>

Imported agricultural products usually have lower prices relative to internal products and the incomes of the internal producers will be topped up by a subsidy from the budget. This system is not suitable for application in a large group of countries like in the EU. It is not easy to cover the deficits of the farmers from the budget. The solution, as is seen in most reform proposals, was the replacement of the price support system with direct income supplementation for low-income farmers. “Because support prices were so high it was argued that CAP encouraged inefficient, high cost production; impeded structural adjustment; disadvantaged lower income consumers (because of high food prices); benefited large farmers greatly and small farmers very little (because the benefit was distributed pro rata to the amount produced) and damaged trade relations with both rich and poor countries alike.”<sup>52</sup>

Unfortunately, the price support system was better adapted to the conditions of the community to protect cereal producers. But under this system, providing national farms with sufficient income is required to compensate for the higher internal prices. In the Union, import levies and export subsidies are also given to protect producers from lower product prices in the world market. This price supporting system is very costly to the CAP budget.

The direct payments are applied “in a few countries in the world which are almost self-sufficient in agricultural production and/or where farms are not very numerous.”<sup>53</sup> In the CAP, direct payments are mainly given to set-aside and livestock.

Indirect subsidy is given to intervention purchasing and to storage costs which also play an important role within the price support system.

Direct payments under the production limiting programs are not subjected to the commitment to reduce domestic support if:

- “a- Such payments are based on fixed area and yields; or
- b- Such payments are made on 85 percent or less of the base level of production, or
- c- Livestock payments are made on a fixed number of heads.”<sup>54</sup>

Briefly, direct payment guarantees a minimum income to producers, and reduces the impact on world markets, which are financed through the CAP budget, because direct payments have no direct effect as market price support had. Direct payments have therefore positive effects both on consumers’ gain and producer surplus too.

Direct payments are given according to the reference area or reference year, which is explained in chapter 3.

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<sup>50</sup> Nicholas Moussis: Access to European Union, 1997, p.434

<sup>51</sup> Rosemary Fennell: The CAP, 1997, p.92

<sup>52</sup> Ritson and Harvey: The CAP and the world Economy, 1991, p.296

<sup>53</sup> Nicholas Moussis: Access to European Union, 1997, p.434

<sup>54</sup> Uruguay Round of Multilateral Trade Negotiations (1986-1984)- (294A1223)(04), p.6



### 2.3.4 Export Subsidy Commitments

Given below are export subsidies which are subject to reduction commitments agreement:

“a- The provisions by governments or their agencies of direct subsidies, including payments in kind, to a firm, to an industry, to producers of an agricultural products, 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 non commercial 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 an agricultural from which the exported product is derived;

d- The provisions of subsidies to reduce the costs of marketing exports of agricultural products including handling, up-grading 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 favourable than for domestic shipments;

f- Subsidies on agricultural products contingent on their incorporation in exported products.”<sup>55</sup>

One of the basic principles of the CAP is the Community preference, which means products of community origin are bought in preference to imported products. But application of the common custom tariff prevents imported product access in to the EU and reduces the welfare of consumers. Besides this, in the Union, product prices still relative to the world prices are high and still subsidized to increase the market share in the world market. But these expenditures still increase the burden of the CAP, because in the past CAP expenditure has been mostly distributed to finance the market support which comprises price intervention mechanism, but export subsidies have also increased the burden of the CAP budget. But nowadays these expenditures have been mostly replaced by direct payments. However, market support and export subsidies were reduced but not removed from the CAP agenda.

In fact higher cost production of internal producers is required to be subsidized for the marketing of internal products. But increasing amounts of payments to internal producers not only increase the excessive transfers from consumers and tax payers to producers, but also increase the production capacity of producers which was not desired. The new reform proposals therefore try to remove the decouple payments which break the link between production of a specific agricultural commodity for receiving direct payment.

### 2.3.5 Domestic Support Commitments

The Domestic support commitments are defined in domestic support reduction commitments for agricultural producers. The commitments are expressed in terms of Total Aggregate Measurements of Support (AMS) and Annual and Final Bound Commitment Levels.

“In accordance with the Mid Term Review Agreement that government measures of assistance, whether direct or indirect, to encourage agricultural and rural development are an integral part of the development programs of developing countries, investment subsidies

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<sup>55</sup> Uruguay Round of Multilateral Trade Negotiations (1986-1984)- (294A1223)(04), p.7

which are generally available to agriculture in developing country Members, and agricultural input subsidies generally available to low income or resource-poor producers in developing country Members shall be exempt from domestic support reduction commitments that would otherwise be applicable to such measures, as shall domestic support to producers in developing country Members to encourage diversification from growing illicit narcotic crops.”<sup>56</sup>

“Direct payments under production–limiting programs shall not be subject to the commitment to reduce domestic support if:

- i- such payments are based on fixed area and yields; or
- ii- such payments are made on 85 per cent or less of the base level of production; or
- iii- livestock payments are made on fixed number of head.”<sup>57</sup>

It is also stated that the exemption from the reduction commitment for direct payments meeting the above criteria shall be reflected by the exclusion of the value of those direct payments in a Member’s calculation of its Current Total AMS.

### **2.3.6 De-coupled Income Support**

“a- Eligibility for such payments shall be determined by clearly- defined criteria such as income, status as a producer or landowner, factor use or production level in a defined and fixed base period.

b- The amount of such payments in any given year shall not be related to or based on the type or volume of production (including livestock units) undertaken by the producer in any year after the base period.

c- The amount of such payments in any given year shall not be related to or based on, the prices, domestic or international, applying to any production undertaken in any year after the base period.

d- The amount of such payments in any given year shall not be related to or based on, the factors of production employed in any year after the base period.

e- No production shall be required in order to receive such payments.”<sup>58</sup>

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<sup>56</sup> Uruguay Round of Multilateral Trade Negotiations (1986-1984)- (294A1223)(04), p.6

<sup>57</sup> Uruguay Round of Multilateral Trade Negotiations (1986-1984)- (294A1223)(04), p.6

<sup>58</sup> Uruguay Round of Multilateral Trade Negotiations (1986-1984), (294A1223)(04), p.14

## 2.4 The Reforms of the CAP of the European Union

In the CAP there are two main problems which are waiting to be solved; the first is 'surpluses' and the other is 'budget.' It is known that in the CAP over-production always occurs. In other words, intervention buying for cereals, milk and beef causes serious problems, such as, milk-mountains and beef-mountains in the Union which are highly expensive to store. From the beginning of the CAP reforms it is clearly stated that intervention stocks must be reduced. However, as is indicated in Table 2-7, reduction of intervention stocks has not been achieved.

In the Rome Treaty it is stated that increasing the agricultural incomes is one of the main purposes of the CAP. However, on the one hand, due to this process, intervention buying is done to encourage the farmers to maintain their production and also to protect farmers' incomes. And on the other hand, protection of farmers' incomes becomes more expensive to the CAP budget than other expected utilities.

**Table 2.7.1:** Intervention stocks in the EU at the end of the marketing year (1000t)

Products	1985/86	90/91	92/93	93/94	94/95	98/99	99/00	00/01	01/02
Common Wheat	10,312	8,520	14,974	6,480	1,993	6,395	3,079	656	457
Rye	1,161	3,163	2,458	2,545	1,208	3,672	3,270	3,794	5,088
Barley	5,296	5,538	8,694	6,526	3,276	7,802	2,325	2,216	2,397
Durum Wheat	887	1,528	3,392	1,152	399	0	0	0	0
Maize	392	1	3,670	1,130	8	100	22	12	15
Sorghum	454	--	151	160	0	49	5	5	4
Total	18,502	18,750	33,339	17,993	6,884	18,018	8,701	6,683	7,962

Source: <http://ww.europa.eu.int/en/comm/dg06/index.htm> and European Commission: The Agricultural Situation in the European Union 1994 Report, Office for Official Publications of the EC, Brussels, 1995, p. T182 and [http://europa.eu.int/comm/agriculture/agrista/2002/table\\_en/4163.pdf](http://europa.eu.int/comm/agriculture/agrista/2002/table_en/4163.pdf)

According to Table 2.7.1 and Table 2.7.2 the intervention stocks in the EU fell but did not disappear between 1985 and 2002. However, within that period cereal production dropped slightly but surplus amounts were maintained. In the table above common wheat and barley intervention stocks increased from 1985 to 1993, but from 1994 to 1997 they were in decline. However, from 1997 to 1998 intervention stocks increased, not only for the common wheat and barley, but also for maize, rye and sorghum too. Only durum wheat intervention stock fell, between the years 1991 and 1998. The reason for this increase depended on variable factors; especially product prices. Cereals production was affected by some other external factors, such as, increasing trade, lower imported product prices and developing markets in Central and Eastern Europe.

Below in Table 2.7.2 production, consumption, export and intervention stocks increased slightly from 1988 to 1992. After the application of the MacSharry reform all four parameters fell in 1992. In 1996 production consumption and export began to increase with the exception of intervention stocks. However, intervention stocks also began to increase after 1997, these increase continuing until 2000, but after 2000 they began to decrease. In 2002 intervention stocks increased slightly but in 2003 a decline in intervention stocks was observed.

**Table 2.7.2:** EU cereals, production, consumption, exports and intervention stocks\* 1988/89 to 2002/03 (mn/ tons)

Year	Production	Consumption	Exports	Intervention
1988/1989	163.98	136.61	25.70	9.15
1989/1990	162.29	133.32	33.88	11.80
1990/1991	182.59	134.17	29.05	18.75
1991/1992	180.94	140.28	34.78	26.38
1992/1993	167.77	134.83	36.99	33.34
1993/1994	163.96	146.13	32.53	17.99
1994/1995	172.89	159.49	32.05	6.58
1995/1996	176.58	166.56	24.53	2.68
1996/1997	205.94	173.52	29.69	2.36
1997/1998	205.89	177.36	22.85	13.66
1998/1999	200.83	177.10	24.29	18.02
1999/2000	213.82	182.01	31.05	8.70
2000/2001	199.69	181.7	37.64	6.68
2001/2002	211.58	186.85	29.48	7.96
2002/2003	184.30	not added (n.a.)	n.a.	7.24

Source: [http://www.cta.nl/agritrade/cereals/executive\\_brief.htm](http://www.cta.nl/agritrade/cereals/executive_brief.htm), CTA: Technical Centre for Agricultural and Rural Cooperation ACP- EU: Agritrade Cereals, August, 2004

#### First Reform in the EU's CAP;

In the European Union, the first tariff reduction between member countries on agricultural products was realised in 1960. Since that date many reform proposals have been put into effect and in the CAP system especially for cereals and some other agricultural products such as milk and milk products. For sugar, tariff measures have been steadily reduced and removed and then quotas between member countries have been replaced with levies which were calculated as the price gap between internal and external products. Finally trade restrictions between member countries have been completely removed since the removal of the internal tariffs and application of the common custom tariff (CCT) in 1<sup>st</sup> July 1968.

In 1968 after the foundation of the CAP, the first reform proposal was planned by Sicco Mansholt to replace the amount of small-scale production (about 5 million hectares in the agricultural land area) with large-scale production. The Commission introduced a memorandum entitled 'Agriculture 1980' which became known as the Mansholt plan, named after the Commissioner Sicco Mansholt in December 1968. This plan called for restructuring agriculture by "encouraging small farmers or let's say, forcing them to leave the land and giving financial assistance for the amalgamation of holdings. The incentives included grants, pensions to farmer over the age of 55 and assistance to young farmers in finding new careers."<sup>59</sup> A growing opposition to the plan came from France and West Germany, which are important producers in agriculture. This reduction would be realised to reduce the cost of production. After three years of discussions within the Council, a final version of the Mansholt plan emerged in April 1972. The revised Mansholt plan provided only for a modest financing of loans to farmers, early retirement incentives and assistance for information, and training to increase efficiency. In addition to this, in his famous Memorandum on the reform of agriculture in the EU Sicco Mansholt warned that "market and price support policies alone

<sup>59</sup> David M. Wood and Birol Yesilada: The emerging European Union, 1996, p.153

cannot solve the fundamental difficulties of farming' (para.16) and that 'our prices are too high to enable us to export on satisfactory terms' (para. 38)."<sup>60</sup>

1984 Second Reform Plan:

The second Reform package gave the green light to the Delors Package. This package covered reform of the common agricultural policy, the level of agricultural expenditure budgetary discipline, the system of own resources and support policies, including the reform of the structural funds, which included the EAGGF Guidance section.

As a consequence, market related measures, such as, dairy quotas, the system of stabilisers and the co-responsibility levies were adopted. In 1988 the stabilisers concept was put forward to the European Council. These stabilisers would be arranged according to the needs of the common market. The above-mentioned political regulations would be put into effect to increase the prosperity of farmers in the CAP. For this reason the measures given below were planned to increase the self sufficiency and planned goals of the CAP (described in article 39). These are:

- Set-aside measure would be used in agricultural control, production extension, and conservation of production diversification and financial support for farmers to earlier pension, which would help to reduce production in agriculture. And the second one was more protection for the little farmers who were affected by fluctuations and some measures imposed on them by CAP. These measurements for achieving the above aims are summarised below:

- a. Product prices, which are fixed for damping, will be more stable and will be used for the coming period.

- b. Producers will be more responsible for overproduction. Producers will also contribute to the cost of redistribution of surpluses.

- c. Guaranteed threshold prices, which are given for overproduction, will be bought by the Community agencies. Besides this, lowering the market prices and reducing the support for producers is considerable. These measures would be applied to cereals, milk, tomatoes, grapes, and olive oil and also to some fruits and vegetables.

The aim of this reform was to promote the set-aside of arable land and extension of certain types of production and also to encourage older farmers to cease farming and living the land free for modernisation of holdings. Intervention purchase is used to maintain the supply side policy. However, people who were buying for the export affected the aim of intervention, because this intervention buying was done, not to push up the price to the desired target price level, but for the exports. Later this intervention buying was taken to the end of cropping season to prevent competition between export product buyers and intervention buyers. Different intervention prices were also proposed to increase the quality of products.

In Table 2-8.1 and Table 2-8.2, it can be seen that the consumer prices in the EU were not reduced between the period 1985 to 2000, except in Holland and Germany.

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<sup>60</sup>DG –VI, Buckwell Report –Towards a Common Agricultural and Rural Policy for Europe- Report of an Expert Group- Introduction: Why the CAP has to continue to Evolve, p.1

**Table 2.8.1:** Consumer prices index for food (excl. drinks and meal out) 1985 =100

Countries	1985	1986	1987	1988
EUR 12	100.0	104.7	107.3	110.2
Belgium	100.0	101.8	101.4	101.2
Denmark	100.0	102.0	102.9	106.7
Germany	100.0	99.5	99.0	98.9
Greece	100.0	120.3	135.5	150.6
Spain	100.0	110.4	115.5	119.6
France	100.0	103.3	105.1	106.5
Ireland	100.0	104.3	107.1	109.8
Italy	100.0	105.4	109.2	113.0
Luxembourg	100.0	102.2	100.4	101.4
Holland	100.0	98.8	96.8	97.0
Austria	100.0	102.5	103.2	104.0
Portugal	100.0	108.8	117.9	127.2
Finland	100.0	103.9	106.3	108.1
Sweden	100.0	107.2	110.5	116.6
United Kingdom	100.0	103.3	106.4	110.1

Source: Eurostat: Agriculture statistical Yearbook, Brussels, 1997, p.184

d. Intervention buying will be done at the end of the damping period. This will prevent competition between export product buyers and intervention buyers. Different intervention prices will be applied to increase the product quality.

e. Set-aside from production, extension and diversification of the production.

Set-aside measures will be used to reduce use of land products, especially for cereals wine and some others. Due to this process, use of land capacity for other purposes will be increased. The loss of farmers will be compensated by community agencies.

f- Structural measures; the small farmers will be exempted partially or completely from production taxes. Direct support for small farmers and early retirement for people who are over the age of 55 was planned.

Over the time mentioned measures have not been successful enough to solve the problems of the CAP. But nevertheless they could contribute to the reduction of intervention prices which were guaranteed to producers. By implementing these measures was expected to reduce over production. Unfortunately a reduction in surplus amounts has not been realised for the all cereal products.

The measures offered by the Council made very little contribution and set-aside from production, extension and diversification of the production (see Table 2-10), income aid, early-retirement which was over the age of 55 (see Table 2-15) lowering the consumer prices and some other measures have not been resulted in the expected way. Therefore, unsuccessful reforms between 1985 and 1988 have resulted in serious crises within the Union.

**Table 2.8.2:** Harmonised indices of consumer prices, index 1996 = 100

Countries	1998	1999	01/2000
EUR 15	103,0	104,3	105,0
Belgium	102,4	103,6	104,7
Denmark	103,3	105,4	106,5
Germany	102,1	102,8	103,8
Greece	110,2	112,6	113,2
Spain	103,7	106,0	107,7
France	102,0	102,5	103,3
Ireland	103,4	106,0	108,2
Italy	103,9	105,7	106,9
Luxembourg	102,4	103,4	104,3
Holland	103,7	105,8	105,8
Austria	102,0	102,5	103,5
Portugal	104,2	106,4	107,3
Finland	102,6	103,9	104,8
Sweden	102,9	103,4	103,5
United kingdom	103,4	104,8	104,5

Source: Eurostat Luxembourg, Regional Statistics, (Regio) Agricultural, 2003

#### 2.4.1 Ray MacSharry Reforms

Increasing surpluses in the Union was the breach of trust against the CAP in the Union (see Table 2-7). Furthermore, the Commission approved a report by its agricultural Commissioner Ray MacSharry recommending a radical reform of the CAP. The plan was known as MacSharry, two proposals, which were accepted by the European Council during its Lisbon Summit in June 1992; the MacSharry Reform package consists of three main sections. These are:

- “1- Measures regarding guaranteed prices and market systems,
- 2- Lower risk production, stimulation of forestation,
- 3- Social measures”<sup>61</sup>

The centrepiece of the MacSharry reforms was the target price for cereals which are the most widely traded farm commodity. In Brussels the Agricultural Council “agreed to a 29% cut in cereals support prices, a 15% cut for beef production was accepted but ministers would only agree to a 5% cut in support of butter production.”<sup>62</sup> Application of the mentioned cut from cereals, beef and butter producer prices would be done to bring production back into line with consumption by cutting intervention prices, thus market balance could be restored. One of the other important objectives which were introduced by the MacSharry reform was the set-aside measure: as well as the voluntary set-aside, the compulsory set-aside measure was introduced into the CAP system. By 1992 a reform of less intensive and environmentally friendly farming methods was also encouraged. In Table 2-9 nominal and real price indices of producer prices of agricultural products are indicated. According to Table 2-9 expected reductions from cereals (support) prices had not been realised after the period following the MacSharry reform.

As a consequence of the MacSharry reforms, guaranteed prices for cereal and cattle support prices fell by 29% from the 1991-92 levels, and compulsory set-aside of 15% applied

<sup>61</sup>Ridvan Karluk: European Community and Turkey, 1996, p.223 translated by the author

<sup>62</sup>David M.Wood and Birol Yesilada: The emerging European Union, 1996, p.155

until 1999. Through the MacSharry reform farmers has been covered by compensatory direct payments, which was planned to replace the market price support. Direct payments to producers, for which exemption from reduction commitments was claimed, should meet the basic criteria set out “in paragraph 1 plus specific criteria applying to individual types of direct payments as set out in paragraph 6.”<sup>63</sup> Besides this, the community agencies would continue to purchase surpluses. For this, current domestic market prices would be considered and sales from food security stocks should be made at no less than the current domestic market price.

**Table 2.9:** Producer prices for agricultural products in the Community (EU- 15) (excluding VAT).  
1990=100

Product	Nominal Price Indices				Deflated Price Indices			
	1992	1993	1994	1995	1992	1993	1994	1995
Total	98.4	97.4	101.3	105.8	89.2	84.9	85.3	85.8
Crop products	96.3	95.1	100.4	110.0	86.8	82.4	83.8	88.5
Cereals & rice	99.8	98.4	90.0	92.8	90.8	86.3	76.4	75.9
Soft wheat	101.9	98.3	88.3	88.3	94.0	88.0	76.9	74.6
Durum wheat	94.7	98.5	86.3	93.7	81.8	80.5	66.3	68.6
Feeding barley	100.8	95.9	90.4	90.8	93.0	86.1	78.9	76.8
Malting barley	98.7	95.7	91.6	100.4	89.5	83.8	77.3	81.7
Oats	101.7	103.5	91.1	78.2	93.0	91.7	78.5	64.6
Grain maize	94.3	95.7	87.8	98.0	84.0	81.2	71.2	76.5
Paddy rice	110.1	134.6	137.9	150.8	96.5	112.6	110.2	114.9
Other	94.1	87.6	81.7	67.6	84.2	74.2	66.8	55.1
Animals & animal products	100.2	98.9	100.4	100.1	91.7	87.4	85.9	83.0

Source: Eurostat: Agriculture statistical Yearbook, 1997, p.17-176

The MacSharry reform of the CAP “introduced arable area payments to compensate for lower cereal support prices. In order to qualify for area-aid, large producers have set aside a proportion of the farm’s eligible area (land on which area-aid is claimed as industry set-aside). Producers receive area aid on their land eligible crops and set-aside payments on land set aside. Alternatively, producers can exempt themselves from set-aside requirement and forgo all area aid payments.”<sup>64</sup>

In the CAP the MacSharry reform package was applied initially to 22 products (which are dependent on CAP) but dropped to only 5-6 products such as cereals, cattle and beef products. Products mentioned which are subject to the MacSharry Reform are the basic foodstuffs in the Union.

Application of these measures would reduce the incomes of the producers, but the income loss of the farmers would be compensated by such direct payments. “Professional producers with annual outputs of more than 92 tons of cereals in order to benefit from compensatory payments would set-aside 15% of their cultivated land.”<sup>65</sup> However, regarding application of set-aside measures, both efficient and inefficient farmers would be subject to this requirement, which would be another problem for discussion. Ineffective farmers have higher production costs than effective producers. According to the Mansholt plan only these ineffective farmers would have to cease farming. But the MacSharry reforms would force almost all producers to set-aside from production up to 15% of their land (see table 2-10). The cost of these payments would “create another piece of European farm bureaucracy; they at least had the merit of distorting markets less than a system that relies on price alone.”<sup>66</sup>

<sup>63</sup>Uruguay Round of Multilateral Trade Negotiations (1986-1984)- Annex 1-Annex 1A, (294A1223)(04), p.13

<sup>64</sup> Journal of Agricultural Economics, Volume 54, No2, July 2003, p.313

<sup>65</sup>David M.Wood and Birol Yesilada: The emerging European Union , 1996, p.155

<sup>66</sup>The Economist May. 23rd.1992, p.33-34



Given in the table below is the arable aid application according to the arable land use. As can be seen, application of the compulsory set-aside measure within the CAP system reduced the land use approximately 15% from 1993 to 1999 and then from 2000 to 2003 about 10% decline in land use is observed. However, there are some important reasons why the total arable areas increased whilst the set-aside measure was applied. The first reason was the EU enlargement in 1995 which increased the arable land within the CAP. The second reason was the arable aid application which was observed especially for commercial producers and not for small farmers.

On the one hand commercial producers reduced their land use and received arable payments, but on the other hand these producers used the rest of their arable land intensively which increased the production quantity. Therefore, the expected decline in land use and production amount was not observed within this period.

**Table 2.10:** Arable aid applications between 1993 and 2003 (1000 ha)

Breakdown of areas	1993/ 94	1994/ 95	1995/ 96	1996/ 97	1997/ 98	1998/ 99	2000/ 01	2002/ 03
<b>Set-aside (%)</b>	<b>15</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>	<b>17</b>	<b>10</b>	<b>10</b>
Set-aside (five year)	6,104	7,353	7,259	5,761	3,978	4,212	:	:
<b>Total base area</b>	<b>48,825</b>	<b>49,030</b>	<b>53,561</b>	<b>53,561</b>	<b>53,548</b>	<b>53,545</b>	<b>51,737</b>	<b>51,793</b>
Fodder area	1,232	1,023	939	890	807	679	693	765
<b>Crop areas</b>	<b>38,066</b>	<b>39,167</b>	<b>43,084</b>	<b>45,058</b>	<b>47,091</b>	<b>46,554</b>	<b>45,458</b>	<b>46,153</b>
<b>Cereals and silage crops</b>	<b>31,333</b>	<b>32,598</b>	<b>37,077</b>	<b>38,928</b>	<b>40,288</b>	<b>39,307</b>	<b>39,322</b>	<b>40,137</b>
Small farmers of which- Cereals and silage crops	13,944 12,130	13,343 11,569	13,797 12,195	13,374 11,675	12,553 10,959	10,140 9,953	12,513 11,150	12,448 11,047
Commercial producers	30,000 4,640	33,286 5,995	37,055 6,411	38,743 5,567	39,925 3,978	40,626 4,212	38,531 5,131	39,788 5,563
Of which –set-aside	25,360	27,292	30,644	33,176	35,947	36,414	33,400	34,225
Total crop area of which cereals and silage crops	19,203	21,029	24,882	27,254	29,329	29,354	28,173	29,100

Source: [http://europa.eu.int/comm/agriculture/agrista/table\\_en/35712.pdf](http://europa.eu.int/comm/agriculture/agrista/table_en/35712.pdf), The EU Commission: Agriculture in the EU- Statistical and Economic Information in 1999 (selected data from table 3.5.7.1.2) and data for 2001-2003 from table: arable aid applications, [http://europa.eu.int/comm/agriculture/agrista/2003/table\\_en/](http://europa.eu.int/comm/agriculture/agrista/2003/table_en/) from implementation of the common agricultural policy

After the MacSharry reform, set-aside measures together with direct payments to producers reduced the intervention prices for cereals to close to world prices. However, the previously mentioned decline in intervention prices for cereals was maintained until the Uruguay round. After the Uruguay round the cereals intervention price began to increase steadily until the Agenda 2000 reforms. But after this reform package intervention price for cereals fell, as is shown in Table 2-11. By means of this reduction intervention stocks also dropped for cereal products but remained as an important problem within the CAP (see Table 2-7).

**Table 2.11:** Intervention prices for cereals. (ECU/ ton)

Cereals	Intervention Prices							
	1991/92	1992/93	1993/94	1994/95	July 1994 to 2000	July 2000	July 2001	July 2002 to 2006
Durum wheat	227.70	220.87	115.49	106.60	119.19	110.25	101.31	101.31
Common Wheat	168.55	163.49	115.49	106.60	119.19	110.25	101.31	101.31
Barley	160.13	155.33	115.49	106.60	n. a.	n. a.	n. a.	n. a.
Rye	160.13	155.33	115.49	106.60	n. a.	n. a.	n. a.	n. a.
Maize	168.55	163.49	115.49	106.60	119.19	110.25	101.31	101.31

Source: European Commission: The Agricultural Situation in the European Union 1994 report, 1995, p. T60 and from [http://www.cta.nl/agritrade/cereals/executive\\_brief.htm](http://www.cta.nl/agritrade/cereals/executive_brief.htm), CTA: Technical Centre for Agricultural and Rural Cooperation ACP- EU: Agritrade Cereals, August, 2004 (n. a. = not added)

The reduction of intervention prices for cereals to near world market prices would also in the long-term cause import levy and export subsidy reductions (see tables above). However, in this reform package there was no explanation on distribution of export subsidies or import levies. In addition, “20% of rich farmers would receive 80% of the subsidy, so as to direct money towards small group of farmers.”<sup>67</sup>

However, discussions about the MacSharry reforms had begun a year before the application of the MacSharry reforms (1992). According to the Commission the MacSharry reforms had two aims: “to reduce high guaranteed prices that have generated huge surpluses and stretched the Community budgets”<sup>68</sup> (see Table 2-7). But the guaranteed prices for cereals were higher than those which MacSharry wanted and would remain above market prices, which would not be able to reduce the burden of the community budget. Besides this, the MacSharrys scheme would pay big farmers disproportionately less than small farmers.

One authority warned against the danger of open-ended financial commitments to farmers and stressed the need for revision:

- “a- to base compensation payments on historical rather than current hectares and numbers of animal,
- b- to limit the duration of payments and
- c- to predetermine the volume of payments over the whole payment period.”<sup>69</sup>

The complaints mentioned above have sapped the power of the MacSharry reforms. But nevertheless, “the MacSharry reform does cut domestic support and the value of export subsidies by enough to meet Americans’ wishes that it will not curb production enough to meet Americans’ demands over the volume of exports on each product.”<sup>70</sup>

The measures were not enough to restrain the cereals production of the European Union, and surpluses will occur if the necessary reforms are not brought into being. (See Table 2-7) If each Member State takes on more responsibility in their regional policy and in the agricultural sector, then a solution to the problems in the agricultural sector will be found, rather than implementing centralized policies which are planned for community level. Adoption of regional policies may contribute to reducing the level of support measures from region to region within the CAP. Such regional policies will also reduce the burden on the CAP budget.

<sup>67</sup>The Economist, May.23rd.1992, p.33-34

<sup>68</sup>The Economist, May.23rd.1992, p.33-34

<sup>69</sup>Lodge Juliet: The European Community and the Challenge of the Future, 1995, p.126

<sup>70</sup>The Economist, May.23rd.1992, p.33-34

## 2.4.2 The Uruguay Round Inclusive WTO

In the Uruguay Round, after a long negotiations period from September 1986 to December 1993 in Punta del Este, the negative effects of the CAP and increasing protection on internal producers and immense difficulties of third world country producers required this reform package. In the Uruguay Round significant reform on the liberalisation of agricultural trade was observed. During the long negotiations period in the Uruguay round important changes on agricultural support measures were taken into consideration; among these “the most radical change relates to the introduction of an agricultural income support system alongside the price support system which has been the hallmark of the CAP since the 1958 Stresa Conference.”<sup>71</sup> This was expected to ensure better matching of production to internal and external market requirements, while protecting income levels of farmers along with the rural economy and the environment. Many of the changes were implemented in the 1993-1994 marketing year.

In the URRA market price support, which contributes to estimations of amounts of price support to producers, has been classified into three main categories. “Subsidies in general are identified by “boxes” which are given the colours of traffic lights: green (permitted), amber (slow down, i.e. be reduced), red (forbidden).”<sup>72</sup> In World Trade Organisation (WTO) terminology it is stated that in agricultural agreements there is no red measure. There is a blue box for subsidies that limit production. Market price support is calculated by using the gap between a fixed external reference price and the producer price multiplied by the quantity of production.

The Uruguay round negotiations had significant effects on the export of agricultural products of the European Union. Export subsidies would be financed from the proceeds of a levy imposed on the agricultural product concerned, or on an agricultural product from which the exported products derived.

The import regime would be determined according to the trigger price. The trigger level would be set according to the following schedule, based on market access opportunities defined as “imports as a percentage of the corresponding domestic consumption during the three preceding years for which data are available:

a- where such market access opportunities for a product are less than or equal to 10 per cent, the base trigger level shall equal 125 per cent,

b- where such market access opportunities for a product are greater than 10 per cent but less than or equal to 30 per cent, the base trigger level shall equal 110 per cent,

c- where such market opportunities for a product are greater than 30 per cent, the base trigger level shall equal 105 per cent.”<sup>73</sup>

The additional tariff will be set under subparagraph 1(b), according to the following schedule:

“a- If the difference between the c.i.f. import price of the shipment expressed in terms of domestic currency (hereinafter referred to as ‘import price’) and the trigger price as defined under that subparagraph is less than or equal to 10 per cent of the trigger price, no additional duty shall be imposed;

b- If the difference between the import price and the trigger price (hereinafter referred to as the ‘difference’) is greater than 10 per cent but less than or equal to 40 per cent of the trigger price, the additional duty shall equal 30 per cent of the amount by which the difference exceeds 10 per cent;

<sup>71</sup>Nicholas Moussis: Access to European Union, 1997, p.445

<sup>72</sup>[http://www.wto.org/english/tratop\\_e/agric\\_e/agboxes\\_e.doc](http://www.wto.org/english/tratop_e/agric_e/agboxes_e.doc), from WTO terminology

<sup>73</sup>Uruguay Round of Multilateral Trade Negotiations (1986-1984)- (294A1223)(04), p.4

c- If the difference is greater than 40 per cent but less than or equal to 60 per cent of the trigger price, the additional duty shall equal 50 per cent of the amount by which difference exceeds 40 per cent plus the additional duty allowed under b;

d- If the difference is greater than 60 per cent but less than or equal to 75 per cent, the additional duty shall equal 70 per cent of the amount by which the difference exceeds 60 per cent of the trigger price, plus the additional duties allowed under (b) and (c).

e- If the difference is greater than 75 per cent of the trigger price, the additional duty shall equal 90 per cent of the amount by which the difference exceeds 75 per cent, plus the additional duties allowed under (b), (c), and (d).<sup>74</sup>

According to the above given schedule internal producers were protected from imported products, as is indicated below in Tables 2.12, 2.13 and 2.14. The trade balance of EU-12 was increased from 1130 in 1991 to 6021 in 1993. But, in 1995 the trade balance of EU-15 was reduced to 2,444, but then in 1997 the trade balance again increased to 5,889 Million ECU. Increase on the trade balance continued until 2000 but a slight decrease was observed in 2001. However, this decrease was covered in 2002 and again increased up to 12697 mn Euro.

**Table 2.12:** EU-12 trade in agricultural and food products according to the principal customer countries (client countries based on 1993). (ECU/ mn)

Countries	Exports			Corresponding Imports			Trade Balance		
	1991	1992	1993	1991	1992	1993	1991	1992	1993
Total of 25 Countries	23,585	25,582	29,245	22,454	23,600	23,225	1,130	1,982	6,021
Total of third world countries	35,983	38,759	41,803	56,866	56,871	54,599	-20,883	-18,112	-12,796

Source: European Commission: The Agricultural Situation in the European Union 1994 report, 1995, p. T147

**Table 2.13:** EU-15 trade in agricultural and food products according to the principal customer countries (client countries based on 1996). (ECU/ mn)

Countries	Exports			Corresponding Imports			Trade Balance		
	1995	1996	1997	1995	1996	1997	1995	1996	1997
Total of 25 Countries	31,811	34,309	38,259	29,367	30,217	32,370	2,444	4,092	5,889
Total of third (world) countries	46,660	48,604	54,934	64,227	65,678	71,238	-17,567	-17,074	-16,304

Source: EU Commission: Eurostat and DG-6,

[http://europa.eu.int/comm/agriculture/agrista/2003/table\\_en/en37.htm](http://europa.eu.int/comm/agriculture/agrista/2003/table_en/en37.htm)

In the last decade according to the European Commission statistics of agricultural years, an increasing trade capacity between the total of 25 countries is especially observed for the United States, which had more (above 10000 Mio Euro), than Japan's and Switzerland's (about 3000 Mio Euro) trade with the EU. However, Russia, Poland, Canada, Saudi Arabia, Norway, Hong Kong, the Czech Republic, Algeria and Turkey had more than 1000 Mio Euro trade with the EU and some other countries such as Brazil, Nigeria, Mexico, Libya, Hungary and some others had less than 1000 Mio Euro trade capacity with the EU countries. In the table below some of these countries have been listed.

<sup>74</sup>Uruguay Round of Multilateral Trade Negotiations (1986-1984)- (294A1223)(04), p.5

**Table 2.14:** EU Trade in agricultural products according to principal customer countries (ECU-EUR/ mn) (client countries based on 2001)

Countries	Exports			Corresponding Imports			Trade Balance		
	2000	2001	2002	2000	2001	2002	2000	2001	2002
United States	10,493	10,811	11,630	8,399	8,225	7,717	2,094	2,586	3,913
Japan	4,205	4,296	4,080	166	176	159	4,039	4,120	3,921
Switzerland	3,488	3,738	3,979	1,405	1,518	1,569	2,083	2,220	2,411
Russia	2,725	3,361	3,536	447	466	681	2,278	2,896	2,855
Poland	1,899	2,058	2,144	1,235	1,476	1,544	664	582	600
Algeria	1,171	1,203	1,233	24	20	28	1,147	1,183	1,205
Turkey	1,015	775	960	1,921	2,197	2,000	-906	-1,422	-1,040
Taiwan	766	747	735	54	62	55	712	686	680
Nigeria	403	584	594	154	244	309	250	340	285
Libya	448	588	528	9	10	6	438	577	522
Total of 25 Countries	40,888	42,449	44,081	30,009	32,509	31,384	10,880	9,940	12,697
Total of third world countries	58,468	60,123	61,579	58,705	62,150	62,337	-237	-2,027	-758

Source: EU Commission: The 2003 agricultural Year, Eurostat, 2003

In the Uruguay Round for cereal products the Commission proposed the following measures:

“The cereals intervention prices are fixed on step (2000) at a safety net level of 95.35 Ecu/ton (presently 119.19 ECU/ton), a non-crop- specific area payment is established at 66 Ecu/ton, this payment will be lowered if the market prices are sustained at a higher level than currently foreseen,

Set-aside: The reference rate for compulsory set-aside is fixed at 0%, voluntary set-aside is allowed, extraordinary set-aside is abolished; set-aside areas get the non-crop-specific payment,

Silage cereals are excluded from the regime,

Special cases: for protein crops, a supplementary aid is established at a level of 6.5 ECU/ton in order to preserve their competitiveness with cereals, maintained.”<sup>75</sup> With respect to the above given regulations cereals intervention prices are expected to reduce and the non-crop-specific area payment will be lowered in accordance with the higher level of the market prices. Compulsory set-aside will be abolished while voluntary set-aside is allowed. But member States will be able to make the granting of direct payments for arable crops and set-aside conditional on the respect of environmental provisions.

In the cereal sector direct payment per hectare was fixed annually in relation to market prices and in relation to the size of holding; in addition, the payment was dependent upon the percentage of withdrawal from planting in agriculture (Table 2.16).

The lands which ceased farming would be used in non-food processing industry, such as, oil-seed for manufacturing purposes. The corresponding levies on cereal and on milk products have been abolished. In the livestock sector direct income support was planned through a system of premium payments for certain types of producers.

The reform proposal also included for price control direct income support and set-aside and reduced milk output quotas. Income support for forestry and rural environment was also considered.

The Financial participation of government in income insurance and income safety net programme was decided in the form given below:

<sup>75</sup>European Commission: Agenda 2000, For a Stronger and Wider Union, 1997, p.5

- a. Eligibility for such payments shall be determined by an income loss, taking into account only income derived from agriculture, which exceeds 30 percent of average gross income or the equivalent in net income terms (excluding any payments from the same or similar schemes) in the preceding three years period or a three- year average based on the preceding, excluding the highest and lowest entry. Any producer meeting this condition shall be eligible to receive the payments.
- b. The amount of such payments shall compensate for less than 70 per cent of the producers income loss in the year producers become eligible to receive this assistance
- c. The amount of such payments shall relate solely to income; it shall not relate to the type or volume of production (including livestock units) undertaken by the producers; or to the prices, domestic or international applying to such production or to the factors of production employed.
- d. Where a producer receives in the same year payments under this paragraph and under paragraph 8 (relief from natural disasters), the total of such payments shall be less than 100 per cent of the producer's total loss."<sup>76</sup>

In addition to these, a programme called "pre-pension scheme" recommended farmers for early retirement (see Table 2.15). According to the producer retirement programmes of the Uruguay Round:

"- Eligibility for such payments shall be determined by reference to clearly defined criteria in programmes designed to facilitate the retirement of persons engaged in marketable agricultural production, or their movement to non agricultural activities,

- Payments shall be conditional upon the total and permanent retirement of the recipients from marketable agricultural production."<sup>77</sup>

Reform of wine, fruit and vegetable markets were not included. But there were environment payments; which would be given on the fulfilment of special conditions under the government programme, including conditions related to production methods or inputs.

In fact, there have been some obstacles to the realisation of reform programs. The first "major obstacle to overcome was that of accepting the idea that large number of farmers should be paid considerable sums of money to do nothing."<sup>78</sup> It is also stated that, the operation of set-aside has revealed many technical and psychological problems. "Most farmers do not like being paid for doing nothing and also does not like being told what to do with their land."<sup>79</sup> Nevertheless, few of them stopped arable farming, while direct payments became their main source of income.

Early retirement and set-aside measures were applied successfully. However, the positive effects of the early retirement programme on surplus reduction and on productivity increase were not seen until the end of the nineties, whilst over production and product prices began to reduce for cereals. Although application of the CAP reforms started in the Second Reform package and the Delors package, but reforms between 1985- 88 resulted in serious crises within the Union.

The number of the early retirement is indicated in table 2-15 below.

<sup>76</sup>Uruguay Round of Multilateral Trade Negotiations (1986-1984)- (294A1223)(04), p.14

<sup>77</sup> Uruguay Round of Multilateral Trade Negotiations (1986-1984)- (294A1223)(04), p.15

<sup>78</sup>Goodman S. F: The European Union, Mac Millian Press Ltd., London, 1990, p.141

<sup>79</sup>Goodman S. F: The European Union, 1990, p.142

**Table 2.15:** Early retirement, number of beneficiaries approved per year

Number of beneficiaries approved				
Countries	15.10.1994	15.10.1995	15.10.1996	15.10.1997
Belgian	--	--	502	739
Denmark	--	291	339	340
Greece	--	2,538	5,459	8,314
Spain: Farmers	481	1,497	1,947	2,652
Workers	210	175	270	399
France	25,583	27,158	22,576	20,983
Ireland: Farmers	1,003	3,480	4,878	5,719
Workers	--	3	7	8
Italy	--	--	--	--
Portugal: Farmers	--	--	51	854
Workers	--	--	--	1
Finland	--	329	938	1,826
Total: Farmers	27,067	35,293	36,690	41,427
Workers	210	178	277	407

Source: EU Commission, Eurostat- DG-6 for Agriculture, or <http://europa.eu.int/en/comm/dg06/index.htm>

In Table 2.15 early retirement schemes of the member countries can be seen. In this table it can be seen that up until 1994 Spain, France and Ireland had applied for early retirement. Respectively in 1995 Denmark, Greece and Finland, and in 1996 Belgium and Portugal also started to apply for early retirement measures for farmers. Italy and in some other EU members are not shown in this table. Relative to the other member countries France had the highest number of farmers who have been offered the early pension. Between these periods the number of the pensioners in France fell, whilst the number of early retirement programme in other member countries increased.

In the Uruguay round the resources retirement programme was also defined:

- Eligibility for such payments shall be determined by reference to clearly defined criteria in a programme designed to remove land or other resources, including livestock, from marketable agricultural production.
- Payments shall be conditional upon the retirement of land from marketable agricultural production for a minimum of three years, and in the case of livestock on its slaughter or definitive permanent disposal.”<sup>80</sup> As is briefly defined the resource retirement programme would be determined especially relating to the removal of land or other resources. It is also important to note, as stated in the coming chapters, the difficulties of inspection of planted areas would create another obstacle for the effective application of these measures; what crops are being grown and comparing the results with what farmers say they are growing and for which they are claiming subsidy. Briefly, whether or not the producer has made a proper declaration for obtaining subsidy is unknown, and therefore, once this payment is given to a farmer, it is difficult to recover it.

It is also difficult to assess the success of the set-aside policy “because, there have also been shifts in world supply and demand for cereals.”<sup>81</sup> In microeconomics, the partial equilibrium position (as here considered for one product, the conditions for the existence and uniqueness of general equilibrium are often very complex for several markets, because of

<sup>80</sup> Uruguay Round of Multilateral Trade Negotiations (1986-1984)- (294A1223)(04), p.15

<sup>81</sup>Goodman S. F: The European Union , 1990, p.143

higher competition) depends on quantity supplied and demand at equilibrium price. But, here cereal production has been affected by some other external factors, such as, increasing trade, lower world prices and developing markets in Central and Eastern Europe.

Below in Table 2.16 areas set aside for arable land use in member countries are also shown. The impact of the application of set aside after the Mac Sharry reform and the Uruguay Round is illustrated for the member countries between 1993 and 2003. Application of the compulsory set-aside measure reduced the amount of arable land use in almost all member countries. During this period a large amount of set-aside area was realised by Germany, Spain, France, United Kingdom and Italy. The important part of the set-aside measure comprises the land for arable products and partly for the industrial set-aside.

**Table 2.16:** Areas set aside in the EU. (1000 ha)

Member countries	1993/ 94		1997/ 98		2002/ 03	
	Total Set- aside	Industrial set-aside	Total set -aside	Industrial set-aside	Total set aside	Industrial set aside
Belgium	19	3	12	1.5	27.2	3.1
Denmark	208	19	160	10.9	224.9	21.3
Germany	1,050	68	821	111.4	1,174.6	352.7
Greece	15	0	11	0	65.0	0.0
Spain	875	6	1,080	5.7	1,428.0	52.6
France	1,578	73	960	229.9	1,525.4	369.9
Ireland	26	0	18	0.7	33.8	0.3
Italy	195	43	157	14.8	229.9	22.6
Luxembourg	2	0	1	0.4	2.9	1.1
Holland	8	1	6	0.2	25.7	2.8
Austria	--	--	72	3.8	105.3	14.5
Portugal	61	0	32	--	103.8	0.0
Finland	--	--	146	0.3	208.1	0.9
Sweden	--	--	203	17.9	289.0	21.6
UK	568	51	297	30.2	629.0	77.7
Total (EU-15)	4,605	264	3,978	427.6	6,072.6	941.0

Source: <http://europa.eu.int/en/comm/dg06/index.htm> and European Commission: The Agricultural Situation in the European Union 1994 Report, 1995, p. T141 and for data 1998 DG-6 European Commission, <http://europa.eu.int/en/comm/dg06/index.htm> (from table: 3.5.7.2 and 3.5.7.1) and [http://europa.eu.int/comm/agriculture/agrista/2003/table\\_en/en361.htm](http://europa.eu.int/comm/agriculture/agrista/2003/table_en/en361.htm) from Implementation of the common agricultural policy

Due to the Reform package, intervention stocks for cereals fell up until 1997, but then as is indicated in Table 2-7 they increased for the above-mentioned reasons. In addition, compulsory set-aside for the year 1994-1995 decreased from 15 to 12 percent and for the year 1996-1997 it fell from 12 to 10 percent.

Finally, the importance of the Uruguay Round agreement must not be forgotten. By means of this agreement all contracting parties to GATT came together to reduce all direct or indirect measures, which directly or indirectly restrict agricultural trade. In the Uruguay round, general obligations towards tariffs and replacement of quantitative measures with reduced tariff measures were planned. According to this, "Quantitative restrictions (quotas) should be converted into customs tariffs equivalents and custom tariffs should be reduced."<sup>82</sup> By doing so negative welfare effects of the quantitative measures would be replaced by the

<sup>82</sup>Gerhard Fink: New Protectionism in Central Europe Exchange rate adjustment, Customs Tariffs and Non Tariff Measures, 1999, p.4



reduced tariff measures. In fact, neither tariffs nor quantitative measures increased the welfare of consumers. But tariff measures had more welfare effect on the nations, which it is analysed in depth in the third chapter.

In relation to the GATT Uruguay Round there are expectations that greater free trade in agricultural production could stimulate upward movement in world market prices. "For developing countries this could be felt by those exports gaining from price increases as well as those characterised by greater dependency upon food imports and external food aid programmes."<sup>83</sup> However in developing countries it is hard to estimate the possible impact of agricultural reform, because lack of know-how and communication between regions prevent mostly the successful application of those reform proposals. Therefore "CAP reform requires both a "macro" and "micro" approach in relation to developing countries."<sup>84</sup> The major omission of the Mac-Sharry reform was expressed by the EP's Committee on Development and Co-operation, and according to a critic "no mention was made in the two communications of the specific situation and needs of the developing countries and the proposed creation of an impact assessment mechanism to measure the impact of EC policy proposals in the field of agriculture on developing countries."<sup>85</sup>

The impact of CAP reforms has different effects on producers in and out of the Union. Therefore for countries which apply to become a member of the EU elaborate research is required to prevent possible negative impacts of the candidate country on the Union. What will bring the membership of this country to the EU? What is the socio-economic welfare in this country. How is the market? How big is the agricultural sector?

### 2.4.3 Agenda 2000

Agenda 2000 key elements comprise mainly, environmentally friendly production, food safety, improvement of rural development and competition power of the CAP and maintenance of production, while applied set-aside measures require alternative job opportunities for those producers who have become redundant.

The commission proposals were prepared to make agriculture more competitive in the world market, more consumers friendly, and by giving a new priority to rural development, more environmentally sensitive.

If the present level of the CAP price supports and direct payments continue it is expected that after the eastern enlargement; "the Unions surpluses for sugar, milk, and meat will rise, because land use will be increased approximately 50% and the farm labour force will be doubled."<sup>86</sup>

"The CAP's future policy objectives according to the Agenda 2000 are given below."<sup>87</sup>

- to improve the union competitiveness through lower prices,
- to guarantee the safety and quality of food to consumers,
- to ensure stable incomes and a fair living for the agricultural community,
- to make its production methods environmentally friendly and respect animal welfare,
- to integrate environmental goals into its instruments,
- to seek to create alternative income and employment opportunities for farmers and their family.

<sup>83</sup>Juliet Lodge: The European Community and the Challenge of the Future, 1995, p.128

<sup>84</sup>Juliet Lodge: The European Community and the Challenge of the Future, 1995, p.128

<sup>85</sup>Juliet Lodge: The European Community and the Challenge of the Future, 1995, p.128

<sup>86</sup>European Commission: Agenda 2000, 1997, p.13

<sup>87</sup>European Commission: Agenda 2000 1997, p.13

The above measures seem to be the continuation of the MacSharry reforms. If we compare these objectives with article 39 of the Rome Treaty, the major difference between these objectives lies in the environmental measures.

In Agenda 2000 reforms were planned to reduce the support prices, which will also help to reduce various expenditures in the Union. The internal producers could be more independent and able to compete in the world markets. Price policy was supported by increasing the product quality. In crop sector especially in cereals a 20% reduction of intervention price in two equal steps was planned.

In the cereal sector, apart from the voluntary set-aside, compulsory set-aside would be applied to prevent surpluses. On the one hand, application of compulsory set-aside would steadily reduce the production, but on the other hand, decline in reduction might cause a price increase in the cereal products which would reduce their competition in the world market. However, inspection of compulsory set-aside is very difficult and the results of this application would mean that producers would receive financial support to reduce their production, while they might prefer to increase production capacity steadily in the rest of their arable land. This capacity increase then would require an increase of the market capacity in the world market to reduce the surplus amount.

#### **2.4.4 The Doha Round**

In June 2003 the Doha Round was put into effect. In the Doha Development Agenda at the new Round of CAP meetings the EU has included concrete measures which will contribute to liberalizing world trade. It was planned to offer a greater market access for all, lower the trade distorting farm subsidies and make a sharp reduction for all forms of export subsidies, as well as food safety and environmental friendly production for third world countries' producers. But these measures must be taken bilaterally to be able to increase their effects on the world trade.

The important contribution of the Doha round could be seen in the decoupling payments, which break the link between production of a specific agricultural product and payments. The Doha Round of Agricultural negotiations aimed at achieving the measures given below, which set to reform the EU's CAP. These are:

- “Substantial improvements in market access (reductions in tariffs)
- Reduction of, with a view to phasing out, all forms of export subsidies,
- Substantial reduction in trade distorting domestic support.”<sup>88</sup> However the Doha Round of multilateral agricultural negotiations has contributed little. In addition, during the Doha round the spirit of the MacSharry reform was maintained and most of its measures were extended until 2007.

#### **2.4.5 The Assessment of the CAP Reform Process**

The reform package in 1992 has helped to reduce stocks in most of the reformed sectors (see Table 2-16). “In the case of cereals, set-aside has helped to keep production under control, while the increased price competitiveness has allowed significant additional quantities to be used in the domestic market, mainly for animal feed.”<sup>89</sup> A significant diminishing of the intervention stocks in the cereal and beef sectors was also observed. However, the current level of prices is still too high to be able to compete in the world market.

The overproduction and higher costs of production increase the burden on the CAP budget. During the last decade (1992-2002) agricultural income per capital has also increased.

<sup>88</sup>Halderman Michael and Nelson Michael: The EU's CAP, WP AY 0405-2, October 2004, p.53

<sup>89</sup>European Commission: Agenda 2000, 1997, p.23

The number of producers in cereals sectors has decreased, due to the reform measures, particularly the set-aside from production measure. Decline in land use forced producers to use land intensively. Intensive land use on the one hand reduced the expected utility of set-aside measure but increased the amount of direct payments result of set-aside.

In 1992 CAP reform direct payments were based on historical production and partially decoupled from production decisions. These products, which farmers were excessively planting in the rest of their land, increased the supply amount, because the result of such obligatory production dependency meant that producers could receive direct payments. Unfortunately, coupled payments, which were dependent on producing a specific crop, had increased cereal production in the last decade. Indeed, producers were paid only for setting aside their land to reduce arable land use. However, decoupled payments, which were put into effect in 2005 due to the Doha round of 2003, broke the link between productions of specific crops and payment. This meant direct payments were fully decoupled from production after 2005.

Consequently, the CAP had some negative effects, which were only partially corrected by the 1992 reform. "The support it provides is distributed somewhat unequally and is concentrated on regions and producers who are not among the most disadvantaged. This is having negative effects on regional development planning and the rural community, which has suffered badly from the decline in agricultural activity in many regions."<sup>90</sup> Consequences of this application are easy to predict: In some regions development of excessively intensive farming practices are having negative effects on environment and animal diseases.

The effect of the reforms on the environment was mixed. On the one hand, there were positive effects, such as, rational use of fertilisers and pesticides which resulted as price decreases; set-aside from production also had some benefits, especially incitement of improvement of the territorial distribution of livestock rearing. On the other hand, there were also negative effects "mainly the encouragement given to irrigated crops through the regionalisation of direct payments to cereals, oilseeds and protein crops, as well as the relative advantage given to intensive live stock farming through lower feed prices and subsidising silage."<sup>91</sup>

The burden of the agricultural support had been shifted from consumers by means of a reduction of the price support and the introduction of direct payment to the producers. "Budgetary expenditure is therefore significantly higher in the sectors concerned."<sup>92</sup> Of course, there were some other factors which were taken into account in recent years such as world prices, dollar exchange rate and intervention stocks.

Briefly, "a feature of the new rural policy is that EU member states are given more flexibility in designing their own programmes, allowing them to be tailored to the specific conditions facing their rural areas. It also requires that EU member States define suitable environmental measures to be implemented by farmers and allow payments to be made in return for compliance with general or specific environmental requirements or agri-environmental commitments entered into by farmers."<sup>93</sup> It is also stated by the Commission that agri-environmental measures are of key importance and have, in general, been welcomed by the public and well-received by farmers. However, the scale of support prices and crop specific payments may also discourage farmers (especially silage maize and flax) from committing themselves to dedicating land to environmental purposes.

Application of the environmental measures has increased as shown in the Table 2.17. From the beginning of the application; Germany, Spain, France, Portugal and the United

<sup>90</sup>Berlin European Council: Agenda 2000, Conclusions of the Presidency-CAP Reform, 11/ March/ 1999, p.3

<sup>91</sup>European Commission: Agenda 2000, 1997, p.23

<sup>92</sup>European Commission: Agenda 2000, 1997, p.23

<sup>93</sup>European Commission: Agenda 2000, 1997, p.91

Kingdom started to apply environmental measures. But by 1997 all member countries had started to apply them. As can be seen in Table 2-17 applications of the environmental measures increased from 10,879.940 ha to 26,851.107 ha during the period 1994 - 1997.

**Table 2.17** Agriculture and environment (regulation EEC No2078/92): application of measures

Application of measures		EU -15
Aggregate total on 31/10/1997		
Approvals	Number	1,642.178
	Hectares	26,851.107
	LU	455.335
Average aid	per hectares	91
	Per LU	110
Aggregate total on 31/10/1996		
Approvals	Number	1,227.380
	Hectares	22,866.424
	LU	374.849
Average aid	per hectares	--
	per LU	--
Aggregate total on 31/10/1995		
Approvals	Number	907.822
	Hectares	18,882.640
	LU	338.359
Average aid	per hectares	--
	per LU	--
Aggregate total on 31/10/1994		
Approvals	Number	--
	Hectares	10,879.940
	LU	78.883
Average aid	per hectares	--
	per LU	--

Source: Eurostat and EU Commission-DG-6, or <http://www.europa.eu.int/en/comm/dg06/index.htm>

The agricultural market in and outside (assuming Turkey as a non- member country) the EU is dependent on many factors. However, there are two factors which are rather important for the estimation of the long- term outlook in the agricultural market. These are: "Population growth and rising incomes. The world population was expected to increase by more than 85 million people a year between 1995 and 2005. And the second factor determining increasing food demand is the favourable prospect for world incomes and economic growth particularly in developing countries."<sup>94</sup> But the expected increase in agricultural product supply outside the EU (let us say in Turkey) will be less than the growth in demand. There are some reasons for this: First of all "it has limited availability of land due to urbanisation and environmental constraints, and secondly to a slowdown in the growth of yields."<sup>95</sup> However, urbanisation in the less developed countries must not be expected in the coming decade to be much faster than population growth in these countries. In developing countries such as Turkey implementation of the industrial revolution is still not completed and the poverty culture in less developed regions has hindered people from adopting new technical and genetic production methods except in some industrialised areas.

However, if the EU producers increase their investment in Turkey, especially in the agricultural sector, then such investments will contribute to an increase in the production capacity and technology of producers in less developed countries. Innovation in the production operation process may increase the cost of production near to the EU level, but

<sup>94</sup>European Commission: Agenda 2000, 1997, p.24

<sup>95</sup>European Commission : Agenda 2000, 1997, p.24

high technological production and know-how will also increase the quality and quantity of production. Such modernisation and innovation in production operation process will increase competition both in and out of the EU market. Moreover, adoption of know-how and high technological production methods and plant techniques will reduce regional disparities and price differences between countries.

**Table 2.18:** Nature of intra industry trade in the EU-12 (1985-1996)

Country	IIT % of Intra EU trade		Vertical IIT % of IIT		Horizontal IIT % of VIIT	
	1985	1996	1985	1996	1985	1996
France	52.3	66.6	46.3	51.0	62.8	61.4
Belgium	45.1	58.0	52.0	55.6	51.2	61.2
Netherlands	47.7	55.9	51.7	54.4	60.3	63.5
Germany	53.4	63.9	51.0	55.5	68.6	68.9
Italy	34.8	44.0	72.2	63.4	21.6	38.3
U. Kingdom	46.5	59.7	64.2	64.3	55.4	56.5
Ireland	23.1	29.6	77.1	85.5	59.4	67.3
Denmark	27.6	42.4	70.6	72.9	58.1	69.7
Greece	6.2	11.2	80.3	80.6	24.4	48.6
Portugal	11.7	26.7	83.6	61.7	45.8	29.7
Spain	29.4	52.5	70.6	55.4	43.4	37.7
EU-12	45.5	56.7	55.2	57.2	56.0	59.0

Source: <http://www.nottingham.ac.uk/economics/research/seminars/CA-IIT.pdf> Comparative Advantages and IIT, A panel data analysis for the EU from C. Diaz

At the beginning of the 1990's the effects of globalisation increased in almost all countries. Increasing communication and information technologies, in particular, enhance collaboration, and countries with similar factor endowments increase their trade share more than countries with different factor endowments (see table above). The new theoretical developments show the existence of imperfect competition and scale economies especially in industrial markets (Krugman 1979 and Lancaster 1980, Helpman 1981 etc.). Increasing similar product trade between countries compels producers to reduce the price differences on similar product trade. As seen in the table below, intra industry trade had considerably increased between 1985 -1996. During this period the horizontal IIT relative to the vertical IIT was observed, which implied that countries preferred to increase their trade capacity on similar qualities of products. Increasing similar quality of product trade forced producers to reduce the price differences between countries. Decline in price differences between countries also meant a decline in price intervention, export subsidies and import tariffs.

In the last decade, consequent on the CAP reforms, a sharp decline in the number of farms and in the number of people employed in agriculture was observed and these are expected to drop in the future too.

The creation of complementary or alternative income and employment opportunities for farmers still remains a major aim for the future, as employment possibilities in agriculture itself fall away. In the table below the number of farms and number of people employed in Agriculture can be seen during the period 1989-1999.

**Table2.19:** People employed in agriculture in the EU (1000 people)

Countries	1989	1994	1999
EU- 15	--	--	6,898
B	120	108	95
DK	149	127	90
D	1056	1171	1034
EL	930	788	669
E	1,605	1,164	1,020
F	1.503	1.128	968
IRL	169	151	136
I	1,912	1,550	1,118
L	6	--	3
NL	286	262	231
A	--	--	229
P	881	522	611
FIN	--	--	148
S	--	--	121
UK	593	534	424
IS	--	--	13
NO	--	--	104
CH	--	--	178

Source: <http://www2.wu-wien.ac.at/bib/dbueberblick.php> , Statistical data from Eurostat yearbook

Finally it is important to note that in the EU's CAP 90% of agricultural products are bought at a higher price and sold to the consumer at a lower price. In fact, more than half of the EU budget is being spent on CAP expenditure. Especially in the EAGGF guarantee section, expenditure goes to finance intervention buying, storage and export subsidies, although the share of the agricultural sector in the national income is approximately 3% and 6% of the working people are employed in agriculture.

Due to the enlargement the Commission confirms the policy choice expressed in the 'Agricultural strategy paper' of December 1995. New reform proposals will be dependant on the 1992 Mac Sharry reform, which shifted price support to direct payments. The reason for this is to reduce the possible effect on the market price.

In the near future "radical simplification of rules and a greater decentralisation of policy implementation, with more margins being lift to member states and regions"<sup>96</sup> are also required.

#### 2.4.6 New Reforms in the CAP

Over the coming decade, agriculture will have to adapt to further changes in market evolution, market policy and trade rules. These changes will not only affect the agricultural market but also local economies in rural areas in the Union. Agriculture in the EU-15 is highly diverse in its natural resources, its farming methods, its competitiveness and income level and also its traditions. In the Union diversity is one of the strengths of European agriculture, contributing to its character and quality. New reform proposals must be realised to cover the needs of the CAP.

The New Reform proposal in the CAP is needed. However, the Commission and the Council of Agricultural Ministers agreed to the historic Mac-Sharry reforms of the CAP on

<sup>96</sup>European Commission: Agenda 2000, 1997, p.26

May 21 1992, which paved the way for agreement in the Uruguay Round of trade talks under the WTO. However, there are some important reasons for starting to think about the next round of reforms.

One of the important reasons for new reform proposal is the inefficient support measures of the CAP which increased the incomes of internal producers whilst consumer welfare and producers gain outside the union was reduced in the last decade. Another important reason for the new reform proposal occurred at the time of the “opening of the Berlin Wall on November 9<sup>th</sup> 1989 and the subsequent collapse of the Soviet Union domination of Central and Eastern Europe.”<sup>97</sup> Reunification of the West and East Germany slightly increased the financial burden of the CAP. But the collapse of the Soviet Union and the application of those (so-called East Block) CEECs countries to join the EU, and which became full members of the EU in May 2004, increased the need for new regulations within the CAP.

The new reform proposal is expected to increase the competition capacity and sufficiency of internal producers in the market. But also the EU “Commission wants to make agriculture more competitive in the world market, more consumer-friendly and, by giving a new priority to rural development, more environmentally sensitive.”<sup>98</sup>

In the new reform proposals it must be taken into account that eastern enlargement brought approximately 100 million consumers into the Union “whose average purchasing power would, however, be only roughly one third of that of the current consumers in the union. The agricultural area would be expanded by half and the agricultural labour force would at least double.”<sup>99</sup> These negative effects could be reduced by diversification of their rural economies. Application of the existing level of the support prices and direct payments would create particular problems. Inordinate cash injections through direct payment would risk creating income disparities and social distortions in the rural areas of eastern countries.

New multilateral trade negotiations attempt to reduce border protection, to reduce export subsidies and to reshape internal support instruments. Another increasingly sensitive issue is the need to introduce environmental and social standards at the international level and to take into account consumer concerns. Since the Uruguay round similar measures have been taken to increase the contribution and effectiveness of the CAP on the trade liberalisation.

In the Union, GATT (WTO) commitments also affected trade liberalisation and especially export from the Union. According to earlier GATT commitments, tariff reduction on industrial goods was performed, but for agricultural products, this reduction was not done. On the one hand, restrictions on agricultural products from the third world are required to protect domestic producers. But on the other hand, export subsidies for domestic products are given to increase domestic export and competition change of domestic producers on the world market. In time the negative impact of this unfair trade liberalisation increases the abyss between the rich and the poor.

The protests of 30 thousand people against the WTO meetings in Seattle were not casual. Similar protests have been observed in Prague, in Melbourne and in Geneva, although during those protests in Seattle, the demands of the labour union in the USA contradicted the demands of less developed countries representatives. The demands of the labour unions in the USA concentrate on the quality of labour and environmental standards; this will increase the protection level of developed countries against the third world countries exports.

Further liberalisation of the agricultural trade is needed, because import levies in the EU are still extremely high. “Because the tariffification of import in the EU, as elsewhere, was based on the base period 1986 to 1988, the initial tariff equivalents or maximum bindings

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<sup>97</sup>DG VI Buckwell Report –Towards a Common Agricultural and Rural Policy for Europe- Report of an Expert Group; Chapter: Political Background, p.1

<sup>98</sup>European Commission: Agenda 2000, 1997, (reform of the CAP), p.4

<sup>99</sup>European Commission: Agenda 2000, 1997, p.25

were extremely high. So even after these have been reduced by the agreed 36% tariff reduction in the URRA between July 1995 and 2001, the applied tariffs are expected to be well below the maximum bindings.”<sup>100</sup> It was therefore difficult to expect from this tariff reduction any positive effects on the domestic market. Nevertheless this was the first tariff reduction and the new reform proposals are expected to lower it for the welfare of the world nations. According to the Buckwell Report such tariff measures will be needed against sudden price collapses or surges of import. As mentioned above due to this process internal producers will be protected at the cost of the consumer’s utility.

The demands of the producers in the USA during the Uruguay Round were almost the same; furthermore, they requested free movement of agriculture from the Union and also financial resource possibilities in the Union, such as banking, stock shares etc. However, obtaining the mentioned demands will be the end of the agricultural sector in the Union, because, the USA has the biggest export capacity of agricultural products and obtaining the free movement of agricultural products will cause the collapse of the agricultural sector in the Union. The recent debate on long-term prospects has revealed factors of uncertainty; in particular, the result of the next WTO Round could also affect the dairy sector. Furthermore, subsidies from the WTO will also not be able to protect internal producers, and internal producers will never be able to compete with these low product prices.

According to the decisions of the Council in Brussels in November 1997, it was planned to prepare the agriculture sector to be more “effective, multifunctional and competitive and it must be divided or distributed up to the less favourable areas,”<sup>101</sup> in order to become more effective and productive. The inspection of the producers will also be required, for control of the proper application of the CAP. Measures for environmental protection are becoming more important for healthy feeding and living.

In October 1998 at the Gmunder Conference it was declared that the reform proposals of the Commission for the agriculture and forestry sectors have an important function in maintaining energy and raw material requirements. According to the experts “production of heat, electricity and motor fuel from growing raw materials is equal to 40 million tons of oil in 1995 although this amount would be 130 million tons of oil in 2010, which approximately corresponds to a 14 million hectare area.”<sup>102</sup> Maintenance of raw material is important and it will also contribute to increasing the environmental protection and reduce the dependency of the EU countries on third world countries. Improvement of raw materials will also help to substitute fossil energy use with bio energy.

Implementation of the above-mentioned regulations would help to increase the use of raw material in the industry sector, which will also contribute to protecting the environment. However, realisation of raw material and bio energy use require structural innovation and know-how.

The other important contribution to the development of the raw material use will also create employment opportunities for the unemployed people in the agriculture sector. In the reform proposals it was stated that if the “use of raw materials and energy transporters can double up from 6% to 12%; it is estimated by the Commission that this will create approximately 500.000 job opportunities.”<sup>103</sup> The realisation of these reform proposals will help ex-farmers who were sent into early retirement to become more useful in the agricultural sector. However, it would be better to remain within the EU where there are approximately 18 million unemployed people, which is a considerable amount, and, in order to create new jobs,

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<sup>100</sup> DG VI Buckwell Report –Towards a Common Agricultural and Rural Policy for Europe- Report of an Expert Group; Chapter: GATT and WTO, p.2

<sup>101</sup> BMLF: Jahresbericht 1998, BMLF, Wien, 1999, p.91

<sup>102</sup> BMLF: Jahresbericht 1998, BMLF, Wien, 1999, p.81

<sup>103</sup> BMLF: Jahresbericht 1998, BMLF, Wien, 1999, p.82



a more radical solution must be used, such as, cooperation with eastern countries' producers to increase the investment amount in these regions, or the pension age, which it is very high in the EU, can be lowered, thus allowing young and dynamic people to start work and become useful.

At the Berlin summit the Commission proposed to improve the less developed regions and develop the CAP reforms to cover the need for producers to become more competitive in the market. Agriculture was also to undertake the responsibility of environmental protection.

In 1999 the Seattle Millennium round stated that custom free trade of industrial goods would be a hindrance to the less developed countries, which are producers of agricultural goods. Besides this, the importance of environmental friendly production facilities in world trade and an investment increase was demanded. Seattle has altered the terms of liberalisation in two respects:

Firstly the liberalisation of trade cannot be determined only through reduction of tariffs because the, "fundamental rights of workers, protection of the environment and health cultural diversity, the multi-functionality of agriculture, quality of the environment,"<sup>104</sup> have also a great impact on world trade.

Secondly, negotiations can no longer be the privilege of just a few major groups of countries; the EU, the United States and the Cairns group. "Seattle had to take far greater account than before of the major third world partners particularly India, Brazil, South Africa and Egypt, the emerging economies especially in South East Asia and our ACP partners."<sup>105</sup>

The impact of globalisation on world trade, which is based on a single market and a liberal trade, is expected by the WTO, which has 134 member states and 31 applicant countries, to remove the trade barriers and subventions in world trade. During the Seattle round it was discussed that the advantage of free trade and removal of the trade barriers would contribute to the welfare of the less developed countries because according to them; "in 1997 the richest developed 20 countries realised 86% of the world production and the rest of the world only 13% of the total production. Developed countries obtained the 68% of direct investments and the other countries obtained the rest. Between, 1980-1997 the growth rate of the 20 developed countries was above 4%, in 79 countries it was less than 3%, and in 59 countries negative growth rate was observed. Between these periods the income of the labour force in 14 developed countries was 10 times more than in 113 countries."<sup>106</sup> In contrast to this it was stated by the EU that if it was possible to reduce the protection approximately "50% of the production in the world could increase to approximately 370 billion dollars, of which 60% of this - approximately 220 billion dollars could be distributed to the developing countries."<sup>107</sup>

The protests in Seattle and then in Prague, in Melbourne and in Geneva started the process of alliance building and the preparation for broader based negotiations for further liberalisation of the world trade especially for agricultural products. This implies that in the new reform proposals a sharp reduction in market support measures will be expected. In addition, this removal of trade distorting measures, which are defined in the amber and in the blue box, will also be in the new reform proposal. Therefore direct payments which are considered in the blue box will be transferred to the green box measures. The expected reduction on support measures was also pointed out by the Commissioner Fischler. In his speech he defined the new framework of the new CAP reform. This is given briefly below:

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<sup>104</sup> EU Commission, WTO Minister conference in Seattle Appraisal and Prospects, Strasbourg, 13/ December/1999 [http://europa.eu.int/comm/commissioners/lamy/speeches\\_articles/spla08\\_en.htm](http://europa.eu.int/comm/commissioners/lamy/speeches_articles/spla08_en.htm)

<sup>105</sup> EU Commission, WTO Minister conference in Seattle Appraisal and Prospects, 13/ December/1999

<sup>106</sup> Cüneyt Ülsever: Seattle-Ankara, 1999.4.12, p.20

<sup>107</sup> Cüneyt Ülsever: Seattle-Ankara, 1999.4.12, p.20

- “cut import tariffs by, on average, 36%, to improve market access for agricultural products coming from third world countries;
- cut export subsidies by, on average, 45%, and, for certain products abolish them altogether;
- cut trade-distorting support by 55%;
- take account of non-trade concerns; and
- give developing countries a better deal, by creating better opportunities for market access, recognising the importance of food security, and allowing a preferential implementation period for any new commitments.”<sup>108</sup> These measures indicate that liberalisation of world trade on agricultural product trade will continue in the coming decade and negotiations will continue in the same direction to ensure a better living standard for all.

The pressure on the CAP reforms is concentrated in four groups. These are budgetary pressure, because of the expensive finance of the CAP, consumer pressure, because of the increasing consumer prices in the CAP, external pressure, especially the Uruguay round and WTO pressure on the EU, and environmental pressure on the production operation process of CEECs, which must be realised to increase the quality standards on the EU level and also must consider the environmental friendly production methods.

In the new reform proposal given below, considerations must not be neglected which mostly affects the producers in the EU. These are:

- a. Production capacity must be lowered for those products which are causing surpluses and higher prices and during and after the transition period direct payments must be paid to the farmers in accordance with the decouple area payments (no dependency on production volume to avoid abandonment of production).
- b. Internal products, which are highly protected in the Union and production costs are highly expensive in the Union, must be substituted with imported products which are relatively cheap. This will increase fair trade and consumer welfare,
- c. Substitution of imported products will prevent price intervention and increase in the Union, but also in time it will help to reduce the export subsidies and the import levies within the Union.
- d. Regulations must be carefully applied to prevent a strong fluctuation within the Union. On the one hand, reduction on tariff amounts will cause a price fluctuation in the market and decrease the production capacity for the next term. But on the other hand, declining levies will increase production capacity outside the Union which will reduce the price of imported products for the next term if the existing market capacity is maintained. This will either force importers (non-EU farmers) to increase the market share for marketing their overproduction, or they will reduce their product price which will have a small contribution on consumer demand because price elasticity of agricultural products is lower as it is in other basic food stuffs. Therefore, any increase in the market can be realised if the market share of internal producers is decreased. The internal producers must be able to increase their competition capacity against external producers. The competition capacity cannot be increased by higher protection walls, especially in the international market. This can be overcome in time if the application of new planting methods and techniques etc. are used to reduce production costs.
- e. Consumers’ nominative incomes will increase if the lower prices of imported products are sold in the market. Increasing the nominal income, (because of negative effects of the income elasticity mentioned above for agricultural products) will be reflected in luxury

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<sup>108</sup> EU Commission: Agriculture; International trade Relations; Speech of Commissioner Fischler, [http://europa.eu.int/comm/agriculture/external/wto/index\\_en.htm](http://europa.eu.int/comm/agriculture/external/wto/index_en.htm),

products. Increase in nominal income without changing real income will increase the welfare of consumers.

f. In principal, producers seem to be more affected than consumers by price changes. However, a percentage of consumers are employed in the production of the basic-foodstuffs. On the one hand, (because of lower prices of the imported products) their nominal income will increase, but on the other hand, after some time their real income will reduce, while they are working in the agricultural sector. Hence, decline in internal product prices will be reflected in the cost of production, which means usually wages will be reduced to reduce the product prices.

g. Set-aside from production must be increased for those products which are excessively produced and cause overproduction. By doing this export subsidies will be reduced. Decline in import levies will force internal producers to reduce the products which are costly to produce. Direct payments will be given therefore, for those producers who set aside their land and/ or replace their higher cost products with lower cost products, or jump up to the other sectors, which will be more productive than agriculture for the Union.

h. Ex-producers may be educated in their new job with intensive training programmes to increase their know-how and information capacity, in order to attain a leading position ahead of those new members who have factor endowment but are suffering from lack of know-how and information technology. In the future it is expected that all citizens of United Europe will be able to work and dwell within Europe. This will help unemployed people, who are less productive in their own country, to travel to other Member States to become more productive in a related field.

In addition to the above, the reform of the CAP must improve the competitiveness of the CAP both for external and domestic markets. The rate of protection must be done to increase the member and non-member countries' welfare. Anxiety within the Union against the lower product prices of the third world would then be overcome by access by new members to the Union. On the one hand, increasing the market capacity within the Union will facilitate the progressive integration of new member States, and on the other hand, lower prices will benefit consumers. Once again in developed countries income elasticity of demand against the basic foodstuffs is negative and there is no need to worry about the lower product prices. Any increase in income will be reflected in the quality products and environmental friendly (ethnic) production.

The set-aside measures will be required for the basic foodstuffs, which will be obtained in the future from new candidate Member States, where their agricultural production is cheap relative to the other Member States. But the alternative income and employment opportunities must be realised for the ex-farm producers within the Union. Briefly "ensuring a fair standard of living for the agricultural community and contributing to the stability of farm incomes remain key objectives of the CAP."<sup>109</sup>

All these proposals together have the aim of giving concrete form to a European Model for agriculture in the years ahead. In the list below lines of this model are given, which should be:

- “-A competitive agriculture sector, which can gradually face up to the world market without being over -subsidised, since this is becoming less and less acceptable internationally;
- Production methods, which are sound and environmentally friendly, able to supply quality products of the kind the public wants;
- Diverse forms of agriculture, rich in tradition, which are not just output-oriented but seek to maintain the visual amenity of our countryside as well as vibrant and active rural communities, generating and maintaining employment;

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<sup>109</sup>European Commission: Agenda 2000, 1997, p.4.

-A simpler more understandable agricultural policy which establishes a clear dividing line between the decisions that have to be taken jointly and those which should stay in the hands of the Member States;

-An agricultural policy which makes clear that the expenditure it involves is justified by the services which society at large expects farmers to provide.”<sup>110</sup>

## 2.5 Turkey's EU Membership

The integration of Turkey into the EU will affect her economy, but membership by Turkey probably mostly affects the EU's CAP because the size of employment and productivity in agriculture differ between the EU and Turkey. First of all Turkey's membership will bring approximately 70 million new consumers to the EU market. However, roughly 8% of the working population in Turkey is unemployed and 15% lives in absolute poverty. The agricultural land is estimated at 34% as a percentage of the total land area which means 36.430 ha utilized agricultural area with approximately 32.7% agricultural people in total employments which is estimated about 12 million people working in the agricultural sector. (See Table 2.20).

### 2.5.1 General Glance at the Accession Period to the EU:

The Transition period into the EU is dependent on the progress which is made by applicant countries in developing their economic and social conditions, adopting, implementing, and enforcing the *acquis*. In recent years Turkey has also implemented many reform proposals, but still there are many other requirements which must be realised for possible full membership by Turkey.

At the Lisbon European Council in 1992 The Commission, in response to a request by the Council noted that: Membership to the European Union implies the acceptance of the *acquis communautaire*, which means:

1. “The contents, principles and political objectives of the Treaties.
2. The legislation adopted in implementation of the Treaties, and the jurisprudence of the Court of Justice.
3. The declarations and resolutions adopted in the Union framework.
4. The international agreements and the agreements between Member States connected with the Union's activities.”<sup>111</sup>

Both Turkey and other applicant countries are required to strengthen administrations and institutions and to strengthen investment in business and infrastructure.

Economic integration in the Union is expected to be realised between countries which have economic power such as qualified labour, capital and infrastructure etc. and other countries can be forced to integrate into these countries.

The well-known surpluses and higher EU market prices are expected to affect Turkey as was observed in CEECs. However, the advantages and disadvantages of the EU membership will affect both the EU side and Turkey. For example, the higher prices of the EU are still a hindrance for marketing of EU products worldwide. However, in the last decade application of the CAP support measures have reduced the surplus amount, but the surplus problem was unfortunately not removed from the CAP agenda. To avoid this, strict supply control and sharp reduction on export subsidies is required. Market-oriented agricultural systems simultaneously reduce consumer burdens and eliminate the need for export subsidies

<sup>110</sup>Berlin European Council: Agricultural Council, Political Agreement on CAP Reform (European model of Agriculture), 11/ March/ 1999, p.7

<sup>111</sup>Delegation of the European Commission (Anouil and Karides): The European Union and Cyprus, 1997, p.7

and supply management. Turkey must ensure the necessary liberal market conditions, which are in the EU's CAP agenda. Restructuring the agriculture sector will help to create competition in the food processing and distribution sectors. The EU announced also a list of conditions that must be met under agriculture include:

“1-increasing production through sustainable agriculture, 2- phasing out existing support policies and replacing them with a direct income support system targeted to low income farmers, 3- establishing a land register system, 4- upgrading food inspection and control mechanisms and, 5- establishing a clear strategy for phytosanitary conditions.”<sup>112</sup> In addition, it is also planned to reduce the Turkish government's role in agriculture by privatizing its State Economic Enterprise (SEE). This may contribute to a reduction of the cost to the state of supporting these institutions, some of which experience economic difficulties maintaining their existence in the market.

Improvement of the agricultural sector will also create better conditions for employees in agriculture. It could be more expensive to stimulate rural activity and employment than to deal with the problems of large numbers of disaffected unemployed persons migrating to towns.

It is also the case that there are significant environmental improvements required in rural areas. Large-scale productions, in particular, have suffered serious industrial pollution. Application of the environmental measures and inspection of measures must be undertaken.

## **2.5.2 Turkey's EU Membership Impact on the CAP**

### A glance at Turkey and EU relations

Turkey's first application to the Council of the EEC (EU) for becoming a full member was realized on 31 July 1959. Unfortunately, difficulties and differences between Turkey and the EU prevented this membership. However, relations between Turkey and the EU increasingly developed. The first agreement was signed on 13 September 1963, known as the 'Ankara agreement'. This was a partnership agreement which was signed to develop relations for customs union and for possible membership. Its additional protocol which established the framework of the Customs Union was signed in 1970. In January 1996, Turkey finally became a member of the Customs Union after a long negotiations period. After this Turkey's trade relations with the EU increased slightly. Particularly in recent years Turkey has made many structural and legislative reforms within the customs Union of the EU, and this contributed to Turkey receiving applicant country status on 17 December 2004.

The Customs Union covers industrial and processed agricultural products. Traditional agricultural products will be included in the Customs Union after Turkey's adaptation to the CAP. Turkey has started to apply the common custom tariff (CCT) for imports from third world countries, with the exception of products which are exempted in the Turkey- EU association council decision No 2/ 95 (WT REG 22/ 2). However, reduction of custom tariffs was partly realised in the following years but not completely removed. In addition to this Turkey acceded to the GATT in 1951 and has participated in all multilateral trade negotiations. Turkey became an original member of the WTO in 1995 and is bound by all measures of the Uruguay round agreement. But as a non-EU member, non-tariff measures of the EU's CAP, such as intervention price increases in the imported product prices, export subsidies, date limitations such as seasonal imports for certain products and quotas on agricultural products maintained, create difficulties for producers in Turkey.

With trade in the basic agricultural products Turkey and the EU agreed to develop the current agricultural trade regime which will contribute to increasing Turkey's agricultural policy moves towards the EU' CAP. Consequently, tariff and quota reductions have been

<sup>112</sup> Morgan Bobby: Turkey, Bi- Weekly Bulletin volume: 14- no: 6, April 12. 2001

steadily made to achieve better market access for Turkey's producers. As a result of these negotiations, from the one side, certain agricultural products such as tomatoes, poultry products, olive oil, cheese, certain fresh fruits, hazelnuts, and fruit juice gain access to the EU market. On the other side, frozen meat, butter, cheese, cereals, refined vegetable oil, sugar, tomato paste, some alcoholic beverages and animal feed stuffs from the EU gain access to Turkey's market. In the subsequent years of the Customs Union EU exports to Turkey increased, but exports from Turkey to the EU decreased.

"The share of the EU in Turkey's total exports which was 51.2 % in 1995 fell to 49.7 % in 1996 and to 46.7 % in 1997. Meanwhile, the share of EU goods in Turkey's imports shifted from 47.2 % to 53 % in 1996 and to 51.2 in 1997."<sup>113</sup> It is obvious that the small scale production and inefficient competition capacity of producers in Turkey reduced their trade share to member countries. However, the appreciating Turkish Lira (TL) in real terms also caused this result in the last decade. Particular trade partners of Turkey in the EU are the UK, Germany, Italy and France which are mostly large scale producers compared to Turkey, because in Turkey almost 70 percent of producers have less than 5 ha UAA. In Turkey most of the western region producers have larger farm sizes and receive a significant amount of agricultural support relative to eastern regions.

It is obvious that the impact of possible EU membership will differ from region to region, and regional development for Turkey is needed to increase the competition of Turkey's producers with the EU 25 countries. The difficulties of Turkey during the accession period to the EU will require both parties to undertake the actions, noted below, for the prevention of a possible and undesirable economic effect on the market, such as price stagnation, an increase in the unemployment rate etc. These can be classified as:

1- Equation of the prices between EU producers and Turkey (especially for cereals and dairy products)

This measure has been used for the integration of other applicant countries in the past. Equation of the prices does not mean the same price, but the difference between applicant country and the EU producers may need to be increased to the same level for similar products to protect price fluctuation. This can be obtained by restructuring the existing production technique, increasing the quality and the capacity of production, which is also demanded in Agenda 2000. A consequence of these restructuring, production costs of Turkey's producers will be an expected increase in the short run, which is desirable for domestic producers to protect their market share in the EU.

In Western countries welfare of the consumer is higher relative to Turkey's consumers. The higher income effects reduce the relative lower cost products of third world countries in the EU market, because product prices at retail level are not the only important consideration for EU consumers; some other important things such as hygienic and organic production methods, labelling, ethnical food preference etc are also important. This means negative effects of income elasticity reduces their demand on basic foodstuffs and increases their demand on high quality, hygienic and environmental friendly products. The production process in Turkey does not operate according to this criterion.

Since the 1930 economic crisis, such policies have been applied. Although, an increase in custom duties, reduction of production, competitive devaluation etc. were not sufficient to avoid the crisis. The negative effects of these measures caused more reduction in production in world trade. These policies, which were called "beggar thy neighbour' policies, resulted in a negative reaction."<sup>114</sup> Such negative experiences have caused a move from the existing system to more liberal and less protectionist policies.

<sup>113</sup> WTO: Turkey: October 1998 Trade Policy Review, P.23

<sup>114</sup>Alpar Cem/ Tuba Ongun: World Economy and International Economic Organisations, 1985, p.124 translated by author

The impact of free trade facilitates cooperation between countries and increases foreign direct investments. Increasing technical capacity and know-how accelerates the production operation process. This process also contributes to extension and improvement of product variation for the market.

The demand by consumers in Turkey for western products is high, because the western appearance of products is more attractive. In many regions of Turkey, lack of attractive presentation, advertising, promotion and lack of corporate identity image, jars, quality and especially labels, all of which need to be adjusted quickly to western standards, reduce the demand for Turkey's products. These hindrances too many producers in Turkey reduce the power of large-scale producers in the EU market.

2- 'The elimination of Tariffs and non-tariff barriers to trade'

Turkey had already joined the customs union in 1996. However, this was mostly realised for industrial products and for certain agricultural products only the tariff reductions were observed. If Turkey becomes a full member of the EU it will increase Turkey's agricultural product trade with the EU market and this increase will create some difficulties which must be overcome before full membership. These difficulties are given briefly below.

For the EU members: Elimination of the tariffs may cause excessive imported products from Turkey, which is not desirable for internal producers. This may cause price fluctuation in the market. Therefore it is necessary to reduce certain agricultural products which are produced by both parties to prevent excessive production.

For Turkey: Abolition of the barriers may affect SME in agriculture which are not in a good enough condition to compete in the market. Insufficient capacity and technical equipment, lack of know-how in organic farm methods, lack of hygienic production etc will reduce the competition of Turkish producers in the EU market. In Turkey industrial production is still not sufficiently developed to be able to compete with developed countries products. Therefore trade in agricultural products is more important than it is in EU countries which have more shares in total GNP and the population living and working in the agricultural sector in Turkey is also higher relative to the EU countries. (see Table 2.20).

The demand for agricultural products is also more elastic compared to industrial products which reduce the power of cause problems for Turkey's producers. This means if any price reduction for basic foodstuffs in agriculture is realised in the EU, demand will not also increase at the same level to preserve the equilibrium position. But, price fluctuation in the market will be reduced within the CAP system by using the price support system.

Consequently trade capacity between Turkey and third world countries is expected to reduce (trade distortion) whilst trade capacity between EU and Turkey will increase (trade creation).

3- Wages in the EU are higher than in many regions in Turkey, and lower wages and lower productivity will create problems. The reasons for these lower wages are many; such as, increasing rate of population, insufficient labour unions, unemployment etc. In cases where free movement of people is realised for Turkey, migration into the EU countries must be expected. However, this problem can be eliminated if the free movement of labour and people is restricted as occurs in some CEECs. In some of these countries such as Poland, Czech Republic, Lithuania, Hungary and Latvia free movement of people is not allowed for five to ten years until necessary improvements are made in adopting the Community Acquis, which means the application of Community rules and standards and all the measures implementing common policy. The higher wages, in particular, in the western countries may become attractive to those people who are not employed in their own countries, but lack of qualifications reduces their chance of getting jobs easily. First of all, communication difficulties and the lack of technical and professional knowledge prevents them competing

with qualified labour power in western countries. There are also strong labour Unions, which will also prevent such people immigrating to the EU countries for work.

4- In Turkey, as in the CEECs the cost of production for basic foodstuffs is cheaper than in the EU.

CAP policies protect domestic farmers from imported products. Since the EU enlargement into the CEECs such protection is in decline, because the cheaper products of the eastern countries slightly reduce the costs of agricultural production, in the long run. Thus, strong protection will only be required for those products which have over production like cereals and milk products. But if the existing price supports and direct payments maintain and apply to these products, then product prices will increase in Turkey in the same way as in eastern countries. These price increases reduce the competition change of the EU products in the world market. Thus, protection of the CAP products will harm both member and non-member producers.

5- The number of unemployed people in Turkey is higher than in the EU. After EU membership, the number of unemployed people will continue to increase, because new planting techniques and high technological production methods will reduce the need for a labour force in agriculture. In the near future this will cause a large outflow from this sector if necessary measures for the education of the labour force and rural activities are not incited and encouraged in Turkey.

6- Emigration to the western countries is expected to increase. Welfare effects will play a major role in this. The higher living standards of the EU are more attractive for the lower income people in Turkey. Besides this, political and criminal problems in Turkey are greater than in the EU. This will also encourage Turkish citizens to immigrate into the western countries, but protection against such migration is limited by Acquis measures as much as possible.

7- Turkey's membership will increase product amounts within the CAP. As a result of this increases in expenditure of community agencies will also increase to provide support measures in Turkey such as direct payments and set-aside measures for the prevention of overproduction. An increasing number of producers within the CAP system will increase the burden on countries such as Germany, UK and France, which are the net contributors of the CAP budget, thus increasing their share in the CAP budget. On the other hand countries such as Greece and Portugal, which are net receivers of the CAP budget, are expected to receive less financial support after Turkey's membership, as was observed after the eastern enlargement, because in Turkey production costs are also lower as they were in Slovakia, Poland, Hungary and in Lithuania. Hence Turkey will also become a net receiver of the CAP budget. In addition the population of the Turkey is about two thirds of the CEECs, which means the monetary amount will be considerable.

8- The trade creation effect is more advantageous for producers in Turkey than those in the EU.

The EU membership will remove the import tariffs on agricultural products from Turkey. Turkey joined the customs union in 1996, but this membership only contributed to an increase in the industrial trade capacity of EU countries because only tariffs for non agricultural products were reduced. Therefore removal of import tariffs on agricultural products will positively affect producers in Turkey, if the product quality increases up to EU standards whilst production cost still remain low relative to the EU producers.

On the one hand removal of the import tariffs will increase the trade capacity between Turkey and EU producers, but on the other hand import tariffs of the EU for non-member countries will become higher relative to the previous custom duties of Turkey, which are applied to non-member countries, because after Turkey's EU membership is finalised a considerable amount of imports realised by third world countries will be replaced/ substituted



by internal products of the EU and the application of compulsory minimum import prices (MIP) to the third world country producers will reduce such imports from non-member countries.

Due to the Customs Union, the trade creation begins to show an effect on trade capacity increase between the EU and Turkey as was explained by Viner (1950). According to him there are discriminations between member and non-member countries, because there are two different aspects of a trade situation. One is trade creation, in which production is transferred from a higher cost to a lower cost source of production (let's say within the Union from the home country to a new partner country) because tariffs have been removed from the latter country's product. The second, trade diversion, occurs when production is transferred from a lower cost source to a higher cost source of production (let's say from third world countries) because of higher tariffs now applied to the new member countries.

It is expected that Turkey will lose the market in non-member countries (trade diversion), as happened in the UK. After EU membership the UK lost its preferential position in the EFTA countries; because after EU membership trade barriers have been removed, which created a new market for the UK. Consequently, trade capacity between the UK and the EFTA decreased. Because of removal of the barriers within the Union trade between the UK and the EU increased and imports reduced from EFTA because of custom duties.

The situation of Turkey related to non-member countries will be the same, because before membership producers can export their products without any restriction (except local government measures). But after joining the EU prices are offered by the Community agencies and export subsidies can only be determined by these agencies, with these prices usually being higher than the world prices.

### **2.5.3 EU Enlargement and Turkey's Prospective Difficulties with Full Membership**

For an assessment of the possible enlargement of Turkey into the EU it is necessary to apply the whole of the Community *acquis*. This does not mean an additional budget, but organizing the Union's response in a more coordinated manner to assist and to cover the needs of the new member.

Economic justification for the enlargement of the European Union arises from the expansion of opportunities to exploit competitive advantages that result in the removal of barriers to trade. The advantage of such removal of trade barriers results in the substitution of lower cost of supply sources (or production) for the higher cost sources. However, the major reason for this enlargement was not only trade creation. For example, financial assessment of the eastern enlargement shows that "the total annual cost of the enlargement of the ten CEECs would cost the EU some 30 billion ECU (or 0.4 of EU's GDP or 31% of the EU's total budget expenditures) in the year 2000."<sup>115</sup> The cost of eastern enlargement is expected to be compensated in the long run by the positive trade creation effect.

The number of countries which have become members has grown considerably since its foundation and despite many problems a number of countries are queuing up to join.

The CEECs which joined the EU in 2004, as well as Bulgaria and Romania are relatively poorer countries than the EU they all have a smaller GDP than the EU, higher inflation and a high proportion of employees in agriculture relative to the EU work force. However, Turkey, which has applied for full membership, has still lower GDP per capita, higher inflation and a higher unemployment rate, all of which will cause a problem for integration of the Turkish economy into the EU. Indeed "Turkey's agricultural employment of 9.7 million people will unquestionably have significant implications for the EU's agriculture sector, where a total of 6.9 million people are employed in the EU. Although the share of

<sup>115</sup> Breuss Fritz: Austria's Approach toward the EU, WP: 18, 1996, p.49

agricultural output in the whole EU economy accounted for 1.7 %, the value added generated through the agricultural sector reached 133.9 billion, whereas, in Turkey, although agriculture is still a significant sector with a share of 14.3 % in the total GDP, it accounts for an output of merely 54 billion.”<sup>116</sup> These mentioned factors increase the cost of integration for full-membership. Moreover, these difficulties in Turkey require large grants from the EU’s structural fund and from the CAP in order to achieve membership.

The possible membership of Turkey will obviously increase the use of arable land and share of employed persons in agriculture in the EU. However, production capacity of Turkish producers is low relative to the EU and higher than the CEEC. Furthermore, the share of the agricultural sector in total GDP is 14 percent, which is also higher than both the CEEC (7%) and the EU (1.7%), although in monetary values it accounts for about half of the EU’s contribution to the total GDP.

**Table 2.20:** Comparison of agriculture in the European Union (EU-15), in the ten new members and in Turkey (in 2000).

	EU-15	10 CC 's	Turkey
Total area (km2)	3,234.3	738.574	769.604
(UAA) Utilized agricultural area (1000 ha)	130.443	38.381	36.430
UAA of total area in % (2004)	40	51	34.1 (in 1997)
Agricultural employment/total employment (%)	4.3	21.5	32.7
Agricultural GNP/GNP, (%)	1.7	7	14.2
Production of the agricultural sector, 1999 (mn Euro)	274,768	16,734	28,940
Agricultural foreign trade balance (mn Euro)	-122	-2,287	-28,455
Exports share to turkey %	1.2	2.0	:
Exports share to EU %	62.1	67.6	52.3
Population (mn)	376.0	73.9	68.6
GDP (per capita) (PPP) (2)	8,829.4	11.320	5.500
Inflation %(1)	1.8	7.7	43.5
Trade Balance (mn/Euro) (3)	49,918	-33,596	-16,397
GDP in value Bn Euro	9,716 for EU 25		212.3

(1) GDP price deflator,

(2) Purchasing power standard,

(3) Total all products- CEEC trade with extra CEEC

Source: Florence Jacquet: Future Agricultural Policy in the European Union, 2003 and collected data from <http://www.un.org/esa/earthsummit> (country profiles Turkey) and from IMF direction of trade statistics CD-Rom for agricultural value added and agricultural employment data. and Eurostat, European Commission, Director General for Agriculture, FAO and UNSO and UAA % data from, O. Onema: Governmental policies, 2004, table: 1 and for Turkey’s UAA% from <http://www.un.org/esa/earthsummit/turkey-cp.htm> and Production data for Turkey from Oskan, Burell, and Vilchez: Turkey in the EU Final Report, 1. 12. 2004, table.4.4, p.54, Turkey’s foreign trade data from <http://www.fifoost.org/EU/statistik/tuerkei.php> and GDP form Commission of the European Communities: Issue Arising from Turkey’s Membership perspective, 2004, (COM2004 656 final), data for agricultural employment: [http://www.europarl.eu.int/enlargement\\_new/statistics/pdf/22a1\\_12\\_02\\_en.pdf](http://www.europarl.eu.int/enlargement_new/statistics/pdf/22a1_12_02_en.pdf) 2002 by Jens Dalsgaard, & [http://europa.eu.int/comm/agriculture/agrista/2003/table\\_en/en2.htm](http://europa.eu.int/comm/agriculture/agrista/2003/table_en/en2.htm)

<sup>116</sup> <http://www.byegm.gov.tr/YAYINLARIMIZ/newspot/2001/may-june/n12.htm> , Harmonization of Turkish Agriculture with the Common Agricultural Policy by Secretariat General for EU Affairs in Turkey

In the table above basic statistics are given for the EU, for new members of the EU and for Turkey. If the given indicators are compared with the data for Turkey, it can easily be seen that Turkey's population is approximately 7% less than the new EU members and the number of people employed in the agricultural sector is much higher than the CEECs. The UAA is about the same as the new members of the EU. Compared to the new members, the total area is a bit larger in Turkey. The GDP per capita is about half of that of the new members. However, the unemployment rate is about the same as in the new members of the EU.

In Turkey approximately 10 million people still work in agriculture, but also land use (34.1%) is lower than in the EU and the share of agriculture in total GDP (14.2 per capita) is higher than most of the EU countries. Such differences increase the difficulties. Turkey's membership will probably increase the CAP expenditure for financing producers in Turkey. This will reduce the share of EU countries which are the net receivers of the CAP budget. Turkey's membership will increase the market capacity of EU producers by about one sixth of the Union population. Turkish producers will try to enter into the EU market, and internal producers will expand into Turkey's market. But there is need of agricultural restructuring for creating competition in food processing and distribution sectors, improvement of productivity standards and development of labour productivity in agriculture. These will inevitably involve a further and perhaps quite large outflow of labour from the primary sector. There are also significant environmental improvements required in Turkey's rural areas.

In Turkey and in three other applicant countries, higher inflation and higher interest rates greatly hinder producers in developing their production capacity. The above-mentioned difficulties affect growth rate which must be accelerated in order to bring production operation processes closer to the developed member countries' level.

To date there has been some financial support from the EU to Turkey. Up until 2002 Turkey had received financial support under the MEDA programme (Financial Instrument of the Euro Mediterranean Partnership) which provides financial support to the Unions Mediterranean policy. The following years 2004 - 2006 focus on support (about 1 million Euro) to meet the Copenhagen criteria and especially political support to strengthen the institutional capacity.

It is obvious that financial aid will continue for the improvement of structural conditions in Turkey. However, Turkey's large share in agriculture and its other structural and cultural differences from the EU will possibly make it the most expensive, controversial enlargement in the EU's Agenda.

Nevertheless, the financial burden of Turkey's membership will possibly be compensated for by a positive trade effect. There are some other important reasons which may contribute to understanding the advantage of this membership. These are:

- It will contribute to an increase in the market capacity of EU producers; this means a market worth approximately 200 billion dollars.
- It will increase foreign direct investment, especially in agriculture, in services and in infrastructure.
- It will increase the average age of the young population in EU, which is now over 40 years, because the average age in Turkey is some 25 years.
- It will reinforce the EU labour market by offering thousand of young workers.
- Finally, this membership will increase the defence power of the EU through her young and strong military forces.

These points are mostly used to argue in favour of Turkey's EU membership.

### 3. The Structure of Protection in the CAP

The EU was founded by the original six members of the European Community. Eleven years later the CAP came into effect to achieve common policies in agriculture. According to the findings of the Spaak report agricultural markets should be supported; the Spaak Committee experts, therefore, settled down to examine three important systems. “These are price intervention, crop limitation and deficiency payments.”<sup>1</sup>

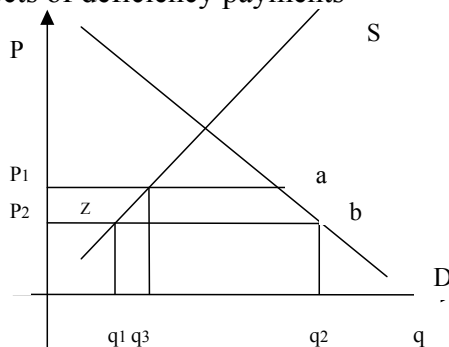
The first system, price intervention, is used to prevent an excessive price fall. The state agency intervenes in the market to purchase a part of the supply effectively increasing the product price. If an opposite effect occurs and the product price becomes too high then the state agencies release some of their stocks to reduce prices to the desired level. This system, therefore, combined with stocks policy has a stabilizing effect on the market.

The second system, crop limitation, was first used in the US to set aside arable land.

The third system, deficiency payments, was first used in the UK. It is a subsidy per unit of production. These payments are used to cover income losses of producers where there is no internal protection. In the CAP system frontier protection is the most visible element in the price and market system. These payments support producers and keep prices close to world market prices. The subsidy is the difference between a guaranteed price and the world market price. Deficiency payments are costly to the CAP budget.

The impact of the deficiency payments is illustrated in Figure 3.1. Before the application of deficiency payments producer output is  $q_1$  where the consumer demand is  $q_2$ . But after the application of deficiency payments the producer price will increase from  $p_1$  (world price) to  $p_2$  (target price) and production expand from  $q_1$  to  $q_3$ ; that increases the producer gain by an amount of the area  $Z$ , while consumer surplus stays constant. In fact, deficiency payments (which, in the CAP, are called direct payments) are a short-term solution to cover the income loss of producers from the results of set-aside measures. But in the long term these payments may contribute to increasing the capacity that will raise the production amount in the next period. Increasing production (supply) causes a price decrease in the market.

**Figure 3.1:** Effects of deficiency payments



Source: Adopted from Rosemary Fennell: *The CAP*, Clarendon Press, Oxford, 1997, p.198

Deficiency payments were made to farmers who participated in an annual commodity program for wheat, feed grains, rice, or cotton, prior to 1996. The crop-specific deficiency payment rate was based on the difference between the legislatively set target price and the lower national average market price during a specified time. The total payment was equal to the payment rate, multiplied by a farm's eligible payment acreage and the program payment yield established for the particular farm products such as Soya bean and oilseed.

<sup>1</sup> Rosemary Fennell: *The CAP*, 1997, p.133

All of these three systems require public funds for their operation. The tariff was the major classic instrument to increase the finance capacity of the CAP budget. The tariff revenues were usually used to finance NTM's to producers. But liberalisation of trade in the market and sharp tariff reductions compel the agricultural market to develop other non-tariff measures, NTMs, which were first introduced in 1960 and in 1962.

In the CAP a more effective application of NTMs was required to protect domestic producers. The new protectionism, on the one hand, was not directly restricting imports as tariff and import quotas did. And on the other hand, it was as effective as tariff measures to keep third world country products out of the Union.

In order to establish the above common market regulation within the six member countries some important changes within the market had to occur, such as, harmonised support prices and intervention measures, eliminating border taxes and controls between themselves in transitional steps. A common level of the tariffs on imports of products from third world countries and export subsidies to domestic producers was to be established. The transitional system introduced a mechanism with a set of intra-Community levies on trade, to be gradually eliminated in a series of steps as external tariffs and internal intervention measures were harmonised. Agreement in this process was achieved by the gradual alignment of the level of protection afforded by measures in the highest-price country.

### **3.1 Descriptive Analyses of the Price Support System of the EU's CAP**

Since 1962 to date, endeavors have been made to maintain price stability in the Union and to secure reasonable income to producers. However, the price of agricultural products still differs widely among EU member states.

#### **3.1.1 The Choice of Market Price Support**

The market price support is usually selected as an instrument to protect producers from third world country exporters under the circumstances noted below:

- “a- When supply and demand elasticity are low, so that the direct distortion costs are low.
- b- For commodities which are imported (rather than exported) where the effect on the government budget is positive,
- c- When the decrease in income, to which the policy is a response, is considered to be temporary so that the set-up costs of administering more complex support schemes play an important role relative to the distortions costs and
- d- When the administrative infrastructure is weak so that the implementation and enforcement costs of alternative transfer instruments are high and opportunity cost of government revenue is high.”<sup>2</sup>

Besides these considerations, it is also important to remember that “an important characteristic of agricultural price and trade policies is that they vary considerably by product and, thus require individual treatment of various products in policy simulations.”<sup>3</sup> Therefore, each support measure and policy should be treated separately for different agricultural products.

Finally, the selection of suitable price support measures is important, but the selection of those farmers who will get subvention is more important, because such support instruments may induce rent-seeking behaviour by interest groups (i.e. collusion between farmers who look to gain subsidies without working the land). Therefore, the identification of producers

<sup>2</sup> European Commission: The Economics of the CAP, 1995, p.41

<sup>3</sup> Mergos G., Stoforos C., Mishev P. and Ivanova N.: Analysing agricultural policy reforms under transition in Bulgaria, 2001, Pages 482,

who will get subvention must be strictly done; because once subvention is given it is difficult to remove.

### 3.1.2 The Level of Market Price Support

When market price support is the instrument chosen to support producers, the level of support will be higher. The following are the factors that, in the view of the Commission, should ideally determine the level of support:

- 1- “A lower level of income of farm households relative to that of households employed in other sectors,
- 2- When more production is concentrated among farmers with small incomes
- 3- The higher the income elasticity of the agricultural commodity in question, the smaller the proportion of the transfer from consumers from low- Income households.
- 4- The greater the net-import of the supported commodity, the more favourable the impact on the government budget.
- 5- The smaller the supply price elasticity, the smaller the distortion costs in production (as would be the case if the use of intermediate inputs and the mobility of primary factors were low and if the support were provided for a short term period) and
- 6- The smaller the demand price elasticity, the smaller the costs in terms of consumption distortion.”<sup>4</sup>

### 3.1.3 Methodology of OECD to Estimate the Producer Subsidy Equivalent in the CAP

The Producer Subsidy Equivalent (PSE) was originally introduced by Timothy Josling for the FAO in the mid-1970s. It is an aggregate measure of support which;

- “Combines various of transfers or benefits to producers into one total value aggregate,
- Provides a common basis for sharing country policy information,
- Provides background information for trade negotiations,
- Used to monitor country progress in reducing trade distorting support.”<sup>5</sup>

In 1999 the Producer Subsidy Equivalent was renamed and redefined by OECD as the Producer Support Estimate (PSE), which is accepted as a precise way of measuring the transfers from government/ community agencies to producers. According to OECD data and current OECD methodology, measurement of the support and use in agricultural policies is expressed in four different ways: “As the total value of the transfers to a producer or group of products; as the value per unit of output; as a percentage of the domestic production value (including production- dependent transfers), or, of the consumption value; and as a Nominal Assistance Coefficient (NAC).”<sup>6</sup>

The impact of support measures from state agencies and consumers to producers is estimated by using the PSE method. “The biggest advantage in using the PSE indicator is that it derives from large and very reliable sets of general economic information and that it involves the calculation of both direct and indirect transfers, which may be related to the agricultural producers of a specific farm commodity group.”<sup>7</sup> Indeed, the PSE method gives more accurate results than consumer support estimate (CSE) on the estimation of support measures. The CSE method is used to determine the welfare effect on consumers, but

<sup>4</sup> European Commission: The economics of the common agricultural policy, 1995, p.41

<sup>5</sup> Frederick J. Nelson: Producer Subsidy Equivalents for Dairy, 18/Oct./1999, p.4

<sup>6</sup> Silvis H. J. and C. P. C. M. van der Hamsvoort: The AMS in agricultural trade negotiations, 1996, p.529

<sup>7</sup> Rednak M, Erjavec E and J. Turk: The Levels of Protection in Slovene Agriculture and Policy Implication, 1995, p.250

statistics on consumption of products are either not available to make a precise forecast or not relevant for my research. For example, production figures are obtained from the producer, but consumption is not so easy to calculate as it is required to know where and in what quantity products are distributed, how much of these are consumed and what quantity of these perishable agricultural products is damaged.

Producer Subsidy Equivalent (PSE): PSE is “an indicator of the annual monetary value of gross transfers from consumers and taxpayers to agricultural producers, measured at the farm-gate level, arising from policy measures that support agriculture, regardless of their nature, objectives or impacts on farm production or income.”<sup>8</sup> This has meant that transfers both from consumers and tax payers are supported through the increase in internal product prices and direct payments.

PSEs can be expressed in different ways. The total PSE is simply the value of transfers to producers as is stated both in the WTO and in the OECD notifications. The PSE has two major components, of which market price support (MPS) is the first component, which covers import restrictions and export subsidies. The price gap between producer price at farm gate ( $P_p$ ) and world price ( $P_r$ ) is used to calculate the market price support as is expressed in the PSE formula below. The second major component of PSE is the budgetary outlay: “It includes all government budget expenditures on farm programs, including WTO exempt (green box) outlays that are made directly to producers, all of the WTO non exempt (amber box) subsidies and all of the WTO blue box forms of domestic support.”<sup>9</sup>

The PSE is not actually the only method for estimation of the amount of support to producers. In agricultural economics, reduction commitments are also expressed in terms of Total Aggregate Measurement of Support (AMS) of the WTO, which is the sum of expenditures on non-exempted domestic support across all commodities. “It generally avoids the effects of fluctuation in exchange rates and classifies subsidies into: those that are permitted (green); others policies included in the AMS subject to reduction commitments (amber); decoupled direct payments associated with production limiting programmes (blue), not in the green box but excluded from the AMS; and those that are prohibited (red).”<sup>10</sup>

The AMS was derived from a different aggregate support measure of the URRA. The AMS is used in the WTO for measuring the support in agriculture and is based on products in a given period. In contrast to the PSE the AMS comprises only the Amber box policies which is a production distorting support measure and not preferred by the Commission for use as a support measure. “The AMS calculation also excludes support that does not exceed 5 percent of the members’ total value of production (10 percent for developing countries), although this support is notified.”<sup>11</sup> On the other hand, the PSE method provides more comprehensive information about the support measures for certain commodities in countries. The PSE method comprises trade oriented policies that restrict import and support export of agricultural products, which is defined in the green box. The AMS includes only domestic policies and is not dependent on market price. Therefore, the MPS, which is one of the major components of the PSEs, is also excluded in the AMS computation. “Although the two measures are similar in basic concept, the PSE includes support (or costs) of some policies that are left out of the AMS - such as trade policies and certain green box policies assumed by negotiators to be non-trade distorting.”<sup>12</sup>

The estimation of PSE differs from AMS because calculation of the MPS is different in the PSE and AMS methods. The MPS is calculated for all agricultural products in the PSE

<sup>8</sup> OECD database: Methodology for the Measurement of the support and use in policy evaluation-

<sup>9</sup> Young, Burfisher, Nelson and Mitchell: Domestic Support and the WTO, 2000, p.4

<sup>10</sup> Wohlmeyer H. and Theodor Q: The World Trade Organisation and Sustainable development, 2002, p.150

<sup>11</sup> Young, Burfisher, Nelson and Mitchell: Domestic Support and the WTO, 2000, p.4

<sup>12</sup> Economic Research Service: US Ag Policy Well Below WTO Ceiling on Domestic Support, 1997, p.30

method, but in AMS the MPS is only included if price support is combined with trade policies. In AMS the MPS is calculated as the difference between administered price and fixed average reference price multiplied by the current production. In contrast to this, the MPS for PSE is calculated for the relevant year as the difference between producer price (at farm gate) in domestic currency units and world reference price in world currency units multiplied by a exchange conversion factor, rather than with the production amount for the relevant year. The AMS price gap, therefore, reflects only the variables which policy makers have control over rather than current market conditions. This has meant calculations of the AMS- MPS can only be used as a means of controlling the success of programs, which are applied for keeping a country under control, whereas the PSE- AMS is used to estimate the amount of protection. By doing this the amount of payments to producers are estimated that contributes to all domestic production being kept competitive with imports at the existing level of commodity output, current producer income and import prices.

The PSE is a method of evaluating the support system that maintains internal production and imports at their current level. The PSE is the computation of the price support system which changes the product price and affects trade capacity directly. "However, conceptual analysis shows that the PSE and its derivatives are not a sound measure of trade restrictions and distortions caused by agricultural policies. Limiting or reducing PSE does not guarantee that the trade distorting effects of national import and export policies will decline."<sup>13</sup> It is obvious that such support measures can only be used for protection of internal producers. Therefore, the impact of such support measures affects only the internal market. The exogenous factors such as exchange rate fluctuation can only minimally be affected by the PSS. For example, if all support measures for high cost production of the CAP could be withdrawn at once; world agricultural product requirement would rise and might increase the import price of agricultural products at least in the short term. Therefore, measures such as intervention price mechanism of the CAP contribute to the maintenance of a stable product price in the market, but have the least effect on exogenous factors.

It is obvious that the PSE in a given year does not presuppose some different level of import; it only estimates the amount of support that is maintaining the existing situation. "The measurements are thereby given a purely static character; PSEs do not gauge dynamic effects. Thus, the outcomes cannot predict trade effects; they simply shed light on an existing situation."<sup>14</sup> It measures the amount of support for each particular year and it uses data from that year only. The evaluation of the PSE, therefore, only contributes to an evaluation of the amount of payment in that year and not for some other year.

The PSE method provides a measure that can be used for evaluating the support system to producers (or consumers if there is any transfer) in agricultural production, but unfortunately it does not provide useful data for any other policy decision in agriculture. "Neither the OECD data nor the WTO data are sufficient for the comprehensive and consistent comparison of domestic support policies potential production and trade distortions resulting from the domestic support program."<sup>15</sup> The PSE can be accepted as a descriptive method for the estimation of the support system in agriculture. However, it is important to note that it provides useful information for estimating the amount of support to producers and for estimating the differences between countries in this respect, and there is no alternative measure for these purposes.

The PSE takes no account of the estimation of economic parameters such as unemployment and social and regional problems. But an estimation of the PSE leads to an interpretation of the effects of support measures on export, import capacity, production

<sup>13</sup> Silvis H. J. and Hamsvoort: The AMS in agricultural trade negotiations, 1996, p. 538

<sup>14</sup> Silvis H. J. and Hamsvoort: The AMS in agricultural trade negotiations, 1996, p. 532

<sup>15</sup> Young, Burfisher, Nelson and Mitchell: Domestic Support and the WTO, 2000, p.3



amount or similar economic parameters. An estimation of the impact of support measures on such economic parameters contributes to determining the best possible CAP measure to reduce destabilizing effects on selected product trade and to reform the CAP system for increasing the contribution to free but fair trade between the EU and Turkey as a non-member country.

The data calculation of the PSE, according to the OECD, is defined below:

$$\underline{PSE = Q (P_p - Pr.X) + D + I}$$

Where;

Q = quantity produced

P<sub>p</sub> = producer price (at farm gate) in domestic currency units.

P<sub>r</sub> = world reference price in world currency unit

X = exchange conversion factor

D = Government payments to producers (in United Nations data it is expressed with

PP)

I = Indirect transfers through policies such as input subsidies marketing assistance or Exchange rate distortion

The unit PSE is the total PSE per ton or unit of production.

Unit PSE= PSE/ Q

Percentage PSE= [PSE/ Q.P<sub>p</sub> +PP] .100

The percentage PSE gives an indication of the proportion of total farm revenues originating from support, whether that support comes through domestic prices higher than those on world markets or more directly from government budgets. Such direct transfers include subsidies paid directly on outputs, subsidies on the use of inputs, and more general subsidies that lower the costs of production.

PP= PSE- Market price support

Q.P<sub>p</sub>= value of production at producers prices

### 3.1.3.1 The Process of Estimation of the Price Support in the CAP

Application of the CAP's PSS is intended to raise EU product prices over world prices. The impact of the PSS increases the market share and income of internal producers, both being created artificially in the market and thus causing a trade distortion in the international market. The effect of the PSS is especially observed on cereal products, sugar, butter, milk powder, cheese, olive oil, sunflower seed, pig meat, cattle, veal, and tobacco.

In the CAP market price support is fixed every year by the Commission with intervention prices for certain agricultural products, such as, cereals, beef etc. However, application of intervention prices is dependent on the representatives of Community agencies in each member country. For example, in Austria, Agrar Markt Austria (AMA) communicates with producers and determines the price support amount which is fixed by the Commission. By doing so the amount of intervention price, which is applied for certain products, differs from one member country to another.

Every October the Commission determines the prices of cereal products for the next year of production. The local agencies in member countries inform producers about given market support for these products. The announcement of product prices has an indirect effect on market stability. If the prices are high producers tend to increase their production, if it is lower then they reduce their production. This intervention price mechanism, which is set above the world price, but 9% percent below the target price, prevents market instability (see

cobweb) and farmers' losses on the market by supporting them with an intervention price guarantee, because this is the minimum price at which these products can be sold on the market.

In the CAP system, besides producer and community agencies, processors also play an important role in market prices. "At least one-quarter of the CAP budget is paid to processors, exporters and other organisations rather than to the producer."<sup>16</sup> These are the trade partners of agricultural producers. The processors also affect the higher product prices in the Union because they purchase the producers' yield cheaper and sell it in the market at a higher price. The considerable price difference between producer price and consumer price occurs as a result of this commission, which is collected by processors as a dealer profit. This market price, which is increased by processors, is the price at which producers would prefer to sell their products on the market. In the table below this price differences are shown throughout recent years; it can be seen that the price gap between producers' and consumers' price tends to diminish.

**Table 3.1:** The difference between consumer price and producer price

Product	Producer price (1995=100)			Market price (as a percentage of intervention price)		
	1999	2000	2001	1999	2000	2001
Cereals	80.4	79.5	81.5	129.8	120.17	110.3

Source: European Commission DG for Agriculture: Agriculture in the European Union Statistical and Economic Information, Brussels, 2002 (table 3.3.2) and before given intervention prices were used to estimate market price.

The function of the price support system of the CAP reduced the impetus for producers to research into other production methods and to increase their productivity and profit on the market. In the last decade, in the cereal sector, direct payments only contributed to an increase in farmers' income, not because of their profit, but because of direct payments.

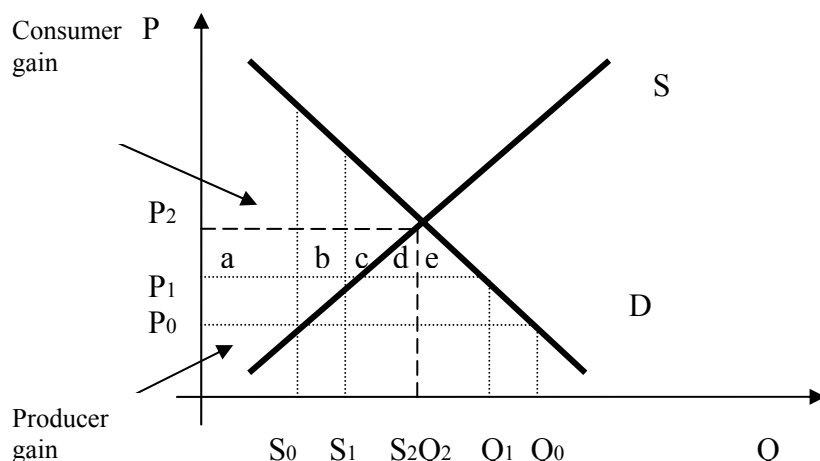
The graph below shows the impact of price support on the CAP. In the below graph, it is assumed that there is less production in the EU. Partial equilibrium, not the general equilibrium position is considered here. There is no income or technical changes and no externalities which may affect and change the price.

The impact of the price support contributes to a price increase in the market. The reason for this is explained in Figure 3.2. It is assumed that the world price is  $P_0$ , which is lower than market price. At the  $P_0$  price production in the EU is intended to be a  $Q_0$  amount which is lower than the consumer demand and needs to be covered by the import products, which are estimated as  $Q_0Q_2$  amount of products to reach the equilibrium position as illustrated in the figure above. However, in the CAP product price should be higher than the world price, which is shown by  $P_1$ , but at that price in the Union the cost of production is not covered and needs to be supported by intervention price mechanism of the CAP. This price increase is necessary, not only to protect producer loss but also to prevent the imported product access which is set by the difference between world price and EU price. However, in the CAP application of the price support measures the product price increases to  $P_2$ ; this reduces the imported product amount whilst internal production is increased. Hence, the amount of goods produced is increased from  $S_0$  to  $S_2$  and goods consumed are reduced from  $D_0$  to  $D_2$ . This is the equilibrium position where consumer demand and producer supply reach the optimum level. The intervention price level is  $P_2$ , which prevents a price fall and secures a

<sup>16</sup>Institute for European Environmental Policy (IEEP): The CAP: How the CAP operates, the key commodities, competitors and markets for the European Union, 2002, p.18, <http://www.ukfg.org.uk/docs/CAPBB1.pdf>

reasonable price for producers in the market. This is the lowest price level allowed within the CAP system. On the one hand, this means that the intervention price prevents a price fall and guarantees producer gain at a reasonable price level, while the production amount increases from  $S_0$  to  $S_2$ . On the other hand, consumer surplus is reduced whilst product price increases from  $P_1$  to  $P_2$ .

**Figure 3.2:** Impact of the price support in the EU market.



The net result of producer gain is shown as areas 'abc' and consumer loss in the areas 'abcde'. This is the minimum welfare loss for the consumer. The prices can be increased over the intervention price up to market price level. But such price increases will then increase the welfare-loss of consumers whilst producer gain is increased deliberately on the cost of consumer welfare.

Below in Figure 3.3 the effects of the price support on production value are shown. In the figure it is supposed that in the union there is an over production, and  $P_r$  is the world price and  $P_p$  is the EU price which is secured by the price support mechanism. As shown in the figure prices increased from  $P_r$  to  $P_p$ , whilst production amounts (S) stayed constant in 1990. Increasing product prices reduced consumer demand from  $QD_1$  to  $QD_2$  in the EU market. Decline in consumer demand compelled EU producers to increase the exported product amount from

$Q_{S-1990} - QD_1$  to  $Q_{S-1990} - QD_2$  (indicated in the figure with yellow lines).

A consequence of price support is that production value artificially increases from A to A+B.

This is the simple expression of producer value after the support measure.

Production value before price support =  $P_r \cdot Q_{S-1990} = A$

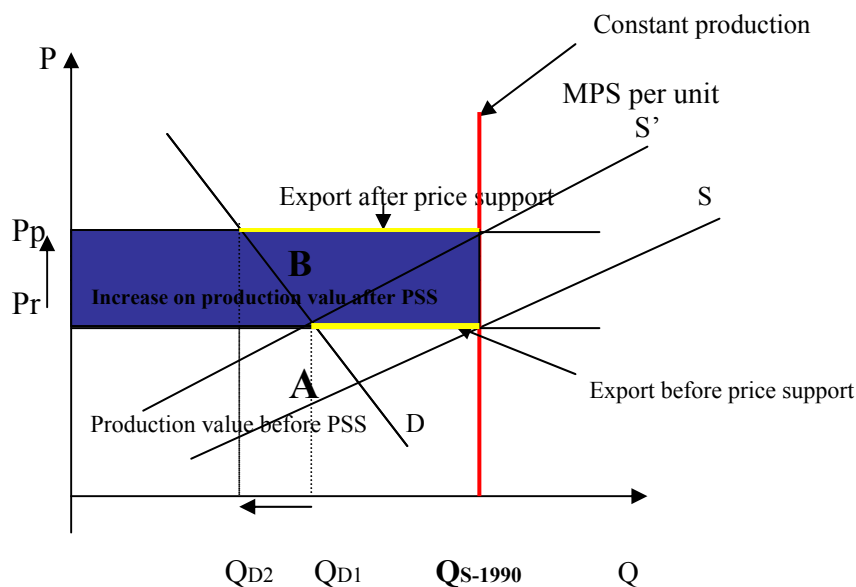
Production value after price support =  $P_p \cdot Q_{S-1990} = A + B$

This contributes to the calculation,

$MPS = (P_p - P_r) Q$  and

Then,

$PSE = MPS + \text{Money or other things} / \text{Direct payments} / \text{Export Subsidy} / \text{Taxes} / \text{General Services}$



**Figure 3.3:** Impact of the price support on production value in EU

In this study the impact of the support measures is only considered for PSE and not for CSE (consumer support estimate); as previously stated, in cereal products there is no transfer from consumers to producers. The sample cereal products, which are selected for use in the calculation of the PSE, usually show over production in the CAP system. This surplus amount requires to be subsidized for exporting to third world countries. Such support measures are financed by the CAP budget to cover producers' losses. To determine this transfer, the PSE method is used for the estimation of the amount of support to producers.

Selection of suitable statistical data for the calculation of the PSE:

The statistical data which is used for the calculation of the PSE is obtained from the Eurostat New Cronos-Agris data base, which is the official publishing organ of the EU and comprise statistics on European and national short/ long term indicators. There are also other publishing organs such as OECD and WTO, which comprise statistical data on the EU's CAP, but each of these sets of statistics has different numbers on different indicators, therefore it will be more accurate to use the statistics of the Eurostat.

Selection of the sample product for the calculation of the PSE:

The selection of a sample product is also important in obtaining more accurate results from the PSE method for the estimation of the impact of the PSS on the CAP. "Which product should be included? Should the AMS be calculated for all products that distort trade most? The parties more or less agreed to start with surplus products because they are the most trade distorting."<sup>17</sup> Therefore, selection of sample products for the PSE calculation is determined after a strict elimination. In this study cereal products have been selected as a sample product for the PSE calculation. The reasons are given below:

First, it is important to choose a product which has sufficient statistical data.

Second, the selected product must contribute to a better result than others, because, if the product selected has no effect on the PSE amount, then there is no need to select it. Therefore, cereal products which receive more than 45 percent of market support within the CAP system have been selected.

The third factor is the worldwide production option. Regional/ ethnic foods such as avocado cannot be selected for the estimation. The product selected must be produced in

<sup>17</sup> Silvis H. J. and Hamsvoort: The AMS in agricultural trade negotiations, 1996, p.533

almost all countries considered in the study. Cereal products are largely produced both in and outside the Union and this is important for comparing the impact of support measures on international trade.

Therefore cereals products, which have more reliable and accessible statistics data and receive support measures mostly in the EU's CAP, have been selected.

### 3.1.3.2 The Transfers Associated with Market Price Support in the PSE

The source of support to agriculture is calculated by the Market Price Support, and consumers give support to agriculture in the form of higher prices. Taxpayers have also to contribute when product surpluses, generated by the high prices, have to be disposed of through export subsidies. For example, the higher consumer prices are maintained by domestic supply.

Restrictions such as supply quotas and foreign trade barriers, import quotas, import tariffs and export subsidies also contribute to the maintenance of price support in the EU.

PSEs can be expressed in three ways “(1) as the total value of transfers for the commodity produced; (2) as the total value of transfers per unit of the commodity produced; and (3) as the total value of transfers as a percentage of the total value of production including transfers.”<sup>18</sup> The PSE expressions as measured by the OECD are required first to calculate market price support (MPS) and then the total PSE amount, which comprises the market price support as a major component of PSE. The MPS is calculated using the formula below:

$$\text{MPS} = (\text{Pp} - \text{Pr}) \cdot \text{Q}$$

This price gap (Pp-Pr), if it is positive, is the support per unit of product for agricultural products. But if it is negative, then it is a tax on agriculture and thus benefits consumers. In order to measure the price gap, it is important to use world and domestic reference prices for products so that the price gap only reflects a difference in price and not differences in quality, variety or degree of processing.

The difficulties in assessing market price gaps also indicate differences between net exporting and net importing countries. “For net exporting countries, the prices are derived on the basis of a ‘free on board’ (f.o.b.), and for net importing countries on the basis of a ‘cost, insurance, freight’ (c.i.f.) concept. Thus reference prices vary by country.”<sup>19</sup> Therefore, the PSE calculation is required to consider a different reference price for the EU which has over production, because producers are the net exporter of cereal products.

The major problems in the use of reference prices are summarized below:

“First, the developing countries are even more likely than the OECD countries to utilize border policies or commodity price support programs backed up by market interventions and government stockholding. There are policies whose effects are measured in a MPS. Second, with less well developed infrastructure, various costs associated with adjusting the reference price are likely to have larger magnitudes in developed countries, so taking them into account (or not) will have a larger effect on the estimated MPS and its interpretation.”<sup>20</sup>

The estimation of the world reference price is also affected by the exchange conversion factor, which creates difficulties, especially in developing countries, in obtaining more accurate results from the PSE calculation. The use of the exchange conversion factor in the PSE calculation is not clearly defined; under discussion is the question whether the

<sup>18</sup> Stokov and Meyers: PSE to Russian Agricultural Producers, WP 96-WP 168, November 1996, p.3

<sup>19</sup> Silvis H. J. and Hamsvoort: The AMS in agricultural trade negotiations, 1996, p. 538

<sup>20</sup> Mullen, Sun, Orden and Gulati: Producer Support Estimates (PSEs) for Agriculture in Developing Countries: Measurement Issues and Illustration from India and China, 2004, p.16

adjusted (shadow) exchange rate or the decomposition method should be used for obtaining better results from the PSE calculation. “For example Liefert et al. (1996) show that the 1994 PSE estimates for Russia change from negative to positive if a purchasing power parity (PPP)<sup>21</sup> exchange rate is used instead of a nominal one. Doyon et al. (2001) contend that in the context of comparing of support levels across countries, PPP adjustments would provide a better conversion factor than nominal exchange rates.”<sup>22</sup>

Another problem with the PSE calculation is the estimation of the farm gate price which is used in the MPS calculation. The EU producer price, which is used for the calculation of the MPS, is determined by the Commission for each commodity once a year. However, application of the producer price is affected and changed by the community agencies, which differ from region to region. Hence, differences in product prices are not reflected in the MPS calculation. In the results of this application, an estimation of the PSE may not indicate the real numbers of support measures.

However, since the monetary Union in 2002, the above-mentioned problems have lessened in the EU, but have remained the same outside the Union. Hence, the calculation of the PSEs is still affected by the reference price and by the exchange conversion factor which affects and changes the results of the PSEs. In short, an incorrect estimation of the PSE creates difficulties in determining the effects of the support measures in agriculture.

The PSE for EU-15 is estimated as shown below, and is adapted from OECD data for cereal products:

$$\text{PSE} = (\text{Pp}-\text{Pr} \cdot \text{X}) \cdot \text{Q} + (\text{I}-\text{C}) + (\text{I}-\text{B}) + (\text{I}-\text{E}) + (\text{I}-\text{F}) + (\text{I}-\text{H})$$

Where;

Q = quantity produced (in OECD data indicated with S2)

Pp = producer price in domestic currency units.

Pr = world price in world currency unit

X = exchange conversion factor (to convert world reference price from dollar etc. to euro)

The indicators that are used for the PSE calculation of the support amount to producers are explained below:

The estimation of the MPS and PSE for the cereal products is required to consider the indicators given below:

Indicator ‘A = (Pp-Pr.X). Q’ is the market price support. It is the major component of the PSE estimation and comprises:

I-Aa = (Pp-Pr.X). Q, Based on unlimited output. It was started in 1988 and applied until the MacSharry reform (1992) and is used for output amount.

I-Ab = (Pp-Pr.X). Q, Based on limited output. It was started with MacSharry reform and is used for crop products (calculation of output amount).

Indicator ‘I-B’ = Based on output payments. Of which ‘Ba’ is based on unlimited output and indicator ‘Bb’ is based on limited output.

Indicator ‘C’ which is the payments based on area planted (or animal number which is not relevant for cereal products) comprises:

I-Ca = ‘payments based on unlimited area’ (especially interventions and environmental amounts are considered). It was introduced in the 1988 reform.

I-Cb = ‘payments based on limited area’ (consist of set-aside and per hectare aid for cereals). It began in 1993 after the MacSharry reform.

<sup>21</sup> (PPP is a theory states that exchange rates between currencies are in equilibrium when their purchasing power is the same in each of the two countries.)

<sup>22</sup> Mullen, Sun, Orden and Gulati: Producer Support Estimates (PSEs) for Agriculture in Developing Countries, 2004, p.33

Indicator I-D: payments based on historical entitlements. Of which indicator 'Da' comprises historical planting (or animal numbers or production) and 'Db' is based on historical support program.

Indicator 'I-E' is based on payments for input use.

Of which 'Ea' comprises a concessional loans fertilizer subsidy, hybrid seed subsidy, pesticide subsidy, seed loans and electricity subsidy (irrigation), water subsidy (irrigation),

'Eb' is based on use of on farm services.

And 'Ec' is based on farm investment on farm development work and concessional loans.

Indicator 'F' is based on payments on input constrains and environment.

'Fa' comprises payments based on constraints on variable inputs and 'Fb' is based on constraints on fixed inputs and 'Fc' is based on constraints on a set of inputs.

There are also miscellaneous payments which make a small contribution to the PSE calculation. The miscellaneous payments are indicated by 'H'. Of which indicator 'Ha' comprises national payments and 'Hb' sub-national payments.

The method that is used to estimate the impact of non-tariff measures on the producer subsidy estimate is as follows:

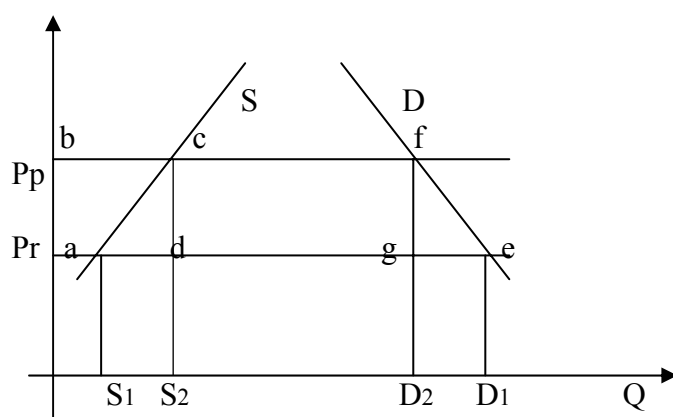
The estimation of the MPS and the PSE is calculated first for the EU-15. The amount of the MPS is fixed, because non- tariff measures are related to the PSE. The PSE comprises all the non-tariff measures, such as, direct payments, set-aside and intervention payments. Therefore, the only possible way to estimate the impact of these non- tariff measures is by subtracting each of the NTMs from the total PSE, or adding each to the fixed MPS, to estimate the effect on market support. In this study direct payments, set-aside and intervention payments are subtracted from the total PSE to show their impact on the producers support estimate.

For the export subsidies it is required to calculate the amount of subsidies from the Agris database. These subsidies are then added to the MPS to obtain the effect of the export subsidies on the market support.

### 3.1.3.2.1 The Transfers Associated with Market Price Support for Imported Products

The Market price support (MPS) is the amount of price support which is given by a community agency (government) to support producers. The mentioned MPS for imported products are illustrated in the figure below. This is not actually relevant for cereal products because in cereal products there is only over production.

**Figure 3.4.1:** MPS for imported Products



Source: Methodology for the Measurement of the support and use in policy evaluation- OECD database

In Figure 3.4.1 above, it is supposed that there is less supply than demand in the CAP. In the figure,  $P_p$  represents the internal producer's price and  $P_r$  represents the world reference price for the commodity, let us say wheat. The wheat production as shown in the figure results from the market support being higher than the world price  $P_r$ . This higher price reduces the demand for the product from  $D_1$  to  $D_2$ , while the amount of production increases from  $S_1$  to  $S_2$ . The MPS for imported products, according to the OECD methodology, is calculated in different forms by using the formulas given below:

1- The transfer to producer associated with the MPS is measured in the area  $abcd = (P_p - P_r) \cdot S_2$ . This is considered under the MPS indicator I-A. This area also shows the transfers from consumers to producers.

This formula is also used for indicator III-P: transfers to producers from consumers in the consumer support estimate (CSE), which is not relevant for cereal products, because there is no transfer from producers to consumers.

2- The transfer from consumer to budget, through import receipts or as rents to importers or exporters due to tariff quotas is the area,  $dcfg = (P_p - P_r) \cdot (D_2 - S_2)$  is represented in the OECD indicators with III-Q: other transfers from consumers or total support estimate which is indicator IV-V: budget revenues. This is also not relevant for cereal products because there is no transfer to consumers.

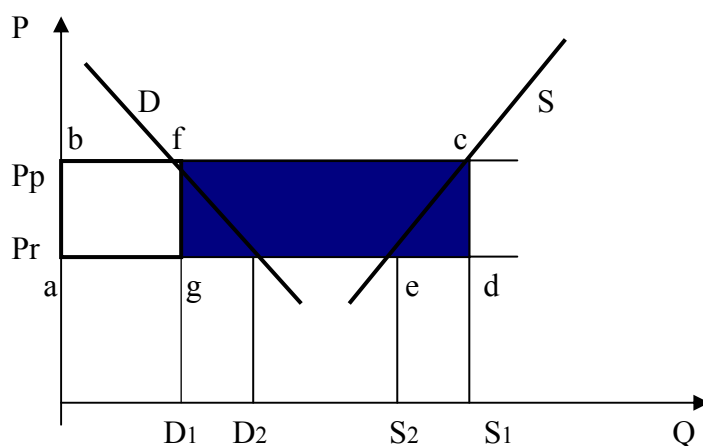
3- The CSE is measured in the area,  $abfg = (P_p - P_r) \cdot D_2$ , indicator III P: transfers to producers from consumers and III-Q: other transfers from consumers.

4- Indicator III- R: transfer to consumers from tax payers  $abcd = P_p - P_r \cdot S_2$   
The numbers 3 and 4 are also not relevant for cereal products.

### 3.1.3.2.2 The Transfers Associated with Market Price Support for Exported Products

The market price support estimation is now used for exported products. The estimation of the MPS for exported products is illustrated in Figure 3.4.2 below. This will be used in this study for selected sample products to estimate the PSE, because in the CAP there is over production in cereal products. Therefore, market price support for exported products is considered in this study.

**Figure 3.4.2:** MPS for exported products



Source: Methodology for the measurement of the support and use in policy evaluation- OECD database



The impact of the support measures is illustrated in Figure 3.4.2 above. The market price support (MPS) for exported products is formulated according to the OECD data as shown below:

1- In the domestic market, income transfer to producers is realized by consumers and Government Purchasing Agencies (GPAs). Community Agencies purchase products in domestic markets. MPS is calculated with  $MPS = (P_p - P_r) \cdot X$ . S<sub>2</sub> in OECD date, indicator I-A: market price support measure.

2- The area  $abgf = (P_p - P_r) \cdot X \cdot D_2$  is financed by the consumer. It is expressed in the OECD data with indicator, I-A: MPS in the PSE.

The formula is also used for the CSE (consumer support estimate) estimation with indicator, III- P: transfers to producers from consumers.

3- The area  $= (P_p - P_r) \cdot X \cdot (S_2 - D_2) = g f c d$

It is defined with indicator, I-A: MPS, transfer to producers from taxpayers. This is realised through food aid export subsidies and public storage.

4- The area  $= (P_p - P_r) \cdot X \cdot (D_2) = a b f g$

It is defined with the indicator III-R: MPS transfer to consumer from taxpayers, which are not relevant for cereals, because there is no transfer to consumers from producers in cereal products. Hence, only the first part of this section is used for the calculation of the MPS and the PSE amounts.

### 3.1.3.3 Selection of Suitable Indicators for the Calculation of the PSE

The PSE includes implicit and explicit payments, such as, price gap on output or input, budgetary payments etc. In order to receive a given payment farmers need to produce or plant a specific commodity, or use a specific input, which incurs costs.

The estimation of the PSE is related to its major component MPS, which contributes to estimating the amount of price support. As mentioned above an estimation of the PSE is firstly considered only for exported products in cereal products. Secondly, there are transfers from consumers to producers in the CAP. Hence, a transfer from consumers and taxpayers to producers occurs, for example, when subsidies are used to finance export.

It should be noted that within the CAP there are several supplementary payments which cover measures such as, premiums to stimulate production, payments to low-profitable farms, payments compensating expenses of some inputs, and investments which are usually not included in the PSE calculations. However, as the entire supplementary price payments were channeled indirectly to producers through the purchase prices paid by the community procurement agencies, it was not possible to treat them as distinct budgetary expenditures.

Therefore, for the estimation of support measures in the EU's CAP only the indicators given below are considered:

I-Aa, I-Ab, I-Ba, I-Ca, I-Cb, I-Db, I-Ea, I-Eb, I-Ec, I-Fa, I-Fb, I-Fc, I-H for the EU producers and for producers in Turkey indicators I-Aa and I-Ea, I-Eb, I-Ec are considered for PSE calculation in the OECD database. These indicators are briefly defined below.

Indicator 'I-A' is market price support and comprises:

I-Aa: Based on unlimited output in MPS

I-Ab: Based on limited output in MPS

Indicator 'I-B' based on output payments.

I-Ba: Based on unlimited output

Indicator 'I-C' Payments based on area planted (or animal number which is not relevant for cereal products). It is only considered for the cereals PSE calculation in the EU's CAP. It comprises:

I-Ca: 'payments based on unlimited area' and

I-Cb: 'payments based on limited area'

Indicator I-D: payments based on historical entitlements. Of which 'I-Db' payments based on historical support program is only considered for the EU's CAP producers.

Indicator 'I-E' is based on payments for input use, comprise product extension, drainage, irrigation etc, which is relevant for the estimation of the PSE for cereal production especially in Turkey, because an important part of transfers to producers is realized by means of these input payments, But input payments are also used in the EU's CAP. However, the EU's input payments, relative to Turkey's input payments, make a minor contribution to cereals support and PSE calculations. The annual transfers from tax payers to agricultural producers arising from support measures is based on the use of a specific fixed or variable input.

Of which 'I-Ea' comprises concessional loans fertilizer subsidies hybrid seed subsidy, pesticide subsidy, seed loans and electricity subsidy (irrigation), water subsidy (irrigation),

'I-Eb' is based on use of on farm services.

And 'I-Ec' is based on farm investment on farm development work and concessional loans.

Indicator 'F' is based on payments on input constrains and environments which are also very minor amounts in cereal products and only considered for PSE calculation for cereals in the CAP. Of which 'I-Fa' comprises payments based on constraints on variable inputs and 'I-Fb' is based on constraints on fixed inputs and 'I-Fc' is based on constraints on a set of inputs.

Indicator 'H' (miscellaneous payments) comprises 'I-Ha' national payments and 'I-Hb' sub-national payments. It is only relevant for the PSE calculation in the EU's CAP.

The market price support in the figure above, represented by the 'abcd' is the area, which is estimated for the MPS.

The estimation of the MPS for cereal products is considered for the exported products, because for cereal products there is excessive production which is exported within the CAP system.

MPS calculation for the area 'abcd':

$$\text{MPS} = (\text{Pp} - \text{Pr}) \cdot \text{Q}$$

For the PSE calculation from the OECD indicators Aa (since the MacSharry reform), Ca, Cb, Ba, Ea, Eb, Ec, Fa, Fb, Fc, Ha and Hb are used to estimate the PSE amount for cereal products.

$$\text{PSE} = (\text{Pp} - \text{Pr}) \cdot \text{Q} + \text{Ca} + \text{Ba} + \text{Ea} + \text{Eb} + \text{Ec} + \text{Fa} + \text{Fb} + \text{Fc} + \text{Ha} + \text{Hb}$$

In the last decade, internal product prices of the CAP were above the world reference price, but they were supported by direct payments and export subsidies to increase the market share outside the EU. There are two types of direct payments which are given to producers in the arable sector. The direct payments, which are based on the area, can be divided into limited and unlimited payments.

### 3.2 Application of Tariffs and non-Tariff Trade Measures

In this section the economic impact of tariff and non-tariff measures on the prices and quantities of goods produced and traded, and on the economic welfare of the EU is researched.

It is difficult to expect the removal of these measures in the near future, but at least a decrease in their negative impacts on the nation welfare is possible if suitable measures are used to protect domestic producers. In fact, only the roughest estimates can be made on the cost of protection by non-tariff barriers (NTBs). "Most comprehensive measures of NTBs are rather limited, simply measuring either the coverage of protection or the presumed effects on trade flows."<sup>23</sup>

The statistical data on the non-tariff measures are roughly estimated. Agricultural products are perishable and an estimation of sales is not possible relative to durable products. First these products relative to other products required a good storage, such as dairy products or crops requiring good preservation until marketing. In the summer only a few hours are needed for these products to perish from the heat. These negative effects of agricultural products reduce the estimation of consumption relative to production because the production amount is obtained from producers, but the consumption or sale amount is very difficult to estimate, even if statistical data is accurately compiled. Therefore, measuring the protection proved to be more difficult than expected.

In the Agricultural sector production techniques vary from one product to another and from farm to farm. The effects of the production operation process and product quality and quantity are not similar. Advance mechanisation and fertilization and irrigation, selective breeding and development of new seeds increase the productivity of agricultural input in some large-scale production more than small-scale and less effective production. Distribution of export and production subsidies is also affected by these production techniques, because large-scale producers receive more subsidy than small-scale producers. Thus "the largest and most efficient 25 percent of farms were estimated to receive about 75 percent of budgetary support in the mid 1980s, on average roughly 9700 ECUs per farm per annum, while the rest received an estimated average of only 1100 ECUs each year."<sup>24</sup> This means the most important part of the indirect subsidies goes to the large and efficient farms, which are only 25 percent of the total amount of farms.

In the Agricultural sector rapid productivity growth greatly increases supply, causing a sharp increase in supply outpacing the modest increase in demand. But this causes a downward increase on farm prices. This is the result of the price elasticity of supply, because the quantity response to price is positive for the supply elasticity (for the demand this is negative).

In the CAP the Commission took the required measures to prevent the fall of the farmers' incomes. Unfortunately, as explained, the Commission has raised some of the producer income excessively, while the rest of the farmers are only able to maintain their production in the market.

#### 3.2.1 Basis of the Foreign Trade: What Signifies Duties?

Taxes are imposed on goods or some services which are imported from abroad to enter into the domestic market. It can be in the form of either fixed tariffs or various import levies.

In all countries, tariffs play an important role in creating finance for the budget. However, a tariff trade measure has a direct negative effect on free trade in the world market

<sup>23</sup> Corden W. M: Protection and Liberalisation, 1987, p.3-4

<sup>24</sup> Linter and Mazey: The European Community, 1991, p.104

because it increases the product prices as much as the tariff amount is applied. Tariffs can either be specific or advalorem, of which various effects are analysed in the following section. The tariff measure contributes to the replacement of some lower cost production with higher cost products between countries. In fact, all support measures have negative effects on free and fair trade. But tariffs are directly applied on the product prices and this has an apparent effect on consumer welfare.

The tariff trade measure has very often been subject to WTO disciplines and reduction commitments. The important role of the WTO (1995), which superseded the GATT (1948), contributes to promoting the rules of free trade between nations. One of the most popular and controversial round of the trade negotiations namely the Uruguay round (1986-1994) had a considerable impact on tariff reduction between countries. Most of the developed countries and some other groups of countries preferred to substitute the tariff measures for non-tariff trade measures.

In the EU's CAP, the CCT is primarily applied to protect internal producers from cheaper products of third countries. However, tariff measures have also had a considerable positive effect on the Community budget relative to other non tariff measures.

The significant impact of tariffs can be classified as shown below:

1. By raising the price on domestic sales to redistribute incomes from consumer to producers. This causes welfare losses for consumers while the producers and community agencies gains are increased. The amount redistributed is the price increase multiplied by the average quantity of domestic sales.

“2. A tariff shifts some purchases from foreign goods to home goods and

3. A tariff makes consumers pay tax revenues directly to the government.”<sup>25</sup> If politicians follow a social approach then it is expected that these tax revenues are returned to the consumers as social services, otherwise the tax revenues are used either for election campaigns or for private use, which is corrupt.

4. Another important impact is that a “tariff discourages some purchases that were worth more than they cost the nation.”<sup>26</sup> Both by shifting some purchases toward costly domestic goods, and by discouraging some purchases worth more than they cost, as is done for imported products, the welfare loss for both exporter and importer is considerable, because in an exporting country higher common custom tariffs reduce the products' access to sales in the importing EU market, and in the EU, higher custom tariffs increase the imported product prices so that the consumer cannot buy these imported products.

5. “If a country forms a preferential trade area (PTA) with another country with substantially lower tariffs than its own, its losses are larger the more it imports from the partner.”<sup>27</sup> This implies that if one country has lower tariffs than its partner, which forms a customs union, the losses of the former country will increase proportionally to its imports from the partner country.

6. A tariff sometimes lowers the internal price of imported products. According to the Metzler Paradox if the inflation rate is higher than the exchange rate, the real value of domestic currency will be appreciated and will increase the demand of imported products. In this case application of the tariff amount will have less negative effect on reducing the demand of imported products. This drives the world price down by even more than the size of its tariff as it may do if the foreign demand for the importing country's export good is inelastic. The partial equilibrium analysis suggests that, “the degree of protection will be

<sup>25</sup>Lindert and Pugel: International Economics, 1996, p.130

<sup>26</sup>Lindert and Pugel: International Economics, 1996, p.130

<sup>27</sup> The Australian journal of Agricultural and Resource Economics, Blackwell Publishing, Volume47, Issue: 47, September 2003

lower the lower the foreign elasticity of supply. If the latter were zero, so that a tariff would lead to a fall in the foreign price equal to the tariff, there would be no rise in the domestic price and hence the tariff would provide no protection.”<sup>28</sup>

Higher tariffs may also affect the internal product price and shift it upwards.

### 3.2.2 Tariff Measures (Considering the EU 15 and Turkey)

The impact of the common custom tariff (CCT in 1968) within the EU has considerable impact on the finance of the CAP budget. The reason for this is very obvious, because support measures have two important functions in the CAP. Firstly, they protect internal producers from external producers and prevent their access to the EU market, and secondly, support measures play an important role in creating finance for the CAP budget.

The tariff trade measure on cereal products are researched in this section. After the application of common custom tariffs on cereal products, imported product prices increase enormously.

#### 3.2.2.1 Application of the Common Custom Tariffs

Tariffs can be either specific or advalorem.

A specific tariff is a fixed charge per unit of import such as dollars per ton of steel bars.

$$P = P_1 + t$$

$P$  = imported product price,  $P_1$  = world price and  $t$  = tariff per unit.

The advalorem fraction of the value of import, which means a percentage of estimated market value of a good, is taxed on reaching the importing country.

$$P = (1+t) P_1 = P_1 + t P_1$$

The application of tariff measures reduces the advantage of international trade, both for consumers and for producers who have been taxed on their commodity. Internal producers increase their cost when they use imported input to produce and when consumers buy expensive products. The effects of the CCT can be best explained by Viner's Customs Union theory.

According to this theory, free trade under a customs union affects world trade in two ways: “a welfare increasing trade creation effect and welfare reducing trade diversion effect. The overall consequence of a customs union on the welfare of its members, as well as on the world as a whole, depends on the relative strengths of these two opposing forces.”<sup>29</sup> In the Union, trade creation occurs when internal tariffs are removed between member countries. This contributes to increased trade between member countries. By doing so, some efficient production of exportable commodities in third countries is replaced by insufficient production in the EU, which is prevented by tariff barriers in the countries outside the Union, this is trade distortion.

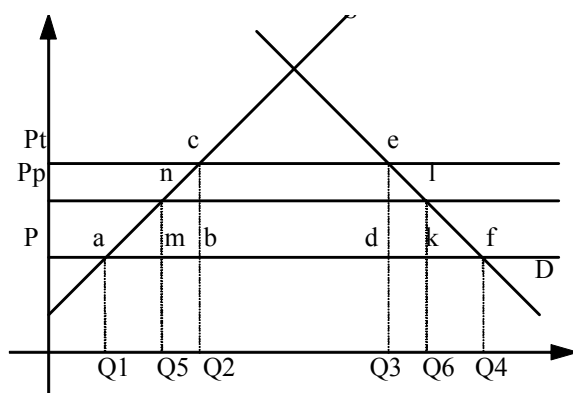
The impact of the customs Union is illustrated in the figure below. The trade capacity will be distorted because of custom duties and is explained either as trade distortion or trade creation. Trade diversion happens where lower cost sources are transferred to higher cost sources, lets say from a third world country to a partner country with higher import tariffs. In this case (tariff effect) increased product prices will cause an increase in production, as is shown in Figure 3.5, from  $P$  to  $P_t$  and production increases from  $Q_1$  to  $Q_2$  and consumption reduces from  $Q_4$  to  $Q_3$ . Triangle ‘abc’ is production loss and ‘def’ is consumer loss. The

<sup>28</sup> Corden W. M.: The Theory of Protection, 1971, p.250

<sup>29</sup> Robert J. Carbaugh: International Economics (eight edition), 2002, p.271

amount of production loss occurs because of imported products which cause an additional cost for obtaining extra output. The rectangular 'bcde' is tariff revenues and  $Q_2bdQ_3$  is foreign exchange revenues.

**Figure 3.5:** Optimal tariff rates and tariff revenues



Source: Williamson and Milner: *The World Economy*, 1991, p.159

If we now consider that a customs Union is realised between the home and partner country, it is then assumed that the custom tariff within the union is removed, while the amount of common custom tariff  $P$   $P_t$  is maintained for the perfectly elastic supply of third countries. However, for the partner country, supply (after customs union when the tariff is eliminated within the Union, but not with third countries) is now perfectly elastic at  $P_p$ . The trade creation in the home country is the difference between consumer's gain and domestic producer's loss ( $ncel$ ), and the trade distortion is measured by the loss in community agencies revenue ( $bced$ ).

The results of the customs union trade creation between home and partner country show that production loss is reduced from 'abc' to 'amn' and consumption loss is reduced from 'def' to 'fkl'.

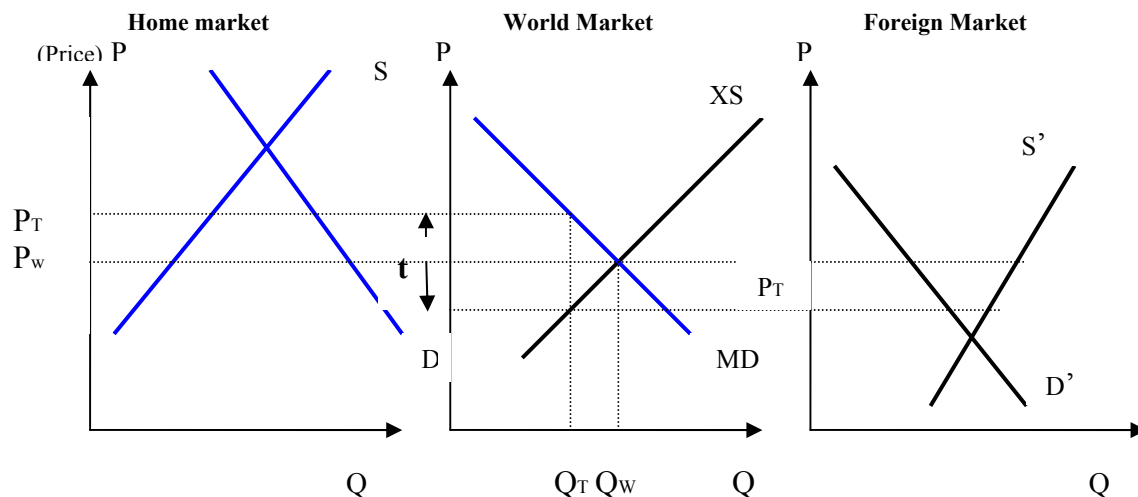
The Community agency's revenue is the difference between 'bcde' and 'klmn'. For the internal products, consumer's gain is  $P_p P_t el$  and producer's loss is  $P_p P_t cn$ .

For the imported products consumer's loss is  $P P_t ef$  and producer's gain is  $P P_t ca$ . The producer surplus increases within the Union in which, production is transferred from a lower cost to a higher cost source of production, let's say from third countries to home country because of the common custom tariff.

The impact of the common custom tariff on the world market is given in the figure below.

It can be seen that the impact of higher internal prices causes an increase in the internal production amount, while product prices in the world market are reduced, because a production increase in the internal market causes similar reductions in world production. This means higher tariff measures in the EU reduce world supply. In the foreign market, results of excessive production and subsidies of the CAP reduce product prices. This process reduces the world prices.

In the figure below, the effects of the Customs union on the international market are illustrated. On the one hand, application of the common custom tariff increases the imported product price in the union, which is stimulated to increase the prices outside the union. On the other hand, export subsidies reduce exported product prices of the EU, below the world prices and increase the share in the foreign market. By doing so, the share in the world market of third countries reduces from  $Q_w$  to  $Q_T$ .

**Figure 3.6:** Effects of the common custom tariff

The application of common tariffs is analysed below.

Now it is important to research the impact of the tariff measure on the products and also of the tariff measures on the input. This leads to the distinction between nominal rate of protection (NRP) and effective rate of protection (ERP).

Nominal rate of protection is measured as the amount of tariff and/ or NTB on its output, ignoring effects of other trade barriers on the industry's inputs. In contrast, the ERP is a measure where the percentage changes in domestic value are added after the tariff on inputs as well as on outputs are levied. In the import competing firms the effective rate of protection is greater than the nominal protection and the firms usually have less incentive to lower their costs. The ERP is used, in particular, to measure the social cost of agricultural output which was first developed by Balassa (1965) and Corden 1966.

Let  $P_1$  be the world price of a good, suppose in a non EU member country say Turkey, levies an ad valorem tariff of  $t\%$  on the commodity X. Then the price of that commodity X in Turkey will be

$$P = P_1 (1+t)$$

The NRP is now defined as  $NRP = (P - P_1) / P_1$

$$\text{And } NRP = (P_1 + P_1 \cdot t - P_1) / P_1$$

$$\text{Thus } NRP = t$$

The use of the tariff rate is dependant on effective protection, a concept developed by Max Corden (Australian) and Harry Johnson (Canadian). The rate of effective protection is defined as “the percentage increase in value added per unit in an economic activity which is made possible by the tariff structure relative to the situation in the absence of tariffs but with the same exchange rate.”<sup>30</sup> And it is more complicated than NRP to calculate. The ERP is used to measure the social cost of agricultural output. For example, if a coffee is protected from imported coffee with 20% tariffs in the domestic market, but internal producers use imported coffee beans, with 40% tariffs, as an input to produce coffee, the 20% tariffs on imported products would not be effective enough to protect internal producers. This is because domestic producers will then pay 20% more for the coffee bean as an input to produce it in the domestic market. The aim of such tariff measures may not contribute to

<sup>30</sup> Max Gorden: Protection, Growth, and Trade, 1985, p.98

protecting internal producers. It may cause welfare loss for the nation. Thus it is important to research the effect of this protection.

The effective rate of protection (ERP) relies on the concept of value added on to the commodity. The value added per unit of a commodity (in the absence of any tariffs either on the products or its input) is denoted as

$$V' = P_1 - \sum P_j X_j$$

Where  $P_1$  is the world price of the commodity,  $P_j$  is the world price of inputs, in the absence of tariffs world prices and domestic process are equal, and  $X_j$  is the amount of input used for producing 1 unit of the commodity.

Suppose now that an ad valorem tariff of  $t\%$  is levied on the product and an ad valorem tariff of  $t_j\%$  is levied on input  $J$ . Then the gross value added per unit of the product becomes:

$$V = P_1 (1+t) - \sum (1+t_j) P_j X_j$$

The ERP is now defined as

$$ERP = \frac{V - V'}{V}$$

$$ERP = \frac{(t P_1 - \sum t_j P_j X_j) / V'}{V'} \text{ }^{31}$$

Now it is important to evaluate the impact of the tariff measures both on the input and on the final products to determine its tariff escalation.

Let us suppose in Turkey 1 ton of concrete requires 1.2 tons of iron and 0.5 tons of cement as input to build concrete blocks. The world price of concrete, iron, and cement are respectively (per ton) €1000, €300 and €100, then;

$$V' = 1000 - [(1.2)(300) + (0.5)(100)] = 1000 - 410 = 590$$

Now let us suppose there are three different cases to evaluate effects of the tariff measures on the final and intermediate products.

**Case 1:** A nominal tariff of 20% on concrete imports, a tariff of 10% on iron and 5% on the cement.

$$ERP = \frac{V - V'}{V'}$$

$$= \frac{(t P_1 - \sum t_j P_j X_j) / V'}{V'}$$

$$= \frac{(1000)(20/100) - (10/100)(1.2)(300) - (5/100)(0.5)(100)}{590}$$

$$= 161.5 / 590$$

$$ERP = 27.4 \%$$

When the tariff is taken from the final product then the tariff would be 20 % from the given ( $ERP = t$ ) formula. But as is seen here the ERP value is already above (27.4 percentage) the given tariff rate which is applied on the final product.

Thus if inputs (here iron and cement) are subject to a lower tariff than final product (here concrete) than,

$$ERP > NRP$$

<sup>31</sup>James Anderson: Effective Protection Redux, WP: 5854, 1996



**Case 2:** Suppose now that there is a uniform tariff of 20 % on concrete, iron and cement.  
Then

$$\begin{aligned} \text{ERP} &= t P_1 - \sum t_j . P_j . X_j / V' \\ &= 20/100 [1000 - (1.2) (300) - (0.5) (100)] / 590 \\ &= 20/100(590) / 590 \\ &= 20\% \end{aligned}$$

In this case if the inputs are subject to the same tariff as the final product then  
ERP= NRP, since we know that NRP = t

**Case 3:** Suppose now that there is a tariff of 20% on concrete and 25 percent on both iron and cement.

$$\begin{aligned} \text{ERP} &= t P_1 - \sum t_j . P_j . X_j / V' \\ &= 20/100 1000 - 25/100 [(1.2) (300) - (0.5) (100)] / 590 \\ &= 97.5 / 590 \\ &= 16.5\% \end{aligned}$$

Thus when inputs are subject to higher tariffs than final products  
ERP < NRP

In conclusion, tariff escalation may be present when tariffs on inputs of a commodity are lower than tariffs on the final products. As in the first case, if the tariff rate of input is lower than that of the final product then this will be a more effective protection for the country. If the tariff rate of input is higher than the tariff rate on final product this will cause an increase in the profit rate of the producer, or in other words, reduce tariff expenditure.

Tariff escalation is a common feature of the developed countries' tariff structure. In LDCs export of raw materials is supported by the Government. This creates an advantage for developed countries to import those raw materials from LDCs, because in the Union, tariff rates on input products are much lower than tariff rates on final products (see table below 3.2.1).

In the Union, since the 1993 Maastricht agreement, there has been no internal tariff between member countries. The application of tariff barriers to the countries outside the Union is also not published either in Eurostats (Agris) or WTO statistics; therefore, it is not possible to estimate the impact of the PSE calculation either for applicant countries or other important trade partner of the EU such as US.

**Table 3.2.1:** Selected tariff rates on some of inputs and final products in the Union

Description	Conventional rate of duty%
<b>Mineral ores or products</b>	Free
Aluminium ores	Free
Nickel	Free
Iron	Free
Silver	Free
Fluorspar	Free
Cement	Free
<b>Primary Metals</b>	
Stainless steel	0.5
Granules	0.5
Plated with aluminium	0.5

**Table 3.2.2:** Selected tariff rates on some of inputs and final products in the Union

<b>Agricultural products</b>	
<b>Cereals:</b>	
Wheat and meslin: Durum Wheat	148 € /t
Other	12.8 € /t
Rye, barley for seed and others	93 € /t
Oats:	89 € /t
Maize:	94 € /t
Seed, hybrid, double hybrid three cross hybrids	Free
Rice:	211 € /t
For sowing	7.7 € /t
Parboiled, Round grain, medium, long	211 € /t

Source for table 3.2: EU Commission: Official journal of the EC Commission regulation (EC) No: 1832/ 2002, amending Annex I to Council Regulation (EEC), No: 2658/ 87

According to the table, given above tariff amounts are calculated for the sample products, which are taken into consideration in this study. The higher internal product prices calculated by using the advalorem tariff formula are shown below.

$$P = (1+t) P_1 = P_1 + t P_1$$

As shown in the table below the result of the MacSharry and Uruguay Round Reforms is very obvious; imported product prices to the Union were increased over the community level to protect internal producers. By doing so, producers and community agencies increased their tariff revenues, while consumer surplus in the Union reduced results of the common custom tariff.

In the table the price difference between world producers, let us say Turkey as a non-member country, and the EU is calculated. The enormous price differences between world and EU product prices are a consequence of the CCT of the CAP.

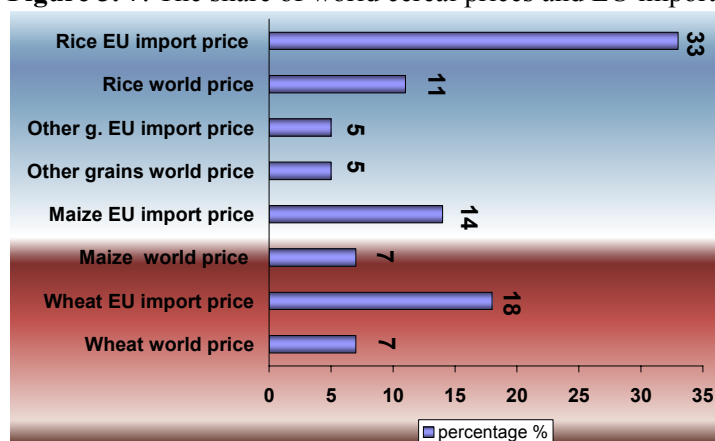
**Table 3.3:** The impact of the tariff measure on the imported agricultural products is compared with world prices (Euro/ t)

Year	Wheat		Maize		Other grains		Rice	
	World price	EU import price	World price	EU Import price	World price	EU Import price	World Price	EU import price
1994	103.4	<b>256.68</b>	99.6	<b>193.6</b>	68.5	<b>77.27</b>	154.5	<b>480.46</b>
1995	125.3	<b>310.7</b>	105.5	<b>204.67</b>	92.2	<b>104.0</b>	191.1	<b>594.32</b>
1996	152.5	<b>378.20</b>	139.4	<b>270.4</b>	122.7	<b>138.4</b>	275.8	<b>857.74</b>
1997	134.5	<b>333.56</b>	113.3	<b>219.8</b>	106.3	<b>119.90</b>	242.7	<b>754.79</b>
1998	99.4	<b>246.5</b>	98	<b>190</b>	67.	<b>152.76</b>	248.8	<b>773.77</b>
1999	89.8	<b>222.70</b>	97.1	<b>188.28</b>	75.7	<b>85.39</b>	284.8	<b>885.73</b>
2000	109.3	<b>271.06</b>	112.1	<b>217.47</b>	104.3	<b>117.42</b>	302.4	<b>940.47</b>
2001	121.9	<b>302.31</b>	120.2	<b>233.18</b>	110.1	<b>124.19</b>	189.2	<b>587.99</b>

Source: calculated from the Eurostat database, Director General for Agriculture and Fisheries, <http://www.euros.ch/agrifish.html>, Agris database 1973-2003, CD-Rom, 2003

In the figure below, the above common custom tariff is calculated compared with the world prices in percentage. The application of the common custom tariff has caused a considerable increase in cereal products price in the EU. In the figure, the share of wheat and maize prices after the tariff application increases approximately more than twofold in the EU market, while the rice price increases compared to the world price are threefold.

**Figure 3. 7:** The share of world cereal prices and EU import prices

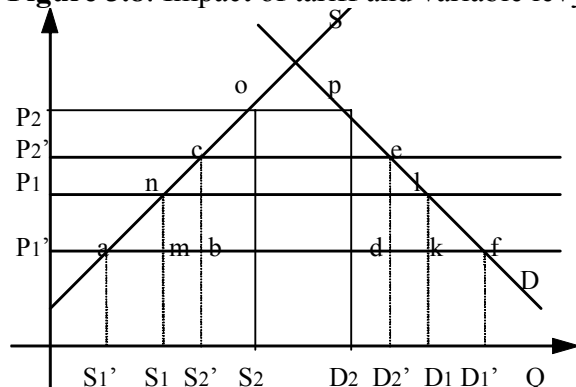


### 3.2.2.2 Tariff - Versus Variable Import Levy

The impact of the tariff measure is explained, but to better understand the welfare of the nation it is important to explain the effect of a variable import levy. In Figure 3.8 the trade between EU producers and third world countries is shown. The tariff measure makes third world country exporters inefficient in the EU market. The tariff measure increases the product prices from  $P_1$  to  $P_2$ . This price increase, as explained previously, reduces the consumer demand and welfare while increasing the producer surplus and supply on the market.

Now suppose that in the Union variable import levies are applied rather than a fixed tariff. In the first case consider the negative effect of variable import levies. Suppose that the world price declines from  $P_1$  to  $P_1'$ . Under the variable levy system the frontier charge, imposed as it was before the difference between  $(P_1' - P_2)$  when applied as a CCT will not effect a change in internal prices for non member producers. In the second case now let us suppose a positive effect of variable import levies. Here if the world price is raised then the internal price would exceed  $P_2$  if a similar tariff were applied but would remain unaltered if a variable levy were applied.

**Figure 3.8:** Impact of tariff and variable levy



Source: adapted from Rosemary Fennell: The CAP, 1997, p.196

### 3.2.2.3 The Requirement to Reduce the Custom Duties

Tariff barriers between industrial countries have been reduced through more than eight rounds of multilateral negotiations of the GATT (WTO). The regulations have been taken in the form of tariffs and some other non-tariff measures, such as, export subsidies, import quotas, quality standards, VER, domestic content requirements (importing countries must also buy some domestic products), environmental measures etc.

Many developing countries feel that the EU and US have abused the WTO-sanctioned right to put up tariffs against imports of products that are being dumped, especially with agricultural products. This has had a negative effect on the agricultural products of third countries and hindered access into the Union market.

It is clear that any interventions on imports directly affect the price of imported products, and as a consequence, import volumes. However, the form of intervention varies from one country to another and the amount of intervention is dependant on products. In many developed countries custom duties, in addition to export subsidies and quotas, are applied to protect their producers from external producers. Such interventions may cause an overproduction, with higher internal prices which indirectly affect the volume of trade flow.

The new protectionism comprises non-tariff measures such as set-aside and direct payments, support for storage costs, export subsidies and price support, which have been classified by two key features; “first, the measures used have tended to be less overt and more subject to administrative discretion than the instruments of old protectionism and second, the measures have tended to be applied in a manner which discriminates between products and countries.”<sup>32</sup> Whether this measure was used to increase the welfare of nations or only tried to discriminate against nations and some undesired producers in the market is questionable, because trade distortions were created through an increase in CAP measures during the last decade. The potential adjustment problems which arise from the implementation of the CAP supports directly affect fair trade negatively by causing resource transfers from lower cost of production in third countries to higher cost of production of the EU producers.

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<sup>32</sup>Williamson and Milner: The World Economy, 1991, p.138

### 3.2.3 The Non-Tariff Trade Measures (Considering the EU-15 and Turkey)

In the CAP protection is also obtained through the use of non-tariff measures. In recent years non-tariff measures within the new protectionism have become more important than tariffs as an obstruction to the flow of international trade. Indeed “agriculture is the most heavily protected sector of international trade with the EU, the USA, Japan and many other states pursuing interventionist policies designed to stabilise domestic prices and guarantee security of supply.”<sup>33</sup>

In the CAP system, the aims and means of organizing the markets changed between the 1992 and 1999 reforms, which were aimed at redesigning the support mechanism through the non-tariff trade measures from market price support to direct subsidies. In the CAP cereal products guaranteed prices and direct payments are applied as complementary support for production. The amount of support measures which are given to “arable crop production represents 21% of agricultural income and covers 40% of utilised agricultural area (UAA) in the European Union. Nearly 42% of total expenditure by the European Agricultural Guidance and Guarantee Fund (EAGGF) goes on this type of crop, and the sector is of considerable importance in terms of human consumption and the feeding stuffs industry.”<sup>34</sup> In the table below a breakdown is given of expenditures by sector, according to the economic nature of the support measures. The important share of the EAGGF guarantee section expenditures is still distributed between market support, price intervention measure and direct payments. However, “in the EU, this indirect support to farms still accounts for the main part (60%) of the Producer Support Estimate (PSE) by the OECD.”<sup>35</sup> However, in the MacSharry reform the replacement of market support with direct payments was planned but unfortunately has still not been achieved.

**Table 3.4.1:** EAGGF Expenditure by support measures in CAP of the EU in 2002

EAGGF support measures	Percentage
Export refunds	4
interventions	45
withdrawal from market	2
Storage	1
direct payments	37
Other interventions	4
Other support	7

Source: Eurostat: The 2003 Agricultural Year, 3. Economic data, from Table: Breakdown of expenditures by sector, according to the economic nature of the measures (EAGGF Guarantee)

[http://europa.eu.int/comm/agriculture/agrista/2003/table\\_en/en34.htm](http://europa.eu.int/comm/agriculture/agrista/2003/table_en/en34.htm)

In the table below distribution of the agricultural expenditure by support measures in Turkey is given. The amount of market support measures within the agricultural expenditures is considerable. Although, since the Agricultural Reform Implementation Project (ARIP 2001-2005) was introduced in 1999, direct income support (DIS) has begun to be applied in Turkey to reduce the disparities between regions and to replace the market support with DIS measures.

<sup>33</sup> David Pinder: The New Europe, 1998, p.58

<sup>34</sup> Activities of the EU Summaries of legislation Common Organisation of the Agricultural Markets, Council Regulation (EC) No 1251/1999 of 17 May 1999, <http://europa.eu.int/scadplus/leg/en/lvb/l60028.htm>

<sup>35</sup> Haering, Dabbert, Aurbacher, Bichler, Eichert, Gambelli, Lampkin, Offerman, Santiago, Tuson, Zanoli: Impact of the CAP measures on Environmental Friendly Farming Systems, 2004, p.37, <http://www.scirus.com/>

However, market support still covers an important share, as in the EU's CAP. This shows that the realisation of some measures is not easily put into effect by the force of law.

**Table 3.4.2:** Distribution of agricultural expenditures by support measures in Turkey in 2004.

EAGGF support measures	Percentage
Direct income support (Via input payments)	45
Market support	13
Animal support	12
Rural development support	10
Compensatory payments	5
Product security payments	5
Catak program payments	5
Other supports	5

Source: Ministry of Agriculture and Rural Affairs: Agricultural Strategy in Turkey 2006-2010

The table below shows the share of crop products in the total expenditure of the CAP which covers approximately 40 per cent of the CAP budget.

Worldwide production of cereals together with a higher share of expenditure on cereal products from the CAP budget and a considerable surplus amount in the CAP was the reason for selection of cereal products as sample products for use in the PSE calculation; this will increase the accurate assessment of CAP support measures showing their effects on market price support in the CAP and in Turkey as a non-member country.

**Table 3.5:** EAGGF expenditure by products in 2002

Products	2002 (2)	
	Mio EUR	%
Arable crops	<b>17,916.0</b>	<b>40.51</b>
Sugar	1,401.0	3.17
Olive oil	2,366.0	5.35
Fruit and Vegetables	1,650.0	3.73
Wine	1,392.0	3.15
Tobacco	983.0	2.22
Milk products	1,912.0	4.32
Beef /veal	8,095.0	18.30
Sheep meat and goat meat	1,832.0	4.47
Pig meat eggs and poultry	475.0	1.16

Source: European Commission Directorate General for Agriculture: Agriculture in the European Union Statistical and Economic information 2002, 2003, (selected data form table 3.4.3.1) (FAO Data)

### 3.2.3.1 The Market Price Support, the CAP and Turkey

In the 1950s food was scarce and expensive in the European countries; choice and quality was very poor. The people employed in agriculture made up a high percentage of the working population and support for farmers was dependent on the European countries' governments mostly led by the Christian Democrats. The number of small-scale farmers was very high. In the initial year of the EU there was no intervention in the market price or in the incomes of the farmers.

From 1968, after the founding of the CAP, it was necessary to build a common market organization, because the lack of common market food prices in different member countries would prevent the integration of member countries into the EU. In fact, the removal of trade barriers was not sufficient; protection for farmers from external producers and from price fluctuation required a common market regulation in the EU's CAP. For this reason market price support (MPS) policies have been used, including common custom tariff, intervention price mechanism, and export subsidies, to support but also to protect internal producers from external producers by raising internal producer and consumer prices above world price levels; this contributed to increasing production incentives whilst decreasing consumption.

Over time the application of the CAP support measures had considerable negative effects on fair trade though several reform proposals that have been applied to date. The financial burden on the CAP budget steadily increased. In the 1970s "production rose rapidly, increasingly outstripping EC consumption of cereals, meat, butter and other commodities. Surplus stocks and exports financed by the CAP grew rapidly, increasing in real terms from 11.3 billion ECU (at 1998 prices) in 1972, to 29.6 billion ECU in 1984."<sup>36</sup>

Especially in the last decade the CAP reforms applied have contributed considerably to reducing the negative effects of the CAP measures on fair trade. However, the replacement of price supports with direct payments indirectly contributed to increase the transfers from consumer to producer. Consequently welfare of consumers was reduced and trade distortion on third world country producers increased.

It is obvious that "without major reforms to the CAP, the old ills could return in more virulent guise. That is because, with a few changes in the 1992 reforms carried out by Ray MacSharry, an earlier EU farm commissioner, the basic shape of the CAP is the same as it was in the 1960s."<sup>37</sup> Therefore, a new reform proposal is required to reshape the existing support measures for increasing the fair trade and welfare on the world.

In 1994 all the 134 members of the GATT (WTO) together with the CAP of the EU adopted the Uruguay Round Agreement on Agriculture (URAA) aimed at protecting producers with different support measures, including domestic support, reducing tariffs trade measure and cutting export subsidies. Such support measures are planned not only to protect internal producers but also to maintain price stability and to transfer collected payments from consumers and taxpayers in order to finance the support measures of the CAP. Since the URAA, the market price support measures have been classified into three main categories: "subsidies in general are identified by "boxes" which are given the colours of traffic lights: green (permitted), amber (slow down, i.e. be reduced), red (forbidden)."<sup>38</sup> In World Trade Organization (WTO) terminology it is stated that in agricultural agreements there is no red measure. There is a blue box for subsidies that limit production. The effects of these subsidies are given below.

**Green Box:** These are called the 'minimally trade-distorting support measures'. They should not include price support or be linked to the quantity of production. They can include payments for research or food security stocks, direct payments to farmers decoupled from price or quantity, safety net payments and environmental or structural adjustment payments.

**Blue Box:** Blue Box payments include payments that do not increase the production of crops below the cost of production, i.e. payments for leaving field's fallow or reducing animal numbers subject to keeping production below a specified quota.

**Amber Box:** These are the most trade-distorting kinds of support such as those that increase the level of production, i.e. those that guarantee a minimum price and so encourage

<sup>36</sup> Malcolm Chalmers: Paying for EU enlargement; can a new burden sharing bargain be sustained?, University of Bradford, London, 2000, p.9 <http://www.psa.ac.uk/cps/2000/chalmers%20Malcolm.pdf>

<sup>37</sup> The Economist: Wanted: a farming revolution, Article, Brussels, 1997

<sup>38</sup> [http://www.wto.org/english/tratop\\_e/agric\\_e/agboxes\\_e.doc](http://www.wto.org/english/tratop_e/agric_e/agboxes_e.doc), from WTO terminology

the production of a surplus at below the cost of production.”<sup>39</sup> The Amber box covers only the aggregate measurement of support (AMS), which excludes explicit trade policies (import restrictions and export subsidies). The Blue box policies were those that evolved into the direct payments under production limiting programs. The Green box policies were directly related to the decoupled payments to producers but which are not related to the volume of production or to the price that is applied for the relevant year.

The above classifications may help to explain the concepts of support measures which are also applied within the CAP system and in Turkey but with some differences. Indeed, support measures vary from country to country. In some countries support measures are concentrated in the amber box type of support which is the most trade-distorting measure, and in some other countries in the EU, MPS are concentrated on blue and green box policies which are less trade-distorting trade measures.

In Turkey agricultural support policy has been classified into four groups, in accordance with the WTO boxes. These are: the market price support; payments to producers for storage of over-productions and for damages caused by the natural disasters; indirect payments for reducing the costs of producers and long term support for reducing the costs in agriculture.

In agriculture, support measures have been mostly based on the input subsidies and output price supports which were applied until 2000, and after 2001 these measures were steadily reduced by direct income support, which began with the agricultural reform implementation project (ARIP) in the 2000 programme, mainly introduced to reduce input subsidies which were steadily replaced by the support system for agricultural producers and farms. But incentives also are given to increase productivity, responsive to real comparative advantages. The ARIP programme aimed at adopting Turkish agriculture into the CAP system. “By the end of 2002 the implementation of the main themes of the program had significantly reduced artificial incentives for inputs and particular crops, and had switched the main focus of agricultural policy to the DIS program. Annual fiscal transfers were reduced from USD 6.08 billion (3.06 percent of GDP) in 1999 to USD 1.79 billion or 0.67 percent of GDP in 2002. This was affected largely through elimination of credit subsidies and substantial reduction in crop price subsidies and financed crop purchases.”<sup>40</sup> However, market support measures still play an important role in subsidizing agricultural producers. The application of price support is concentrated in the amber box policies which are applied especially in the form of import levies and input subsidies such as fertilizer and credit subsidies. In the crop sector subsidies are concentrated particularly on domestic input prices and price support on final output. In the past mainly import quotas were observed and in recent years higher import duties have also been applied as a protective measure. Indeed, “the dominant component of agricultural support in Turkey is (was) in the form of border measures. During 1999 – 2001, for example, the producer support estimate averaged 6.5 billion dollars. Of that 5.1 billion dollars were transferred through border measures.”<sup>41</sup> Such interventionist support measures (input price subsidy, import levies, export refund etc) were broadly applied until 2001.

Another important point about the MPS in Turkey was the distribution of subsidies. The MPS was distributed mostly to large scale producers in western and south coastal regions. The unequal distribution of subsidies in different regions of Turkey is given below. In the first table the amount of subsidies is given. The Western (Marmara Aegean and Mediterranean) and Central Anatolian regions received half of the support which was transferred to producers via

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<sup>39</sup> EU and the International Trade, Briefing Paper 2, Council for European Affairs  
<http://www.quaker.org/qcea/TradeBP2.doc>

<sup>40</sup> Lundel, Lampietti, Pertev, Pohlmeier, Akder, Ocek, Jha: Turkey, A review of the Impact of the Reform of Agricultural Sector Subsidization, 2004, p.3

<sup>41</sup> Baffes John: Experience with Decoupling Agricultural Support, 2004, p.13



input subsidies. However, the rest of the regions (Black Sea, East and South East) which have only one fifth less arable land received almost one fifth of the total subsidies.

According to the State Institute of Statistics (SIS) report, which was published in Ankara in 2001, the reasons for this unequal distribution of subsidies were:

- The south and western regions comprises almost 50 % of the total production. Due to this higher production capacity, they received the highest income, which comprised almost half of the total support.
- The East and Southeast Anatolian regions are the lowest income regions and have less than 20 percent of total production in Turkey. They received, therefore, about one fifth of the total input subsidies.

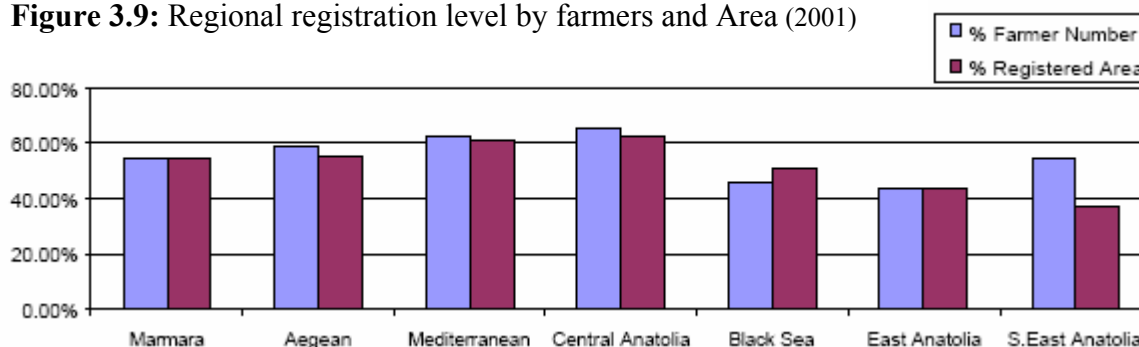
**Table 3.6:** Regional PSE by cereal products, 1999 and 2001 Billion Real 2001 TL

1999	Mediterranean	East Anatolia	Aegean	South e. A	Central A.	Black Sea	Marmara	Turkey
Wheat	213.995	91.632	114.205	122.191	380.724	142.287	189.358	1,254.391
Maize	60.115	438	10.267	2.468	380	42.328	25.563	141.558
Other Grains	31.246	37.849	65.681	54.610	221.475	47.573	57.354	515.788
<b>Total crops</b>	<b>761.368</b>	<b>289.323</b>	<b>661.636</b>	<b>351.875</b>	<b>1,344.111</b>	<b>665.383</b>	<b>665.142</b>	<b>4,738.839</b>
2001								
Wheat	-26.032	-12.757	-13.738	-24.638	-38.108	-163.68	-25.616	-157.257
Maize	7.313	36	1.623	414	249	5.364	5.038	20.067
Other Grains	2.665	3.536	4.731	10.649	13.599	4.022	5.018	44.220
<b>Total Grains</b>	<b>347.765</b>	<b>71.388</b>	<b>326.099</b>	<b>146.771</b>	<b>267.122</b>	<b>248.153</b>	<b>235.140</b>	<b>1,642.438</b>

Source: Lundel, Lampietti, Pohlmeier, Akder, Ocek, Jha: Turkey, A review of the Impact of the Reform of Agricultural Sector Subsidization, 2004, p.14

In Figure 3.9 the amount in percentage of farmers and registered areas in agricultural use are given. The Western regions together with the central Anatolian region have the highest amount of arable land and farmers. However, in the East, South East Anatolian and in the Black Sea regions land use and number of farmers is only about twenty per cent less than the other regions.

**Figure 3.9:** Regional registration level by farmers and Area (2001)



Source: Lundel, Lampietti, Pohlmeier, Ocek, Jha: Turkey, A review of the Impact of the Reform of Agricultural Sector Subsidization, 2004, p.43

The next Table 3.7 illustrates the amount of the DIS program which was first applied in 2001. It is also important to state that the distribution of DIS has been mostly realised in Central Anatolian region and, interestingly enough, in the East and South East Anatolian regions which have less land for farming and farmers.

The distribution of subsidies was not applied in accordance with the over-production and/ or marketing difficulties of producers and/ or number of farmers or land use in different regions. It is mostly dependent on political reasons. Such unequal distribution of support payments has also been observed within the CAP system. Those large scale producers who had over-production in certain agricultural products such as cereals received a significant part of the CAP expenditures. But financial support was mostly given for exportation of over-production and for those producers who had marketing difficulties and were not sufficient for maintaining their production in the market.

**Table 3.7:** Average DIS payments by regions in Turkey 2001 program (Euro/mn)

Average DIS payments per registered farmers by regions	Total payment
Marmara	352
Aegean	285
Mediterranean	293
Central Anatolian	608
Black Sea	249
East Anatolian	523
South East Anatolian	662
<b>Total</b>	<b>2.972</b>

Source: Table adopted from Lundel, Lampietti, Pohlmeier, Jha: Turkey, A review of the Impact of the Reform of Agricultural Sector Subsidization, 2004, p.44 (1Euro= 1.313,000 TL in December 2001)

It is obvious that in Turkey market price support policies have had less effect on changing the regional distribution of income, since the large scale (20 ha and above) high income producers which comprise only 5 percentage of the total holdings, received an important part of agricultural support. In contrast less market price support has been given to small scale producers (less than 5 ha arable land use) which comprise about 70 per cent of total holdings (arable land) so it is difficult to expect a reduction in the disparities between regions.

By the beginning of the year 2000 both input subsidies and intervention price mechanism had been partly replaced with decoupled direct income support (DIS) which was mostly distributed by means of input payments and output payments. The aim of this reform was to reduce the trade distortion effect and financial burden of the state. However, lack of information and communication between some regions and insufficient data on registered farmers and land use reduced the effective application of these new measures in Turkey.

The measurement of the producer price index was another problem for the Turkish producers, because according to article 41 in the 'Stand by' agreement, which was signed between Turkey and the USA, it was suggested that the producer prices be linked to the Chicago stock exchange. By doing this any change on the world price index would be reflected directly by the Turkish Grain Board (TMO) on the grain product prices. However, producer prices could be estimated in accordance with the price movements of commodities bought and sold by manufacturers in a country's market.

The above mentioned problems affect an accurate estimation of the PSE in Turkey.

The application of the PSS differs from product to product and from country to country. However, in arable products (especially for cereal products) price support measures are combined both in Turkey and in the EU with the direct input support measure (with some differences) to estimate the market support. Therefore, an estimation of the PSE on cereal products will contribute to a comparison of the possible effects of these measures between EU and Turkey. However, the application of the EU's CAP support measures is wider than in Turkey; in particular, the application of direct payments, defined in the OECD database with

indicator 'C', are not used in Turkey. In addition, indicator 'B' payments based on input, indicator 'D' payments based on historical planting, indicator 'F' payments based on constraints, and indicator 'H' miscellaneous payments are not used as support measures in agricultural sector in Turkey.

The impact of market price support is explained in the figure illustrated below. It is assumed that in the EU the intervention price causes an increase in product prices from  $P_W$  (price in World) to  $P_{EU}$  (price in EU), which causes an increase in production amount from  $Q_1$  to  $Q_2$ . By doing so, the production amount which would be exported into the EU market is reduced, because increasing product price has also meant an increase in the import tariffs. The price gap ( $P_{EU}-P_W$ ) is applied as a tariff amount on imported products.

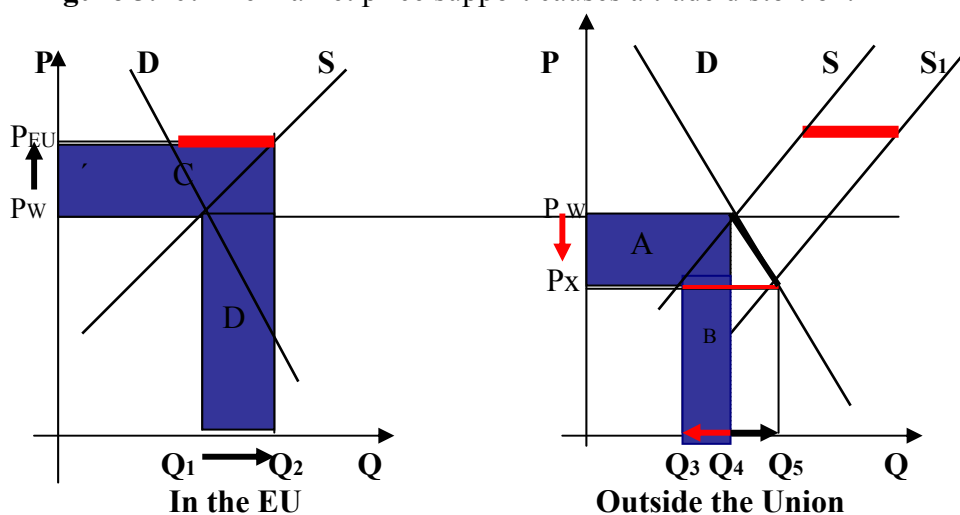
In the EU's CAP application of the export subsidies reduces the exported product price from  $P_W$  to  $P_X$ . A decline in product price increases the demand for EU products outside the EU, which increases EU exports from  $Q_4$  to  $Q_5$ . But export subsidies outside the Union reduce the product amount from  $Q_3$  to  $Q_4$ .

On the one hand, in the EU, common custom tariffs prevent the access of third world country products to the EU market. But, on the other hand, higher internal product prices stimulate external producers to increase their next term production.

Export subsidies outside the Union reduce the product price of the internal producers. A decline in product prices stimulates the demand by consumers for products of internal producers outside the Union. An increasing demand for EU products boosts the market share of the EU producers from  $Q_4$  to  $Q_5$ , whilst producers outside the Union reduce their market share from  $Q_3$  to  $Q_4$ .

In Figure 3.10 the blue colours represent the change in production. In the EU production is increased, which is shown with the blue coloured areas C+D, while the level of production outside the EU is decreased as shown with the blue areas A+B.

**Figure 3.10:** The market price support causes a trade distortion.



As the above-illustrated results of the market price support show, the expected utility from trade liberalisation has not been achieved for all nations. Some people and nations became richer while the other nations, especially in the third world, became poorer than ever before. The abyss between rich and poor deepened. According to the UN Human Development report published in 2000, at the end of 1990, 20% of the world's richest population living in developed countries had 80% of the world's products and 20% of the world's poorest population had only 1% of the world's products.

One of the important reasons for income inequality in the world is probably unequal and unfair distribution of (commercial) income which is applied on agricultural products,

because most of developing countries are dependent on agricultural sector and application of different tariff and non-tariff trade measures replace lower cost products of developing countries with some higher cost products of developed countries. However, agricultural support policies newly reformed in Turkey had also contributed to increasing the absolute income difference, not only between countries but also between different regions in undeveloped countries. For example, in Turkey, input subsidies which are distributed to producers increased the absolute income difference, because an important share of subsidized inputs went relatively more intensively to the higher income regions than the lower ones. This implies that the large-scale farmers who cultivated small portion of the land received more subsidies than small-scale farmers who cultivated less than 5 ha of the land and comprise about 70 percent of farmers.

In the EU's CAP the application of the MacSharry reform has had a considerable positive effect on reducing the negative impact of market support on unfair trade. The application of measures reduced the price support for cereals and cattle by 15%, for beef by 29%. But also 15% compulsory set-aside as well as voluntary set-aside was planned. However, through the MacSharry reform producers began to receive direct income support which was accepted as a less trade-distorting blue box support measure in the WTO terminology. In the CAP support system replacement of market support with direct payments was very evident:

- Direct payments have less effect on the market prices while they cause an increase in producer income,
- They have less trade-distorting effect relative to the price support measure,
- The direct payments were acceptable for the WTO.
- Market price support is one of the most trade-distorting trade measures, being one of the most important components of producer subsidy equivalent (PSE).

The estimation of the PSE in the OECD database is explained in the previous chapter. In this section it is now required to adopt the PSE calculation for the calculation of transfers from consumers to producers in cereal products. The important component of MPS is calculated before the PSE. The estimation of the MPS and PSE for cereal products (as previously explained in detail in the methodology section 3.1.3) is considered for indicators Aa, Ab, Ba, Ca, Cb, Ea, Eb, Ec, Fa, Fb, Fc and indicator H for the EU and for Turkey indicators Aa and Ea, Eb, Ec are considered.

The formula below is used to calculate the MPS for the EU.

$$\text{MPS} = (\text{Pp} - \text{Pr} \cdot \text{X}) \cdot \text{Q}$$

MPS for EU;

Aa = 'based on unlimited output'

Ab = 'based on limited output'

Where;

Q = quantity produced (considered only indicator A1= based on unlimited output)

Pp = producer price in domestic currency units.

Pr = world price in world currency unit

X = exchange conversion factor (to convert world reference price from dollar to euro)

The estimation of MPS and PSE for EU-15 is calculated by using the formula below to estimate the impact of the market support for producers within the CAP. This is adapted from the PSE formula for cereal products:

$$\text{PSE} = (\text{Pp} - \text{Pr} \cdot \text{X}) \cdot \text{Q} + \text{Ba} + \text{Cb} + \text{Ca} + \text{Db} + \text{Ea} + \text{Eb} + \text{Ec} + \text{Fa} + \text{Fb} + \text{Fc} + \text{Ha} + \text{Hb}$$

PSE for EU;

Ba = 'based on unlimited output'

Ca = 'payments based on unlimited area' (especially interventions and environmental amounts are considered) and

Cb = 'payments based on limited area' (consist of set-aside and per hectare aid for cereals).

Db = 'based on historical support programmes'

Ea = 'payment based on variable input use'

Eb = 'payments based on use of on-farm services'

Ec = 'payments based on-farm investments'

Fa = 'payments based on constraints on variable inputs',

Fb = 'based on constraints on fixed inputs'

Fc = 'based on constraints on a set of inputs.'

Ha = 'National payments'

Hb = 'sub-national payments'

The formula below is used to calculate the MPS for Turkey.

$$\text{MPS} = (\text{Pp} - \text{Pr.X}).\text{Q}$$

MPS for Turkey;

Aa = 'based on unlimited output is only considered'

The estimation of MPS and PSE for Turkey is calculated by using the formula below to estimate the impact of the market support for producers in Turkey. This is adapted from the PSE formula for cereal products:

$$\text{PSE} = (\text{Pp} - \text{Pr.X}).\text{Q} + \text{Ea} + \text{Eb} + \text{Ec}$$

PSE for Turkey;

Ea = 'payment based on variable input use'

Eb = 'payments based on use of on-farm services'

Ec = 'payments based on-farm investments'

For the PSE calculation from the OECD indicators, Aa, Ab, Ba, Ca, Cb, Db, Ea, Eb, Ec, Fa, Fb, Fc, Ha and Hb are required and for the estimation of the PSE amount in cereal products in the EU's CAP and for Turkey indicators 'Aa' and indicator 'Ea, Eb, Ec' are considered.

However, some of these indicators which are explained above have been partly used for the calculation of the PSE amount in the EU's CAP whilst others were extracted from the PSE calculation for the reasons given below.

- Only selected indicators of OECD data have an impact on the PSE calculation for cereals. However, it is not used for the whole period of time (1986- 2003) considered for the PSE calculation because:

- The payments based on limited area (Cb) began in 1993 after the MacSharry reform.  
 - The payments based on unlimited area (Ca), were introduced in the 1988 reform.  
 - Market price support, based on limited output (Ab), was also started with the MacSharry reform and comprises of crop products.

- Market price support based on unlimited output (Aa) was started in the 1988 reform and applied until 1992.

- The payments based on constraints on variable inputs (Fa) were started by the end of the Uruguay round of trade negotiations in 1994.

- The payments based on historical support programmes 'Db' were started by the 1988 reform programmes. However, this has made little contribution to the PSE calculation to date.

The calculation of the MPS and then the PSE amount within and outside the Union is considered.

It is also important to remember that some of the OECD indicators, which are defined above, were not relevant for the whole period from 1986 to 2003, which is taken into consideration for this study. Therefore, some of above given indicators are not used either for the calculation of the MPS or for the PSE's amount, because the MPS based on unlimited output was replaced with limited output. That means these direct payments based on unlimited output were only valid until the 1992 MacSharry reform, which then were replaced by limited output. One other important difference which is indicated in this calculation is the limited area payments which were also replaced with the unlimited area payments after the MacSharry reform. Consequently these changes are taken into consideration in MPS and in PSE calculations and the impact of reform proposals are then compared with Turkey's MPS and PSE in order to answer the questions given below. These are:

- Do CAP reform proposals, which were realised between 1980 and 2003, have positive effects on reducing transfers from consumers to producers on those cereal products in the EU's CAP?
- Do the reform proposals reduce the negative effects of the CAP, compared to Turkey as a non-member country, who applied her own support policies to the cereal products during this period?

The answer to these questions cannot be simply given, because, on the one hand, the amount of direct payments for the member countries is not published in the EU, therefore, it is not possible to calculate the total amount of PSE for member countries of the EU, although part of the PSE can be calculated by using the formula for cereals products given below.

The measures which are used both in the EU's CAP and in Turkey are not unique and differ between countries. Nevertheless, calculations of these measures can give a better understanding to the amount of support which is distributed to producers.

The distribution of subsidies between member countries is not published; only published statistics in the Agris database and/ or OECD database are estimated for the EU-15. Therefore, estimation of the indicators for the MPS and PSE calculation are only considered for the EU-15. Some of these indicators, such as payments based on limited area (Cb) which began in 1993 after the MacSharry reform and MPS based on limited output (Ab) also started with the MacSharry reform, were only calculated from the beginning year of application.

The estimation of the MPS for Turkey is also only considered for the indicator 'Aa' based on unlimited output. And for the PSE calculation indicator E is considered, because there was no other support measure during this period. However, input subsidies and output payments have been decoupled from using input or producing output by the market regulations planned in 1999.

In the OECD methodology MPS (market price support to producers) is the important component of the PSE calculation. It is estimated by the price gap between producer price and world reference price. In Table 3.8 below the PSE calculation is only given after the date of EU membership for Austria, Finland and Sweden. Previous calculations are not possible because related statistical data are not published for these countries. But after EU membership the PSE calculation is considered in accordance with the published statistical data in the Agris database. Previous calculations are not considered because these countries were not EU members until 1995 and no payments for these countries were given by the CAP. In OECD database Turkey's MPS and PSE amounts are published and calculated. Therefore required data is indicated between 1986 and 2003.

In the table below the amount of MPS and PSE for the most widely produced cereal products is calculated first for wheat and then for barley, in the EU for Austria, Finland and Sweden and, outside the EU, is estimated, in Turkey as a non-member country. The effect of the MPS of the CAP in EU countries before and after EU membership is shown. The

comparison of the impact of support measures is calculated by using indicator Cb (limited area) for the EU producers, and for Turkish producers by using Ea (input subsidies: comprises concessional loans fertilizer subsidies, hybrid seed subsidy) which can be considered as an important support measures for transferring monetary values to producers. This comparison brings about a better understanding of the amount of transfers, realised via different support measures, which contribute to an increase in the finance and/ or income of producers in and out of the Union.

**Table 3.8.1: MPS and PSE for Wheat (Euro /tons)**

year	Turkey Euro/mn		Austria Euro/ mn		Finland Euro/mn		Sweden Euro/mn	
	Wheat----		Wheat----		Wheat-----		Wheat-----	
	MPS	PSE	MPS	PSE	MPS	PSE	MPS	PSE
1990	375	724	209.28	:	3162,3	:	157.37	:
1993	248	650	183.04	:	85.46	:	23.31	:
1994	150	563	197.1	:	49.78	:	49.51	:
1996	95	464	12.07	140.9	14.69	54.02	-10.55	80.79
1998	1.126	1.501	34.47	132.7	18.96	46.17	180.21	110.29
2001	-137	-90	-37.413	56.4	-0.044	39.6	-67.04	44.11
2003	1.282	1.294	:	:	:	:	:	:

Source: calculated from the Eurostat database, Director General for Agriculture and Fisheries, <http://www.euros.ch/agrifish.html>, Agri database 1973-2003, CD-Rom, 2003 and for Turkey from OECD database: Agricultural Policies in OECD Countries: Monitoring and Evaluation 2005.

As seen in the table above, the decreasing amount of MPS in member countries has been covered by direct subsidies. For cereal products direct payments are mainly used by the Community agencies as an important support measure.

The negative values given in the table for the MPS and PSE does not mean that there was negative production, but the producers paid more tax than the profit earned from sales in that year. In the CAP producer income loss is covered by different support measures. However, if the tax which is paid by them is higher than their income, then the PSE will result in negative numbers.

It is evident that the MPS was rather high for Austria, Finland and Sweden, before EU membership. Having EU membership increased the amount of support measures for these countries. It can be seen that, prior to EU membership, the amount of MPS was rather high, but after achieving EU membership the PSE increased while the MPS fell. The reason for this is very obvious; the above-mentioned three member countries of the EU began to apply CAP measures (direct payments, intervention price, common custom tariff (CCT) and export subsidies, in order to adapt their market structure into the EU. But after EU membership the amount of MPS was reduced, while the amount of direct payments added to the MPS to estimate the PSE amount steadily increased.

In contrast, the amount of PSE in Turkey steadily decreased, whilst the amount of MPS decreasingly increased. This meant that both in Turkey and in the EU the MPS had an important effect on the PSE calculation, but in the EU application of direct payments, which replaced the market price support after the 1992 reform, made an important contribution to the PSE increase. However, in Turkey the MPS had a considerable positive effect on the PSE amount, because the increase in input subsidies and decreasing increase in output payments was maintained until 2000. But after 2000 the application of the new regulations, especially direct income support (DIS) which breaks the link from input use and/ or producing output, contributed to increasing the MPS, and in 2003 the amount of MPS again increased nearer to the PSE amount. This happened because unfair distribution of support measures between

producers still continued. Although necessary measures were put into effect in 2001, lack of information and inspection and some other political expectations caused this result.

In the table below, market price support (MPS) for barley is calculated. As with wheat, the estimated amount of market price support for barley was extremely high prior to EU membership. But after achieving EU membership, the support amount in these countries was steadily replaced with direct payments which do not have a direct effect on the market price. On the one hand direct payments support the income of internal producers whilst reducing negative reactions against CAP measures in the world markets. However, as well as direct payments other support measures such as export subsidies and market support were maintained, and this had a negative effect on reducing unfair trade in the world markets. By doing so higher cost producers of the CAP continue to receive market price support together with direct payments whilst producers in non-member Turkey, with a lower cost advantage, have been partly supported by input subsidies which were replaced with direct income support (DIS) in 2001. However, over time, both in Turkey and in the EU the increased amount of support measures is considerable. On the one side in Turkey direct income support which breaks the link between input use and producing output is mostly distributed between large scale producers. On the other side, in the EU direct payments, which are first decoupled and then break the link between production, contributed to an increase in the transfers from consumers and taxpayers to producers. Consequently, over time, transfers from consumers to producers reduced the welfare of consumers more and more.

**Table 3.8.2:** MPS and PSE for barley (Euro /tons)

Year	Austria - ( Euro/mn)		Finland - ( Euro/mn)		Sweden -(Euro/mn)		Turkey (Euro/ mn)	
	Barley		Barley		Barley		Barley	
	MPS	PSE	MPS	PSE	MPS	PSE	MPS	PSE
1990	39.029	38.739	525.687	500.712	128.465	166.287	239	301
1992	27.026	26.649	278.029	245.987	58.247	107.860	225	290
1993	25.250	24.814	211.214	186.081	8.286	37.023	393	457
1994	27.436	27.436	244.285	248.747	42.636	76.129	72	132
1996	9.133	30.133	59.509	121.396	39.906	121.291	151	260
1998	4.800	21.127	59.890	123.426	22.659	104.429	551	655
2001	0.017	14.152	25.225	125.545	6.619	87.601	30	40
2003	:	:	:	:	:	:	229	229

Source: calculated from the Eurostat database, Director General for Agriculture and Fisheries, <http://www.euros.ch/agrifish.html>, Agris database 1973-2003, CD-Rom, 2003 and for Turkey from OECD database: Agricultural Policies in OECD Countries: Monitoring and Evaluation 2005 (TL converted to the Euro).

The market price support which is calculated for the three member countries and Turkey gives some important information. The MPS was higher in all three countries before EU membership, but as is indicated in the tables, the amount of the market support differs from one country to another. This is the reason why these support measures are not published. Both in Turkey and in the above given three member countries application of the MPS amount together with the PSE amount differ from one country to another and from one year to another. This has meant that the application of the CAP support measures differ from one region to another and the result of this distribution of financial support vary between regions. Such differences on distribution of financial support between countries prevented publication of statistical data on financial support, which probably prevents discussions between member countries.

Indeed, market price support, which increased the product prices and prevented product access from third world countries into the EU market, was often criticised and seen as the



reason for unfair trade in WTO meetings, despite the application of the MacSharry reform (1992), later followed by the Uruguay round and Agenda 2000 reform proposals aimed at reducing those trade-distorting effects of the CAP measures. The replacement of the MPS with direct payments in the CAP (1992) and DIS in Turkey (2000) made some important contributions to the reduction of the trade distortion effect. But neither in the CAP nor in Turkey did those income support measures increase the welfare of the consumer. Unfair application of amber box support measures in Turkey, which increases the trade distortion on the world market has been slightly reduced but not removed. Furthermore, in Turkey the application of market support causes an increase in the income of some large scale producers whilst others have been neglected. Such unequal distribution of subsidies is actually realised both in Turkey and in the EU's CAP.

As previously explained market supports were very high both in Turkey and in Austria, Finland and Sweden. However, after joining the EU, market support was reduced and replaced with direct payments in order to reduce the negative effects of price support in the market.

The PSE calculation before EU membership was not calculated for the three EU countries; because necessary data for PSE calculation was published neither in OECD data nor in Eurostat Agris database. But as is indicated in the table above, a decline in market price support has been steadily replaced with the direct payments indicated in the PSE amount.

**Table 3.9:** The production amount in cereals in EU and in Turkey (mn/ tons)

Year	EU				Turkey			
	Wheat	Barley	Other grains	Maize	Wheat	Barley	Maize	Other grains
1986	72.0	46.8	52.1	25.5	15.4	6.2	2.2	6.2
1991	90.7	51.5	55.8	27.3	16.9	7.1	2.1	7.1
1992	84.8	43.3	46.8	30.0	15.9	6.3	2.1	6.3
1993	80.8	42.9	47.2	29.8	17.4	6.8	2.4	6.8
1994	82.8	38.9	43.3	28.2	14.5	6.4	1.8	6.4
<b>1995</b>	<b>87.7</b>	<b>43.4</b>	<b>49.2</b>	<b>30.1</b>	<b>14.9</b>	<b>6.8</b>	<b>1.1</b>	<b>6.8</b>
1996	99.9	52.7	59.6	35.5	15.3	7.3	1.9	7.3
1998	103.8	51.6	57.9	35.8	17.2	8.2	2.2	8.2
2000	105.2	51.4	58.1	38.4	17.2	7.3	2.2	7.3
<b>2001</b>	<b>91.8</b>	<b>48.1</b>	<b>54.3</b>	<b>40.5</b>	<b>16.0</b>	<b>6.8</b>	<b>2.1</b>	<b>6.8</b>
<b>2003</b>	<b>92.0</b>	<b>46.6</b>	<b>53.5</b>	<b>34.2</b>	<b>15.8</b>	<b>7.4</b>	<b>2.7</b>	<b>7.4</b>

Source: calculated from the Eurostat database, Director General for Agriculture and Fisheries, <http://www.eurostat.ch/agrifish.html>, Agris database 1973-2003, CD- Rom, 2003 and for Turkey from OECD database: Agricultural Policies in OECD Countries: Monitoring and Evaluation 2005.

From 1995 to 2000 an increase in the market support in Turkey and in direct payments in the EU increased transfers to producers. However, these transfers had a negative effect on production amounts, which increased cereals both in the EU's CAP and in Turkey. (see table below).

It is also important to note that increasing direct payments were not reflected in rising production amounts as an increase in the rate of direct payments (see tables above and below).

Over time an increase in the amount of market price support and direct payments from taxpayers and consumers to producers strengthened reactions against the application of the price support system of the CAP. In addition to this, the price gap between world and EU products, especially for the cereal industry has dropped since 2000. The decline in cereal product price and the increase in product price outside the Union should be reflected in the intervention measures too. This implies that the market intervention price, which is lower than the world cereal prices, should be reduced, because any increase in the intervention price has

also meant an increase in the CCT. However, product price outside the Union is higher than the EU prices. Therefore, there is no need to increase the market price artificially, because by doing so some unavoidable outcomes would have to be considered. These are:

- Market intervention increases the surplus amount
- Increase on the market price will be directly reflected in the CCT, which is not required, because cereals prices outside the Union are already well below the prices of internal producers.
- In the EU there is an over-production for cereal products and any price intervention will only contribute to increasing the production of the next term (see Cobweb theorem). By doing this prices move further away from the equilibrium position which means price stagnation.

The impact of the 1988 reform, which comprised voluntary set-aside and early retirement measures, increased cereal production until 1991, compared to production in 1986. With the 1992 reform, this shifted market price support to direct payments and extended set-aside measures to compulsory set-aside, production increased until 2000. After 2000 a decline in cereal prices below the world level reduced the direct payments together with market price support slightly. However application of the direct payments were given to producers, even if the price support is zero, that means the price gap between internal and world producers was closed ( $P_p = P_r$ ).

Next I analyse the impact of the various support measures of the CAP. The impact of each support measure on producer gain is estimated to determine the trade distortion effect of CAP support measures in economics.

The support measure or measures that can best fit into the CAP system to reduce the trade distortion effect in both the EU's CAP and Turkey, as a non-member country, will be estimated.

The PSE has been calculated for each selected cereal product for the EU-15 in Table 3.10.1.

In the last decade MPS was in decline whilst the PSE increased. The PSE increase was the outcome of the policy changes in the CAP which were started by the MacSharry reform in 1992 and increased transfers from consumers to producers was caused by the application of direct payments.

**Table 3.10.1:** The MPS and PSE compared in the EU 15. (Euro/mn)

Year	Wheat		Barley		Other grains		Maize	
	MPS	PSE	MPS	PSE	MPS	PSE	MPS	PSE
1986	7,469	<b>8,315</b>	4,845	<b>5,106</b>	5,234	<b>5,515</b>	2,688	<b>2,926</b>
1988	6,036	<b>6,933</b>	3,859	<b>4,125</b>	3,971	<b>4,263</b>	2,238	<b>2,468</b>
1990	4,706	<b>6,018</b>	3,649	<b>3,960</b>	3,871	<b>4,212</b>	2,136	<b>2,417</b>
1992	5,728	<b>7,424</b>	3,345	<b>4,032</b>	3,568	<b>4,329</b>	2,638	<b>2,991</b>
1993	4,424	<b>8,900</b>	3,071	<b>5,401</b>	3,277	<b>5,896</b>	1,927	<b>2,423</b>
1994	3,299	<b>9,392</b>	2,561	<b>5,683</b>	2,734	<b>6,276</b>	1,264	<b>2,019</b>
1995	1,589	<b>8,680</b>	1,653	<b>5,665</b>	1,857	<b>6,588</b>	1,706	<b>2,713</b>
1996	0	<b>7,769</b>	136	<b>4,542</b>	367	<b>5,557</b>	727	<b>2,108</b>
1997	5	<b>7,566</b>	442	<b>4,872</b>	606	<b>2,437</b>	915	<b>2,225</b>
1998	2,408	<b>9,981</b>	2,215	<b>6,511</b>	2,437	<b>7,563</b>	1,168	<b>2,448</b>
1999	2,879	<b>10,673</b>	1,645	<b>5,966</b>	1,949	<b>7,105</b>	1,435	<b>2,788</b>
2000	1,039	<b>9,948</b>	122	<b>4,795</b>	409	<b>6,039</b>	940	<b>3,038</b>
2001	337	<b>9,559</b>	0	<b>5,131</b>	181	<b>6,313</b>	550	<b>2,812</b>
2003	147	<b>9,566</b>	114	<b>5,155</b>	0	<b>5,587</b>	873	<b>2,710</b>

Source: calculated from the Eurostat database, Director General for Agriculture and Fisheries, <http://www.euros.ch/agrifish.html>, Agris database 1973-2003, CD-Rom, 2003

In the following decade the MPS amount has tended to diminish. In the table above the PSE amount in the given period shows a tendency to increase while the amount of MPS falls. This means that the amount of direct payments has increased while the price support measure has fallen.

The reform of Agenda 2000, which was planned to increase productivity of producers in the CAP and reduce subsidies, contributed to a reduction in the market support which is given to producers but increased the direct payments. The impact of these measures can be observed in the PSE amounts (see table above). The PSE results after 2000 show a tendency to fall, while the price gap between internal and world producers declines.

In Table 3.10.2 given below the MPS and PSE is compared for selected cereal products in Turkey. As indicated in the table the market price support comprises an important part of support measures in Turkey, of which payments based on unlimited output are considered for distributing market support to producers. However, in the EU as well as the unlimited output, the limited output has also been used since the MacSharry reform for distributing market support to producers.

**Table 3.10.2:** The MPS and PSE compared in Turkey. (Euro/mn)

Year	Wheat		Barley		Other grains		Maize	
	MPS	PSE	MPS	PSE	MPS	PSE	MPS	PSE
1986	101	<b>348</b>	175	<b>220</b>	175	<b>220</b>	17	<b>36</b>
1990	375	<b>724</b>	239	<b>301</b>	239	<b>301</b>	76	<b>100</b>
1992	335	<b>720</b>	225	<b>290</b>	225	<b>290</b>	101	<b>126</b>
1993	248	<b>650</b>	393	<b>457</b>	393	<b>457</b>	73	<b>100</b>
1994	150	<b>563</b>	72	<b>132</b>	72	<b>132</b>	-19	<b>5</b>
1996	95	<b>464</b>	151	<b>260</b>	151	<b>260</b>	45	<b>80</b>
1998	1,126	<b>1,501</b>	551	<b>655</b>	551	<b>655</b>	136	<b>170</b>
2000	516	<b>710</b>	239	<b>291</b>	239	<b>291</b>	97	<b>113</b>
2001	-137	<b>-90</b>	30	<b>40</b>	30	<b>40</b>	14	<b>18</b>
2003	1,282	<b>1,294</b>	229	<b>229</b>	229	<b>229</b>	175	<b>175</b>

Source: OECD database: Agricultural Policies in OECD Countries: Monitoring and Evaluation 2005, own calculation.

In Turkey the MPS given to producers in Turkey increased continuously up until 2003 whilst measures such as payment based on input (defined in the OECD database with indicator E) were considered mostly for the PSE calculation, because payments based on area which are considered for the estimation of the PSE calculation for cereal products in the EU are not relevant for the PSE calculation in Turkey. However, as in EU, payments based on the unlimited output indicator 'A1' are also considered for cereals PSE calculation in Turkey.

The important difference in support measures between Turkey and the EU occurs therefore in Turkey's input subsidies (indicator Ea) calculated in the PSE, which is accepted by WTO in the amber box as the most trade-distorting support measure, and the EU's direct payments (indicator Ca), calculated in the PSE, which is accepted as a lesser trade-distorting support measure in the blue box measure of the WTO.

In Figure 3.11 below, the impact of price support mechanism of the CAP is considered for cereal products. In the CAP of the EU cereal products have over-production. This excessive production of cereals is indicated between  $Q_{D1}$  and  $Q_{S2}$ .

The supply curve is assumed to be an increasing function of price and the demand curve is a decreasing function of the price. In the CAP, on the one hand, producers are protected by higher common tariff measures from countries outside the EU, and on the other hand,

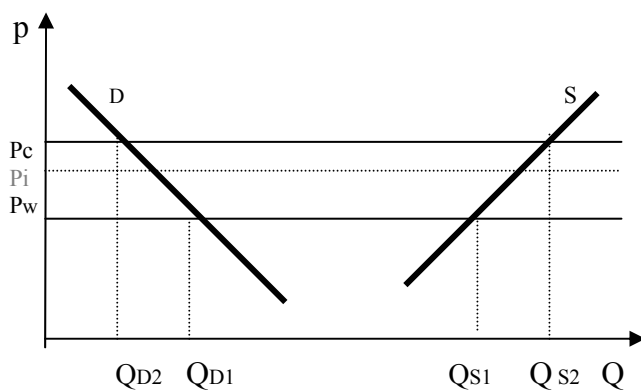
producers are supported by intervention prices to prevent a price fall in the market and income losses for producers. However, besides these measures, there is an export subsidy as a measure to increase the exported product amount from the Union. The export subsidy is given by the Community agencies to the producers to reduce their high product price to below that of the world price in order to increase their market share and sales amount in importing countries.

In the case below, the cereal products are assumed to be subsidized with the price gap between world's ' $P_w$ ' and Union's ' $P_c$ '. The subsidy increases the production amount from  $Q_{S1}$  to  $Q_{S2}$ . As a consequence of this subsidy; consumers are compelled to pay more than the world price ( $P_w$ ), which is guaranteed by the community agencies through intervention prices to producers. This higher internal price reduces consumer demand from  $Q_{D1}$  to  $Q_{D2}$ .

The export subsidy can then be estimated by using the formula below:

$$((P_c - P_w) \cdot (Q_{D2} - Q_{S2}))$$

This will guarantee the producer  $P_c$  price to continue producing  $Q_{S2}$  amount of cereal product. However, the export subsidy is a burden on the community budget. It is inconsistent with the comparative advantages theory because internal producers will hinder countries with lower relative cost advantage in the world market. The results of this subsidy cause internal producers to increase their trade capacity in the world market while third world country producers reduce theirs. This is the trade distortion effect of internal producers in the world market.



**Figure 3.11:** Excessive production of commodity x

In the figure above, intervention purchase will be used to prevent a price fall below the intervention price,  $P_i$ . Community agencies will purchase  $Q_{S1}Q_{S2}$  amount of commodity x. The surplus mentioned is either stored or exported to third world countries.

In the EU's CAP product prices are high relative to world prices. The internal producers are protected by different support measures in the EU market. But outside the EU the export subsidy which is given to increase the market share of internal producers is an important support measure for protecting internal producers from producers outside the Union. On the one hand, internal producers are supported to increase their trade capacity outside the Union in Turkey, but on the other hand, economic difficulties such as higher inflation, exchange rate difficulties, the lower techno and capacity production of Turkey's producers facilitate an increase in Turkey in the trade capacity of the EU's producers. However, the higher inflation and exchange rate advantage, which was reducing the nominal price of cereal products from Turkey into the EU market, increased the cereals exports from Turkey to the EU. But the relative cost advantage of producers and the H-O model of production which is dependent on the factor endowment also contributed to increasing the trade capacity of Turkish producers in the EU market up to 2000. But after 2000 the decreasing inflation rate in Turkey and the application of a single currency in the EU which was put into effect in 2002, reduced imports from Turkey whilst exports to Turkey increased (see Table 3.11 below).

**Table 3.11:** Cereals trade between EU and Turkey (mn Ecu / €)

Agricultural Product: Cereals											Evolution of trade (%)		Share in all agriculture (%)	
	1995	1996	1997	1998	1999	2000	2001	2002	2003	95/03	02/03	1995	2003	
EUR15 - Export to Turkey	35	58	75	43	54	61	23	51	70	<b>101.1</b>	<b>36.9</b>	4.1	6.8	
EUR15 - Import from Turkey	6.2	4.3	2.9	26	22	43	43	32	23	<b>265.4</b>	<b>-30.2</b>	0.4	1.1	

Source: [http://europa.eu.int/comm/agriculture/agrista/tradestats/index\\_en.htm](http://europa.eu.int/comm/agriculture/agrista/tradestats/index_en.htm), European Commission: Eurostat: Agriculture: Trade statistics (10.08.2004)

Exchange rate differences are given in the table below. According to this table the negative effect of higher inflation in Turkey can be easily seen in the exchange rates which change the monetary value of the Turkish Lira after conversion into the Euro and USD. However, as seen in the table the great difference between Turkish Lira and Euro steadily dropped after the inflation rate in Turkey fell from the year 2000 to 2003. Similarly, the real effective exchange rate (REER) also increased until 2000 and then reduced.

**Table 3.12:** Exchange rate differences between the EU's Euro/ USD and Turkey's Lira

Year	USD/EUR	TL/EUR	REER TL/ Euro (1)
1980	1.392.23	54.58	0.05
1982	0.999.71	164.03	0.06
1986	0.984.167	679.76	0.23
1989	1.101.75	1.924.21	0.89
1990	1.273.43	3.329.06	1.2
1992	1.298.1	8.930.95	3.7
1993	1.171	12.879.30	5.2
1994	1.895.2	35.535.30	13
1996	1.269.75	103.214.00	42
1998	1.121.09	293.736.00	137
2000	0.923.6	574.816.00	203
2001	0.895.6	1,102.425.00	377
2002	0.945.6	1,439.680.00	365
2003	1.131.2	1,694.851.00	186

(1): exchange rate of TL in Euro and exchange rate of USA dollar in Euro is considered for the computation of the REER. Source: USD/EUR exchange rates are from European Central Bank reference rates published by Eurostat. TL/EUR exchange rates are based on TL/USD rates published by OECD, for 1980-1989. From 1990 to date are from European Central Bank reference rates published by Eurostat. (Exchange rates yearly averages) For the REER: data for consumer price index for the USA from the Federal Reserve Bank of Minneapolis and for Turkey from the Central Bank of the Republic of Turkey (calculated by author).

### 3.2.3.2 The Direct Payments

Direct payments are recurring non-market transfers to farmers from consumers and taxpayers. In the OECD database payments are divided into three main categories: (a) compensatory allowances (headage), (b) arable land premium and (c) agri-environmental payments. However, for the cereal products only b and c are considered when estimating PSEs (for more details see chapter 3.1.3)

In 1992 when MacSharry introduced direct payments they were only planned to cover the income loss of producers resulting from set-aside measures. However, increasing transfers to producers reduced the expected benefit of this measure, which was aimed at reducing over-production. Direct payments were first based on historical production (the products that producers used to plant on their arable area), which increased the supply amount; because it was necessary for farmers to produce in order to obtain the subsidy. Over time increasing

subsidies for producers made it necessary for the Commission to introduce new regulations on direct payments into the CAP system, because these payments contradicted the aim of set-aside measures. On the one hand, set-aside measures were planned to reduce production, but on the other hand, direct payments compelled farmers to produce in order to obtain the subsidy. It was necessary to resolve this contradiction between direct payments and set-aside.

The direct payments given to producers in accordance with their set-aside, based on limited or unlimited area, increased the transfers from consumers to producers.

In the CAP income support is mostly given for arable crops in the form of area payments. It was first introduced in 1987 in the form of voluntary set-aside area payments. According to this measure farmers may voluntarily set-aside part of their land in order to receive payments. Regulations for voluntary set-aside areas differ in member states. The application of voluntary set-aside is unrestricted; this means producers are free to set aside their land.

The impact of set-aside land on the market and surplus reduction occurred after the MacSharry reform (1992) where obligatory set-aside payments were introduced into the CAP system. Obligatory set-aside: "The core period for set-aside is 15 January to 31 August. Specific rules are laid down relating to the management and maintenance of set-aside land during that period. The obligatory rate for 2004 is 5%."<sup>42</sup> Farmers are required to leave aside a minimum percentage of their land as a condition of receiving compensatory payments. Set-aside requirements are determined annually in response to market conditions. Set-aside land can be used for production of certain non-food crops. As a result of this set-aside direct income support measures were introduced into the CAP system instead of market price support.

In Turkey application of direct payments is not a relevant support measure; in this section, therefore, the impact of the direct payments is estimated only for the EU's CAP.

The effect of the direct payments on producer support can be estimated by either, totalling the amount of direct payment to the market price support (MPS), or subtracting it from the total PSE. It is preferable to subtract it from the total PSE. It is easier to compare the difference between the total PSE and the PSE without direct payment which shows the impact on total producer support.

The increasing transfers from consumers to producers have compelled the CAP to reform the concept of direct payments. Below, planned decoupled area payments are compared with flat rate area payments and less favoured area payments.

- Decoupled single area payments:

In 2003 the Commission proposed single farm payments to replace the product specific direct payments with decoupled area payments. Decoupled single area payments mean breaking the link between production of a specific agricultural commodity and receipt of direct payment. This means that there will be no dependency on production volume to avoid abandonment of production. There will be no obligatory production to receive these payments, but farmers must maintain their land in good condition to receive it. These single farm payments which were based on the reference amount in the reference period would be linked to environmental and food safety.

These new single farm payments were started in January 2005 and this meant a shift of payments from blue boxes to green boxes in WTO terms. The green box payments mean farmers receive aid based on their historical production. The green box includes support measures which have minimal trade distortion effects compared to the other blue and amber boxes.

The opponents of direct payments such as IFOAM (International Federation of Organic Agriculture Movement) believe that the application of direct payments, which are paid to

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<sup>42</sup> Teagasc Irish Agriculture and Food Development Authority: CAP payments supplementary material

farmers to do nothing on their land, is not fair. According to them there is no reason to continue these payments for land which is no longer in agricultural use.

- Flat rate area payments:

In the reform proposal there was a new approach to replacing the crop specific payments with flat rate area payments.

Flat rate area payments are calculated by dividing the total subsidy payment by the reference area, which is then the rate applied uniformly across farms.

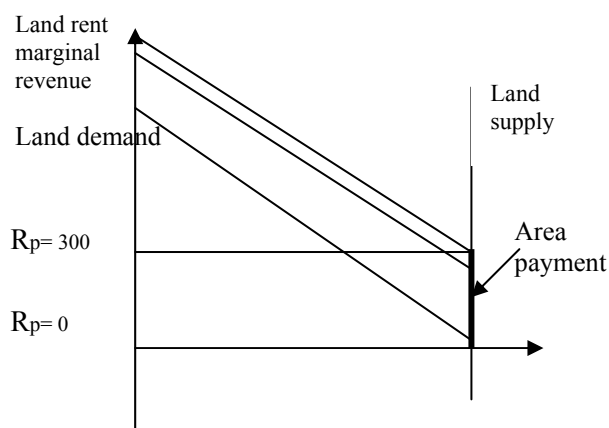
The scheme comprises of area payments for cereal products which include set-aside payments. The flat rate area is based on “the direct payments the farmer received in 2001 or the average of three preceding years. Currently, direct aid schemes make no distinction between farmers receiving small amounts and those receiving larger amounts, with the eligibility conditions and administrative and control provisions being the same. The yearly global payment will be based on the amount of the direct payments the farmer has received during the reference period and will be paid until the end of the scheme, once the farmer continues to fulfil the conditions for the simplified scheme.”<sup>43</sup>

- The less favoured area payments are the area based per hectare payments. These payments are given for the development of less favoured areas to reduce the disparities between member countries.

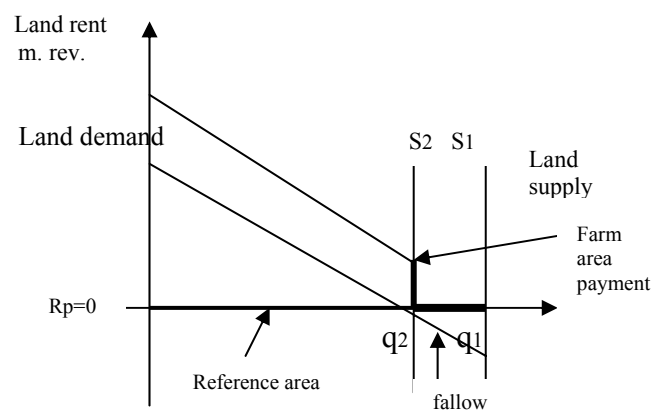
In the graphics below, applications of the ‘flat rate area payment’, ‘single farm payments’ and ‘less favoured area payments’ are compared.

The importance of area payments in agriculture is dependent on the supply and demand elasticity of land. “Because of the lack of alternative use, supply of agricultural land is rather inelastic. The demand for land and the land rent depend on the marginal return to land, including the effect of direct payments.”<sup>44</sup> The effect of payments depends on the amount of the payment; it can either increase demand (or rent paid) for land or reduce it.

In Figure 3.12.1 flat rate area payments are illustrated. Producers who are receiving payments are not required to set-aside or leave their land fallow for this payment. By doing so, producers will be free to produce on the demand of consumers, which means there will be no limitation on production type. The amount of payment is illustrated with  $R$  as land revenue which represents  $R_p=300$  as an amount of returns to farmers.



**Figure 3.12.1: Flat Rate Area Payments**



**Figure 3.12.2: Decoupled Farm Payments**

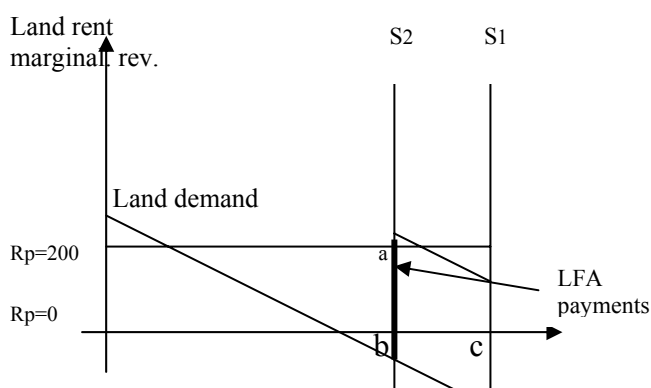
Source for figures a, and b: Osterburg: EU: CAP and Enlargement an Opportunity for Nature and Environment, 2003

<sup>43</sup> Decision to cut red tape for small farmers : - Fischer : This makes life of our farmers easier, Luxembourg, 19 June 2001, Reference: IP/01/882, Date: 20/06/2001

<sup>44</sup> Bernhard Osterburg: EU: CAP and Enlargement An Opportunity for Nature and Environment, 2003

Decoupled Single Farm payments are illustrated in Figure 3.12.2. The obligatory set-aside is represented by the area ‘fallow’ which reduces the production from  $q_1$  to  $q_2$ . Area payments are only paid on the basis of historical reference area, which means there is no obligation to produce specific crops to receive the payment. These payments were proposed in the MacSharry reform. However, these payments were started in 2005 aimed at breaking the link between production and area payments. The single area payments were also planned to finance healthy planting and environmental conditions for organic farming. The single farm payment cannot avoid agricultural land from being abandoned (shown in Figure 3.12.2 as “fallow”).

**Figure 3.12.3:** Less favoured area payments



Source for figures c: Osterburg: EU: CAP and Enlargement an Opportunity for Nature and Environment, 2003

The less favoured area payment (figure 3.12.3) is concentrated in the marginal areas such as mountain farming. These payments cover producers' costs in maintaining production. Shown in the graphic is the area of possible decline in production ‘bc’, as well as the amount of payment for farmers' losses, ‘ab’, because of difficulties in land use.

### 3.2.3.2.1 Payments based on Unlimited Area

Income support is mostly given to arable crops in the form of area (aid) payments. In the CAP system, unlimited area payments, related to the voluntary set-aside, were introduced in 1987 and had considerable effect until the 1992 MacSharry reform. The unlimited area payments via voluntary set-aside were mostly distributed between large -scale producers, because small scale producers were exempted from set-aside. By the end of this programme only 9% of the arable land was set-aside because in this programme producers were free to set-aside their land. In voluntary set-aside farmers may voluntarily set-aside part of their land beyond compulsory requirements and receive the full set-aside payment. Regulations for set-aside differ in member states.

The impact of set-aside on the market, and surplus reduction, occurred after the MacSharry reform through which obligatory set-aside payments were introduced into the CAP system. The obligatory set-aside is a compulsory measure, which means at least 10 percent of producers' arable land must be set aside. As a result of the set-aside, the direct income support measure was mostly replaced with the market price support.

One important support measure in the CAP is direct payments. In the first table below the direct payments of the EU's CAP are shown.

The calculation of total PSE for cereal products in the CAP is estimated using the formula below. In the OECD database only the indicator ‘C’ (payments based on area planted) is relevant to direct payments. Therefore, only the indicator ‘Ca’ is considered for the



calculation of the PSE and after this subtracting the payments based on unlimited area is required.

There is a more detailed explanation in the methodology section 3.1.3.

$$\text{PSE} = (\text{Pp} - \text{Pr} \cdot \text{X}) \cdot \text{Q} + \text{Ca}$$

Where;

Q = quantity produced

Pp = producer price in domestic currency units.

Pr = world price in world currency unit

X = exchange conversion factor (to convert world reference price from dollar to euro)

Ca = payments based on unlimited area (interventions and environmental amounts, in particular, are considered) and

The direct payments measure was first introduced as coupled historical payments to producers and applied until 2005. Since 2005 coupled direct payments have been replaced with the decoupled area payment which breaks the link between production and payments.

The effect of the direct payments on producer support can be estimated by either; totalling the amount of direct payment to the market price support (MPS), or subtracting it from the total PSE. I prefer the latter, as using it makes it easier to compare the difference between total PSE and PSE without direct payment which shows the impact on total producer support.

In the table below, the total PSE is compared with the PSE amount which is subtracted from direct payments that contain indicator I-Ca. As shown in the table below, after subtracting the amount of direct payments based on unlimited area from the total PSE, producer support is slightly reduced in the EU's CAP.

**Table 3.13:** The total PSE and PSE after subtracting the direct payments base on unlimited area (Euro/ mn)

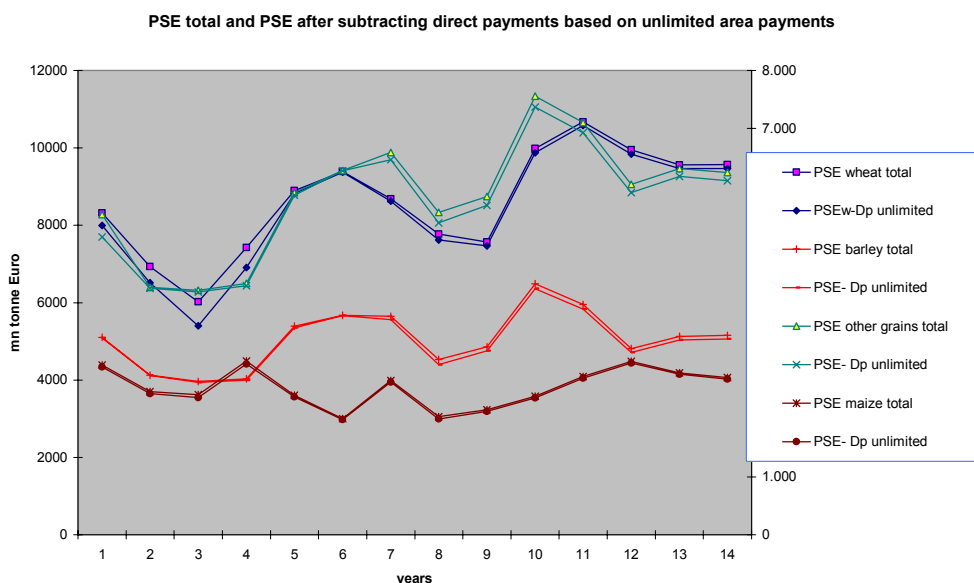
Year	Wheat (W)		Barley (B)		Other grains (o.g.)		Maize (M)	
	PSE W total	PSE w-Dp unlimited	PSE B total	PSE B- Dp unlimited	PSE o. g. total	PSE o.g.- Dp unlimited	PSE M total	PSE M- Dp unlimited
1986	8,315	7,996	5,106	5,088	5,515	5,131	2,926	2,892
1988	6,933	6,517	4,125	4,112	4,263	4,249	2,468	2,433
1990	6,018	5,401	3,960	3,935	4,212	4,184	2,417	2,364
1992	7,424	6,904	4,032	3,997	4,329	4,290	2,991	2,942
1993	8,900	8,823	5,389	5,349	5,896	5,851	2,402	2,373
1994	9,392	9,370	5,672	5,667	6,276	6,270	2,000	1,987
1995	8,680	8,620	5,649	5,565	6,588	6,461	2,658	2,632
1996	7,769	7,621	4,531	4,400	5,557	5,377	2,035	1,993
1997	7,566	7,470	4,857	4,750	5,828	5,677	2,152	2,125
1998	9,981	9,872	6,491	6,363	7,560	7,370	2,385	2,357
1999	10,673	10,576	5,955	5,832	7,105	6,927	2,727	2,699
2000	9,948	9,837	4,813	4,713	6,039	5,895	2,988	2,958
2001	9,559	9,465	5,131	5,037	6,313	6,175	2,792	2,767
2003	9,566	9,464	5,155	5,056	6,242	6,099	2,710	2,684

Source: calculation from the Eurostat database and by myself, Director General for Agriculture and Fisheries, <http://www.euros.ch/agrifish.html>, Agris database 1973-2003, CD-Rom, 2003

The small difference in PSE amount after subtracting the direct income amount for wheat, barley, oats, and maize is indicated in the figure below.

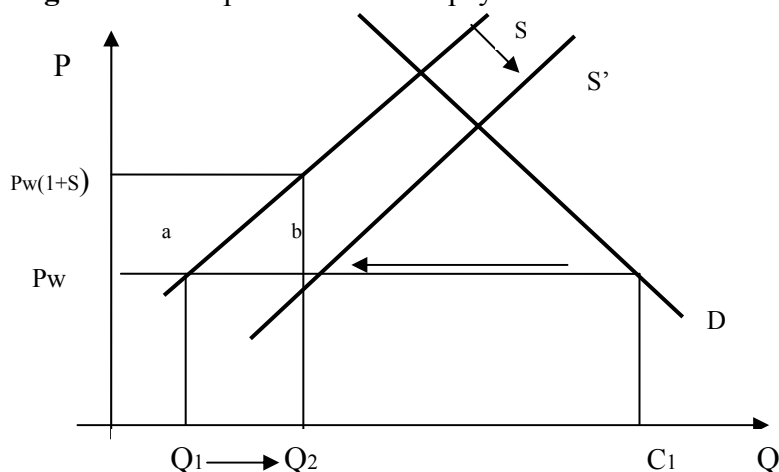
In the figure below the effect of the direct payments on producer support in the CAP, based on unlimited area payments, is illustrated. The small difference after subtracting the direct payments from the PSE amount is important in showing the small effect of voluntary set-aside in the EU's CAP.

**Figure 3.13:** The PSE for cereal before and after subtracting direct payments based on unlimited area (Euro/ mn)



In the figure below, the effective supply curve shifts down by the amount of the subsidy from  $S$  to  $S'$ . This increase in supply increases the product amount, whilst product prices stay intact, because direct payments have no effect on product prices and product prices start at  $P_w$  level constant, whilst producer income increases. The imported product amount,  $Q_1C_1$ , also accesses the EU market.

**Figure 3.14:** Impact of the direct payments



Source: adapted from Paul Brenton, Henry Scott, Peter Sinclair: International Trade Oxford University Press, 1997, p.171

The difference from the tariff is that tariff measures increase the prices and thus reduce the imported product amount as in Figure 3.14, as well as reducing imports and consumer

surplus. But as is seen here, consumer surplus is still the same after the payments. The community agency has to pay for the payment and lose a+b area amount. Producer gain is area 'a' and production loss or deadweight loss is represented by the triangle b.

The impact of the direct payments cannot be calculated for cereal products in Turkey, because there were no transfers as direct payments to producers. Therefore, there is no need to indicate the impact of direct payments on producers in Turkey.

### 3.2.3.2.2 The Payments based on Limited Area,

In this part of the payments compulsory set-aside measures will be analysed. In fact, since the 1992 reform the amount of set-aside payments have been of considerable importance. The area payments are given to producers according to their set-aside amount. The obligatory set-aside measure which was started by the MacSharry reform has had considerable impact on increasing the transfers from producers to consumers. In obligatory payments farmers are required to leave a minimum percentage (about 10%) of their land as a condition of receiving compensatory payments. Set-aside requirements are determined annually by the Council in response to market conditions. This means set-aside is rotational and all land must be set-aside in turn without considering the quality of the land. Set-aside of the land and receiving payments were linked for the production of certain non-food crops until 2005. After 2005, direct payments were decoupled.

Compulsory (Obligatory) payments vary from year to year. But from the time of Agenda 2000 "area payments for cereals, oilseeds, linseed and set-aside were standardised by the year 2002 at 63Euro/ton (about £240/ha in Great Britain at 1999 exchange rates)."<sup>45</sup> This price equation implies that effects of these payments on the market seem to be similar.

The above given formula is now considered for the limited area payments. Therefore, indicator 'Cb' is used for the estimation of the PSE after subtracting the payments based on limited area.

$$PSE = (P_p - P_r \cdot X) \cdot Q + C_b$$

Where;

Cb='payments based on limited area' (consist of set-aside and per hectare aid for cereals).

The impact of the production subsidies is shown in the table below. As can be seen, there is a considerable change after subtracting the limited area payments from the PSE which was applied after the MacSharry reform. In the CAP obligatory payments were distributed to the large-scale producers which caused a large decline in PSE (see table below).

The estimation of PSE gives better information on the amount of support which is given to the producers. In the table below, the amount of the producer support based on limited area for set-aside payments per hectare is subtracted from the total PSE. The strong decline after subtracting the direct payments based on limited area payments worsened after the MacSharry reform and continued until the end of the decade. The huge difference between the PSE and the PSE after direct payments based on limited area payments is the increasing amount of transfers from consumers to producers. This is especially done to show, where set-aside payments are not used as an instrument to support producers on the market, what will be a possible effect of the PSE on the producers.

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<sup>45</sup> The UK Parliament: Science and Technology- First Report, Chapter 4: Agricultural Support Programmes, 1999

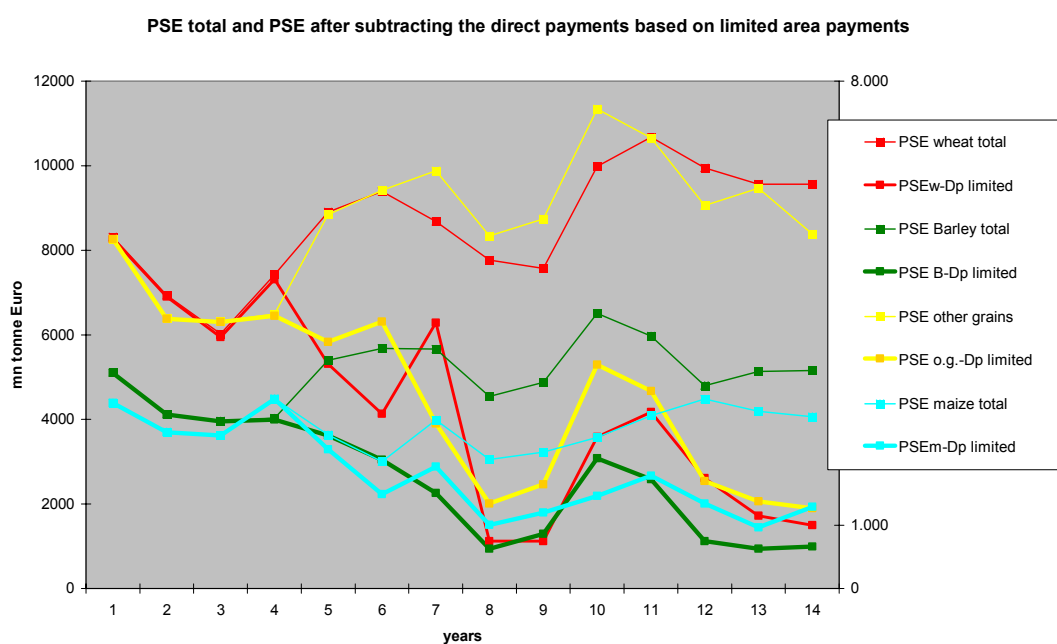
**Table 3.14:** The total PSE and the PSE after subtracting payments based on limited area.  
(Euro/ mn)

Year	Wheat		Barley		Other grains		Maize	
	PSE W total	PSE w-Dp limited	PSE B total	PSE B-Dp limited	PSE o.g. total	PSE o.g.-Dp limited	PSE M total	PSE m-Dp limited
1986	8,315	8,271	5,106	5,099	5,515	5,508	2,926	2,924
1988	6,933	6,900	4,125	4,114	4,263	4,251	2,468	2,466
1990	6,018	5,941	3,960	3,951	4,212	4,202	2,417	2,414
1992	7,424	7,311	4,032	3,997	4,329	4,299	2,991	2,986
1993	<b>8,900</b>	<b>5,315</b>	<b>5,401</b>	<b>3,620</b>	<b>5,896</b>	<b>3,890</b>	<b>2,423</b>	<b>2,194</b>
1994	9,392	4,129	5,683	3,043	6,276	4,207	2,000	1,489
1995	8,680	6,287	5,665	2,260	6,588	2,600	2,658	1,919
1996	7,769	1,120	4,542	9,370	5,557	1,339	2,035	1,006
1997	7,566	1,119	4,872	1,289	5,828	1,642	2,152	1,200
1998	9,981	3,584	6,511	3,081	7,563	3,531	2,385	1,459
1999	10,673	4,172	5,966	2,580	7,105	3,116	2,727	1,780
2000	9,948	2,611	4,795	1,120	6,039	1,692	2,988	1,340
2001	9,559	1,720	5,131	942	6,313	1,373	2,792	963
2003	<b>9,566</b>	<b>1,495</b>	<b>5,155</b>	<b>992</b>	<b>5,587</b>	<b>1,264</b>	<b>2,710</b>	<b>1,289</b>

Source: calculation from the Eurostat database and myself, Director General for Agriculture and Fisheries, <http://www.euros.ch/agrifish.html>, Agris database 1973-2003, CD-Rom, 2003

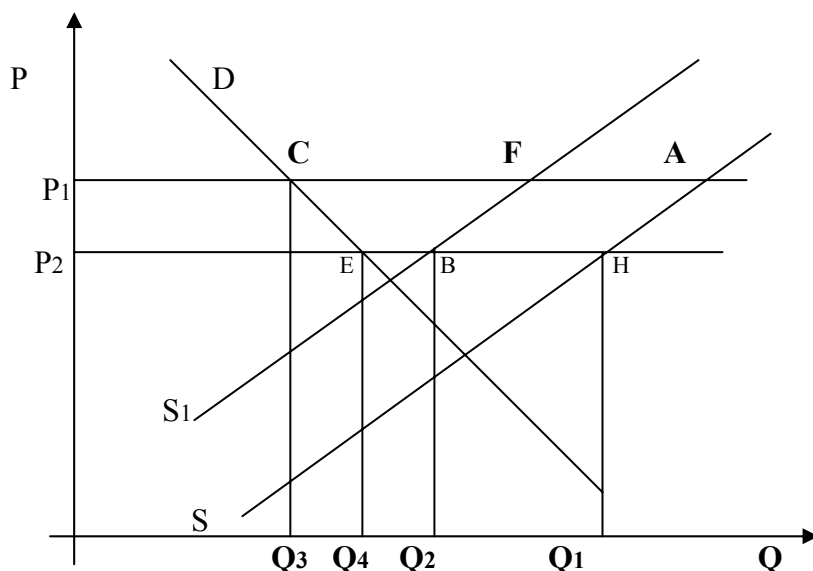
In the figure below, the PSE and the PSE after subtracting direct payments based on limited areas which were calculated above are also illustrated. The important difference after subtracting the direct payments based on limited area had a considerable negative effect on the transfers from consumers to producers. The application of the compulsory set-aside measure, in particular, made an important contribution to transfers from consumers to producers.

**Figure 3.15:** The PSE for cereal before and after subtracting direct payments based on limited area (Euro/ mn)



In the figure below, the impact of the direct payments based on area set-aside combined with the market price measure is shown. Here only large-scale producers, who must use set-aside (obligatory) and receive direct payments based on limited area, are considered. At the original support price,  $P_1$ , farmers produce at  $Q_1$ . The price was then reduced to  $P_2$  and farmers now receive compensatory payment for this reduction, in accordance with their production level. This reduction is calculated for producers with the amount of withdrawal from production.

**Figure 3.16.1:** The impact of the price support measures combined with set-aside measures.



Source: Rosemary Fennell: *The CAP*, Clarendon Press, Oxford, 1997, p.201

Over time the arable area which is left for set-aside reduces the amount of arable area and therefore the surplus amount. The shift in supply curve from  $S$  to  $S_1$  reduces production from  $Q_1$  to  $Q_2$  while demand for products increases because of the price reduction from  $Q_3$  to  $Q_4$ .

As a result of this support system, consumer surplus increases to an amount of  $P_1P_2CE$ , Producer gain from price support payment is  $P_1P_2FB$  and set-aside is  $FBAH$ . In fact these areas would be a loss of producers in absence of the support scheme.

The effects of the price support measures when it is combined with set-aside measures are given below:

- If direct payments are used with set-aside then this has a better impact on the consumer surplus and producer gain (see table above),
- It has an surplus reduction effect on production,
- The set-aside measure is better if it is compulsory because voluntary set-aside has less effect on the surplus reduction,
- Set-aside is combined with direct payments to reduce the income loss of producers. However, by doing so, producer income increases together with production amount, which means 15 % set-aside forces producers to increase production in the other 85% of arable land. (see Table 2.7.2)
- Compulsory set-aside increases the cost of the budget to prevent a surplus amount. It is not evident whether the use of intervention measures or set-aside measures is best for the prevention of overproduction. It is also not clear which of these measures costs the CAP budget the most.

- In the Union after 2000, cereal product prices fell, while on the world market they increased. This price fall led to a sharp decline of export refunds in 1996 compared to 1990 (see Table 3.18.1). This resulted in an increase in direct payments. (see table 3.14) “If the desired level of supply control had been attained by an uncompensated price cut, a large saving to taxpayers and consumers would have been made initially for the CAP budget. However, as world prices rose in the mid-nineties these gains tended to diminish as much as the price gap reduced.”<sup>46</sup>

A considerable fall in producers’ incomes would have occurred because MPS are calculated according to the price gap between world and internal producers. If the direct payments did not exist in the CAP then the amount of payments would be very minor and not considerable as market support.

The effects of direct payments on the market are given below:

Positive effect of direct payments:

- Direct payments are not directly related to the price support system and have less of an effect on price support,
- Direct payments are given to cover the income gap of producers,
- They have a less distorting effect relative to the market price support,
- Direct payments relative to other measures have less negative effects on unfair trade.
- They have reduced the tension between the EU and third world country producers,
- Direct payments create an income for farmers,
- They have reduced surplus amounts, because they are based on compulsory set-aside,
- The application of the decoupled payments removes link to historical production levels,
- Market price support influences the market share of producers whereas direct payments have no direct influence on market creation.

Negative effects of flat rate payments:

- Redistribute income from consumer and taxpayer to producer,
- Direct payments have a negative effect on price support and market stability,
- Direct payments are distributed to ensure the farmers do nothing with their land,
- Politically unpopular with producer representative outlook,
- Reduce the productivity of producers, because they are getting paid to do nothing,
- They have an indirect effect on production depending on whether the producer uses them to increase production capacity or not,
- They have negative effects on productivity,
- Once given it is difficult to stop these payments,
- It is difficult to estimate application and control,
- Direct payments increase farmers’ income and this increased income of the farmers also increases their financial capacity which stimulates the next term investment and production in the short run.

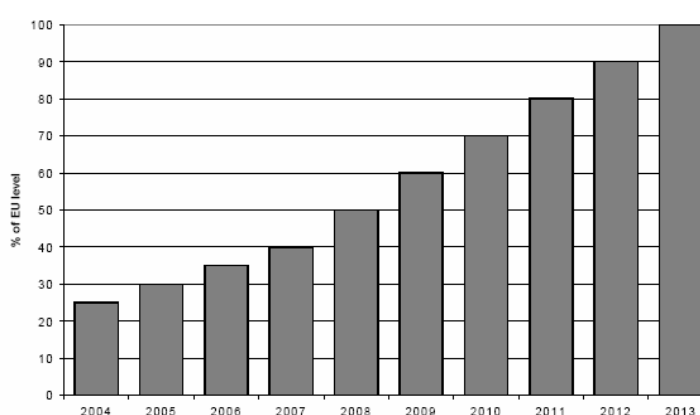
Future perspective of direct payments;

Begun in 2005, the application of decoupled payments is expected to reduce the negative effects of direct payments such as over-production and excessive monetary transfers to producers via other support measures such as price support and export subsidies which have a direct effect on the market and reduce fair trade in the world. Indeed, breaking the link between production and payments will reduce the production of specific crops and the share of crop land which is set-aside will increase. Since 2000 the decline in cereals prices in the EU has fallen below the world prices. Therefore, the price gap between the EU and world producers disappeared. This implies that price support which was applied in the CAP could be

<sup>46</sup> Department for Environment Food and Rural Affairs: Defra Economic Evaluation of Set-aside, p.10

removed. In fact it should be adjusted in accordance with the price gap between internal and external producers used for the calculation of the CCT and export subsidies. However, neither the CCT nor the export subsidies has been adjusted to the new price gap. By doing this, on the one hand, excessive transfers to producers via tariff and export subsidies together with direct income support were increased, whilst cereals export to third world countries were also increased. On the other hand, imported product access to the EU market was reduced because of maintenance of the CCT, in spite of the disappearance of the price gap between internal and external producers. It is expected that newly applied decoupled payments will replace market support which affects the CCT and export subsidies. By doing this the trade-distorting effects of CCT and export subsidies will be reduced. In the figure below a future perspective of the decoupled direct payments is illustrated.

**Figure 3.16.2:** Direct Payments – level in new Member States (phased in over 10 years)



Source: European Commission (2004f).

Source: Gay S.H., Osterburg B, Baldock D, Zdanowicz A: Recent Evolution of the EU CAP, WP.6,

### 3.2.3.3 Intervention Purchasing for Storage to Support Prices,

The intervention price is one of the most important policy instruments of the CAP. The intervention price has two important roles within the CAP system. First it has a price stability effect on the market, and second it secures the income of the producers by preventing a price fall below the intervention price. Under the CAP system the intervention price determines import tariffs, export subsidies and payments for storage.

Import tariffs determine the difference between world reference price and producer price. The price gap is applied as import tariff. The export subsidies are also estimated by using the same price gap, which is then multiplied with the difference between production and consumption. The storage payments are also made according to the amount of intervention purchase to cover storage costs and insure orderly marketing over the season.

The intervention price for cereals is the price at which wheat, barley; maize, rye, sorghum, and durum wheat are purchased. In the last decade the intervention price mechanism has played a very important role in price stabilization within the internal market. But after 2000 intervention prices tended to decrease. “In 2000 and 2001 cereals intervention prices reduced 7.5% as in the schedule given below:

119.19 €/t (for 1999/2000)

110.25 €/t (for 2000/2001)

101.31 €/t (for 2001/2002) and further decrease is also expected because of improvement in the market capacity<sup>47</sup> The reason for this decline is the decreasing gap between world price and the EU market price. However, the world reference price for cereal products has tended to increase since 2000, and if the price increase is maintained there will be no need to prevent the access of imported cereals with higher tariffs or support exports with subsidies (see table below).

**Table 3.15:** The price gap between world reference price and producer price at farm gate in the CAP for barley and wheat products in Euros (€)

year	Barley			Wheat		
	Farm gate price	Reference price	Market Price gap	Farm gate price	Reference price	Market Price gap
1986	172.1	68.6	<b>103.7</b>	205	94	<b>109</b>
1988	160.7	89.7	<b>71.0</b>	187	100	<b>87</b>
1989	162.4	115.0	<b>47.3</b>	188	141	<b>47</b>
1990	157.3	84.9	<b>72.4</b>	176	109	<b>98</b>
1992	152.1	74.7	<b>77.3</b>	167	100	<b>67</b>
1993	139.5	68.0	<b>71.5</b>	155	101	<b>55</b>
1994	131.6	65.8	<b>65.8</b>	140	104	<b>36</b>
1995	130.8	92.8	<b>38.0</b>	143	126	<b>17</b>
1996	128.3	125.8	<b>2.6</b>	143	153	<b>0</b>
1997	119.5	111.0	<b>8.4</b>	134	135	<b>0</b>
1998	109.1	66.3	<b>42.8</b>	123	100	<b>23</b>
1999	111.4	77.7	<b>33.8</b>	121	91	<b>30</b>
2000	111.5	109.1	<b>2.4</b>	120	114	<b>6</b>
2001	109.5	109.5	<b>0.0</b>	123	125	<b>0</b>
2002	104.4	100.8	<b>3.6</b>	116	119	<b>0</b>

Source: selected from OECD database -agricultural statistics used for PSE calculation for barley and wheat products. [http://www.oecd.org/document/54/0,2340,en\\_2825\\_494504\\_35009718\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/document/54/0,2340,en_2825_494504_35009718_1_1_1_1,00.html)

In the table above, world reference prices and producer price at farm gate are given, of which the price gap for cereal products is calculated for barley and wheat. The decreasing price gap for selected cereal products between world reference price and producer price at farm gate in the CAP of the EU is of considerable importance. This indicates the unnecessary application of an intervention price mechanism in the EU's CAP, because such small price differences between producers price at farm gate are also observed in member countries. But such a market price differential between member countries is not considered for protecting producers from each other. Furthermore, producers in cheaper regions together with higher cost regions are taken into consideration and a unique price intervention mechanism is applied to prevent a price fluctuation in the market. However, the above-mentioned price gap is used as a preventive measure and applied with a previous percentage as a CCT on third world country products in the CAP. This price gap, which has almost disappeared between world price and producer price in the CAP, is still maintained and applied as an export subsidy for exporting surplus products outside the Union. These unfair applications of the EU's CAP on the one hand, reduced consumer welfare both in and out of the Union, and on the other hand, increased transfers from consumers to producers.

In the table below, the impact of the intervention measures is calculated for the PSE in the EU's CAP, but for producers in Turkey intervention measures are not relevant because

<sup>47</sup> Markus Hofreiter: Der Reform bedarf der CAP aus Österreichischer Perspektive, 2002, p.4 (Translation by the Author)



there is no transfer in the form of intervention price support, therefore, the PSE calculation for the intervention price mechanism is only calculated for the CAP. The estimation of the intervention price is calculated by subtracting the market price support (indicator 'Aa and Ab' in OECD database) from the total PSE. Besides the indicator 'A' there are also some other transfers from consumers to producers which are defined in indicator 'Ca' payments based on unlimited area. However, the amount of transfers to producers is very small and can be ignored in this calculation

**Table 3.16:** The total PSE and the PSE after subtracting intervention amount in EU- 15.  
(Euro mn)

Year	Wheat		Barley		Other grains		Maize	
	PSE	PSE-I	PSE	PSE-I	PSE	PSE-I	PSE	PSE-I
1986	8,315	<b>846</b>	5,106	<b>261</b>	5,515	<b>281</b>	2,926	<b>238</b>
1988	6,933	<b>897</b>	4,125	<b>266</b>	4,263	<b>292</b>	2,468	<b>230</b>
1990	6,018	<b>1,312</b>	3,960	<b>311</b>	4,212	<b>341</b>	2,417	<b>281</b>
1992	7,424	<b>1,696</b>	4,032	<b>687</b>	4,329	<b>761</b>	2,991	<b>353</b>
1993	8,900	<b>4,476</b>	5,389	<b>2,318</b>	5,896	<b>2,620</b>	2,402	<b>475</b>
1994	9,392	<b>6,093</b>	5,672	<b>3,111</b>	6,276	<b>3,542</b>	2,000	<b>736</b>
1995	8,680	<b>7,091</b>	5,649	<b>5,649</b>	6,588	<b>5,731</b>	2,658	<b>985</b>
1996	7,769	<b>7,769</b>	4,531	<b>4,395</b>	5,557	<b>5,190</b>	2,035	<b>1,359</b>
1997	7,566	<b>7,561</b>	4,857	<b>4,416</b>	5,828	<b>5,222</b>	2,152	<b>1,289</b>
1998	9,981	<b>7,573</b>	6,491	<b>4,283</b>	7,560	<b>5,123</b>	2,385	<b>1,264</b>
1999	10,673	<b>7,794</b>	5,955	<b>4,310</b>	7,105	<b>5,156</b>	2,727	<b>1,336</b>
2000	9,948	<b>8,909</b>	4,813	<b>4,690</b>	6,039	<b>5,630</b>	2,988	<b>2,089</b>
2001	9,559	<b>9,222</b>	5,131	<b>5,131</b>	6,313	<b>6,132</b>	2,792	<b>2,290</b>
2003	9,566	<b>9,419</b>	5,155	<b>5,041</b>	6,242	<b>6,107</b>	2,710	<b>1,837</b>

Source: calculated from the Eurostat database and by myself, Director General for Agriculture and Fisheries, <http://www.euros.ch/agrifish.html>, Agri database 1973-2003, CD-Rom, 2003

Note; PSE= PSE total and PSE-I= PSE after subtracting the calculated intervention measure from PSE total

As is seen, there is a considerable decrease after subtracting the intervention amount from the total PSE at the beginning of the PSE calculation. However, at the end of the decade, especially after the application of the direct payments, a sharp declination on the intervention price amount is observed. The application of the intervention measure is actually a price support and stability measure on the market. However, there is a considerable effect on the price support relative to the other support measures. Over time direct payments, which were planned to be replaced by market price support, had reduced the effect of the intervention price mechanism in the CAP. The direct payments were less trade-distorting support measures and given especially for storage costs. The intervention price support had a considerable effect on the PSE calculation, because most of the over-production was bought by the Community agencies and this prevented the price fall below the given intervention price level, therefore producers were protected from a strong price fall and secure with a guaranteed product price, thus guaranteeing income level. The community agencies, on the one hand, shared the cost of over-production with producers, who are supported by the intervention price mechanism, and on the other hand, these agencies support producers with direct storage payments in order to gain a reasonable income.

Subsidies for storage of over-production are illustrated in the figure below. The intervention measure, which increases the surplus amounts, is compared with set-aside on the

same table in order to bring about a better understanding of the possible effects of these measures.

In Figure 3.17  $P_w$  is the world price and  $P_e$  is the market price. The intervention price is the minimum price which is offered to producers by the community agencies. At that price community agencies will purchase over-production if the market prices,  $P_c$ , fall below the intervention price,  $P_i$ . An intervention price of  $P_i$  producer surplus is '7, 8, 9, 10', which will be purchased from producers by the community agencies. At the intervention price ( $P_i$ ), which is higher than the world price ( $P_w$ ), consumer surplus reduces to '7, 8, 9'. The subsidy amount which is given to producers is the areas '1, 2, 3, 4, 5, 7, 8, 9, 10', which will allow the EU to sell the surplus in the world markets. If  $P_w$  is the world market price and  $P_i$  is the intervention price, the impact on consumer and producer surplus and CAP-costs are explained below.

At  $P_e$  (EU price), consumer surplus decreases with the areas 1, 2, 7, 8, 9 (= A)

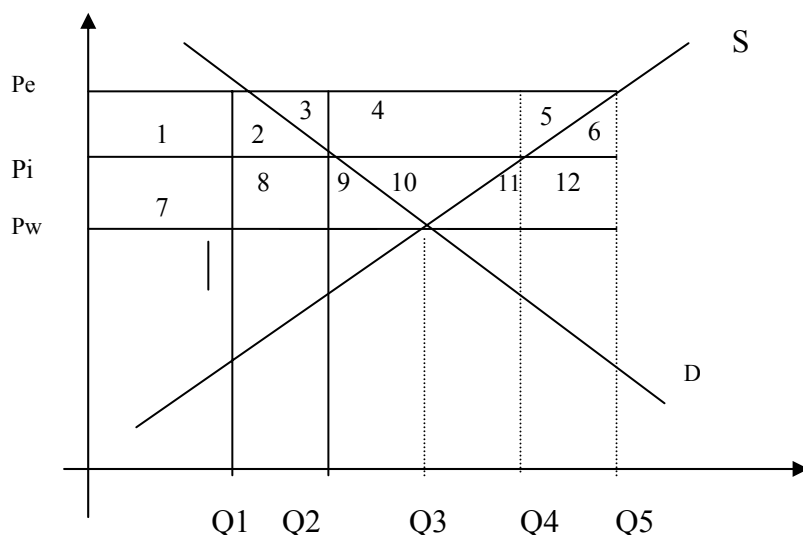
And producer surplus increases with the areas A + 3, 4, 5, 10 (= B)

Net: 3, 4, 5, 10

CAP costs: 3, 2, 8, 4, 10, 9, 11, 5, 6, 12

Net effect: cost: 2, 8, 9, 11, 12, 6

**Figure 3.17:** Illustration of surplus and intervention payments



Now let us consider the set-aside measure on the same table where production after the set-aside reduces from  $Q_5$  to  $Q_4$ . Then,

Producers are restricted to produce up to  $Q_4$  and save costs is the area 5, 6, 12

Consumer surplus would remain intact

Producer surplus would fall by the area 5

A net gain of 6, 12

Now suppose there is an alternative price cut from  $P_e$  to  $P_i$ :

Consumer surplus increases 1, 2

Producer surplus decreases 1, 2, 3, 4, 5

Save costs: 2, 3, 4, 5, 6, 8, 12

A net gain: 2, 8, 6, 12

Conclusion,

A decline in the price gap between world price and Union price will continue to increase the demand of consumers for the cereal products of the CAP. The increasing substitution of third world countries' cereal products with the CAP's cereals will continue to reduce the share of third world countries products in the world market. Furthermore,

application of intervention measures will continue to increase the internal product prices above the world price. The increase in internal product price means the price gap between internal and world cereal products, which is applied as tariff measure on imported products, will continue to increase the price of the imported products in the EU market. On the one hand, imported product access will prevent the results of high common custom tariffs, and on the other hand, export subsidies of the CAP will continue to reduce the third world countries' share in the world market. It is obvious that the application of price support measures will increasingly raise the trade distortion in the world market, if its existing application of price support, which affects the application of CCT and export subsidies, is maintained in the EU's CAP.

### 3.2.3.4 Payments Based on Input Use

In the following section one of the important agricultural support measures which are used both in Turkey and in the EU is estimated. This will facilitate a better comparison of the amounts of the support measures between Turkey and the EU. However, there are some difficulties in comparing transfers via support measures between Turkey and the EU, because in the EU there are various support measures which cause monetary transfers from consumers to producers. But in Turkey the support measures are mostly concentrated in indicator 'E' which is based on input use.

An input payment is dependent on the use of variable inputs or farm services or farm investments in a firm. "These payments which are conditional on the on-farm use of specific or variable inputs include explicit and implicit payments affecting specific variable input costs (a. Based on use of variable inputs); the cost of on-farm technical, sanitary and phytosanitary services (b. Based on use of on-farm services); or affecting fixed costs, including investment costs (c. Based on use of fixed inputs)." <sup>48</sup>

In the tables below a comparison of the input subsidies between the EU and Turkey is given. In the given period important differences in transfers via input subsidies between Turkey and the EU is observed. The reason for higher transfers via input subsidies in Turkey relative to the EU is related to support measures, because input subsidies were the only support measure besides the market support. However, in the CAP there were some other support measures which were used for monetary transfers from consumers and taxpayer to producers.

In the OECD methodology for PSE calculation, input subsidies are concentrated only in the indicator 'E'. Indicator 'E' is based on input use. The annual transfers from taxpayers to agricultural producers arising from support measures based on the use of a specific fixed or variable input, of which 'Ea' comprises concessional loans, fertilizer subsidies, hybrid seed subsidy, pesticide subsidy, seed loans and electricity subsidy (irrigation), water subsidy (irrigation). 'Eb' is based on use of on-farm services. And 'Ec' is based on-farm investment, on-farm development work and concessional loans. However, in Turkey all the input subsidies are based on variable input use. But in addition, in the EU, payments based on on-farm services and farm investments were also realised.

The estimation of the indicator E which is calculated by using the formula below will contribute to determining the amount of transfers via input subsidies both in the EU and in Turkey. This is adapted from the PSE formula for cereal products:

$$PSE = (P_p - P_r \cdot X) \cdot Q + E_a + E_b + E_c$$

<sup>48</sup> OECD Database: Methodology for the Measurement of Support and Use in Policy Evaluation

Where;

Q = quantity produced (considered only indicator Aa= based on unlimited output)

Pp = producer price in domestic currency units.

Pr = world price in world currency unit

X = exchange conversion factor (to convert world reference price from dollar to euro)

And indicator E is considered both for the EU and for Turkey, where;

Ea = 'payment based on variable input use'

Eb = 'payments based on use of on-farm services'

Ec = 'payments based on-farm investments'

**Table 3.17.1** The total PSE and PSE after subtracting payments based on input use in the EU's CAP (Euro/ mn)

Year	Wheat		Barley		Other grains		Maize	
	PSE	<b>PSE-Ip</b>	PSE	<b>PSE-Ip</b>	PSE	<b>PSE-Ip</b>	PSE	<b>PSE-Ip</b>
1986	8,315	<b>7,876</b>	5,106	<b>4,899</b>	5,515	<b>5,288</b>	2,926	<b>2,738</b>
1988	6,933	<b>6,518</b>	4,125	<b>3,907</b>	4,263	<b>4,025</b>	2,468	<b>2,285</b>
1990	6,018	<b>5,512</b>	3,960	<b>3,758</b>	4,212	<b>3,999</b>	2,417	<b>2,209</b>
1992	7,424	<b>6,902</b>	4,032	<b>3,780</b>	4,329	<b>4,051</b>	2,991	<b>2,806</b>
1993	8,900	<b>8,464</b>	5,389	<b>5,159</b>	5,896	<b>5,635</b>	2,402	<b>2,250</b>
1994	9,392	<b>8,974</b>	5,672	<b>5,461</b>	6,276	<b>6,039</b>	2,000	<b>1,864</b>
1995	8,680	<b>8,298</b>	5,649	<b>5,438</b>	6,588	<b>6,343</b>	2,658	<b>2,535</b>
1996	7,769	<b>7,297</b>	4,531	<b>4,274</b>	5,557	<b>5,257</b>	2,035	<b>1,896</b>
1997	7,566	<b>7,140</b>	4,857	<b>4,607</b>	5,828	<b>5,539</b>	2,152	<b>2,006</b>
1998	9,981	<b>9,571</b>	6,491	<b>6,262</b>	7,560	<b>7,289</b>	2,385	<b>2,249</b>
1999	10,673	<b>10,252</b>	5,955	<b>5,725</b>	7,105	<b>6,834</b>	2,727	<b>2,569</b>
2000	9,948	<b>9,463</b>	4,813	<b>4,570</b>	6,039	<b>5,746</b>	2,988	<b>2,815</b>
2001	9,559	<b>9,116</b>	5,131	<b>4,901</b>	6,313	<b>6,042</b>	2,792	<b>2,589</b>
2003	9,566	<b>9,098</b>	5,155	<b>4,922</b>	6,242	<b>5,963</b>	2,710	<b>2,521</b>

Source: calculated from the Eurostat database and by myself, Director General for Agriculture and Fisheries, <http://www.euros.ch/agrifish.html>, Agris database 1973-2003, CD-Rom, 2003

Note; PSE= PSE total and PSE-I= PSE after subtracting the calculated input payments from PSE total

Indicated in the table below is the important share of input subsidies which is transferred from consumers to producers in Turkey. As mentioned above, in Turkey indicator 'E' is the only measure which is realised for supporting producers. For this reason a large transfer from consumers and taxpayers to producers is realised in this period. However, unequal distribution of subsidies, which are given mostly to those large scale producers in western regions relative to the eastern regions, reduced the effectiveness of support measures for reducing regional disparities in Turkey.

The negative values which are observed in the Table 3.17.2 does not mean that there were negative transfers in that year, but was caused by the higher support amount which is in excess of the monetary value obtained from products sold in the market.

**Table 3.17.2** The total PSE and PSE after subtracting payments based on input use in Turkey (Euro/ mn)

Year	Wheat		Barley		Other grains		Maize	
	PSE	PSE-Ip	PSE	PSE-Ip	PSE	PSE-Ip	PSE	PSE-Ip
1986	348	101	220	175	220	175	36	17
1990	<b>724</b>	<b>375</b>	<b>301</b>	<b>239</b>	<b>301</b>	<b>239</b>	<b>100</b>	<b>76</b>
1992	<b>720</b>	<b>335</b>	<b>290</b>	<b>225</b>	<b>290</b>	<b>225</b>	<b>126</b>	<b>101</b>
1993	650	248	457	393	457	393	100	73
1994	563	150	132	72	132	72	5	-19
1996	464	95	260	151	260	151	81	46
1998	1,501	1,126	655	551	655	551	170	136
2000	710	<b>517</b>	<b>291</b>	<b>238</b>	<b>291</b>	<b>238</b>	<b>113</b>	<b>97</b>
2001	-90	-137	40	30	40	30	18	14
2003	1, 294	1, 282	229	229	229	229	175	175

Source: OECD database: Agricultural Policies in OECD Countries: Monitoring and Evaluation 2005 calculated by myself. [http://www.oecd.org/document/54/0,2340,en\\_2825\\_494504\\_35009718\\_1\\_1\\_1\\_1.00.html](http://www.oecd.org/document/54/0,2340,en_2825_494504_35009718_1_1_1_1.00.html)

### Conclusion

Input subsidies have an important effect on reducing the producer price. Input subsidies contribute to reducing the cost of production. If the reduction of production cost is reflected in the product price then the consumer will profit from a decrease in product price. But if the decline in production cost is not reflected in the product price and captured by the producer as a profit, then input subsidies will only contribute to an increase in the profit rate of producers. By doing this producers may increase their profit rate in the short run, but in the long run the share of producers in the world market will be reduced because of higher product prices which could be reduced in accordance with input subsidies which cut the production cost. A decline in the market share will also reduce both producer profit and consumer welfare.

In Turkey input subsidies have had both positive and negative effects on producers. On the one hand decline in production cost contributed to an increase in the income of producers. But for consumers it has had less effect because input subsidies, which were expected to reduce the producer price and consequently the consumption prices, were not realised. On the other hand a decline in producer price for exported products into the EU market made no change in exported product prices, because the application of the CCT prevents such a reduction in the producer price. Therefore, input subsidies have had no effect on exported product prices. This has meant any decline in the producer price can only contribute to an increase in the price gap which is used to calculate the CCT amount in the EU market.

In the EU input subsidies contributed to reduction in the producer price and consequently in the consumption price. On the one hand, a decline in production cost has been reflected in the producer prices and on the other hand a decline in producer price was used to increase the market share in Turkey, because there was not such a high tariff restriction as there was in the EU.

### 3.2.3.5 Export Subsidies to Encourage Exports

An export subsidy is a payment to a firm or to an individual who ships goods abroad. It can be either specific or ad valorem. As a consequence of subsidy measures, the “producer will export goods up to the point where domestic price exceeds the foreign price by the amount of the subsidy.”<sup>49</sup> Export subsidies are distributed to increase the market share of internal

<sup>49</sup> Paul Krugman and Maurice Obstfeld: International Economics, 1996, p.198

producers in the world market. In the CAP most of the cereal products have over-production and the need to reduce this over-production is the main reason for export subsidies, because in the EU product prices of cereals have been higher than the world prices particularly in the last decade. Over time the above-mentioned price gap fell and almost disappeared between internal and external producers. However, the application of export subsidies, which should have been halted, was still maintained, because the calculation of export subsidies was estimated in accordance with the price gap between world and internal product prices. Nevertheless, export subsidies were the only support measure in exports which was transparently negotiated, quantified and reduced during the Uruguay round. Over a six year period from 1986 to 1992, a 36% reduction of subsidy level in each of 22 products was planned, and the volume of export subsidies was to be reduced by 21% within this period for each of these products.

In the MacSharry reform, on the one hand, producers were supported so that the production cost fell in recent years below the world price, and on the other hand it contributed to an increase in exports of cereal products. As a consequence of the MacSharry reform, producers received reasonable incomes which were transferred from consumers and taxpayers to them. However, export subsidies increased the cost of the CAP budget whilst producer gains increased and consumer surplus decreased.

In this section, the impact of export subsidies on producer gain is researched. Export subsidies are trade-distorting support measures, because due to this support some lower cost products of third world countries are replaced with the higher cost products of developed countries in the world market. It is obvious that, if let us say the EU stopped giving export subsidies for cereal products this would reduce exports to that country. However, when the EU withdraws from a market it is obvious that products from other developed countries, which are equally competitive whether, subsidised or not, will take over. So the development and fair trade effect of removing export subsidies is exaggerated. Therefore, WTO measures are required to be applied all over the world to increase fair trade.

In the CAP some exported agricultural products are subsidized, such as, cereal products, olive oil, tobacco, sheep meat, wine and some fruit and vegetables. In addition, in the CAP export subsidies which were given to producers were rather high compared to Turkey's and some other developed countries' export subsidies. For example, "in 1990 the overall cost of EU agricultural subsidies amounted to US\$ 134 bn compared to \$ 74 bn in the USA and \$ 59 bn in Japan"<sup>50</sup> But, in Turkey in the same decade, export subsidies were calculated as 17.637 mn/ USD in 1996 and it was increased up to 27.996 mn/ USD in 1999 (State Institute for Statistic, report in 2001). This increase was rather lower in Turkey, which contributed little to the agricultural GDP in the last decade not only for EU producers but also for Turkish producers. The declining trend in the share of agriculture in the total GDP is indicated in Table 4.9.2.

In the EU, the impact of export subsidies is dependent on the Commission and its agencies. The producers offer the Commission different prices for different amounts of products. Let say producer x demands from the Commission 100 Euro per ton, for the exportation of wheat, and other producers offer 80 Euro per ton; then the Commission chooses the lowest subsidy offer and allows the exporting of its product. The problem here is that there is no limitation or any order for the member countries producers; it is possible that the same producers may receive export rights for each consecutive year.

In Turkey policies on export subsidies are applied in accordance with the policies undertaken by the WTO. The application of the Turkish policy has a direct effect on export subsidies in Turkey and the application of the WTO policy on export subsidies in other countries has an indirect effect on Turkey's exports.

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<sup>50</sup> David Pinder: The New Europe, 1998, p.58

Therefore, both in the EU and in Turkey export subsidies are calculated according to the differences between the consumption and production amount multiplied by the market price differential as in the formula given below.

The formula below is used for the estimation of export subsidies for cereal products, which is used for the estimation of the PSE amount for export subsidies.

$$\text{Export Subsidy} = (P_p - P_r) \cdot (Q_p - Q_c)$$

$P_p$ : EU producer price at farm gate (estimated by intervention price)

$P_r$ : World reference price at farm gate

$Q_p$ : production amount of commodity

$Q_c$ : Consumption amount of commodity

In Table 3.18.1 below subsidized cereal products for exportation are shown. In the beginning of the 1980s up to the MacSharry reform in 1992 and the Uruguay round in 1994, export subsidies had a considerable effect on the exportation of cereal products and “For most of its life CAP spending, mainly on support-buying and export subsidies, absorbed two-thirds or more of the EU's budget. It has recently accounted for just less than one-half, due to increases in such items as Regional and Social Funds.”<sup>51</sup>

In Table 3.18.1 export subsidies in the EU are given. As H. Richard mentioned, the amount of export subsidies together with the intervention purchasing comprises almost two thirds of the CAP budget in the nineties. However, as indicated in Table 3.6.1, the export subsidies together with market interventions comprises almost half of the CAP budget, of which 4 percent goes to the export subsidies according to the Eurostat statistics in 2002.

**Table 3.18.1:** The export subsidies in the EU for cereals (Euro/ mn)

Year	Wheat EU			Barley			Other grains		
	Export sub.		MPS	Export sub.		MPS	Export sub.		MPS
	Euro/ mn	% in MPS	Euro/ mn	Euro/ mn	% in MPS	Euro/ mn	Euro/ mn	% in MPS	Euro/ mn
1986	1,209	16	7,469	595	12	4,845	306	5	5,234
1988	1,662	27	6,036	1,070	27	3,859	159	4	3,971
1990	2,591	55	4,706	941	25	3,649	860	22	3,871
1992	1,500	26	5,728	369	11	3,345	256	7	3,568
1993	1,085	24	4,424	558	18	3,071	539	16	3,277
1994	528	16	3,299	177	6	2,561	156	5	2,734
1995	218	13	1,589	176	10	1,653	148	7	1,857
1996	-223	--	0	38	28	136	78	21	367
1997	-15	-300	5	86	19	442	107	17	606
1999	348	12	2,879	229	14	1,645	229	12	1,949
2000	126	12	1,039	22	18	122	82	2	409
2001	0	--	337	0	--	0	0	--	181
2003	-6	-4	147	4	3	114	6	--	0

Source: calculated from the Eurostat database, Director General for Agriculture and Fisheries, <http://www.eurostat.ch/agrifish.html>, Agris database 1973-2003, CD-Rom, 2003 and OECD database. [http://www.oecd.org/document/54/0,2340,en\\_2825\\_494504\\_35009718\\_1\\_1\\_1\\_1.00.html](http://www.oecd.org/document/54/0,2340,en_2825_494504_35009718_1_1_1_1.00.html) calculated by myself

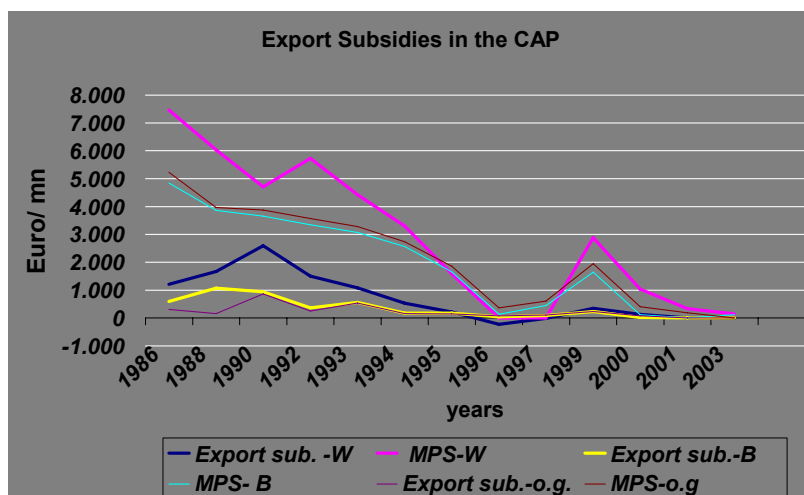
<sup>51</sup> Howarth Richard: The failures of CAP, 1999, <http://www.globalbritain.org/BNN/BN03.htm>

In the table above, the amounts of the export subsidies for cereals were about 7% for wheat, 10% for barley and 18% for other grains in 1986. Since 2000, the amount of export subsidies has sharply reduced in the CAP (see table below). According to the given calculation, the amount of export subsidies in the EU has less value as a share of the PSEs, compared with the second table which indicates Turkey's export subsidies. However, export subsidies in the EU were higher only in the period beginning early in 1986 to 1993 and in the second half of the nineties. In contrast to this, in Turkey the amount of export subsidies as a share of the PSE showed a considerable increase after 1993. This increase on export subsidies was maintained until the millennium and after that, a steady decrease on export subsidies was observed. As noted in the table the negative values indicate that in that year there was less production than consumption which caused a negative value. However, this did not mean that there was not any subsidy in that year.

In the 1980s higher subsidies also contributed to an increase in EU exports of cereal products. However, after the Uruguay round and the MacSharry reform a decline in exports and an increase in production and intervention stocks was observed (see also Table 2.7.2). One of the most important reasons for these increases in production and surpluses of cereal products is their dependence on coupled payments which required specific production in order to receive direct income payments.

The effect of export subsidy on the EU market, which is calculated above, is illustrated in the figure below. A higher share of export subsidies and a sharp decline after the Uruguay round is observed.

**Figure 3.18.1:** The export subsidies and the PSE for cereals in the EU



In the Table 3.18.2, the amount of the MSE for export subsidies to Turkish producers is calculated. In the mid-nineties the amount of these subsidies tended to increase because world prices for cereal products rose. This increase in world prices reduced the market price differential between producer price for Turkish producers and the reference price of third world country producers. Therefore, in some years the calculated export subsidies are given with a negative value. However, this does not mean there was negative subsidy. In the table below a sharp increase in the MPS, especially for wheat, is observed. The reason for this is the considerable decline in production amount in recent years which increased the MPS for the wheat producers in Turkey (see Table3.9).

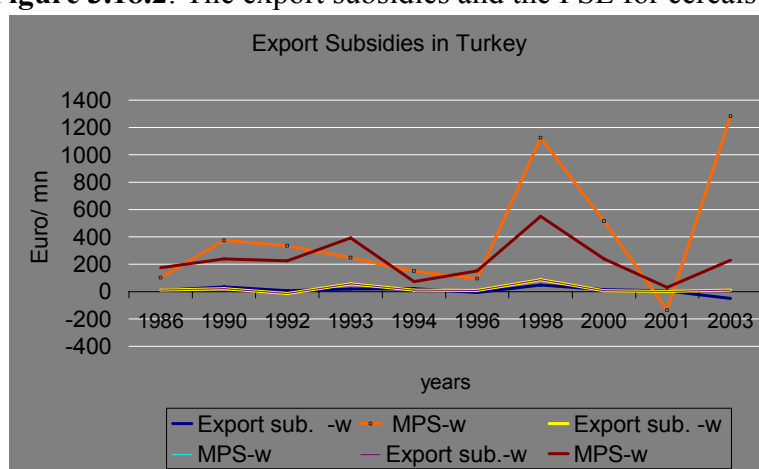


**Table 3.18.2:** The export subsidies in Turkey for cereals (Euro/mn)

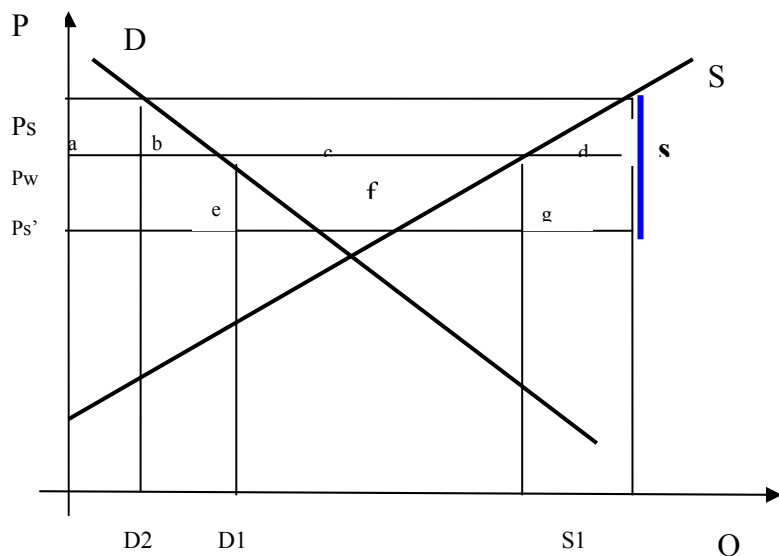
Year	Wheat TR		Barley		Other grains	
	Export sub. -w	MPS-w	Export sub. -w	MPS-w	Export sub.-w	MPS-w
1986	8	101	11	175	11	175
1990	34	375	22	239	22	239
1992	7	335	-14	225	-14	225
1993	19	248	56	393	56	393
1994	22	150	11	72	11	72
1996	-6	95	8	151	8	151
1998	49	1,126	87	551	87	551
2000	14	516	6	239	6	239
2001	4	-137	1	30	1	30
2003	-50	1,282	11	229	11	229

Source: OECD database: Agricultural Policies in OECD Countries: Monitoring and Evaluation 2005.   
[http://www.oecd.org/document/54/0,2340,en\\_2825\\_494504\\_35009718\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/document/54/0,2340,en_2825_494504_35009718_1_1_1_1,00.html) calculated by myself

In Turkey, during this period, a steady increase in export subsidies was observed. This increase was noticed particularly after 1995 and continued until the millennium. However, afterwards, the application of the 2001 measures, which were planned to adopt the agricultural sector into the CAP system, contributed to reducing export subsidies.

**Figure 3.18.2:** The export subsidies and the PSE for cereals in Turkey

In Figure 3.19 below, the effects of the export subsidies are illustrated. Let us suppose that in the EU for domestic producers, a subsidy of 's' amount per unit is given. With this subsidy, domestic producers will be able to earn  $P_s = P_s' + s$  in the world market, while prices in the importing country decrease to  $P_s'$  level. The price in the domestic market is higher than in the importing country. In the world market, prices are lower than the EU, but after the application of a subsidy in the domestic market, prices in the world market will become lower as well as in the foreign country.

**Figure 3.19:** Impact of the Export subsidies on the export

Source: Paul Krugman and Maurice Obstfeld: International Economics, 1996 p.198

The impact of the export subsidies is given below:

The producer gains  $a+b+c$ , the consumer loses  $a+b$ , and the community agency also loses  $b+c+d+e+f+g$ . Thus, from these given amounts, the net welfare loss of export subsidies is:

$$\text{Consumer loss} - \text{producer gain} + \text{government loss} = \text{net loss}$$

$$(a+b) - (a+b+c) + (b+c+d+e+f+g) = b+d+e+f+g$$

It is evident that export subsidies cause unfair competition in the market for the EU producers, and it causes a welfare loss for the nations (see also figure and graphic). The result of support policies in the CAP has negative effects on world prices. The reason for this negative effect is the strong protection of internal producers in the CAP system. But “the countries, which can influence world prices the most are the major producers and to a lesser extent, the large exporters which are relatively small producers.”<sup>52</sup>

In the table below, the CAP expenditure is given. The amount of expenditure on export subsidies has decreased considerably. The excessive export subsidies which had negative effects on the world market prices for cereals were in decline in the Nineties.

**Table 3.19:** The CAP expenditure in the EU

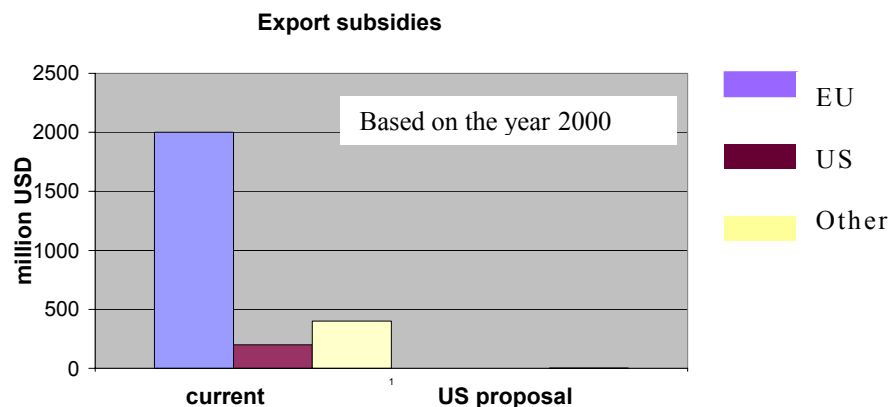
Expenditure	1990	1995	2000	2001
Total expenditure EU (billion Euro)	45.6	68.4	92.3	96.7
CAP Expenditure (billion €)	25	34.5	41.5	44.6
Idem in %total expenditure	56%	50%	45%	46%
<b>Total export subsidies (billion €)</b>	<b>9.4</b>	<b>6.4</b>	<b>5.6</b>	<b>3.4</b>
Idem in % total CAP	<b>37%</b>	<b>19%</b>	<b>14%</b>	<b>8%</b>
Intervention. Stock grains	14.4	6.9	8.7	6.8
Idem in % total intervention	31%	10%	9%	7%

Source: Regine Neyli and Ignace Coussement : The EU export subsidies and their impact on developing countries: Not losing sight of the real priorities, [http://www.copa-cogeca.be/pdf/expsubsid\\_03\\_1e.pdf](http://www.copa-cogeca.be/pdf/expsubsid_03_1e.pdf)

<sup>52</sup> Gary Storey, Andrew Schmitz, Alexander Harris: International Agricultural Trade, 1984, p.232

In the graphic below, excessive export subsidies, which are given within the EU, are illustrated.

**Figure 3.20:** Excessive Export subsidies in the EU compared to the other nations

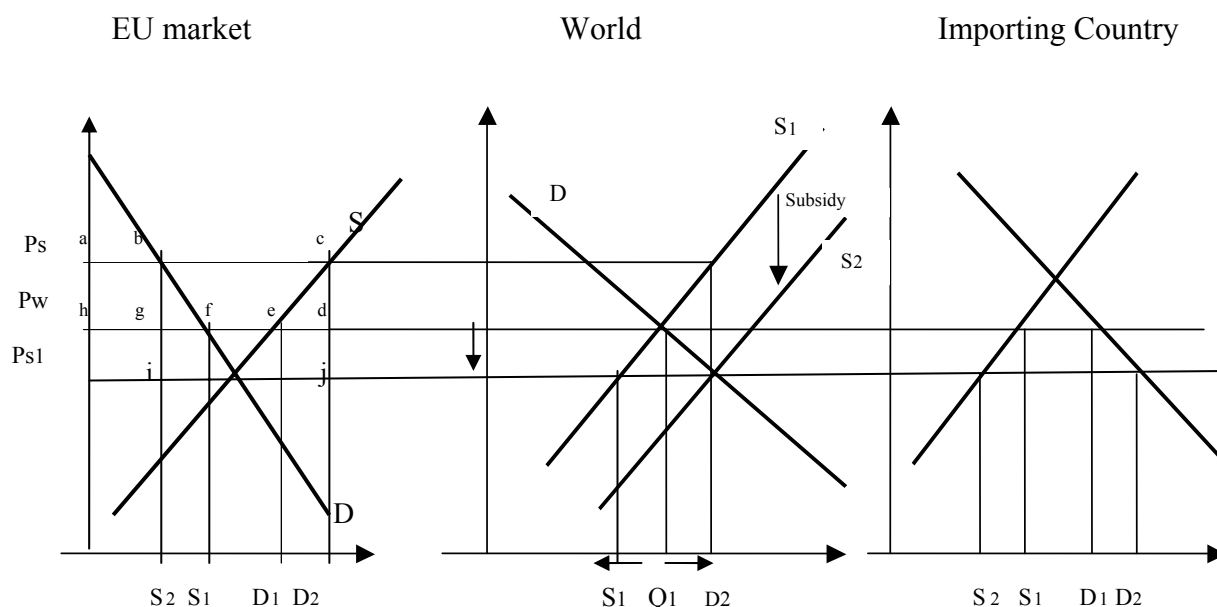


Source: <http://www.fas.usda.gov/info/factsheets/WTO/subsidies.html>, US proposal for global agricultural trade reform, United States Department of Agriculture.

The impact of this excessive protection of internal producers with export subsidies has negative effects on the world market for cereals, as it is illustrated in Figure 3.21 below. The higher cereal product prices in the EU are  $P_s$  but the community agency subsidises producers with an amount of  $P_s - P_w$ . By doing so internal producers increase their market share in the world market. This export subsidy reduces the product price below the world price to  $P_{s1}$ . The increasing market share of EU producers reduces the market share of world producers.

The EU producers have, in the last decade, reduced their cereal production costs and product prices. A decline in product price reduced the price gap between world and EU cereal products so that the EU producers have the advantage on the world market without any export subsidy.

**Figure 3.21:** Effects of the Export subsidies on the Nations Welfare



Source: Export subsidies and taxes, Reed Chapter 4 and Houck chapter 10 and 12  
[http://www.umanitoba.ca/afs/agri\\_economics/course/069.303/notes/oct21.pdf](http://www.umanitoba.ca/afs/agri_economics/course/069.303/notes/oct21.pdf)

In the figure the EU price is represented by  $P_s$ , and the world price is  $P_w$ .

The EU is a large country. Application of the export subsidies in the EU has negative effects on the cost of the CAP budget.

According to the s above, welfare loss for the nations can be summarized as:

EU as a small country:

Gain in producer surplus: a, b, c, e, f, g, h

Loss of consumer surplus: a, b, f, g, h

Community Expenditure: b, c, j, i

Net welfare loss for EU: consumption cost + production cost + budget cost  

$$b g f \quad + \quad e c d \quad + \quad g i d j$$

World as a large country:

In the figure, the impact of the export subsidies, financed by the CAP budget, is illustrated as the world market in the middle graph. It can be seen that the export subsidies product price of the internal producers has fallen below the world level from  $P_w$  to  $P_{s1}$ . The decline in product price has increased the market share (demand) of EU producers in the world from  $Q_1$  to  $D_2$ , while the market share (supply) of third world countries has fallen from  $Q_1$  to  $S_1$ .

The loss for the world as a large country is given below:

Gain in producer surplus: a, b, c, e, f, g, h

Loss of consumer surplus: a, b, f, g, h

Community expenditure: b, c, d, f, g

Net welfare loss: consumption cost + production cost  

$$b g f \quad + \quad e c d$$

Conclusion:

The most important result for the CAP exports is a decrease in the price gap between world and EU cereal product prices. After 2000 cereal product prices in the world market went beyond the EU prices. This means that the CAP expenditure on export subsidies will not be required. The world market share of EU producers will increase without any subsidy. A decrease on cereal prices export subsidies has not been removed from the CAP agenda, and they continue to be maintained for the support of internal producers' share in the world markets. The effects of the export subsidies for internal producers and for Turkish producers are given below:

Positive effects;

- Increased export of commodity,
- Subsidies protect producers and rural welfare,
- Subsidies have income effect, which contributes to increased producers' profit and income via an increase in the market share,
- Support insufficient producers to maintain their production,
- Subvention redistributes income from the domestic consumer who pays a higher price to domestic producers of a commodity (who receive the higher price),
- Price support or intervention price, prevent a fluctuation in the market,
- Subsidies increase the market share that gives an impetus to increase the productivity in cereal production,
- Subsidy is more preferable than tariff, subsidy is a direct form of aid

Negative effects;

- Subsidies cause over-production,
- Subsidies reduce the product price in importing country but, internal product prices stay intact,
- Because of the subsidy some efficient production of exportable commodity in the third world country is replaced by the insufficient production in the EU,

- Subsidy is a trade distortion for non-member countries, and reduces the welfare of the world economy,
- Subsidies cause unfair competition and are inconsistent with the comparative advantages theory,
- Subsidies reduce the welfare of the consumer if there is over-production,
- It is difficult to estimate which producers get subvention, and once it is given it is difficult to remove (protective tariffs may have the same effect),
- Reduce consumer surplus or cost,
- Reduce competition of third world country producers,
- Subsidy is used for political purposes, such as work place guarantee, because it is difficult to find a job for the low skilled workers,
- Restrict import of commodity indirectly.

### 3.2.3.6 The Production Quotas to Prevent Over-production

In the EU's CAP production quotas are used to prevent over-production in certain agricultural products such as cereals, sugar, milk and milk products. There are four coexisting mechanisms for controlling production quantities. These are:

#### “1. Production quotas as such

Quotas are fixed at national level for milk and sugar and allocated to farms or enterprises. Producers exceeding the quotas in each Member State face penalties.

#### 2. National guaranteed production quotas

These quotas (Maximum Guaranteed Quantities - MGQ -, Maximum Guaranteed Areas - MGA - and premiums per head of cattle) cover a long list of products and are equivalent to direct aid to producers, reduced proportionally if predetermined thresholds are exceeded.

#### 3. Guaranteed production quotas at Community level

These quotas, which are calculated on the basis of overall EU production, are being phased out and at present only apply to some processed fruit and vegetables, pulses and bananas.

#### 4. National quotas for surpluses

These quotas are for some Mediterranean products (wine, using approved distillation volumes) and some fresh fruit and vegetables (using thresholds for withdrawal from the market).<sup>53</sup>

The National guaranteed production quotas are applied for cereal products. National guaranteed production quotas comprise of three application quotas: Maximum Guaranteed Quantities- MGQ -, Maximum Guaranteed Areas - MGA - and premiums per head of cattle) cover a long list of products and are equivalent to direct aid to producers, reduced proportionally if predetermined thresholds are exceeded.

The impact of the production quotas is illustrated by using the theory of supply and demand.

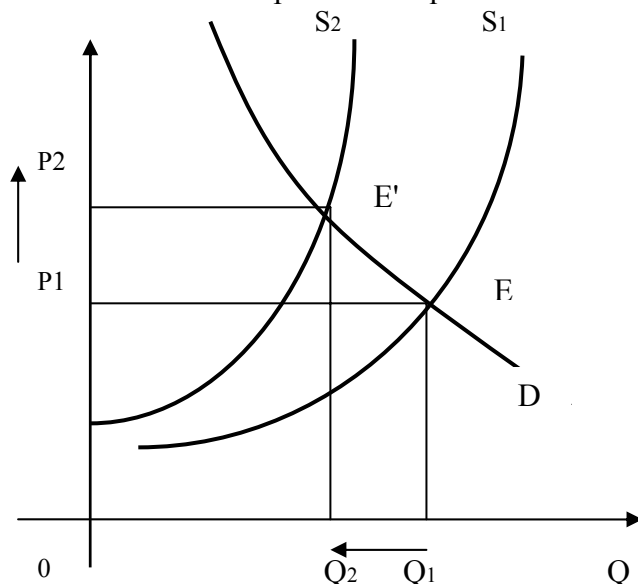
In the 1997, farmers were only allowed to produce a specific number of goods. Production quotas are required for cereals, beef and dairy products. Quotas can be considered as a production permit for farmers. The amount of restriction is required to reduce the surplus in the Union. “The Commission in Brussels says that intervention stocks of cereals, currently at 5m ton, could rise to a record 58m ton in ten years. The beef mountain is expected to double, to 1.5m ton. Alpine ranges of dairy products and sugar, lakes of olive oil and wine, could all reappear.”<sup>54</sup>

<sup>53</sup> European Parliament Fact Sheets: (4.1.3) Agricultural Markets Policy Common Organisations of the Market (coms) general concept European Parliament (12/10/2000), [http://www.europarl.eu.int/factsheets/4\\_1\\_3\\_en.htm](http://www.europarl.eu.int/factsheets/4_1_3_en.htm)

<sup>54</sup> Economist: Wanted: a farming revolution, Europe, Brussels, 1.September.1997

If the Commission requires producers to apply the production quotas, then the supply curve would shift to the left, which implies a decline in supply. The possible effect on the market from this decrease in production is the price increase, because the demand for basic foodstuffs is inelastic. Increasing prices will increase the profit and income of producers.

**Figure 3.22:** Effects of the production quotas on the overproduction



As is seen in the figure, the CAP restriction  $Q_1$  to  $Q_2$  increases the product price  $P_1$  to  $P_2$  and total revenues of farmers from  $OP_1EQ_1$  to  $OP_2EQ_2$  which gives more revenue than the first one. Here it is clear that consumer welfare is reduced to  $P_1P_2EE'$  while producer gain is increased. This Quota measure therefore raises the income of one group at the expense of others.

### 3.2.3.7 Quotas to protect from Import.

Import quotas are the restriction of imports allowed into a country every year. Quotas help to ensure that the quantity of imports is strictly limited. If increasing foreign competitiveness lowers the world price of imports then the total amount spent on imports will reduce. These quotas to limit imported products are a protective measure for securing a balance of payments. They secure the protection of domestic producers because the producers know that the amount of imported products will never exceed the quota limit. The restricted quota amount is a guarantee for a balance of payments, because it prevents excessive import access into the domestic market, which might cause an imbalance of payments.

There are two basic types of quotas: “absolute quotas and tariff-rate quotas. Absolute quotas limit the quantity of imports to a specified level during a specified period of time. Sometimes these quotas are set globally and thus, affect all imports, while sometimes they are set only against specified countries. Absolute quotas are generally administered on a first-come first-served basis. For this reason, many quotas are filled shortly after the opening of the quota period. Tariff-rate quotas allow a specified quantity of goods to be imported at a reduced tariff rate during the specified quota period.”<sup>55</sup> These tariff rate quotas which are used in agriculture now exist in the EU along with the other WTO member countries. Tariff rate quotas (TRQs) do not limit trade. On the contrary they provide for imports at a favourable tariff up to an offered

<sup>55</sup> Steven Suranovic: International Trade Theory and Policy Lecture notes, 8/ 16/ 2003, <http://internationalecon.com/v1.0/ch10/10c060.html>

limit. Beyond these limits an import is unlimited but at the normal tariff rate no reduction on tariff is now offered.

In the EU TRQs were started as a result of the Uruguay round. The TRQs are managed by the European Commission and handled on a basis of first come first served, or on a basis of licence or on historic imports.

First come first served. "Under this scheme, importers who are first to import products up to the limit set by the quota get the quota rents. Under the second form, the government, can either issue license on a first come first served basis allocate licenses across importers based on predetermined criteria, or sell the licenses at the auction."<sup>56</sup>

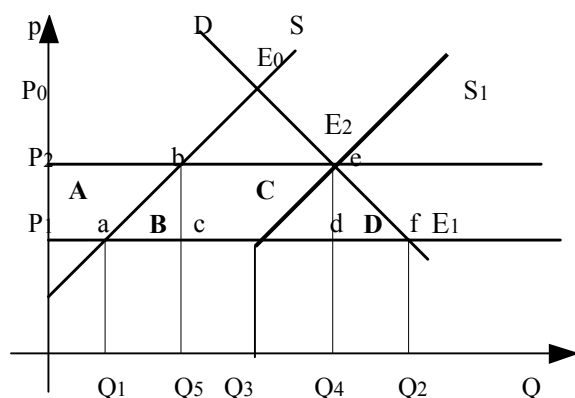
TRQs have been put into effect especially to secure the interest of exporters for certain traditional products such as bananas and coffee beans etc from developing countries.

Import quotas require greater collaboration with domestic firms. This has both negative and positive effects on the government trade policy. It has a positive effect because, "they give government officials greater administrative flexibility and power in dealing with domestic firms."<sup>57</sup> Government incitements are required to collaborate with domestic firms to increase economic development. But adaptation of quotas is dependent on the domestic production by using local resources and consumers' demand, which is not easy to estimate. The process used to estimate the quota amount is obtained from producers. The government needs to know the required production capacity and its cost. This will then help to estimate the demand capacity of consumers and market price of the product. After these estimations, the government must determine the import capacity and the quota amount for the domestic market. This estimation process requires a strong collaboration between the government and producers to determine the import quota amount. On the one hand, restricted imports are desirable to prevent excessive imports in the domestic market, to prevent price fluctuation and to protect producers gain in the market. But on the other hand, a restricted import reduces the supply of this product, which causes a price increase in the domestic market and reduces the welfare of the consumers.

A tariff, by contrast, does not require such intensive research and relations with firms, but the adaptation of tariffs directly affects producers and it "allows later foreign price cuts to raise both import quantities and (if demand of imports is elastic) import values, thus complicating any official forecasts of the balance of payments."<sup>58</sup>

However, adaptation of quotas is not the optimal way to protect producers and to increase welfare in the world by using international trade, as is explained in the figure below.

**Figure 3.23: Impact of import quotas**



Source: Mia Mikic: International Trade, 1998, p328

<sup>56</sup>Bowen, Hollander, Viaene: Applied International Trade Analysis, 1998, p.172

<sup>57</sup>Lindert and Pugel: International Economics, 1996, p.136

<sup>58</sup>Lindert and Pugel: International Economics, 1996, p.136

Suppose that in the Union an import is limited under perfect competition and substitution between imported products and domestic products. In the figure above, under the no trade assumption, intersection of demand and supply corresponds to the equilibrium autarky price and quantity at point  $E_0$ . The domestic product is supplied at  $P_1$  where the equilibrium is at point  $E_1$  supplied by domestic producers, where the  $Q_1Q_2$  amount would be imported. However, the import of products is restricted to an amount of  $Q_3$ . This means the highest level of imported products is  $Q_1Q_3$ ; beyond this the amount of products must be supplied by domestic producers. Therefore, the post quota supply curve is  $S_1$  and the new equilibrium  $E_2$ . At this point total consumption is  $Q_4$ , where the price is increased because of the import quota up to  $P_2$ .

The restricted import, which is represented by  $Q_1Q_3$ , reduces the consumers' welfare. The triangle 'def' shows consumption loss and 'abc' shows the production loss.

The loss to consumer is  $A+B+C+D$

The producer gain is 'A'

Revenues of the Government replace the quota rent to producers. The quota rent goes here to the producer who has the license right to import. The amount of the quota rent (profit) is the area 'C'.

The impact of import quotas is given below:

Quotas have some important negative effects. First of all "quotas increase the monopoly tendency in the home country."<sup>59</sup> The restricted amount of quotas increases the monopoly tendency of internal producers, because imported products will never exceed the quota limit and competition will continue to rise up to the quota amount. As a consequence of quota restriction, internal producers remain alone in the market. The second negative effect is that the quotas may reduce the amount of world trade.

"Quotas are rigid"<sup>60</sup> i.e. fixed according to the amount and period of time. The restricted quantity of import quotas may have welfare effects different from the national perspective than the equivalent global quotas. Bilateral quotas affect production capacity of countries and the exporting producers may take advantage of the monopolization of the export supply of a specific product.

Quota versus tariff:

Common Custom tariffs are applied to reduce the imported product amount in order to protect internal producers. The application of tariffs is dependent on the price of domestic products. In the Union, the product prices are higher than the external (imported) product prices, which require some restriction to protect internal producers. The amount of the tariff is determined with respect to the amount of the next term product prices, which in turn is determined by the Community agencies. The aim of the custom duties is to prevent the access of imported products into the domestic market by reducing the demand capacity of customers to those imported products. As a consequence of this process, the demand for domestic products will be prevented. However, the impact of import restrictions may reduce the utility of customers and also reduce the inclination of producers to replace the higher cost production technique with a lower one.

Quotas seem to be a more radical solution for the domestic producers. In this case a tight collaboration between the government and producers is required in order to obtain detailed information on the next term production so as to estimate the amount of the quota.

The impact of quotas affects domestic producers and gives them an opportunity to determine the next term production which it is dependent on the demand of consumers. The restricted imported products will become ineffective, within the domestic market, in changing the consumer demand or product prices. As a consequence these domestic producers will be alone

<sup>59</sup>Lindert and Pugel: International Economics, 1996, p.138

<sup>60</sup>Mia Mikic: International Trade, 1998, p328



in the market and will have the opportunity to affect and to protect consumer demand by using the price policy. (See Figure 3.22)

In the long run the application of quotas increases the monopoly tendency and reduces the utility of consumers.

Conclusions on import quotas:

1. Quotas reduce the competition power of third countries and increase the market capacity of internal producers to become a monopoly power in the market,
2. It is more costly if it creates internal monopoly power,
3. Producers gain is much smaller under quotas; relative to other measures,
4. Community agencies or licence owners profit from quotas,
5. Quotas have less positive effects on the government/ community agencies revenues,
6. Necessity for continual price reductions as supply shifts right avoided by quotas.

### 3.2.3.8 Export Quotas

The exporting country, in order to limit the volume of export over a period of time, applies export quotas. The methods for administering export quotas are the same as those for import quotas. "The country can allow exports to be shipped on a first come first serve basis or an export license can be issued or sold at auction."<sup>61</sup> Here, as in import quotas, there exists a problem, namely that export tax can duplicate the price and volume effect on an export quota. In the EU's CAP the EU export quotas given particularly for sugar were introduced in 1968 to increase the amount of exported products.

The important difference between export quotas and import tariffs is that the export quota is more preferable for an exporting country, because export quotas increase the profit rate of the exporting country. The application of export quotas reduces the exported product amount (supply amount) in the importing country. By doing so, the product price tends to increase in importing countries. Increasing the price in importing countries gives an opportunity to the exporting country to increase the product price and thus to capture the quota revenues in the importing country. Therefore, exporting countries prefer to negotiate with importing countries to apply export quotas or VER (voluntary export restraint) to increase the profit rate.

In the figure below, the impact of the export quotas is illustrated. It is supposed that in the EU maize production (supply) is less than demand and it is required to cover the consumer demand through imports. In the figure  $S_{EU}$  and  $D_{EU}$  are the supply and demand curves of the EU.  $S_{TR}$  denotes the supply schedule of Turkey, assumed to be the world's low cost producers and  $S_J$  is the supply schedule of Japan, which is too costly to be exported into the EU market.

Now it is expected that the cheaper products of Turkey will cover less supply (1 unit) than demand (7 units) in the EU market. However, Turkish producers decided to restrain their exports, rather than face possible protectionist measures on their exports. Assuming that the Turkish producers apply 2 units export quota on maize export, the export amount would decrease from 7 units to 5 units. However, a decline in the export amount will increase the product price in the EU market from 10 € to 30 €. An increase in the maize price will increase the supply from 1 unit to 3 units in the EU. An increasing supply in the EU will reduce the exported product amount from 4 units to 2 units. The total supply now is equal to the Turkish supply plus the export quota amount. The advantage for the producers in the exporting country is the price increase in the EU market, which contributes to the Turkish exporter increasing the product price (profit rate from export) and capturing the quota revenues.

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<sup>61</sup> Bowen, Hollander, Viaene: Applied International Trade Analysis, 1998, p.172



export amount. It is difficult to predict the action of exporters, because bilateral negotiations are not fixed. As a consequence of VER's, the importing country loses all price mark-up by letting foreign exporters limit in the importing country. Briefly, the importing country induces another nation to reduce its export of commodities voluntarily.

A voluntary export restraints agreement is negotiated between an importing country and one of the supplier countries. The aim of this agreement is to limit the export of goods in importing countries.

The VER has an increasingly common form of protection in the US and the EU. Although they do not completely give authority to exporters if they do not voluntarily reduce the export amount. In the case where the export amount is excessive for the importing country then "the importing country threatens foreign exporters with stiff quotas."<sup>63</sup> But they give the exporter the freedom to charge the full mark up on their limited sales to the importing country. This has a positive influence on domestic producers, because imported products become too expensive.

The effect of VER is shown in Figure 3.24. Similar assumptions are taken for import and export quotas. The effects of the VER on the nation welfare are given below.

The terms of trade deterioration implies the loss of consumer surplus equal to the area, "a+ b+ c+ d+ e+ f+ g+ h+ I+ j+ k+ l"

Producer gain is the area "a+ h", which is the same as export quotas.

Protective effect is "b+ c+ I"

Consumption effect is "f+ l+ g"

The rent from the export quotas goes to the exporter who receives the license right to export and this is shown in area "d+ e+ j+ k".

The government receives nothing; only the foreign Supplier receives a quota rent of  $P_2 - P_1$  per unit exported. The effects of VER's on domestic prices, production and imports are equivalent to those of tariffs or import quotas. "The only difference is an appropriation of the rents which in the case of VER's goes to the foreigners."<sup>64</sup>

### 3.2.3.10 The impact of the Support Measures on Trade

The impact of support measures is summarized in the table below. Within the European Union a "free market" policy is applied. A free market perspective leads to a more efficient use of the world's scarce resources which will result in the maximization of global wealth and enable people to benefit economically. However, as is seen in the table, both in the EU and in Turkey, the amount of the loser is much more than the winner, because most producers, especially in the EU, get more, both EU and Turkish consumers pay more, EU and Turkish taxpayers pay more, the EU generally exports more/ imports less, Turkish producers outside the Union lose. And finally, after the monetary union, money is mostly redistributed among EU countries and less in Turkey as a non-member country.

<sup>63</sup>Lindert and Pugel: International Economics, 1996,p.151

<sup>64</sup>Mia Mikic: International Trade, 1998, p333

**Table 3.20:** Cost and benefits of tariff, subsidies and quota measures for cereal products

	Impact of the trade measures in the EU			Impact of the trade measures in Turkey as a third world country		
<b>Trade measures</b>	Consumer	Producers	Community Agency	Consumer	Producer	Government
Market price support applied by the EU	Loss - Increasing prices reduce the nominal income and reduce the consumer surplus	Gain - Increase the income of producers and producer surplus	Loss- Market support increases the expenditure	No change	Loss -Increasing price gap via MPS increases the applied CCT, which increases the cost of export into the EU and reduces the export income	Loss - Increasing price gap via MPS increases the applied CCT. This increases the government expenditure and reduces the export revenues
Market price support applied by Turkey	No change	Loss Increasing price gap via MPS increase the applied tariff, which increases the cost of export into Turkey. This reduces the export income	Loss Increasing price gap via MPS increase the applied tariff. This reduces the export revenues	Loss Increasing price reduces the nominal income and reduces the consumer surplus	Gain Increases the income of producers and producer surplus	Loss Market support increases the expenditure
Tariff applied by the EU for Turkey as an importing country	Loss Increases the imported product prices	Gain increases market share and income	Gain tariff revenue	No change	Loss reduces market share and profit	Loss reduces the tariff revenue
Tariff applied by Turkey for EU as an importing country	No change	Loss reduces the profit	Loss reduces the tariff revenue	Loss Increases the imported product prices	Gain increases market share and income	Gain-tariff revenue
Direct payments on limited area applied in the EU	Loss Restricted production reduces supply and increases product price. This reduces the purchasing power of consumer	Gain increases income	Loss increases expenditure	No change	No change	No change
DIS (Direct income Support) applied by Turkey started in 2001	No change	No change	No change	Loss via transfers from consumers to producers	Gain income increase	Loss- increases expenditures

Decouple Direct payments on Unlimited area support-with set-aside applied in the EU started in 2005	Gain via reduced prices	Gain increase income support	Loss increase expenditure	No change	No change	No change
Intervention purchase in the EU	Loss increases product prices	Gain increases producer surplus	Loss increases expenditures	No change	Reduces the market access into the EU via increase on CCT	Reduces revenues via decline in import
Input subsidies applied in the EU	Gain via decline in product price. But if the decline in production cost will be reflected in the producer price and particularly consumer price. If not then it is loss for consumer.	Gain increases the profit rates via decline in input prices	Loss increases the burden of the CAP budget	Gain via decline in product price. But if the decline in production price is used by Turkey to increase the import tariff then no effect. But to date there was no change in accordance with the price change in imported products	Gain- decline in product prices via decline in production cost in the EU will reduce the applied CCT. (But if reduced production cost is reflected in producer prices which will reduce the CCT), then this decline in CCT will reduce the expenditure of producers in Turkey that is spent on the CCT, This also increases the market access to the EU	No direct effect. Gain if the export share to the EU increases then this will increase the revenues of the government
Input subsidies applied in Turkey	No change. Because in the EU there is the CCT which is used to increase the external product prices up to the EU level	Loss because decline in input price may reduce the production cost and price in this case . Producers in the EU will be required to reduce their product prices more to maintain their market share in Turkey	Gain if the decline in product price is used for the calculation of the CCT. But if there is no decline in product price then there is also no gain.	Gain via decline in product price. However, if the decline in production cost is not reflected in the consumer price then it is loss. However, to date there was decline also in consumer prices	Gain increases the profit rates via decline in input price	Increase the expenditure of the government
Only Set-aside in the EU	No change	Loss- via decline in production and profit	Loss-increase the expenditure of the CAP budget which is distributed to producers for set-aside	No change	No change	No change

Product Price cut in the EU	Gain via decline in producer price	Loss via decline in profit	Gain	No change	No change	No change
Subsidy in the EU for export into Turkey as a third country	Loss- increases transfers form consumers	Gain - reduces the exported product prices but also increases the profit and income via subsidies	Loss- increases the expenditures	Gain- decline in product prices from the EU, increases the nominal income	Loss- reduces the market share and profit	Gain - if tariff is increased in accordance to the tariff
Subsidy in Turkey for export in to the EU	No change because it only increases the price gap which is applied for third world country producers in the EU	No change because of the CCT which is the price gap between internal and external products	Gain - because increases the price gap which is applied as a CCT in the CAP	No change	Gain-reduces the exported product prices but also increases the profit and income via subsidies	Loss- increases the expenditures

1; if the owner of the license is the government then the rent income goes to the government.

The CAP, which was founded by the six original members of the EU, has only achieved a part of its objectives. It is obvious that the CAP has achieved the objectives below:

- Fair standards of living for farmers, who are supported with a reasonable income, even if they are not sufficiently competitive in the market. In Figure 4.2 it is shown that during the nineties producers' incomes considerably increased. In 1992 the MacSharry reform reduced the arable land by 15% as a result of the application of the compulsory set-aside. However, the application of set-aside showed a small decline in production, as seen in Table 4.2. Furthermore, "the reality was that farmers simply intensified even more on the other 85% of their land."<sup>65</sup> On the one hand, producers received direct payments for their compulsory set-aside, but on the other hand, intensive use of the other 85% of their land made little contribution to surplus reduction. Increasing production was supported with export subsidies to become competitive in the world market and this increased the market share of internal producers (see Table 2.7.2).
- Agricultural productivity increase has been achieved, especially in cereal products. If the productivity can be measured (for arable land products) in output per acre for land, then it is obvious that despite the compulsory set-aside measure, which reduced arable land use, production amount has increased in the last decade (see Table 2.7.2)
- The CAP support measures contributed to the Market stability. The CAP has also increased the competitiveness of internal producers by setting the intervention price mechanism as a protective measure to lower cost production of third world countries. By doing this imported product access and extreme price fluctuation were taken under control. It is obvious that existence of the intervention price mechanism reduces price fluctuation in the market.

<sup>65</sup> [http://www.courseworkbank.co.uk/coursework/examine\\_examples\\_government\\_policies\\_can\\_2894/](http://www.courseworkbank.co.uk/coursework/examine_examples_government_policies_can_2894/) Critically discuss the following quote from bong p 2004 from racial to class apartheid: South Africa's frustrating decade of freedom monthly review, 55, and (10) 45-59".

- The export subsidies have increased the world market share of EU producers which contributed to a reduction of the surplus amount, even if it is maintained as a problem for the CAP budget (see Table 2.7).
- Availability of supply is achieved. Furthermore, it caused an overproduction (see Table 2.7). This is one of the CAP's best achieved objectives of the. Furthermore, endeavours are given to reduce the supply amount in certain agricultural products. However, application of set-aside measures has less of a contribution on surplus reduction (see Table 2.7).

The CAP system has had no success on the points given below:

- Reasonable prices for consumers. In the last decade consumer price has steadily increased. This reduces the welfare of consumers (see Tables 2.8.1 and 2.8.2),
- For the rural community preservation of employment opportunities. Since the foundation of the CAP, a decline in agricultural employment has been observed (see Table 4.11). However, it is difficult to predict whether this has resulted from the CAP support measures or not, but it would not be wrong to say that the CAP has not had any positive effects on the amount of persons employed in agriculture.

In the CAP, guaranteed prices and direct payments are applied to complement production for cereal products. In fact, the amount of support measures which are given for the cereals cover approximately half of the CAP expenditures. The considerable share of support on cereal products was the reason for selection of cereals as sample products. This was done in order to estimate the amount of PSE necessary for a better analysis of the impact of support measures on the welfare of consumers and the distribution effect on producers. By means of PSE calculation estimation of the impact of support measures on producer in the CAP and in Turkey is realised.

For this reason, first of all, it was planned to estimate the trade distortion effect of the CAP. The cereal products are first researched for the last three members of the EU. The results of MPS calculation for these countries showed that market support is not the result of the CAP system; moreover, it was even higher in those countries before EU membership. After EU membership, the calculation of the PSE for these countries showed that the support measures in the CAP system have also considerable market support for producers. In the last decade, in particular, the increasing amount of direct payments, which increase the transfers from consumers and taxpayers to producers, had a considerable negative effect on the welfare loss for the consumer.

In the last decade, the MacSharry reform and later Agenda 2000 contributed to a decrease in the welfare of consumers and caused trade distortion in the market. The price support system had a direct effect on the market price. However, direct payments have indirect effects. The finance of direct payments is obtained from other support measures, such as, common custom tariffs and levies, intervention price mechanisms, or sometimes from import quotas. These measures are not only used to protect internal producers, but also used to collect revenue to finance other support measures, such as, direct payments or export subsidies. In the last decade especially, transfers from consumers and taxpayers to producers increased, which compels them to pay higher prices, resulting in intervention measures for the producers. By doing so, on the one hand, internal consumers are forced to pay more to buy expensive goods from internal producers thus reducing consumer surplus. On the other hand, the existence of intervention measures contributes to an increase in the price gap between internal and world producers which then increases the tariff amount on imported products and reduces the market access of third world countries. As a consequence of these measures, trade distortion occurs for third world country producers.

The CAP system caused a trade distortion and price instability in the world market. The price reductions on cereal products are supported with direct payments and export subsidies; altogether these caused a trade distortion for third world country producers.

In the cereal sector, especially for wheat products, a sharp price decline and an increase in production caused internal producers to increase their share in the world market. The increasing shares of internal producers in the world market reduced the share and production of third world country producers. Consequently, third world country producers lost their market share which resulted in price increases for cereal products after 2000. In the next decade it can be expected that export subsidies will disappear, while internal EU prices are brought into line with international prices. Finally, the amount of direct payment will be reduced and replaced with decoupled single farm payments which will break the link between production and payment.



## 4. The Impact of the Support Measures on Cereals Trade (Considering the EU-15 and Turkey)

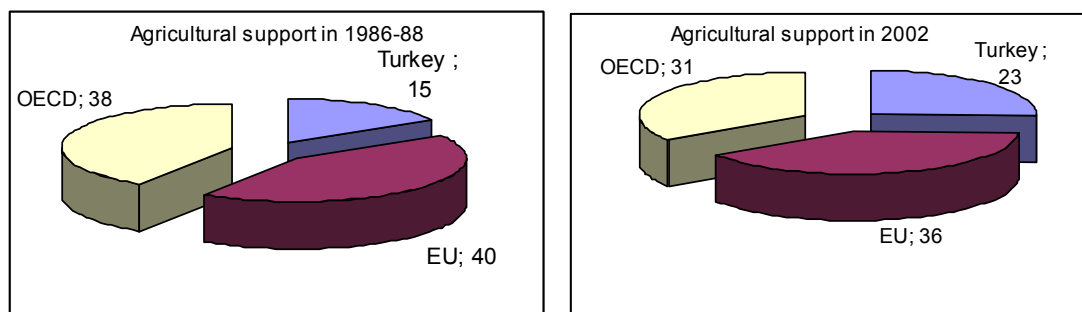
### 4.1 General Considerations

In the CAP there were two main problems: the surplus and the finance of the CAP budget. In the last decade CAP reforms were planned to overcome these two major problems.

The lack of sufficient information and of published data on market support via price interventions, CCT and export subsidies to EU members resulted in an under-estimation of support amounts for the calculation of the producer support estimate (PSE) for each support measure in member countries and in Turkey. In particular, different applications of market support and distribution of subsidies in each member country and in Turkey's different regions prevented the publication of statistics on agricultural subsidies in the last decade. This was obviously done, to reduce reactions of Turkish producers on the distribution of agricultural subsidies. Therefore, it was very difficult to predict whether intervention measures in all member countries had similar effects or not. Nevertheless, the calculation of PSE for the EU-15 and for Turkey contributed to an estimation of the monetary amounts of various support measures in the CAP and in Turkey (see chapter three).

In the table below PSE percentage amount of agricultural support is illustrated. The PSE percentage for the EU, Turkey and for OECD is compared between 1988 and 2002. As illustrated in the figure the PSE percentage for Turkey increased about 7% in 2002. In contrast, the PSE percentage both for the EU and for the OECD countries decreased by 4% and 7% respectively.

**Figure 4.1:** Indicators of Agricultural Support in EU, in Turkey as an applicant country and in the OECD as non-EU countries



Source: EU Commission: Agricultural situation in the Candidate Countries, 2003, p.20, illustrated by myself.

The effects of the CAP support system in and outside the Union are given below.

1- The CAP price support system was one of the most important and controversial policies of the EU. From its foundation in 1962 to date many reform proposals and policies were applied in the CAP. However, increasing negative reactions of producers against the CAP and WTO former measures forced a reduction in trade distorting support measures in the last decade. For this reason Turkey as a WTO member and applicant country of the EU followed the rules and policies of the WTO and CAP very closely. Therefore, CAP reforms and GATT (WTO) measures contribute to the regulation of the mechanism for agriculture remaining competitive in world markets. However, endeavours are also made to reduce trade distorting support measures in world markets.

2- Intervention prices differ between member countries and increase price disparities between member countries.

The price support measures, which are guaranteed by intervention prices, are determined by the Commission, but applied by Community agencies.

Community agencies in member countries regulate the intervention price according to the production levels of regional producers. By this means intervention prices differ between member countries. Therefore, intervention prices, which are applied differently by the community agencies, increase the price differences in member countries. Moreover, different market prices in member countries also have negative effects on the increase of price disparities in member countries. In the table below, price differences between member countries are illustrated. Market prices differ between member countries. These price differences have a negative effect on economic integration within the CAP. Price differences for cereals in different member countries are illustrated in the table below.

**Table 4.1:** Market price for cereals as a percentage of the intervention price

Member Countries	2001			2002		
	Common wheat	Barley	Maize	Common wheat	Barley	Maize
Austria	117.47	108.10	106.92	116.4	108.2	110.95
Belgium	124.60	110.77	--	122.81	108.62	119.12
Germany	118.54	101.11	--	117.22	104.13	120.71
Greece	149.19	148.73	133.91	155.21	153.61	148.41
Spain	155.02	133.35	123.56	156.00	135.52	136.65
Italy	149.42	136.34	112.09	144.27	136.69	131.01
Portugal	138.99	134.16	131.36	152.97	134.41	140.93
United Kingdom	149.79	113.87	--	147.77	113.86	--

Source: European Commission DGeneral for Agriculture: Agriculture in the European union Statistical and Economic information 2002, 2003, (selected data form table 4.1.6.2)

3- The finance of the CAP support system is costly and support measures such as price intervention, CCT and export subsidies all increase unfair trade for Turkish producers as a non-member country in the EU market.

4- The CAP policies secure a reasonable income for producers but at the cost of consumer welfare. The weakness of existing CAP support measures to increase the productivity in agriculture reduces the integration of internal producers in the world markets. Indeed, in the last decade, the support measures price gap between internal and world producers fell. However, the application of import tariff and export subsidies, applied in the past to protect and support internal producers from third world countries' lower-priced products, was maintained. The business interests and policies which are imposed on the CAP are unfortunately more united and effectively coherent than the welfare of the people.

5- The Support measures cause a trade distortion in the market. "The CAP causes misery for millions of poor farmers around the world. The EU pays the agribusiness £2 billion a year to "dump" excess food, such as milk, sugar and wheat, on to poor countries, driving poor farmers out of the markets and into even deeper poverty."<sup>1</sup>

6- The EU's CAP has brought about many changes and opportunities for farmers. "All in all the contribution of the EU to the agricultural budget of the federal government amounts to about 50%."<sup>2</sup> The CAP budget finance EAGGF guarantee and guidance section supports

<sup>1</sup> Oxfam Press Release: Aid agencies welcome Chancellor's demand to Cut the CAP, Joint Agency Press Release - 29 September 2003 (Oxfam GB is a development, relief, and campaigning organisation that works with others to find lasting solutions to poverty and suffering around the world.),

<http://www.oxfam.org.uk/press/releases/cap290903.htm>

<sup>2</sup> BMLF: Österreichs Landwirtschaft mit der Natur, BMLF, Vienna, 1999, p.47

member countries' producers in maintaining their production and securing their income with different subsidies. But consumer welfare has mostly been neglected.

7- The WTO membership of the EU's CAP has made an important contribution to the reduction of the trade distorting measures in agriculture. The Uruguay round, in particular, has made an important contribution to the reduction of the amount of subsidies. However, negative reactions from fewer developing countries during the Seattle WTO meetings were proof of the trade difficulties for poor WTO members, as a result of the trade distorting measures applied by the CAP. However, the CAP did contribute to liberalization of trade, but only in the EU market. In 1968, both the foundation of the Customs Union and the removal of trade barriers increased the trade capacity between member countries, but the price support system, the application of the CCT and export subsidies had negative effects on marketing of less developed countries' agricultural products, in the EU market as well as in the world markets.

After joining the EU Austria's foreign trade capacity, for example, increased in favour of EU members, while its trade capacity with EFTA countries fell. A consequence of Austria's membership in the EU was that it had to redirect its trade flow from its neighbours to other EU countries. This is the result of the Customs Union theory, which causes trade creation between member countries, whilst trade distortion is increased between member and non-member countries.

If free trade is based on the theory of comparative advantages it is difficult to accept the support measures which were applied within the CAP. The liberal trade is based on the comparative costs advantage which implies that countries with lower relative costs would become trade partners. But the CAP support measures were, unfortunately, creating unfair competition between countries and replacing some efficient production of exportable commodities with inefficient production in the market.

8- Export subsidies of the CAP increase the trade distortion in the world markets. Over time, especially in the Uruguay round, a sharp decline in export subsidies was observed, 36% of the budgetary expenditures for export subsidies (outlays) and 21% of the volume of subsidized export were reduced. However, export subsidies on cereals were of considerable importance in increasing the market capacity especially for the internal producer who exported to Turkey. But, export subsidies from Turkey to the EU market had no effect, because application of the CCT in the CAP prevented the reduction of cereals prices from Turkey to the EU markets. Moreover, any decline in exported product prices from Turkey to the EU market would only increase the price gap between internal and external products, which is used for the calculation of the CCT. Therefore, any increase in export subsidies given to a producer who exported to the EU market would only increase the monetary transfers which would be paid via CCT to the Community budget. However, producers who export to the EU and do not get supported by export subsidies could obviously increase the profit rate via decline in CCT and capture part of the expenditure which could be spent from the community budget.

9- The EU contributes to a reduction of the disparities between EU regions, such as, less favoured areas or less developed countries. The aim of this is that "Länder (states) those whose tax revenues fall below some predetermined range should receive compensation from Länder whose tax revenues exceed that range."<sup>3</sup> This system of fiscal equalisation contributes to equalizing fiscal differences between member countries. For this reason, the EU budget finances countries in less favoured regions together with the EAGGF of the CAP.

In the table below the net contributors and beneficiaries of the EU are shown. The main contributors of the EU budget are Germany, Holland, Austria and Sweden. The net

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<sup>3</sup> Paul de Grauwe: Economics of Monetary Union, 2000, p.11

receivers of the EU are Greece, Portugal and Spain. It is also important to note that almost 50 % of the EU budget goes to finance the CAP.

**Table 4.2.1:** Net contributors and receivers of the EU

	1992		1993		1994		1995		1996		1997	
	Mecus	% GNP	Mecus	% GNP	Mecus	% GNP	Mecus	% GNP	Mecus	% GNP	Mecus	% GNP
<b>B</b>	-280.2	-0.16	-458.3	-0.25	-922.9	-0.47	-381.2	-0.18	-636.4	-0.30	-1 137.6	-0.52
<b>DK</b>	275.0	0.27	332.7	0.30	208.3	0.18	311.5	0.25	215.9	0.16	36.6	0.03
<b>D</b>	-9 645.6	-0.62	-11 759.7	-0.72	-13 540.0	-0.78	-13 315.2	-0.72	-10 653.8	-0.58	-11 076.2	-0.60
<b>GR</b>	3 580.6	4.65	4 085.5	5.16	3 862.7	4.61	3 515.8	3.98	4 069.6	4.19	4 359.8	4.12
<b>E</b>	2 685.1	0.60	2 995.0	0.73	3 146.9	0.78	7 226.5	1.69	6 087.8	1.34	5 911.0	1.27
<b>F</b>	-1 393.4	-0.14	-1 115.0	-0.11	-2 568.2	-0.23	-1 683.6	-0.14	-312.5	-0.03	-971.7	-0.08
<b>IRL</b>	2 107.1	5.84	2 387.3	6.54	1 759.1	4.42	1 902.3	4.45	2 304.7	4.84	2 663.9	4.82
<b>I</b>	-277.6	-0.03	-1 197.4	-0.14	-2 419.2	-0.29	-751.4	-0.09	-1 239.7	-0.13	-153.1	-0.02
<b>L</b>	-70.4	-0.59	-92.4	-0.74	-68.9	-0.52	-60.8	-0.43	-37.3	-0.26	-52.4	-0.35
<b>NL</b>	-844.1	-0.34	-1 294.4	-0.49	-1 787.5	-0.63	-1 962.7	-0.65	-2 371.2	-0.76	-2 317.2	-0.73
<b>A</b>	-	-	-	-	-	-	-863.6	-0.49	-224.6	-0.12	-735.8	-0.41
<b>P</b>	2 112.9	2.91	2 442.4	3.42	1 834.0	2.48	2 428.1	3.06	2 838.6	3.40	2 710.8	3.11
<b>FIN</b>	-	-	-	-	-	-	-136.6	-0.15	74.0	0.08	42.3	0.04
<b>S</b>	-	-	-	-	-	-	-900.8	-0.53	-672.2	-0.35	-1 144.7	-0.59
<b>UK</b>	-2 301.8	-0.29	-3 013.7	-0.38	-1 140.0	-0.13	-4 711.5	-0.56	-2 177.8	-0.24	-1 882.7	-0.17

Source: <http://www.business.uiuc.edu/ineal/EU-budget.ppt>

**Table 4.2.2:** Net contributors and receivers of the EU budget (in million Euro /ECU)

Countries	ECU million		
	1998	1999	2000
<b>B+ Lux</b>	188.7	359.6	558.4
<b>DK</b>	154.3	279.4	402.0
<b>D</b>	-7,172.7	-7,578.1	-7,229.9
<b>GR</b>	4,798.6	3,888.8	4,496.7
<b>E</b>	7,449.2	7,758.3	5,832.9
<b>F</b>	-108.6	-859.5	200.5
<b>IRL</b>	2,513.0	2,137.7	1,910.0
<b>I</b>	-1,007.4	-312.1	1,710.7
<b>NL</b>	-964.8	-1,197.7	-901.6
<b>A</b>	-391.6	-355.0	-170.4
<b>P</b>	3,160.1	3,026.3	2,336.8
<b>Fin</b>	-10.6	-120.0	376.6
<b>S</b>	-570.9	-671.4	-827.0
<b>UK</b>	-3,062.1	-2,265.4	-2,504.6

Source: Blankart and Kirchner: Nettoempfänger gegen Nettozahler Die Blockadedes EU Haushalts und Ihre mögliche Überwindung, 2003 <http://www.vfs.unizh.ch/papers/Blankart.pdf>

If full membership for Turkey is realised it is obvious that Turkish producers will be the net receivers from the CAP budget, because producers in Turkey are poorer and receive less support than the EU producers. This will require an increase of transfers from the Community budget to Turkey to support the Community budget's first pillar measures, which comprise agricultural price support and payments, especially for direct payments, and second pillar policies which comprise rural development programmes such as rural development projects and environmental measures. The adoption of the Turkish agriculture into the CAP system will also require some planned programmes. For example, in 2001, the ARIP programme was started in order to replace the input subsidies with DIS. By doing this support measures in Turkey would come closer to the CAP measures as well as WTO measures. This was planned in order to reduce the trade distorting support measures in the world by reducing the amber box measures and increasing the green box measures on world trade.

10- In the CAP system the application of direct payments increased the income of producers. But distribution of subsidies in member countries is not dependent on farm size. Some member countries received more income support due to the fact that farm size was not relevant, so large scale farms received more subsidies whilst producers in other countries received less.

In fact, at the start, the application of direct payments was planned in order to support income loss to producers who were setting aside their land so as to reduce the surplus in cereals. However, coupled direct payments were dependent on the production of a specific product to receive them. By coupling payments the expected reduction on surplus amounts was not obtained and monetary transfers from consumers and tax payers increased, with different shares in each country, without consideration of land use, efficiency, or income loss of producers.

The decoupled payments, which started in 2005, are expected to reduce the surplus amount together with excessive transfers to producers, thus breaking the link between production and payment. In consequence the unequal distribution of income support in each member country is expected to be overcome.

Direct income support was also started in Turkey in 2001 in order to adopt the Turkish agriculture into the CAP under the ARIP program. Therefore, less trade distorting measures which were applied in the CAP were led and preferably accepted by the WTO in blue and green box measures to reduce the trade distorting measures in the world markets. The CAP measures have directly affected trade partners which have trade relations with the EU because the EU is a very huge market for third world countries and adoption of these measures will increase the market capacity.

In the EU CAP during the nineties, application of direct payments increased the incomes and the size of the farms in almost all member countries. However, it is important to note that a decline in small-scale farms and an increase in large-scale farms began with the Mansholt plan, which replaced approximately 5 million hectares in the agricultural land area with large-scale production. As a consequence of this replacement in the 1980s, the number of small-scale producers of less than 5 ha fell from 8.916 mn/ha to 7.384 mn/ha in 1993, while farms of more than 100 ha increased from 33.526 mn/t to 46.012 mn/t in 1993 (see also Table 2.2). As illustrated in the figure below this decline in small-scale farms has continued up to date. "The process of enlarging of farms and the decrease in the number of farmers contributed to a better organisation of the professional interests of the farmers for two reasons. First, the educational level rose as the farmers became bigger and richer. Secondly, the articulation and promotion of interests became more effective as the farmers acquired a higher level of professionalism."<sup>4</sup>

During my research in various institutes in Vienna, in Turkey and in other institutions I came to the conclusion that the data on support measures for each member country would not be easily obtained, because the distribution of support measures was not published. Therefore, the only data that can be used to indicate the unequal distribution of payments in member countries were the rough figures illustrated below.

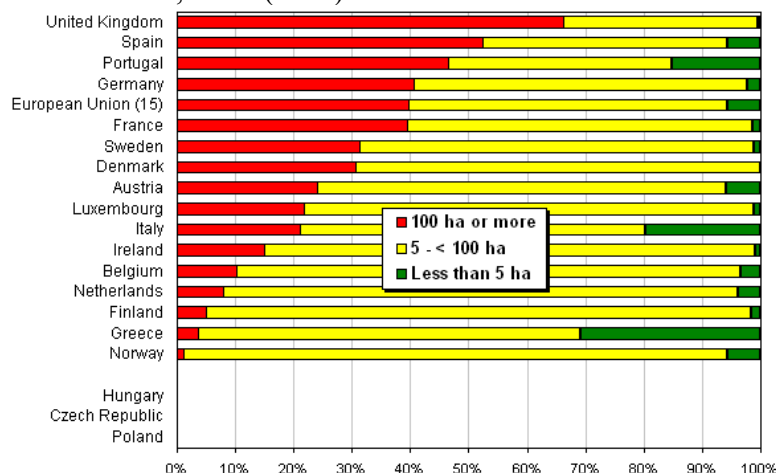
In the figure below the sizes of farms in member countries are illustrated. The highest utilized arable land by size of holdings of more than 100 ha is observed in the UK, which has approximately 65 percent and the subsidy amount given to producers in the UK is almost one third of Finland, which has approximately 4 percent of cultivated arable land of more than 100 hectares. It must be remembered that the greatest number of inefficient farmers in the EU are among the small and medium-scale producers. However, most of the subsidies go to

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<sup>4</sup> Kourvertaris and Moschonas: The Impact of the European Integration, 1996, p.123

efficient farmers who have financial capability and inefficient farmers who have costly production and are mostly neglected.

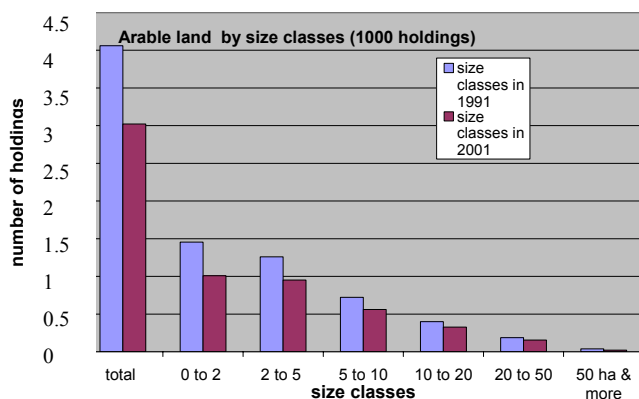
**Figure 4.2:** Utilized agricultural area by size of holdings as a percentage of all utilized agricultural areas, 1995 (in %)



Source: Eurostat Yearbook 98/99 A statistical eye on Europe 1987-1997, 1999, p.336 or [http://www.iiasa.ac.at/Research/ERD/DB/data/eco/agr/images/agr\\_eu4.g](http://www.iiasa.ac.at/Research/ERD/DB/data/eco/agr/images/agr_eu4.g)

In Turkey, in the nineties, the number of arable areas, which were used in agriculture, declined. But this reduction of farm land was also observed, not only in small-scale producers but also in large-scale producers, although in the CAP, the fall in numbers was mostly in the small-scale producers who had difficulties producing and competing adequately in the market. In the figure below the decline in small and large-scale production is indicated.

**Figure 4.3:** Number of holdings in Turkey between 1991 and 2001 (mn holdings)



Source: EU Commission: Agricultural Situation in the Candidate Countries, 2003, p.5, illustrated by the author.

In the figures below the development of farm size and income between 1995 and 2000 is given, which may contribute to an understanding of the reason for higher payments to countries such as Finland and Austria which are net contributors to the CAP budget.

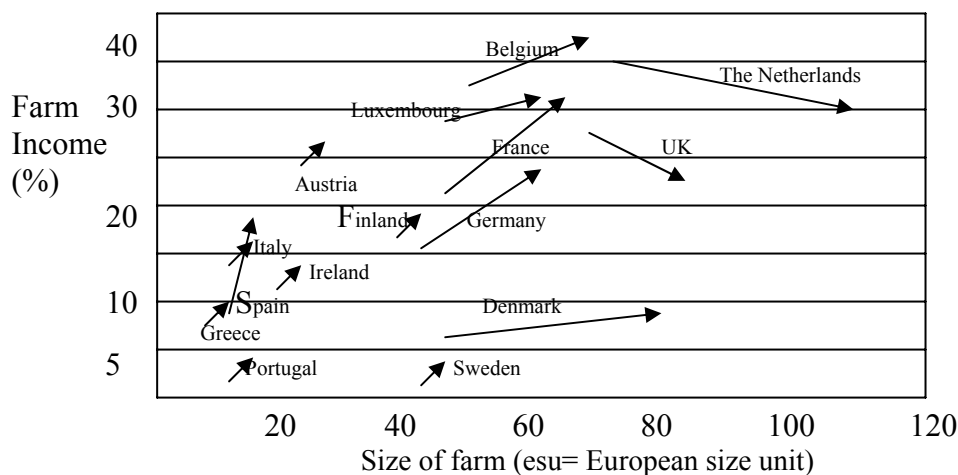
In fact countries which are net contributors to the CAP budget, when compared to other member countries, rarely receive financial support. However, between 1995 and 2000 Finland, Germany, Ireland and Austria, which are net contributors, received more financial support than other members. The increasing transfer to these countries can only be dependent on the development of farm size as seen in Figure 4.4, because the development of farm size

in Austria and in Finland was rather high in this period. Due to this development producers received more financial support relative to other countries' producers.

In the figure, the increase in farm size and incomes is given in the European size unit (one ESU is defined as 1200 Euros). It is obvious that direct payments caused a considerable income transfer to producers in the nineties.

**Figure 4.4.1:** Trends in income during the nineties

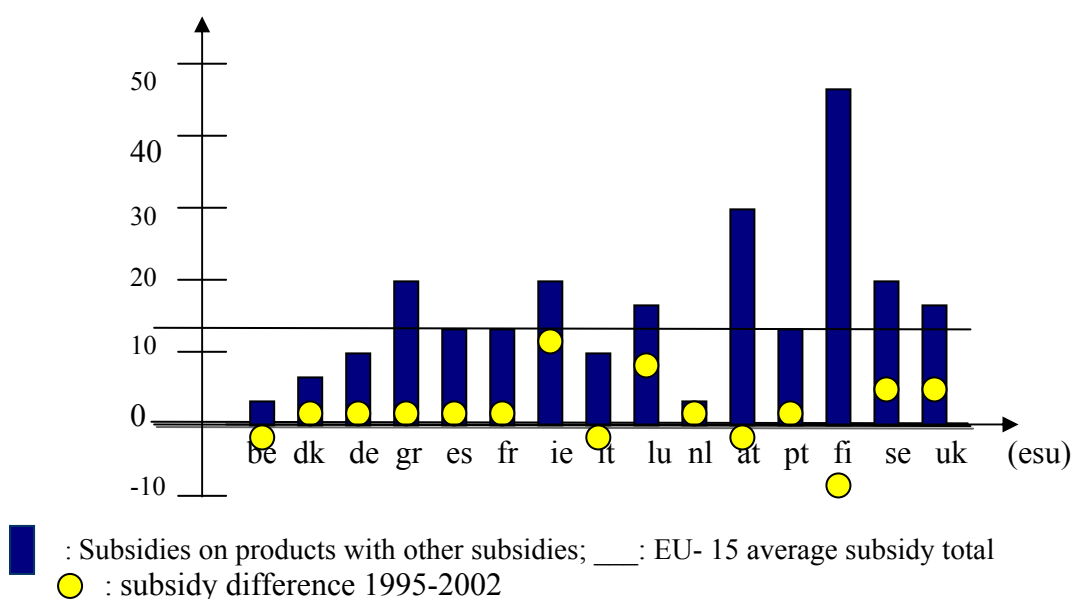
Development of farms per country in accordance to the European size unit (esu)



Source: Dr Hans K. J., Poppe, Bont, Koole, Jager, Wisman,: Evolution of farm incomes in the EU, LEI, Agricultural Economics research Institute. [http://www.europarl.eu.int/hearings/20030930/agri/vrolijk\\_en.pdf](http://www.europarl.eu.int/hearings/20030930/agri/vrolijk_en.pdf)

In Figure 4.4.2 the average total subsidies in the EU-15 are shown as being between 10 and 50. The yellow circles are the difference in subsidies between the period 1995 - 2002, and the blue columns are the amount of subsidies for each member country.

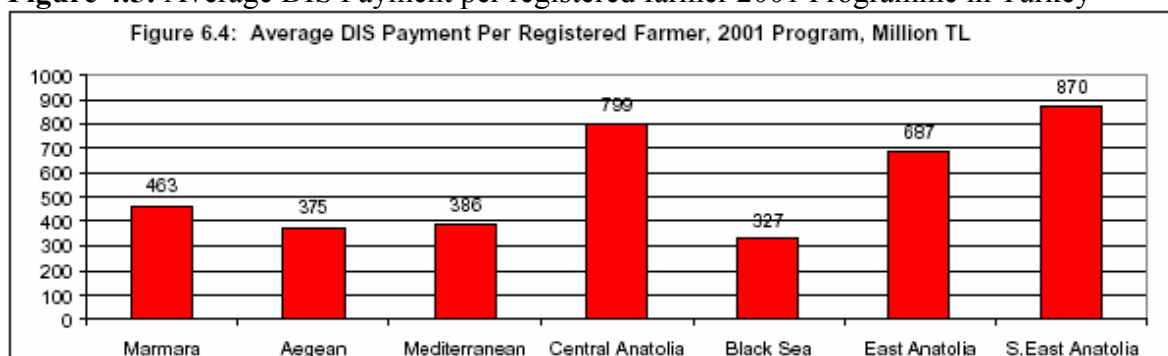
**Figure 4.4.2:** Share of subsidies on products in member countries in accordance to the European size unit (esu)



Source: Hans, Poppe, Koole, Jager, Wisman,: Evolution of farm incomes in the EU, LEI, Agricultural Economics research Institute. [http://www.europarl.eu.int/hearings/20030930/agri/vrolijk\\_en.pdf](http://www.europarl.eu.int/hearings/20030930/agri/vrolijk_en.pdf)

In Turkey also, such unequal distribution of DIS in different regions was observed. However, in the CAP excessive transfers via direct payments increased the income of producers in some countries with different level in the nineties. Similarly, the new agricultural programme ARIP, which started in Turkey in 2001, increased the direct income support of some producers in different regions; this also contributed to an increase in the transfers from consumers and tax payers to producers without considering income loss and/or arable farm land level (see figure below).

**Figure 4.5:** Average DIS Payment per registered farmer 2001 Programme in Turkey



Source: Mark, Lampietti, Pertev, Pohlmeier, Akder, Ocek, Jha: Turkey, A review of the Impact of the Reform of Agricultural Sector Subsidization, WP Volume: 9, 2004, p.44

11- Direct payments are accepted as a less trade-distorting trade measure. However, these payments to producers differ between regions and member countries. Due to different distribution in EU countries, publication of direct payments in member countries is realised. This is done to prevent possible discussions for reducing negative reactions in and out side of the Union between countries on its distribution. Therefore, it was very difficult to obtain any detailed information on the distribution of payments. Hence, these payments are only for the EU-15 level estimated in the PSE calculation for the EU countries whose level statistics have not been published.

12- In the CAP reduction of regional disparities is the planned goal, but the application of support measures differs between producers in member countries and this reduces the success of the planned measures.

The impact of the price support system (PSS) can be defined as: the more you produce the more subsidies you effectively get. "One estimate (CEC July1991) is that 80 % of the CAP spending goes to only 20 % of farmers who are overwhelmingly bigger and richer"<sup>5</sup> This means the lion's share of the direct subsidies goes to the large and efficient farms which are only 25 % of the total farms. Furthermore, once the subsidy is given to a producer it is difficult to reclaim it.

In the table below, the distribution of support payments is given. In the CAP small-scale producers, who cover 53 % of total farms, receive only € 405 per farm, and those producers with farms between 50 and 100 ha, which is less than 1 % of total farms, receive € 67,095 per farm. Support payments have unfortunately increased more than proportional to the increase in farm size. Farm sizes over 100 ha, in particular, receive a significant share of the payments as was observed for the CAP producers (see Figure 4.4). Farms between 100 and 200 ha which make up only 0.24 % of total farms, receive €133,689, whereas farms over 500 ha, which make up only 0.01 % of total farms, receive € 768.333 per farm payment.

<sup>5</sup>Guglielmo Carchedi: For Another Europe, Verso, UK, 2001, p.217



**Table 4.3: CAP support payments 2001**

Size Class (hectare)	Payment per farm	% of EU15 farms in size class	Number of farms in size class	% of EU15 payments to size class	Cumulative % of budget (from largest to smallest)	Cumulative % of farms (from largest to smallest)
0 to 1.25	€ 405	53.76%	297,630	4.3%	100.0%	99.97%
1.25 to 2	€ 1,593	8.54%	380,800	2.7%	95.7%	46.21%
2 to 5	€ 3,296	16.30%	726,730	10.7%	93.0%	37.67%
5 to 10	€ 7,128	9.17%	409,080	13.0%	82.2%	21.37%
10 to 20	€ 13,989	6.81%	303,500	19.0%	69.2%	12.20%
20 to 50	€ 30,098	4.13%	184,100	24.8%	50.2%	5.39%
50 to 100	€ 67,095	0.94%	41,700	12.5%	25.4%	1.27%
100 to 200	€ 133,689	0.24%	10,720	6.4%	12.9%	0.33%
200 to 300	€ 241,157	0.05%	2,130	2.3%	6.5%	0.09%
300 to 500	€ 376,534	0.03%	1,270	2.1%	4.2%	0.04%
over 500	€ 768,333	0.01%	610	2.1%	2.1%	0.01%
Average, All farms	€ 5,015	:	:	:	:	:

Source: Baldwin and Wyplosz: The Economics of European Integration, chapter 8: CAP, 2001, p.15

<http://hei.unige.ch/~baldwin/PapersBooks/BW/slides/Slides%20Chapter%208.ppt>

In the table below, cereal production is shown. Cereal products cover approximately 40 percent of the total subsidy in the EU. Therefore, the data given may help in highlighting the difference in distribution in member countries, of subsidies which are not dependent on production amount or farm size (see Table 4.4). The amount of cereal production, especially in Spain, France, Italy, the United Kingdom and Germany, is very high relative to other member countries. However, besides Germany, subsidy amounts in the United Kingdom, Italy, France and Spain are below the average subsidy line (see Figure 4.4). On the other hand, in some other EU member countries such as Luxembourg, Ireland and Finland the production amount, compared to other member countries, is low, but the distributed subsidy amount is higher.

**Table 4.4: Total cereal production in the EU member countries (1000t)**

EU countries	1985	1990	1993	1995	1997	1999	2000	2002
Belgium	2,065	1,987	2,139	2,212	2,394	2,407	2,513	2,580
Denmark	7,956	9,607	8,198	9,150	9,530	8,775	9,413	8,793
<b>Germany</b>	<b>25,914</b>	<b>25,883</b>	<b>35,547</b>	<b>39,864</b>	<b>45,486</b>	<b>44,452</b>	<b>45,271</b>	<b>43,271</b>
Greece	4,489	4,581	4,416	4,420	5,046	4,457	4,231	4,238
<b>Spain</b>	<b>20,972</b>	<b>18,763</b>	<b>17,473</b>	<b>11,571</b>	<b>19,338</b>	<b>18,138</b>	<b>24,561</b>	<b>21,501</b>
<b>France</b>	<b>55,812</b>	<b>55,060</b>	<b>55,393</b>	<b>53,270</b>	<b>63,014</b>	<b>64,246</b>	<b>65,698</b>	<b>69,161</b>
<b>Ireland</b>	<b>1,987</b>	<b>1,965</b>	<b>1,626</b>	<b>1,796</b>	<b>1,943</b>	<b>2,011</b>	<b>1,963</b>	<b>2,156</b>
<b>Italy</b>	<b>17,823</b>	<b>17,394</b>	<b>19,750</b>	<b>19,658</b>	<b>19,906</b>	<b>21,002</b>	<b>20,622</b>	<b>19,922</b>
<b>Luxembourg</b>	<b>157</b>	<b>148</b>	<b>152</b>	<b>148</b>	<b>162</b>	<b>154</b>	<b>153</b>	<b>160</b>
Holland	1,129	1,359	1,512	1,549	1,623	1,416	1,819	:
Austria	5,551	5,290	4,206	4,452	5,009	4,806	4,490	4,745
Portugal	1,375	1,426	1,449	1,446	1,560	1,658	1,608	1,567
<b>Finland</b>	<b>:</b>	<b>:</b>	<b>3,332</b>	<b>3,328</b>	<b>3,799</b>	<b>2,868</b>	<b>4,089</b>	<b>:</b>
<b>Sweden</b>	<b>:</b>	<b>6,484</b>	<b>:</b>	<b>4,791</b>	<b>5,986</b>	<b>4,931</b>	<b>5,670</b>	<b>5,471</b>
<b>U K</b>	<b>22,467</b>	<b>22,583</b>	<b>19,500</b>	<b>21,868</b>	<b>23,533</b>	<b>22,119</b>	<b>23,985</b>	<b>:</b>

Source: Illustrated from the Eurostat database, Director General for Agriculture and Fisheries,

<http://www.euros.ch/agrifish.html>, Agris database 1973-2003, CD-Rom, 2003

## 4.2 Effects on Trade Balance

The balance of trade is the indicator of trade flow in current account between countries. In a nation, the balance of trade is the difference between sales of export and the cost of buying imports. “The balance on goods and services (or net export for short) is a major component of aggregate demand for expenditure on the reporting country’s aggregate output.”<sup>6</sup> However, current account together with the financial account is the two most important parts of the international transactions, relative to the capital account.

In the CAP system the application of support measures such as CCT, import quotas and VER prevents access of the imported product into the EU market and contributes to a reduction of the current account deficit together with export subsidies, which increases the export of internal producers. This means that the existence of internal support measures in the CAP makes an important contribution to the maintenance of current account balance at a desired level.

In the last decade, the application of CAP measures had positive effects on increasing the trade share of internal producers whilst non-member countries producers such as those in Turkey were negatively affected by the CAP measures. On the one hand, higher CCT increased the internal product prices over world prices and reduced the access of the imported product into the EU market. By this means, the value of tax revenues collected by the community agencies increased. On the other hand, the maintenance of export subsidies reduced the exported product price of internal producers and increased their market share in Turkey and in other non-member countries. Consequently, support measures had directly affected consumers and especially producers in their decision making process, production operation and marketing of products. But CAP measures have also affected the behaviour of consumers and changed the demand for products in and outside the Union. Consequently, support measures affected the amount of exports to non-member countries and Turkey, as well as imports from Turkey and from non-members countries to the EU and this created an unfair market share for EU producers. The support measures have artificially but positively changed the trade balance.

Since 2002 the single currency has been in circulation in the EU. Over time the Euro appreciated in value against foreign currencies, especially the Turkish Lira. However, the appreciation in value of the Euro had less effect on increasing imports into the EU market, because of the CCT as explained above.

The import and export amounts of the EU and Turkey are illustrated in Table 4.5 below. The higher share of cereals export is the result of excessive export subsidies in the CAP which reduce the product price on the world market and increase the trade capacity. Soya cake and beans comprise almost half of the import amount, which has tax free access to the EU Union and there is very low production of Soya cake and beans in the Union. They therefore enjoy Union access without tariff restriction.

The excessive surplus amount in cereals and higher storage costs increased the amount of export subsidies for cereals which covered almost 43% of the total export, whilst import of cereals was highly protected and comprised only 11 % of the total import in the last decade. One of the other important export products of the CAP is wine which covers 25 % of the total EU export. Also sugar and fruit and vegetables become important items of the exported products in the CAP. In contrast to this, corn gluten feed together with fruit and vegetables from third world countries covered approximately 20% of the total import. The rest of the imported products were a very small percentage.

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<sup>6</sup> Chacholiades Miltiades: International Economics, 1990, p.292

**Table 4.5:** Import and export amount of selected agricultural products in the CAP and in Turkey (in 2003)

CAP of the EU (%)			Turkey (%)		
Agri. products	Import	Export	Agricultural products	Import	Export
Cereals	11	43	Cereals	12	5
Rice	2	1	Oilseeds and oleaginous fruits	8	1
Corn gluten feed	10	0	Edible vegetables roots and tubers	3	8
Soya cake and bean	49	3	Edible fruits and nuts	2	30
Vegetables & Fruit	10	7	Live animals	1	0
Olive oil	0	0	Dairy products	1	1
Milk/ milk products	0	3	Products of animal origin	1	1
Sugar	4	12	Animal or vegetable fats & oils	13	6
Tobacco	1	0	Preparation of veg. fruits & nuts	1	13
wine	11	25	Sugar and sugar confectionery	0	7
Beef and veal	1	2	Coffee, tea mate & spices	1	1
Pig meat	0	2	Cacao and cacao preparations	2	2
Sheep & goat meat	0	0	Tobacco and tobacco products	11	12
Poultry Meat	1	2	Others	44	13

Source: for the CAP; Eurostat database, Agris database 1973-2003, CD-Rom, 2003 and for Turkey; EU Commission: Agricultural situation in the Candidate Countries, Country Report Turkey, 2003, p.18 Illustrated by the author

In the last decade about 30 % of Turkish exports consisted of edible fruits and nuts, 13% preparations of animal origin, 13% others, 12% tobacco and tobacco products, 8% edible vegetables, roots and tubers, 6% animal and vegetable fats and oils and finally cereals which covered 5% of Turkish exports. There were also some other exported products from Turkey but they were less than 1 percent in total agricultural product trade.

In the last decade 44% of imported products comprise others, which are not indicated. But cereals comprise 11.60% of agricultural import. The animal and vegetable fat and oils comprises 12% and tobacco products comprise 11% of the Turkish import on agricultural products.

In the table below the export and import amount of cereals between the EU and Turkey is shown. In the last decade imports from the EU to Turkey vary from one year to another, the reason for this being dependence on the decline in export subsidies which were reduced in the Uruguay round to about 36 % for a six year period. In 2000, a sharp decline in price gap between internal and external cereal price increased exports from the EU to Turkey. In contrast to this, exports from Turkey to the EU between 1990 and 1995 increased almost five fold. The reason for this increase was the MacSharry reform which cut the support price 15%, whilst compulsory set-aside (15%) began to be applied for cereals.

**Table 4.6:** Turkey's agricultural trade with the EU

	Imports from EU, % share						Exports to EU, % share					
	1990	1995	2000	2001	2002	2003	1990	1995	2000	2001	2002	2003
Trade with EU	44.4	47.2	48.8	44.2	45.2	45.8	55.4	51.2	52.2	51.4	51.2	51.8r
	Value of imports (euro/ mn)						Value of exports (euro/ mn)					
	Cereals	448.2	359.7	458.6	234.7	429.2	--	58.5	337.1	440.1	366.0	290.0

Source: EU Commission: Turkey in EU, Chapter Eight: Turkey's Trade Position, EU Commission, 2004, p.125 and 128, <http://www.scirus.com>

Statistical data from one publisher differ to that of another. Therefore, it is difficult, to estimate exactly what the precise outcome of the support measures are. For example, total agricultural product trade and cereal products import and export in the Eurostat Agris database (above figures for statistics) differ from the DG VI for agriculture statistics (below given figures) and from FAO database. But, at least it is obvious that the decline in export subsidies has had less negative effect on reducing the export capacity of the CAP in the world markets, because first, cereal prices were in decline in the CAP, which reduced the price gap between internal and external producers and second, export subsidies were maintained, in spite of a sharp reduction in the price gap between external and internal products, and third, maintenance of the CCT reduced the import of third world countries producers. As a consequence of these measures, the amount of export and import changed, and this has had a positive effect on the trade balance for the EU CAP, in the last decade.

In the following part an estimation of the trade balance and the applied formula have been reformulated and adapted to the CAP system to better calculate the correct value of the trade balance for the CAP.

The deficit on the balance of payments increases the financial burden of the Community budget. It is also important to remember that within the CAP, the application of support measures, such as common custom tariff (CCT) does not only play a protective role, but also creates finance to support other non-tariff measures. This implies increasing import, which on the one hand, has a negative effect on trade balance and as a consequence of this on the balance of payments; but on the other hand, increasing imports, in particular in the EU where CCT is applied, increase the revenue incomes collected via tariff measures which in turn increase the resources of the Community budget. The CCT is actually one of the important support measures which contribute to the CAP budget in financing other non-tariff measures.

Indeed, CAP measures increase the expenditure of the CAP budget, and excessive direct payments and export subsidies, in particular, have increased the cost of the CAP budget in the last decade. Therefore, both the cost of subsidies on export and the import revenue results of the common custom tariff to estimate the trade balance of the CAP products is to be considered.

The export revenues, which are obtained from exporting goods, need to be subtracted from the amount of export subsidies to estimate the contribution to the trade balance. It is obvious that in the CAP the application of support measures creates trade distortion and the effect of this distortion is indirectly reflected in the balance of payments.

In the figure below, the impact of the price support system of the EU CAP is illustrated. It is supposed that the price gap, (t) between internal (P<sub>p</sub>) and world products (P<sub>r</sub>), is applied as a common custom tariff, resulting in a reduction of imported products from Q<sub>4</sub> to Q<sub>2</sub>. The red line represents the import amount.

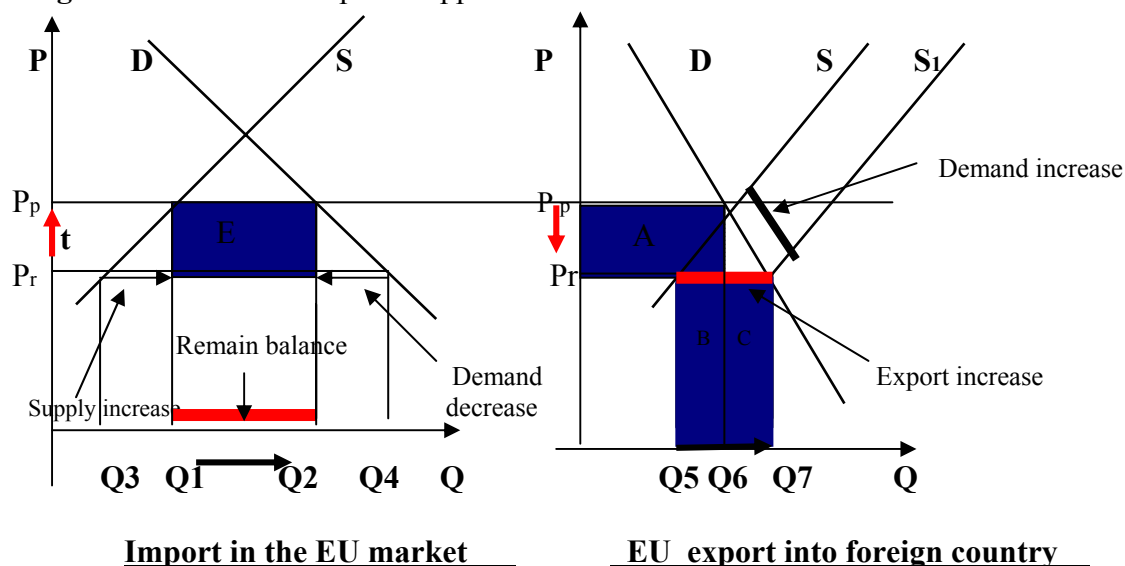
The amount of import after the application of the common custom tariff (ad valorem tax formula) can be calculated for the tariff revenues with the blue coloured area E, as shown in equation 1 below.

$$\text{Ad valorem tax} = (1+t) P_r$$

Total value of net imports after tariff (I<sub>t</sub>):

$$I_t = [(P_p + P_p \cdot t) (Q_1 - Q_2)]$$

**Figure 4.6:** The market price support causes a trade distortion.



However, it is obvious that for the calculation of the trade balance, it is required to subtract the tariff revenues from the import value in the case where no tariff is applied.

Therefore, it is necessary to calculate the difference between total import value without tariff and total import value with tariff. By doing so the difference between these two will give the total expenditure on import as shown below:

$$\begin{aligned} &\text{Total import revenue (Ir),} \\ &Ir = (P_p - P_r) \cdot (Q_1 - Q_2) \end{aligned}$$

$$\begin{aligned} &\text{Net import expenditure (Ie),} \\ &Ie = It - Ir \\ &Ie = [(P_r + P_r \cdot t) \cdot (Q_1 - Q_2)] - [(P_p - P_r) \cdot (Q_1 - Q_2)] \end{aligned}$$

$P_p$ : EU unit value at producer price (farm gate price)

$t$ : the price gap between internal and world products, which is applied as a common custom tariff.

$P_r$ : world reference price

$(Q_1 - Q_2)$ : imported product amount

For the export,

Now it is supposed that the price gap between internal ( $P_p$ ) and world products ( $P_r$ ) will be applied as an export subsidy ( $P_p - P_r$ ) which will reduce the product price below the world level and increase the EU product sales from  $Q_5Q_6$  to  $Q_5Q_7$ , which is shown by the blue coloured areas (B+C). Areas B and C represent the export sales, while the sales amount of importing country reduces as shown in the blue coloured areas (A+B). As a consequence of the price reduction, export demand outside the union is increased. Therefore, it is required to estimate the amount of subsidy and production increase in the market and then calculate the value of the export as given below.

$$\text{Total values of export subsidy expenditure } E_s = (P_p - P_r) \cdot (Q_5 - Q_7)$$

It is required to subtract the above given value from the total export value (without subsidy) to estimate the gain from export.

Therefore, the value of total export ( $E_t$ ) is below given form:

$$E_t = P_p (Q_5 - Q_7)$$

$P_p$  is the EU producer price, but application of the export subsidy, reduces the price level out of the Union so that the EU product price falls below the world price ( $P_r$ ) level.

Hence, to estimate total export revenue  $E_r$  is then:

$$E_r = E_t - E_s$$

$$E_r = P_p (Q_5 - Q_7) - (P_p - P_r)(Q_5 - Q_7)$$

$P_p$ : EU producer price

$P_r$ : World reference price

$P_p - P_r$ : export subsidy amount per unit

$(Q_5 - Q_7)$ : exported product amount

The below given formula can be used to estimate the trade balance for CAP products which are supported with tariff and non-tariff measures. By doing so, the trade balance, which is dependent on the difference between export and import of goods, can be better estimated in the balance of payments calculation.

Trade balance ( $T_b$ ) is then,

$$T_b = E_r - I_e$$

$$T_b = [ P_p (Q_5 - Q_7) - (P_p - P_r)(Q_5 - Q_7) ] - [ (P_p + P_p \cdot t) (Q_1 - Q_2) ] - [ (P_p - P_r) \cdot (Q_1 - Q_2) ]$$

In the table below, the above trade balance formula has been used to illustrate the impact of the tariff and export subsidies on the trade balance. Below, in Table 4.7, barley export and import amounts are taken as a sample product in the given *scenario* used to illustrate the impact of the export subsidies and import tariffs on export and import values which influence the trade balance.

**Table 4.7:** The impact of the tariff and export subsidy on Trade balance of barley (Only barley is considered) (€/ t)

Year	Total Import tax (It)	Net import expenditure (Ie)	Total Export value (Et)	Net Export revenue (Er)	Balance with tariff and without subsidy effects (Et- It)	Balance without tariff and subsidy effect (Er-Ie)
1994	327.645	<b>15.787</b>	1,157.422	<b>578.511</b>	<b>1,124.657</b>	<b>562.723</b>
1995	610.745	<b>58.346</b>	553.938	<b>393.008</b>	<b>492.864</b>	<b>334.661</b>
1996	34.233	<b>33.867</b>	1,205.763	<b>1,181.328</b>	<b>1,171.529</b>	<b>1,147.461</b>
1997	59.555	<b>57.220</b>	598.695	<b>556,611</b>	<b>539.140</b>	<b>499.391</b>
1998	45.169	<b>30.061</b>	1,122.093	<b>681.895</b>	<b>1,076.923</b>	<b>651.834</b>
1999	255.627	<b>232.240</b>	1,597.030	<b>1,112.474</b>	<b>1,341.403</b>	<b>880.234</b>
2000	102.333	<b>101.167</b>	1,142.094	<b>1,117.511</b>	<b>1,039.760</b>	<b>1,016.343</b>

Source: calculated by the author from the Eurostat database, Director General for Agriculture and Fisheries, <http://www.euros.ch/agrifish.html>, Agris database 1973-2003, CD-Rom, 2003 and [http://europa.eu.int/eur-lex/pri/en/oj/dat/2002/l\\_290/l\\_29020021028en00010932.pdf](http://europa.eu.int/eur-lex/pri/en/oj/dat/2002/l_290/l_29020021028en00010932.pdf)

The tariff and export subsidies had considerable impact on import and export of barley trade and trade balance as indicated in the table above. The trade balance of 1994 has considerably increased from the result of the import tariff and export subsidy compared to the trade balance without export subsidy and import tariff in the same year. The mentioned situation has had, in almost all years, similar effects on the trade balance. The mentioned trade balance difference has surprisingly not been observed in 1996, 1997 and in 2000, where the

price gap between internal and world products fell. The price gap was approximately 2.5 € in 1996 and 2000 and 8€ in 1997, which reduced the impact of these support measures on trade balance. This means the application of the export subsidies and common custom tariffs have less positive effects on trade balance when the price gap between internal and world products is reduced, because the difference between export and import values, which gives the trade balance, is almost the same, with or without support measures.

In the last decade, the decline in import has also been affected by higher import tariffs, which prevent the access of third world country producers into the market. The application of the common custom tariff is a fixed percentage. The application of fixed percentage can only be changed with commission approval. In recent years the price gap between internal and world cereal producers fell. The application of the common custom tariff was maintained. However, the application of a variable levy is adjustable. If a variable levy is preferable for use on imports then the amount of the levy is the price gap between world and EU prices. Any increase or decrease in the price gap would be reflected in the amount of the levy.

However, if a variable levy were preferred as an instrument to protect internal producers from producers outside the Union, it would have less trade distorting effect on third world country producers, because a decline in the price gap between internal and external producers would also reduce the levy amount. A decline in the levy would reduce the imported product price and might increase the imported product access to the EU.

It is obvious that the application of a flexible levy causes less trade distortion than tariffs.

In the next decade, the CAP reform must concentrate on replacement of the CCT with the flexible levy. The flexible levy can be better and more easily adapted to changes in the price gap between internal and external producers, because any change in the CCT is required to change the measure on tax regulations. It is obvious that an application of the variable import levy could be more advantageous than the common custom tariff (CCT), which may contribute to a reduction of the trade distortion in the market. By such an application, any reduction on intervention price would be easily reflected in the variable import levy, which would be continuously regulated in the price gap between internal and world products. As a consequence of this policy change, some lower cost products from third world countries will gain access into the EU market. This will both increase fair trade and consumer welfare.

The export subsidies, which are dependent on the price gap between internal and world products, must also be continuously regulated to the price gap; this means any increase and decrease in the price gap must be reflected in the applied export subsidy for the prevention of excessive spending from the CAP budget. The better regulation of export subsidies into the price gap changes will reduce the resource transfers from lower cost production to higher cost production and increase fair trade in the world markets.

In short, the CCT and intervention price mechanism have been mostly used to prevent the access of imported products to the EU market, and excessive export subsidies were given to boost the amount of export in the world market to increase the trade balance. The application of these measures reduced self-sufficiency and market-oriented production in the market. The new measures must be planned to lessen the transfers from consumers and tax payers to producers and for greater transparency in domestic production to agriculture in order to for increase fair trade.

The negative effects of the CAP measures on the external trade balance are summarized below:

- The common custom tariff increases the revenues of the CAP budget and reduces the balance of trade deficits but increases the trade distortion,
- Export subsidies contribute to an increase in the exported product amount. Increasing exports may contribute to covering the deficits in the trade balance. However, it is

required to estimate the export subsidy amount in order to determine the positive contribution to the balance of trade. It is possible that expenditure on export subsidies may go beyond the expected income from subsidized export.

- CAP reforms are oriented to support producers. But with the exception of common custom tariff other non-tariff measures increase the expenditure of the CAP budget which then reduces financial capacity.
- In recent years the price gap disappeared. Moreover, internal prices fell below the world price for cereal products, but application of common custom tariff stayed intact thus contributing to an increase in the revenue obtained from external trade.

### 4.3 Effects on the Cereal Products

The impact of the support measures has increased the surplus amount in the CAP, but in the last decade, the application of set-aside measures on cereal products has reduced the amount of production. The application of compulsory set-aside, together with voluntary set-aside, reduced the arable land in agriculture (see Table 2.1 and 2.2). However, a decline in arable land did not contribute to a reduction in the production of cereals, but increased production of most of the cereals (see Table 3.9). For example, wheat production increased from 82,8 mn/t in 1994 to 92.0 mn/t in 2003, barley production increased from 38,9 mn/t in 1994 to 46.6 mn/t in 2003, and finally, maize production also increased from 28.2 mn/t in 1994 to 40.2 mn/t in 2001. Set-aside and direct payments were planned to cover farmers' losses whilst they were setting their land aside from production. This meant that support measures had less effect on reducing cereal products. Nevertheless, wheat production, which had higher intervention stocks relative to other cereals, has fallen slightly. This happened whilst export of wheat products increased in the world markets, because the consumption level increased from 134.2 to 178.3 (mn/t) (see Table 2.7.2) and the export level also increased about 2% (see Table 4.10). These positive improvements have contributed to a reduction in the stock levels in the last decade (see Table 2.7.1). A consequence of positive improvements in wheat, and also in maize and barley, caused stock levels in cereals to fall from 18.7 to 7.9 mn/ tons (see table 2.7), while export amounts increased approximately from 29.1 to 37.6 mn/ tons (see Table 2.7). Altogether this has meant that CAP measures have contributed to an increase in export amounts by means of export subsidies. But some of these measure such as set-aside and early retirement on the one hand, reduced cereals and, on the other hand, some others such as output and area payments stimulated producers to increase production. Such a contradiction between support measures reduced the success of applied CAP policies which increased the CAP expenditure on cereals in the last decade (see Table 2.5).

In Turkey the production of cereals showed a very small increase in this period. For example wheat production increased from 14.5 mn/t in 1994 to 15.8 mn/t in 2003, and barley production increased from 6.4 mn/t in 1994 to 7.4 mn/t in 2003 (see Table 3.9), which was very small compared to the CAP cereals. Moreover in the CAP reform proposals were planned to reduce the surplus amount in the CAP. Moreover, in Turkey the export of cereal products relative to imports is less and there was not any planned policy or program to reduce cereal production (see Table 4.4).

The effects of the CAP on the cereal sector are given below:

- Set-aside measure reduced cereal production together with land use.
- Free movement of goods within the Union accelerated the trade between member countries. Increasing internal trade reduced trade access into the Union while export amounts increased as a result of export subsidies.



- An intervention price mechanism was required to support producer income and to prevent a price fall below the intervention price. As a result of this measure, internal prices were artificially increased. Intervention purchase, which stimulated an increase in production, had an impact on the supply.
- Direct payments are given to cover the income gap of farmers which is determined per hectare for arable crops (cereals). Excessive payments increased the income of producers.
- Environmental measures and the adaptation of new regulations for plant genetics and organic farming supported the CAP measures for increasing production and export capacity whilst reducing imports from Turkey.
- The set-aside measure was planned to reduce excessive production. Hence, the application of this measure increases the grassland for the animal husbandry sector. While, compulsory set-aside measure reduced the use of arable land approximately 15 percent, it increased the transfers from consumers and tax payers to producers in the last decade. Income effects have gone beyond the set-aside effect.
- Import-export: Maintenance of CCT and export subsidies remain as safeguard measures in the internal market to protect internal producers, but by doing so both measures increase the trade distortion in the world market and continue to increase cereal production in the CAP.

The impact of support measures has had a negative effect on reducing cereals production in the last decade. The production amount, in spite of compulsory set-aside, has not been reduced to the desired level. The existing compulsory set-aside measure was combined with direct payments which increased the production amount of cereals in the CAP. However, if the existing support and payments are maintained for internal producers, it is obvious that cereals production will continue to increase in the following decade.

In Turkey similarly as a non-member country the impact of agricultural subsidies which were especially concentrated in input subsidies have boosted the cereals production and steadily increased. But, since 2001 the newly started ARIP program introduced the DIS instead of input subsidies in Turkey. However, due to lack of information and communication most of the producers in less favoured regions received less support relative to producers in the Aegean and Western regions in Turkey. Due to this the unequal distribution of DIS, which transferred about 50 USD per hectare to farmers, production increased in western and Aegean regions.

Consequently, similar to the CAP, the application of agricultural support measures in Turkey increased the transfers to producers. Large-scale producers in favourite regions, in particular, received most of the support which increased the cereals production. In Turkey, too unequal distribution of input subsidies and later DIS to producers increased production.

#### **4.4 Price Distortion Effects**

Price distortion effects of the CAP measures have two dimensions; on the one hand, the price support system contributes to a reduction of price differences on similar products between member countries, and on the other hand, it affects the external product prices with different support measures, such as, tariff and export subsidies.

Effect in the CAP:

The negative impacts of the CAP intervention measures, which are determined by the Commission, but applied differently by the community agencies in member countries, increase the price disparity. This different application creates difficulties in obtaining the price equation on the market.

**Table 4.8.1:** Food prices differ significantly between member states

Product	Min. Prices		Max. Prices	
	Pork	Germany	78	Sweden
Beef	Ireland	67	Belgium	117
Salmon	Spain	61	Denmark	133
Cod	Italy	85	France	115
Oranges	Spain	51	UK	141
Bananas	Spain	76	Sweden	120
<b>Tomatoes</b>	<b>Spain</b>	<b>58</b>	<b>Germany</b>	<b>115</b>
Potatoes	Ireland	56	Denmark	175
Cheese	Holland	75	Italy	125

Source: [http://europa.eu.int/comm/internal\\_market/en/smn/smn27/s27mn05.htm](http://europa.eu.int/comm/internal_market/en/smn/smn27/s27mn05.htm)

Note: Highest and lowest prices of selected fresh food (100 = EU average). Prices are average prices, including VAT, for supermarkets.

Shown in the above table are the large price differences between members in agricultural products. Let us consider for example tomato and TV set prices. The minimum price of tomatoes is € 58 in Spain and the maximum price is € 115 in Germany which is almost 100% higher than in Spain. However, if we consider the TV set prices in the table below, the minimum price is € 79 in Portugal and the maximum price is € 120 in Sweden which is almost 50 percent higher than in Portugal. It is important to remember that within the EU there is no trade restriction between member countries. The distance between Portugal and Sweden (app.3000 km) is longer than the distance between Spain and Germany (app. 1300 km). This means, therefore, that transportation costs cannot cause such high internal price differences. If this were the case then the high price differences would also be seen in the industrial sector, or there would be regional market regulations which affect product prices in agriculture (see table below).

**Table 4.8.2:** Prices differ less for electronics

Product	Min. prices		Max. Prices	
	Camcorder (Panasonic)	Austria	86	France
Portable CD Players -Philips	Germany	79	Spain	123
<b>14 inch Colour TV (Sony)</b>	<b>Portugal</b>	<b>79</b>	<b>Sweden</b>	<b>120</b>
25 inch Colour TV (Philips)	Sweden	78	Denmark	123
29 inch Colour TV (Sony)	Portugal	82	Denmark	122
Digital Versatile Disc (Sony)	Germany	84	Spain	111
Audio Mini System (Sony)	UK	83	Sweden	122
Video Cassette Rec. (Panasonic)	Italy	89	France	115
Compact Disc Player (Sony)	Italy	88	Austria	112
Video Cassette Recorder (Sony)	Germany	81	Denmark	126

Source: [http://europa.eu.int/comm/international\\_market/en/update/score/scoresurvey.htm](http://europa.eu.int/comm/international_market/en/update/score/scoresurvey.htm)

Note for table 3.1-and 3.2: Highest and lowest prices of selected consumer electronics goods (100 = EU average). Price levels are yearly average at national level for specialist stores.

The implementation of economic integration has still not been completed, which has reduced the success of the single currency and created difficulties for an equation of similar product prices. It is obvious that “the ease with which consumers and firms can compare

prices in different EU countries will increase dramatically with the single currency.”<sup>7</sup> Price transparency is one of the important effects of the single currency. Price comparisons between different countries are good indicators of an estimation of economic integration and market performance, because increasing price differences between countries have negative effects on the economic integration, and the opposite is also true. Equation of similar product prices increases the competition and market efficiency, where goods are traded freely, because similar products with similar prices maintain downward pressure on prices for similar products.

Nevertheless, price support mechanism prevents price fluctuation on the market.

Effect in Turkey:

The effects in Turkey occur when producers in Turkey export into the EU markets with common custom tariffs. The results of this are that, on the one side, internal producers are protected from Turkish producers, Turkish, support systems increase the prices in Turkey so that the producers are prevented from entering the internal market.

Price distortion which is dependent on the rate of protection, explained in section 3.2.1, also affects the producers in Turkey when internal producers export their products with subsidies. By doing so the price of the exported product amount declines below the world prices and increases the market share in Turkey. As a consequence of these export subsidies; the market share of Turkish producers’ falls, while their product price is artificially increased by the CCT.

The price distortion effects of the CAP support system are summarized:

The price support system increases the price differences in the market and reduces economic integration in the EU.

It reduces the access of imported products into the internal market.

Higher internal prices stimulate external producers to increase their product price to capture part of the tax revenues.

Export subsidies cause a sharp decline on exported product prices so that the external producers are not able to compete in the world market

Decline in exported product price increases market share of internal producers while external producers reduce their share on the world market.

In the CAP, high common custom tariffs for agricultural products (especially for cereals) eliminate almost all imports so that there is no apparent imported distortion on the internal market (see Table 4.6).

#### **4.5 Revenue Effects**

The revenue effect of tariff and non-tariff measures of the CAP varies from one measure to another. The application of the support measures is not actually dependent on an increase in the revenues of the CAP of the EU. The primary goal is to prevent the loss of producers and maintain market stability.

Most of the support measures increase the expenditure of the CAP budget which is costly. Especially after the MacSharry reform, which replaced the price support measures with direct payments and increased the expenditure on export subsidies, budget costs of the CAP increased, except CCT and quotas license rights (if the license right belongs to the community) had positive effects on the Community budget. Price support, export subsidies, direct payments and set-aside payment had negative effects on the CAP budget.

In the table below, the development of agricultural incomes in the last decade is shown. In the nineties the amount of income increase differs between member countries, but

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<sup>7</sup> A. Harrison E. Dalkiran E. Elsey: International Business, 2000, p.351

in the last decade, in almost all member countries' agricultural incomes increased. However, in member countries such as Belgium, the UK, and Luxembourg and especially in Holland, agricultural incomes fell. In particular, a decline in these countries has been observed since the Uruguay round which reduced the amount of budget spending on export subsidies by about 36% and agricultural support by about 20% over a six year period.

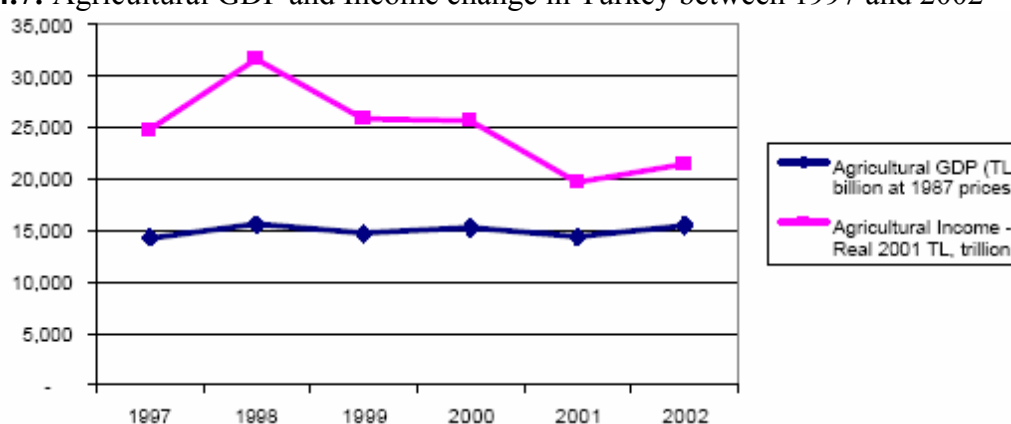
**Table 4.9.1:** Development of total agricultural incomes per capita in CAP (1995=100)

Countries	1990	1992	1994	1996	1999	2002
EU-15	:	:	94.0	103.5	100.2	107.2
Belgium	116.1	<b>113.6</b>	111.1	109.7	99.7	<b>107.8</b>
Denmark	86.0	73.4	84.0	102.1	74.8	81.1
Germany	:	94.4	93.6	113.1	94.6	110.9
Greece	:	:	95.9	95.2	96.5	111.8
Spain	102.1	87.3	100.4	112.3	107.8	125.1
France	87.2	83.5	94.2	100.5	106.4	108.9
Ireland	76.0	87.4	93.5	102.3	92.5	92.6
Italy	78.1	83.0	91.1	105.7	116.6	110.7
Luxembourg	99.1	<b>92.8</b>	88.6	103.8	94.3	<b>91.1</b>
Holland	115.8	<b>104.8</b>	97.3	95.9	86.4	<b>81.2</b>
Austria	90.4	86.3	88.1	92.1	78.1	95.3
Portugal	94.6	70.1	91.1	109.8	125.8	136.8
Finland	100.7	81.7	88.2	80.6	82.3	106.6
Sweden	106.5	79.4	84.0	98.1	94.0	114.8
United Kingdom	67.5	<b>72.5</b>	90.6	93.7	61.1	<b>64.0</b>

Source: European Commission Directorate General for Agriculture: Agriculture in the European Union Statistical and Economic information 2002, Belgium, 2003, (selected data form table 4.1.6.2), p.32

In the figure below agricultural income and GDP in Turkey between 1997 and 2002 is illustrated. The share of agricultural GDP in the total GDP was maintained at the same level whilst income in agriculture was in decline. The reason for this sharp decline between 1999 and 2002 was the replacement of the agricultural input subsidies and price support with the DIS programme designed to bring Turkish agriculture more closely in line with the CAP support system.

**Figure 4.7:** Agricultural GDP and Income change in Turkey between 1997 and 2002



Source: Lundell, Lampiotti, Pertev, Pohlmeier, Akder, Ocek, Jha: Turkey, A review of the Impact of the Reform of Agricultural Sector Subsidization, 2004, p.5

The results of the new support system showed that most of Turkish farmers suffered a net income loss. In Turkey the application of the DIS was enlarged throughout all the regions, while other subsidies (input subsidies and price support) were removed or reduced. By doing this, most of the Turkish farmers lost about half of their income, about 40% of which was covered by the DIS payments in the second year of the application. “The large difference between the fiscal savings from the agricultural transfers (subsidy and DIS) reform program (USD 4.3 billion) and the net income loss to farmers (USD1.45 billion) is a testimony to the gross inefficiencies of the pre reform agricultural subsidies in supporting farmers’ income. This indicates that from a fiscal or taxpayer perspective the current DIS program is a much more cost effective and fiscally sustainable way of supporting farmers’ income than the earlier regime of output and input subsidies.”<sup>8</sup> The newly introduced DIS system has not been equally applied and the regional distribution of DIS payments varies from one region to region, where large-scale farmers receive most of subsidies and small-scale producers believe that they are not even eligible to receive this subsidy. Through this neglect of the small-scale producers most of the large-scale producers who own most of the land receive financial support and part-time farmers who work on their land receive nothing. It is hoped, however, that in future these difficulties will be overcome and the new policy will bring a more equitable system in agriculture.

In the table below the share of agricultural GDP in the total GDP indicates that both in the EU and in Turkey, decline in agricultural GDP in the total GDP was observed in the last decade. On the contrary, total income level was in decline in Turkey whilst it increased in the EU in the same period.

**Table 4.9.2:** Share of agriculture in GDP (%)

Countries	GDP 1990	GDP 1999
EU-15	3.6	1.8
Turkey	16.67	13.34 (in 1997)

Source: Edgar Elgar: *The Politics and Economics of the EU*, 2001, p.217 and European Commission: *European Economics*, No: 2, Belgium, 2003, p.259 and for Turkey, Çakmak: *Agricultural Policy Reform and Rural Development in Turkey*, 1998, p.4

#### 4.6 Effects on Investment Policy

In the CAP, the internal market has been protected by various support measures. Most of the support measures increase producer income, but make a very small contribution to capacity increase. The existence of over-production in the cereal sector prevents the producer from increasing capacity. Furthermore, apart from export subsidies, other support measures have no effect on the increase of the market share. In the CAP system, payments which are given to the producers are not proposed to increase productivity, but to support the income of producers and price intervention is supposed to secure price stability in the market. Therefore, ineffective incentive policies reduce the productivity within the CAP.

Investment Promotion: For less developed regions this is supplied from the ERDF (European regional and Development Fund). Improvement of the existing agricultural structure receives support from the EAGGF. The European Finance Bank supports projects in agriculture to improve the welfare of people who work in agriculture.

Investment promotions can be realized by the reduction of interest rate on credits, reduction of the taxation, direct subsidies, in cash money etc. Due to these incitements

<sup>8</sup> Lundel, Lampietti, Pertev, Pohlmeier, Akder, Ocek, Jha: *Turkey, A review of the Impact of the Reform of Agricultural Sector Subsidization*, 2004, p.viii

regional disparities can be eliminated within the CAP. The support measures of the CAP also create finance in order to reduce disparities between regions and countries.

In the table below, the increase in machinery investment and fertilizer use is given. In the CAP the decline in arable areas tractors' and harvesters' use continued. This implies that machinery use increased in the rest of the arable land, which positively accelerated rural development and productivity. In addition, increasing exports of agricultural machinery also meant an increase in the amount of machinery used in agriculture. The increased transfers to producers, therefore, obviously positively affected machinery use in the last decade. However, total fertilizer exports increased whilst consumption fell between the periods 1985 to 2003. In contrast, in Turkey, tractor use increased considerably, whilst harvester use decreased. The export of fertilizers decreased whilst consumption of fertilizers increased in the same period. The reason for this was the decreasing Turkish production of fertilisers and increasing consumption of them between 1985 and 2002.

**Table 4.10:** Machinery and fertilizers in agriculture in the EU and in Turkey

Country	Item	1985	1990	1995	2002
<b>EU-15</b>	Land use (1000ha)	150.330	148.542	142.456	140.987
	Tractors in use – number	7,189.975	7,414.790	7,077.840	6,953.532
	Harvester in use- number	635.158	598.176	545.461	846.774
	Agricultural machineries import- 1000 \$	33,717.616	7,390.437	8,277.240	9,120.839
	Agricultural machineries export 1000 \$	5,144.831	10,075.587	11,137.941	12,695.826
	Total fertilizer production (mn/t)	24,637.1 83	20,608.814	16,229.000	12,601.203
	Total fertilizers import-qty-mn/t	9,814.457	12,588.855	12,537.800	12,478,612
	Total fertilizers export-qty-mn/ t	11,427.903	12,122.824	9,990.200	9,162.666
	Total fertilizer consumption	21,564.562	19,660.489	17,267.703	14,845.970
	<b>TR</b>	Land use (1000ha)	38.130	39.677	39.493
Tractors in use – number		582.291	689.650	776.863	970.083
Harvester in use- number		13.615	11.741	12.706	11.539
Agricultural machineries import-1000 \$		38.968	41.070	37.383	43.989
Agricultural machineries export-1000 \$		7.620	3.884	9.922	62.330
Total fertilizer production (mn/t)		1,373.800	1,563.861	1,330.902	935.772
Total fertilizers import-qty-mn/ t		449.166	624.218	632.582	961.211
Total fertilizers export-qty-mn/ t		169.400	156.975	49.461	138.124
Total fertilizer consumption		1,426.900	1,887.520	1,700.388	1,743.173

Source: <http://faostat.fao.org/> , Agriculture, crops primary selected statistics from FAO database, forecasted by myself.

#### 4.7 Effects on Employment in the Agricultural Sector

In the CAP, it is obvious that the application of support measures is planned to maintain the livelihood of and a reasonable income for producers, but also maintenance of workforce is desired, even if it is not stated in a Article 39, because it is evident that without CAP support measures most of the least efficient producers would be eliminated.

In Turkey similarly a newly applied ARIP programme reduced the arable land and employees in agriculture. However, in Turkey the number of people employed in agriculture was rather high relative to the EU countries which require managing through other support programmes such as training on new agricultural planting methods, development of know-how and the use of technology etc.

In the CAP, the effects of support measures on unemployment were observed after the application of set-aside measures and the early retirement scheme in 1988, which reduced about 5 million ha arable land in agriculture. But the application of compulsory set-aside in the 1992 MacSharry reform also reduced the land use and employees too.

As seen in the table below, in almost all countries the labour force has declined. However, it is obvious that without these support measures the employment situation would have drastically worsened. When unemployment rises in agriculture it increases the migration to towns. “In addition to shrinking the nations current standard of living, severe unemployment may have longer-term effects on the economy’s productive capacity and therefore on the future path of potential GDP fall and future living standards.”<sup>9</sup>

In the table below, the decreasing amount of employed persons in agriculture is shown. Especially after the MacSharry reform in 1992, the amount of employed people continued to fall until 2001.

**Table 4.11.1:** Persons employed in agriculture, hunting, forestry and fishing

Countries	In thousands		
	1980	1990	2001
<b>EU-15</b>	<b>12,730</b>	<b>9,562</b>	<b>6,701</b>
Austria	323	269	215
Belgium	116	119	56
Denmark	200	147	96
Germany	1,403	1,081	956
Greece	1,016	889	627
Spain	2,229	1,496	1,025
France	1,821	1,394	964
Ireland	209	173	120
Italy	2,899	1,913	1,113
Luxembourg	9	6	3
Holland	244	297	238
Portugal	1,122	840	645
Finland	314	207	140
Sweden	211	154	114
U.K.	614	577	390
Turkey	<b>20,335</b>	<b>21,507</b>	<b>21,016 (year 2000)</b>

Source: European Commission Directorate General for Agriculture: Agriculture in the European Union Statistical and Economic information 2002, EU Commission DG Agriculture, Belgium, 2003, (selected data form table 3.5.1.2, p.125) and for Turkey: <http://faostat.fao.org/>, Employment in Agriculture, crops primary selected statistics from FAO database.

The major problem in Turkish agriculture is the high percentage of employed people in agriculture which comprise about 30 % of the total employment in Turkey. Indeed, both the high employment numbers and lower machinery use in agriculture disguise employment in the sector and reduce productivity in agriculture (see table 4.11.2). It is obvious that large

<sup>9</sup> James Ragan JR, and Lloyd B. Thomas JR: Principles of Economics, 1992, p.223

shifts from agriculture to services are still needed. However, large cities in Turkey cannot easily absorb further high levels of migration. Therefore the migration flow from Turkey to the EU countries can be predicted. “Some Turkish economic commentators think Turkey will enter a ‘golden age’ after 2010, similar to that experienced by the Asian tigers in the past, with a very high ratio of the active to total population.” The reason for this is the young population in Turkey, where about 50 % of the total population is under the age of 25. But less know-how and communication difficulties with Turkish workers reduce the migration option to the EU countries.

In the table below, the amount of people employed in agriculture is shown. In the EU the share of people in total employment is 4.3% and the GNP contribution is only 1.7%. The people employed in the CEECs are almost fivefold, and in Turkey it is eightfold which is rather high and needs to be reduced in order for Turkish agriculture to be adopted into the CAP system (see table below).

**Table 4.11.2:** Share of employment and GDP in EU and CEECs in 2003

	EU	CEEC's	Turkey
Agricultural employment/total employment (%)	4.3	21.5	32.7
Agricultural GNP/GNP, 1999 (%)	1.7	7.0	14.2

Source: Jacquet: Future Agricultural Policy in the European Union, February 2003 and for Turkey data from IMF direction of trade statistics CD- Rom for agricultural value added and agricultural employment data and Eurostat, European Commission, Director General for Agriculture, FAO and UNSO, <http://www.un.org/esa/earthsummit>

After the eastern enlargement share of employed persons in agriculture increased, results of higher employment share in agriculture in CEEC's (see Table above). Similarly, in Turkey, share of employees in agriculture is about 32% which is rather high compared to the EU and CEEC's. This implies about 50% of Turkish farmers are required to move employees from the agricultural sector to the industry and service sectors. However, a fall in agricultural employment cannot be realised in a short period, because such a decline would mean about a 12% growth in the service and industry sectors. This will require higher investment for a capacity increase in both sectors. But a more difficult problem will be the integration of these people, who are not qualified for employment in the service and industry fields, into the two other sectors; this will require long-term training programmes to achieve integration. Therefore, it will be very difficult to adopt the Turkish agriculture in to the CAP within a decade.

#### 4.8 Effects on Productivity in Agriculture

In the last decade agricultural incomes increased (see Table 4.5) while CAP expenditure on cereal products, i.e. about a 45 % share of the CAP budget, has also increased. The increasing incomes have obviously resulted in higher transfers to producers in the last decade. Therefore, it would not be wrong to say that CAP interventions contributed to an increase in the output amount in the last decade, which was not the planned goal of the CAP support measures.

In Turkey agricultural support had been realised via input subsidies until 1999, and this had a significant effect on production costs, but the TGB (Turkish Grain Board) reduced the income level of producers and productivity in this sector. Moreover, the duality in



agriculture of modern versus traditional planting methods creates difficulties in this sector. Regional disparities in production, competition, resource and technology use, unequal distribution of subsidies reduce the efficiency and productivity in the cereals sector. It is clear that adoption of the Turkish agriculture into the CAP level will require a unique application throughout the whole land.

The negative impacts of support measures on productivity both in the Union and in Turkey are summarized below:

1. Reduced motivation: Direct payments and export subsidies increase incomes without any increase in investment and production. Income guarantee reduces the entrepreneurial spirit of producers.
2. Market intervention creates unfair trade for Turkish producers in the market. CAP measures not only cause distortion on the market but also replace some efficient production of exportable commodities from Turkey with the insufficient production of the CAP producers.
3. The set-aside measure was combined with direct payments which was dependent on the production amount in the last decade. Consequently, producers use the other 85% of their arable land more intensively to receive more payment.
4. In recent years a reduction of cereals prices has been observed, but against this decline, neither CCT nor export subsidies have been reduced for Turkish non-member country producers nor has the trade distortion effect of the CAP reduced. The payments have increased the expenditure of the CAP budget and had little effect on productivity. This mainly occurs in cereal products where there was excessive over-production and further payments only contributed to an increase in the surplus.
5. Small and medium enterprises (SME) must be supported in order to become self-sufficient in the market and therefore increase productivity.
6. Endeavours must be made to reduce disparities between regions to increase growth and productivity.

If the membership of Turkey is realized the share of lower cost production will be increased, because in the CAP the EU-15 producers have capital-intensive production relative to Turkey where labour intensive production is in use. In the CAP system after Turkey's membership, the technical advantage of EU countries will be used in order to reduce the cost of production and to increase productivity. Turkey's membership will increase the market capacity of internal producers. Increasing market capacity will increase production capacity. In such an enlarged market, competition between large-scale producers will also increase.

In the EU there is an excessive supply of cereals and "growth in the EU has continuously exceeded domestic demand growth and resulted in the emergence of excess supply in cereals, beef dairy, products, wine and some fruits,"<sup>10</sup> but after Turkey's membership the enlarged market capacity will increase.

If support measures in the CAP are maintained, over-production and producer income will continue to dominate the CAP expenditure in order to finance storage costs and direct payment to producers.

Finally, in the CAP investment for the new production technique and plant genetics may contribute to an increase in productivity. After Turkey's membership cooperation with Turkish producers will increase the investment demand in Turkey. Consequently, increasing investments by the EU's multinational firms will increase their market capacity and their competitive opportunities for lower-cost production exporting to the Near East markets.

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<sup>10</sup> Artis and Lee: The Economy of the EU, 1997, p.92

#### 4.9 Dynamic Effects

Dynamic effects enhance productivity and the rate of GDP growth, causing faster technological progress, increasing welfare, reducing uncertainty, and increasing efficiency, due to intensification of competition.

According to the dynamic economy, production can only be analysed by dynamic effects because it is dependent on time and technological changes. It has positive competition effects, economies of scale, and future growth. Dynamic effects gains are obtained in the long run, consideration time means price, marketing demand etc. The dynamic effect of integration is directly related to the growth of GDP.

The dynamic effects of the economic union play a more important role than static effects (Customs Union theory: Trade creation- trade distortion). Dynamic trade creation occurs when a change in custom tariff affects the trade volume and growth. The growth rate is determined endogenously in a dynamic economy. The dynamic gains occur when member countries are integrated into the single market. This integration allows member countries to use the advantage of economies of scale to reduce product prices, and to specialise in certain products. Countries may agree to allocate certain goods production. This happens as a result of economies of scale, which means increasing mass-production of goods contributes to a reduction of the average costs. Economies of scale occur where capital-intensive production is used as is observed in the EU. Economies of scale contribute to an understanding of why firms in certain sectors grow rapidly and become efficient in the market place.

The dynamic gains occur where the rate of growth of the GNP is enhanced rather than welfare. There are two ways to estimate this, “either through increased productivity growth at a given investment ratio or through increased investment itself. This is true whether the increased sales are generated internally or through the pressures of demand for exports from abroad through regional integration.”<sup>11</sup> The estimation of growth rate therefore contributes to an indication of dynamic effects. The GDP is dependent on an increase of investment itself at a given period. In the CAP there is overproduction in other sectors besides that of cereals. This implies that in these sectors dynamic gains can occur if external demand is enlarged, because excessive production can only be exported to increase the capacity and productivity, otherwise it will be destroyed or denominated to maintain at least an existing production capacity.

The EU dynamic effects are obtained in the long-term. “Due to the increase in internal heterogeneity of the economic block, the effects are likely to be spatially asymmetric. From the point of view of both existing as well as acceding member states the dynamic growth or accumulative effect understood as a permanent change in the long-term average growth rate of GDP per capita is especially appealing.”<sup>12</sup> As mentioned above, the dynamic gains of the Customs Union is possible in the long-term, apart from economies of scale, which can occur either internally (within the firm as a result of mass-production) or externally (outside the firm as a result of its location).

In the figure below, internal scale economies, which increase in production reducing the average costs because of marketing, technical managerial, research and development economies, are considered. To explain the impacts of scale economies, two countries X (Romania) and Y (Turkey) are considered. In the figure  $D_{x+y}$  is their demand for commodity,  $x+y$ .  $S_w$  is the world supply curve and  $AC_x$  and  $AC_y$  is their negatively-sloped aggregate supply curves for commodity Z in countries X and Y.

<sup>11</sup> Ali M. El- Agraa: Regional Integration, 1999, p.175

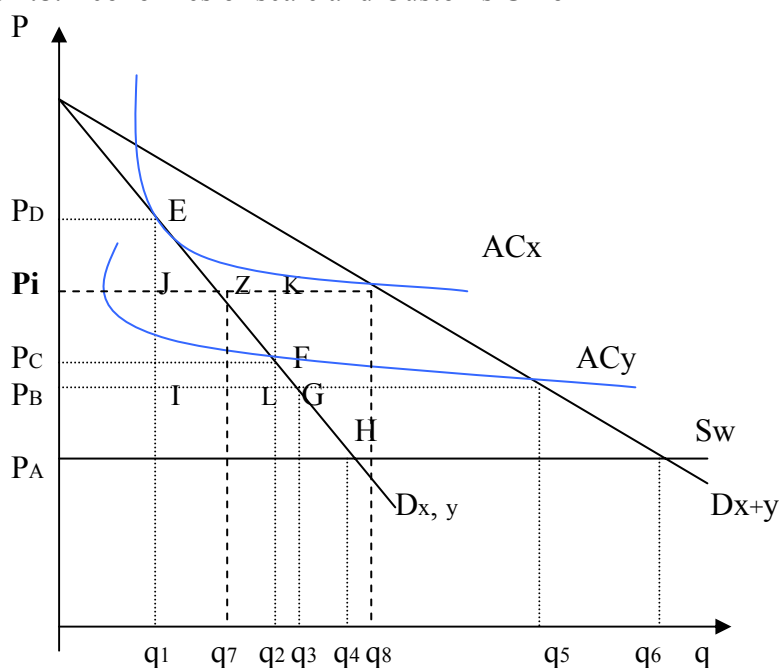
<sup>12</sup> Brodzicki: In Search for Accumulative Effects of European Integration, 2003, <http://econpapers.hhs.se>

In the figure, free trade is the best policy resulting with  $oq_6$  amount of consumption, which is covered by imports at price  $P_A$ . If X and Y countries impose tariffs to prevent access into the market then, these tariffs will be  $P_{APC}$  and  $P_{APD}$  for Y and X countries respectively resulting in  $oq_1$  and  $oq_2$  production for X and Y countries.

When X and Y enter into the Customs Union (CU) the production amount will be then increased to  $oq_5$  at price  $P_B$ . This will raise the consumption in X and Y to  $oq_3$  because of the decline in product price. The results of this consumer surplus will increase to  $P_B P_D E G$  for country X and  $P_B P_C F G$  for country Y. Part of these gains is  $P_B P_D E I$  for X and  $P_B P_C F L$  for Y which are cost reduction effects. The production gain for Y and production loss for X occurs due to keeping production together.

However, in the CAP, the existence of the intervention price mechanism changes the above-mentioned impact of the Customs Union. Let's suppose that after the Customs Union product price is estimated as the  $P_i$  intervention price, which is the minimum price for the producers in the market. The production changes from  $q_3$  to  $q_7$  and the entire union output changes from  $q_5$  to  $q_8$  due to the results of the CAP intervention price. Then the expected consumer surplus for X and Y countries will change. The consumer surplus is reduced from  $P_B P_D E G$  to  $P_D P_i E Z$  in X country and in country Y from  $P_B P_C F G$  to  $P_C P_i Z F$ . The cost reduction effect for country X is  $P_i P_D E J$  and  $P_C P_i K F$  for country Y.

**Figure 4.8:** Economies of scale and Customs Union



Source: Ali M. El- Agra: Regional Integration, 1999, p.45

As explained above the CAP support measures have affected and changed the producer gain and consumer surplus. However, as in this example, gain or loss in the Customs Union is dependent on the production costs of countries before joining the Customs Union. If the production cost is as high as in country X before the Customs Union then it is expected that in that country producer gain will decrease while consumer gain will increase. If, as in country Y, production cost is cheaper before the Customs Union then producer gain will increase and consumer surplus will fall. However, it is not possible to predict which member country will gain from the formation of the Customs Union. But it is evident that the reallocation of resources and productivity of new investment is increased after the formation

of the Customs Union. The effect of increasing resources and demand capacity increases the gain of countries with lower production costs.

Due to the enlargement of the markets, production capacity also increases as seen in the figure above. In the CAP, producers mostly have over-production and this is related to the demand capacity. However, in the EU there is not sufficient demand and this caused an over-production in the market. In 2015 the anticipated membership of Turkey will increase the market capacity together with the production of the CAP. It is obvious that, as indicated in the table below, increasing production will increase Turkey's market share in the EU-15. Therefore, expanding market capacity may occur for EU –15. Furthermore, if production, as indicated in the table, further increases, then this will only contribute to an increase in the surplus amount, which is an expensive problem within the CAP system. It is also possible that increasing production in Turkey may capture part of the internal market from the results of the cheaper production costs relative to the EU. However, if the market capacity, after Turkey's possible membership, increases the demand of internal production of the EU-15, then this will increase profit and production capacity and possibly employment, because more profit means more investments. Increasing investment will increase the amount of enterprise. This will create jobs and increase demand in the market. In reality there are many other factors which affect this circulation in economics, such as, lower interest rates, import amounts, demand elasticity etc. Such dynamic effects can only be realized in the long run and it is more effective than the short-term static effects.

The development of the cereal production both in the EU and in Turkey is shown in the table below. The impact of support measures has obvious less effect on reducing the production in the EU CAP. Over time increasing level of cereals, especially in the EU, increased the storage costs of the community agencies. However, decreasing producer price and maintenance of export subsidies have increased the market share both in and outside the Union, whilst the market share of Turkish producers together with other non-member countries' producers fell by the end of the nineties.

**Table 4.12:** The production amount in cereals in the EU and in Turkey (mn/t)

Year	European Union				Turkey			
	Wheat	Barley	Other grains	Maize	Wheat	Barley	Maize	Other grains
1986	72.0	46.8	52.1	25.5	15.4	6.2	2.1	6.2
1991	90.7	51.5	55.8	27.3	16.9	7.1	2.1	7.1
1992	84.8	43.3	46.8	30.0	15.9	6.3	2.1	6.3
1993	80.8	42.9	47.2	29.8	17.4	6.8	2.4	6.8
1994	82.8	38.9	43.3	28.2	14.5	6.4	1.8	6.4
1995	87.7	43.4	49.2	30.1	14.9	6.8	1.1	6.8
1996	99.9	52.7	59.6	35.5	15.3	7.3	1.9	7.3
1998	103.8	51.6	57.9	35.8	17.2	8.2	2.2	8.2
2000	105.2	51.4	58.1	38.4	17.2	7.3	2.2	7.3
2001	91.8	48.1	54.3	40.5	16.0	6.8	2.1	6.8
2003	92.0	46.6	53.5	34.2	15.8	7.4	2.6	7.4

Source: calculated from the Eurostat database, Agris database 1973-2003, CD-Rom, 2003 and for Turkey from OECD database: Agricultural Policies in OECD Countries: Monitoring and Evaluation 2005.

In the CAP, the existence of the intervention price mechanism, which secures the market prices with intervention prices for certain agricultural products and reasonable income for producers, has reduced the productivity and market oriented production which would

increase competition for internal producers in the world markets. However, the price support system also reduced the price fluctuation on the market.

The formation of the Customs Union has had a positive effect on firms in specialisation of similar product industries. It allowed for taking the advantage both in the size of the market and the differentiation of similar product trade which is observed in intra-industry trade. However, in such an IIT increasing competition within the same industry accelerates growth and creates pressure on firms to reduce product prices, as observed in the cereals sector in the last decade. But growing firms tend to become an oligopolistic power in imperfect competition as was observed in the CAP and increasing intra-industry trade shows that the Customs Union tends to move in imperfect competition. (See Table 1.3)

#### 4.10 Welfare Effect for the Consumers

The welfare effect of the price support system in the CAP varies both in cases where output is less than demand, or is in excess of demand. In cereal products, considered in my research, there is excessive production and there is only transfer from consumers and taxpayers to producers. Therefore, the welfare effect is only considered for excessive production where supply exceeds demand. The transfer from producer to consumer is not relevant for cereal products.

In 1980 Morris measured the 'effect on resources' of the CAP. He also considered the concept of economic surplus to represent the impact of support measures on consumers and producers. "Such calculations require assumptions about two potentially controversial factors: the appropriate level of world prices and the response of producers and consumers to changes in prices."<sup>13</sup> In his study he considered the impact on the net exports of the EU, of the CAP price support system which is dependent on the price changes by means of support measures and responses of producers and consumer's to these price changes in the market. This requires the estimation of the price elasticity of demand and supply. In the EU price changes on cereals are dependent on CAP policies of the Commission. Therefore, any increase or decrease on prices cannot be dependent on the changes in quantity supplied or demanded which contribute to an estimation of the price elasticity. This implies that, in the EU, quantity supplied and demanded have had less effect on the estimation of the cereal prices, because the intervention price mechanism increased the cereal prices artificially and contributed to protection of producer gain at the cost of consumer's welfare.

In the last decade application of CAP policies reduced the cereals prices to below the world prices which affected the consumer's welfare in and outside the EU. In particular the application of the green box measure, which increases fair trade in the world markets, can also be quantified by looking at the difference between the total benefits accruing to consumers and tax payers and the costs imposed on the producer in agriculture.

The welfare implication of the CAP policies requires an examination of the effects of the CAP liberalisation on the distribution of incomes which means transfers from producers to consumers to tax payers.

There are some studies that analyse the distribution of incomes results of the CAP liberalisation. For example, Tyres and Anderson estimated the effects of the liberalisation of the agricultural market on economic welfare. According to this study, by 2000, the cost of welfare of agricultural protection in the EU was estimated at 30.9 billion USD (1988), or equivalently 0.38% of developed countries GDP. This has meant that the cost of every dollar received by producers would have cost consumers and tax payers 1.22 USD. Similar results have also been obtained from Roningen and Dixit's study. According to their estimation total

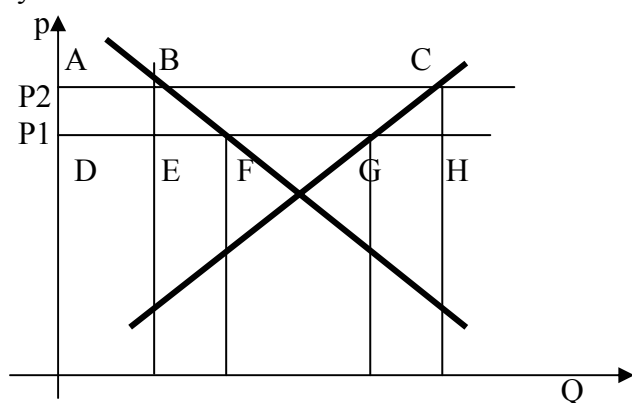
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<sup>13</sup>Ali M. El Agra: Regional Integration, 1999, p.325

welfare benefits of a multilateral liberalisation were calculated (here considered the 1986-1987 average of PSE's and CSE's) by year 2000 at 26.6 billion USD (1988) or 0.33 % of developed countries. In this study, compared to Tyres and Anderson's estimation, the cost of a dollar received by producers would have cost consumers and tax payers about 1.25 USD. However, these estimations were realised in a static model approach and for a dynamic model it is necessary to estimate the impact of supply and factor rigidity in the short-run medium-term to determine the social impact of any transfers in population.

The possible welfare effect on consumers is illustrated in the graphics below. It is not easy to determine the net welfare effect of the CAP, but at least it is possible to illustrate the welfare effect of support measures on consumer surplus and on producer gain.

In the figure below, the welfare effect of support measures is considered for excessive production. It is assumed that output exceeding demand is also relevant for cereal products in the CAP. The Union now provides a subsidy for exports in Turkey. The effects of an export subsidy cause a price increase from  $P_1$  to  $P_2$  in the EU but the price in Turkey as an importing country falls. The higher price of commodity benefits producers which cause an increase of producer surplus as is shown in the area  $ACGD$ . The price increase harms consumer surplus. The reduction of consumer surplus is the area  $ABFD$ . The amount of subsidy is the area  $EBCH$ , which is the cost of the CAP budget. The cost of production/ consumption (deadweight loss) is the triangles  $EBF$  and  $GCH$ . The cost of the CAP budget is represented with the area of  $BECH$ . Here it is evident that there is consumer loss while there is producer gain by means of subsidies.



**Figure 4.9:** Excessive supply rather than demand in the Union

In the figure above it can be seen that there is over-production in the Union. The application of subsidy for export increases producer gain from export, but harms consumers in the Union. The PSS is unresponsive to consumer demands. Instead of consumer preferences, producers tend to increase their production capacity where the price support mechanism encourages them, because subsidising exports increases the product price in the Union. But for Turkey as an importing country, consumer demand has increased because of the EU's export subsidies. However, in Turkey only 12 percent of the cereals are imported from the EU see (Table 4.5), therefore subsidized export from the CAP had no positive effect on consumer welfare in Turkey (see Table 4.13.2).

The impact of the EU's export subsidies has a negative effect on Turkish producers, which reduces their production and market share in the EU market because of the increasing market share of the EU's internal producers. (see Chapter 3 export subsidies).

It is obvious that support measures of the CAP have resulted in high food prices and welfare losses for European consumers. A reform proposal is expected in 2015. A decline in the price gap between external and internal cereal products tends to reduce the export subsidies in the new reform proposals. Green box measures, especially, began to be preferred

for reducing the trade distortion instead of the amber box measure which was accepted by the WTO as the most trade distorting measure and was replaced with the green box measures.

A comparison of the total CSE in Turkey and in the EU in 1986 and in 2004 is illustrated in the table below. The higher transfers in the beginning of the period from EU consumers to producers were realised, whilst in Turkey there were lower transfers relative to EU consumers. Over time in the EU a significant reduction of transfers from consumers to producers was observed.

**Table 4.13.1:** The comparison of total CSE and CSE for cereals between EU and Turkey in 1986 and in 2004.

Transfers to/ from Consumers	EU				Turkey			
	1986		2004		1986		2004	
	Euro/mn	%	Euro/mn.	%	Euro mn	%	Euro mn	%
Total CSE	-74.045	:	-51.782	:	-2.280	:	-6.254	:
CSE for Wheat	-4.050	-33	-385	-4	-31	-5	-436	-34
CSE for Maize	-540	-9	-428	-8	-4	-4	-78	-11
CSE for Barley	-932	-13	-148	-4	-8	-4	-30	-2
CSE for Other grains	-1.133	-15	-175	-4	-8	-4	-30	-2

Source: OECD database: Monitoring and Evaluation 2005 calculated by myself.

Note: (Exchange rate sale, 1 Euro in November 1986 = 679.76TL and 1 Euro in November 2004= 1.854,400 TL)

The total consumer support estimate (CSE) and CSE support for selected cereal products for the EU and for Turkey are indicated in the table below. The estimated CSE for wheat was reduced about 90% and for barley and other grains a decline of about 80 % in CSE was observed. But for maize there was only a 20 % reduction from 1986 to 2004. However, the amount of total transfers from consumers to producers was only reduced by about 30 % which meant transfers to (from) consumers increased about 70%between the same periods.

In Turkey an estimation of the welfare increase for consumers was rather more difficult than the EU's estimation. On the one hand, inflation in this period was rather high, which reduced the comparison of support estimation, because it was required to use a less fluctuating currency than TL for a better indication of transfers to consumers. For this reason, the USD was considered for a comparison of the amount of transfer between 1986 and 2003. Exchanging the TRL with the USD contributed to the comparison of the monetary changes between EU and Turkey. In Table 4.13 proportional reductions on consumer support is observed, particularly in the EU, but welfare loss has been observed in both countries for the total CSE and CSE for cereal products within this period. However, it is obvious that a comparison of CSE between Turkey and the EU may also require knowing other economic parameters such as changes in consumer income and price changes etc. for a better comparison of the transfers between the EU and Turkey which is not possible with the CSE calculation. Nevertheless, the below given data contributes to a comparison of the CSE between the EU and Turkey. In the table below the total CSE for the EU consumers has resulted in a positive amount which means about a 30% decrease in consumer transfers to producers. In contrast, in Turkey the consumer welfare was reduced approximately three fold (280%). However, the higher inflation and the very small amount of payments in 1986 caused an increase in transfers from consumers to producers. In contrast, in the EU the amount of the transfers was rather high compared to Turkey and the currencies in the EU countries were more stable than that of Turkey.

**Table 4.13.2:** The comparison of total CSE and CSE for cereals between the EU and Turkey.

Transfers to/ from Consumers	EU Euro/mn.		Turkey (TL/ mn. And Euro mn)		
	1986-2004	In %	2004-1986 (TL/ mn)	2004-1986 (Euro/ mn)	In %
Total CSE	-22,263	-30	-13,156	-3,974	280
CSE for Wheat	-3,665	-90	-808.9	-405	600
CES for Maize	-112	-20	-144.7	-74	90
CSE for Barley	-785	-84	-55.6	-22	175
CSE for Other grains	-958	-84	-55.6	-22	175

Source: OECD database: Monitoring and Evaluation 2005 calculated by myself.

Note: (Exchange rate sale, 1 Euro in November 1986 = 679.76TL and 1 Euro in November 2004= 1.854,400 TL)

Instead of these higher transfers in the CAP and in Turkey which are guaranteed for the producers by the Council in the EU and the Turkish Grain Board in Turkey, a considerable amount of decoupled payments aimed at increasing productivity and market-oriented production for high quality, lower-cost products would be the best possible solution to prevent both consumer welfare loss and producer gains. It is a mistake to think that European consumers could have enjoyed maintaining the higher market prices in the EU which reduced their income and welfare whilst producer gain was increased, because consumers purchase food and services to optimize their utility and are not supporters of the stable market prices.

#### 4.11 Distribution Effect for Producers

The production effect arises because the subvention of some efficient production of exportable commodities in the third world countries which are replaced by the insufficient production in the EU. As is shown in Figure 4.9, the amount of export is increased because of subsidy. Subsidy increases the production amounts in the Union (see in Fig. 4.9 the producer surplus increase 'ACGD' area), which increases exports to third world countries.

In fact, in the Union, agricultural production is expensive and needs to be subsidized. However, subsidies reduce the opportunities for competition of producers in Turkey as a non-member country, whilst internal producers artificially increase their market capacity in Turkey and in other non-member countries.

In the figure below, various effects of tariffs are illustrated to estimate the impact on production. In the figure two goods A and B in two different countries are considered. In the pre-trade situation social welfare is realised at the equilibrium point E where price line is tangential to the production frontier line (transformation curve). The equilibrium is at point E, but consumption point is at point Ec, where the highest indifference curve is tangential to the price line. At point Ec the export amount is the difference of EB and ECB and import amount is EA ECA. The gain from trade is visible as the social indifference curve tangent at Ec is higher than the E.

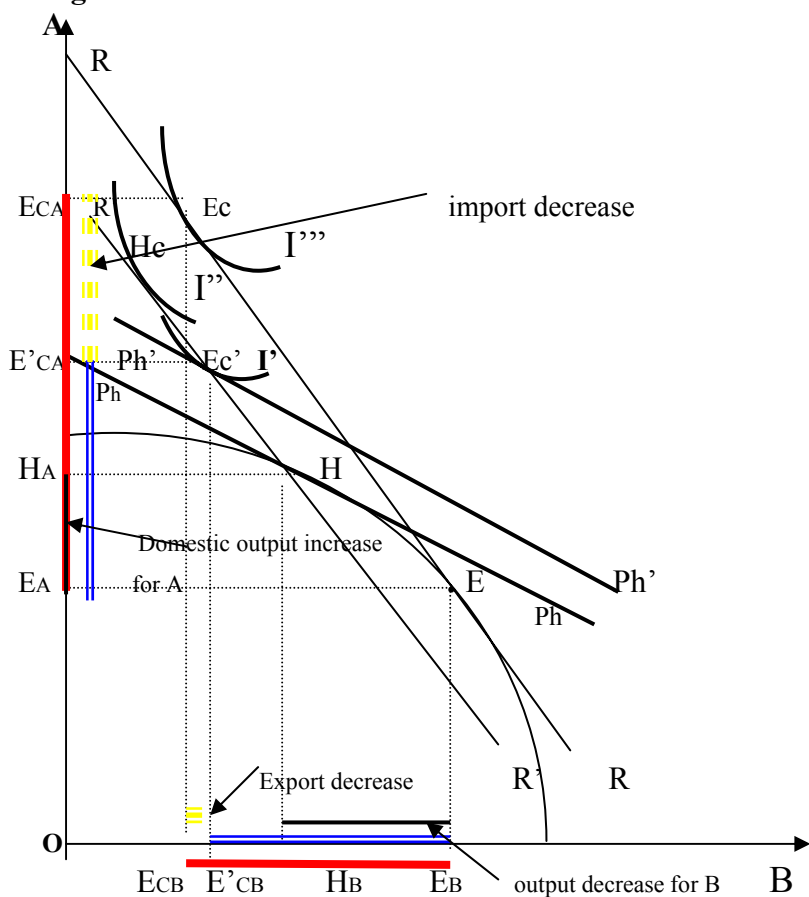
Now let us consider there is a tariff amount applied on products. When the country imposes a tariff on commodity A the product price will increase as will the rate of exchange  $P_B/P_A$ , which shifts the equilibrium from E to H. Thus, after the tariff application, the export reduces from EB ECB to EBHB and import amount from EA ECA to EAHa. At point H the consumption point does not end at point Hc, because consumers will also respond to this price change in the market and equalize the marginal rate of substitution to this price. Thus moving on the R'R' line to find the point where marginal rate of substitution is equal to the domestic relative price. This point is found at E'c, where indifference curve I' has the same slope as  $P_h'P_h'$ , which is parallel to  $P_hP_h$ . "The Production effects consist in the passage from E to H. The domestic output of the protected commodity increases by EAHa, whilst the output of the



other commodity decreases by  $EBHB$ .<sup>14</sup> The volume of trade effect, shown in the figure with bold red lines on the x-axis and y-axis was the import  $E_A E_{CA}$  and export amount  $E_B E_{CB}$ . After the trade tariff is imposed the import amount increases to  $E_A E'_{CA}$  and export amount increases to  $E_B E'_{CB}$ . The red colour shows the trade capacity before the tariff. The yellow colour shows the decrease in trade. The blue colours represent the amount of trade increase (export and import).

The production effect, which is supported by import tariffs, as illustrated in the figure, reduces the welfare of the consumer. To bring about a better understanding of this let us consider indifference curves in the figure above. The indifference curve,  $I'''$ , offers consumers higher utilities than the other two curves. In the figure, after the application of import tariffs, consumer welfare reduced from Indifference curve  $I'''$  to  $I'$ , where the lowest utility compared to the two indifference curves is obtained. But from the production effect the situation is also similar, although as stated above, domestic output of the protected commodity increases by  $EAHA$ , whilst the output of the other commodity decreases by  $EBH$ . However, the real national output in free trade for product A was  $OR$ , before tariffs, but after the tariff was imposed it fell to  $OPh$ , even if, the tariff revenue  $OPh$  were only to reach  $OPh'$  which is still lower than  $OR$ . Therefore, it is evident that tariff measures reduce the values of real national output together with the consumer welfare.

**Figure 4.10: Production effect**



Source: Giancarlo Gandolfo: International Trade Theory and Policy, 1998, p.155

<sup>14</sup> Giancarlo Gandolfo: International Trade Theory and Policy, 1998, p.156

In the EU production costs are lowered because of support measures and some internal productions are replaced from the efficient production of Turkish producers to less efficient production of internal producers. The negative effect of market intervention measures can be seen in Table 4.14 which is the results of NTM. Approximately 100% percent of all food products were affected whilst this amount for industrial products was only a 33% increase in 1986. Thomson calculated the effect of price support in the CAP results of trade liberalisation in 1986. In his study, he calculated that about 15% of the total income of taxpayers and consumers was transferred to producers. In 2000 Tyres and Anderson calculated the impact of the CAP policies on producer gain and consumer loss. According to this study, by the year 2000, consumer and tax payers cost was estimated as 159 and 11.3 billion USD (1988) respectively, for the CAP producer total gain was estimated as 139.9 bn USD (1988).

The distribution effect of the CAP measures obviously dramatically increased producer gain in the last decade. Indeed the intervention price mechanism, which prevents a price fall below the intervention price, secured the producer price and reasonable income whilst price fluctuation in the market was also prevented. Since 1992 the application of direct payments contributed to an increase in the transfers from consumers and taxpayers to producers. Similarly, in Turkey monetary transfers via input subsidies were realised via input subsidies in the last decade. But, since 2001, the introduction of the ARIP programme and DIS measure, which was planned to bring the support measures in Turkey closer to the CAP system, increased the amount of transfers from consumers and tax payers to producers. However, both in the CAP and in Turkey most of these transfers have been gone to the large-scale producers whilst small and medium-scale producers, especially in less-favoured areas, received only one fifth of the total payments (see also Figures 4.4.1 and 4.4.2 and 4.5 in pages 173). Regional disparities and differences between countries cannot be reduced by this method. In 2005 new applications of decoupled direct payments based on land use per hectare are expected to reduce both unequal distribution of payments and excessive transfers to producers in the CAP.

In Table 4.14 below, comparisons of the total PSE amounts between the EU and Turkey in 1986 and in 2004 are indicated. The higher amount of total support in the EU relative to Turkey is considerable.

**Table 4.14:** EU and Turkey Total PSE in 1986 and in 2004

Total support in agriculture with some important support measures	EU (Euro Mio)		Turkey (Euro Mio)	
	1986	2004	1986	2004
<b>PSE Total</b>	97,371	107,686	<b>2,794</b>	<b>9,019</b>
Market price support (MPS) total	86,386	57,125	2,08	7,0
<b>Payments based on output</b>	<b>3,975</b>	<b>3,737</b>	-	<b>276</b>
based on unlimited output	790	203	-	276
based on limited output	3,185	3,534	-	-
<b>Payments based on area planted/</b>	<b>1,979</b>	<b>30,339</b>	-	-
based on unlimited area/ animal no	1,101	808	-	-
based on limited area/ animal no	878	29,531	-	-
<b>Payments based on input use</b>	<b>4,128</b>	<b>9,267</b>	<b>710</b>	<b>140</b>
<b>Payments based historical entitlement</b>	<b>0</b>	<b>2,344</b>	-	<b>1,596</b>
Payments based on input constrain	653	5,297	-	-
Miscellaneous Payments	250	-452	-	-

Source: OECD database: Monitoring and Evaluation 2005 calculated by myself.

Note: (Exchange rate sale, 1 Euro in November 1986 = 679.76TL and 1 Euro in November 2004= 1.854,400 TL)

In the table above, in the EU total MPS have been in decline whilst direct payments have increased. In contrast, in Turkey in 2001, the total MPS was increased whilst total input use was reduced and replaced with the DIS (indicated with the payments based historical entitlement in the table) which showed a considerable increase in the total income support for producers in agriculture.

In the second table below the changes in the amount of the total PSE and PSE based on area and input and PSE for selected cereal products is compared between 1986 and 2004 to bring about a better understanding of transfers from consumers and taxpayers to producers. It is obvious that, neither in Turkey nor in the EU, has the amount of transfers been reduced to producers. Furthermore, transfers of about 10% in the EU and almost 360% in Turkey have increased. However, the higher increase in Turkey was realised because at the start of the application as mentioned in the welfare effect, the amount of producer support was very little relative to the EU's total PSE. Over time market price support has been reduced by almost 30 percent for EU producers whilst payments based on area planted increased about 125%. In Turkey, in contrast, the payments based on area were not realised for Turkish farmers. Instead, there were mainly payments based on input use and these were sharply reduced and replaced in the 1999 ARIP programme with payments based on historical entitlement, known as DIS (direct income support). Due to this decline (since 1999) in input use caused negative value on changes between 1986 and 2004, whilst changes in payments based on historical entitlements which comprises DIS payments increased and resulted in positive values as shown in the table below.

In the EU there were several support measures which increased the transfers to producers in this period. In Turkey there was a lessening of transfers relative to the EU between 1986 and 2004.

**Table 4.15.1: EU and Turkey Total PSE Changes between 1986 and 2004**

Total support in agriculture with some important support measures	EU (Euro Mio)		Turkey (billion/ TL) & (Euro mn)		
	1986-2004	In %	2004-1986 TL/ bn	2004-1986 USD/ mn	In %
<b>PSE Total</b>	<b>10,315</b>	<b>10.5</b>	<b>16,721.5</b>	<b>6,279</b>	<b>360</b>
Market price support total	-29,261	-33.8	12,988.3	4,920	390
<b>Payments based on output</b>	<b>-239</b>	<b>-5</b>	<b>513.068</b>	<b>276</b>	<b>--</b>
based on unlimited output	-587	-74	--	--	--
based on limited output	349	10	--	--	--
<b>Payments based on area planted/</b>	<b>28,360</b>	<b>143</b>	<b>--</b>	<b>--</b>	<b>--</b>
based on unlimited area/ animal no	-293	-26.5	--	--	--
based on limited area/ animal no	28,653	326	--	--	--
<b>Payments based on input use</b>	<b>5,139</b>	<b>124</b>	<b>260.089</b>	<b>570</b>	<b>72</b>
<b>Payments based historical entitlement</b>	<b>2,344</b>	<b>--</b>	<b>2,960.000</b>	<b>1,596</b>	<b>--</b>
Payments based on input constrain	4,644	70	--	--	--
Miscellaneous Payments	-702	-28	--	--	--

Source: OECD database: Monitoring and Evaluation 2005 calculated by myself.

Note: (Exchange rate sale, 1 Euro in November 1986 = 679.76TL and 1 Euro in November 2004= 1,854.400 TL)

In table below the amount of transfers for selected cereals is also compared with Turkey's support amount between 1986 and 2003. A considerable level of support for wheat, both in Turkey and in the EU, had been realised. In the EU the amount of transfers for maize was reduced, whilst in Turkey this increased in the same period. In contrast, in Turkey for

barley and for other grains a decline in support was observed, whilst in the EU an increase in support level was observed.

**Table 4.15.2:** EU and Turkey, PSE for Selected Cereals Changes between 1986 and 2003

Support in Agriculture for selected cereals	EU (Euro Mio)		Turkey (billion/ TL) & (Euro/mn)		
	2003-1986	In %	2003-1986 TL bn	2003-1986 Euro mn	In %
PSE Wheat	1,251	15	1,953.073	946	320
PSE barley	49	1	279.706	-9	-5
PSE Maize	-216	-7	297.524	139	510
PSE Other Grains	727	13	279.706	-9	-5

Source: OECD database: Monitoring and Evaluation 2005 calculated by myself.

Note: (Exchange rate sale, 1 Euro in November 1986 = 679.76TL and 1 Euro in November 2003= 1.694,851 TL)

#### 4.12 Effects on International Trade

The CAP support measures have negative effects in Turkey and the rest of the world trade. The excessive export subsidies and import tariffs reduce the flow of international trade in the world market. In the CAP the existence of over-production can only be eliminated by external EU trade which increased in the last decade by means of export subsidies. Expansion into the third world countries is secured by WTO agreements which contribute to a reduction of trade restrictions in both parts. The WTO secures fair trade in the world markets via green box measures, which comprise most of trade distorting measures relative to the amber box measures.

The enlargement of multinational firms in developed countries plays an important role in developing international trade. In the last decade, the support measures of the CAP caused a trade distortion for Turkey and other non-member countries, and although these were reformed several times trade distortion effects have continued.

The CAP is not only responsible for trade distortion in agriculture, as was also acknowledged in the WTO negotiations held by the US agriculture secretary Ann Veneman, US trade Representative Robert Zoellick and EU farm Commissioner Franz Fischler: "We have no intention of restricting access of cereals and rice to the EU market. GATT provisions fully provide for the maintenance of the rights of our WTO partners. Our objective in these negotiations, therefore, is to improve the system to more accurately fulfil our WTO obligations and protect our rights. The present EU regime for importing rice and cereals to the EU does not work."<sup>15</sup>

The existence of protective measures in agriculture reduces fair trade in the world market. A free market approach leads to more efficient use of the world's scarce resources which contributes to an increase in global wealth and enables people to benefit economically. Support in the world market can be dependent on two factors: "First it is argued that if agricultural commodity production is not internationally competitive, production linked support may be needed to guarantee the supply of non-commodity benefits. Second, in the presence of joint ventures and potentially high transaction costs related to direct targeting of non-commodity outputs, it may be wiser to support non-commodity outputs indirectly via the commodity output rather than use instruments targeting directly non-commodity outputs."<sup>16</sup>

<sup>15</sup> EU Commission: Commission has no intention of restricting access of cereals and rice to the EU market", reference: IP/ 02/ 962, Brussels, 28 June 2002,

<sup>16</sup> European Review of Agricultural Economics, Volume:30, No:1, March 2003

However, applications of support measures have negative effects. Firstly, they reduce the welfare of consumers and secondly, they cause a trade distortion in the World market. It is obvious that EU trade cannot be considered only in the internal market. The EU CAP has external implications which need to be considered in trade with non- member countries. This can be done with bilateral agreements to increase both export and import which influence trade balance, production capacity etc., between EU and non- member countries

In the CAP inefficient producers are protected with CAP support measures. In addition to this, CAP support measures increase the economic power of large member countries and their influence on small member countries, with less economic power, through internal EU trade and direct investments.

The table below shows that the Uruguay round of tariff reductions in 1994 and then Customs Union, which was signed between Turkey and EU in 1995, made little contribution to an increase in the trade capacity between Turkey and the EU producers. Therefore, Turkey's membership of the Customs Union (1995) has had no substantial effect on increasing trade capacity, because the Customs Union does not cover the whole agricultural product trade but only some fruit and vegetables and nuts that are not produced in the EU countries. But for cereals the protection was maintained by the EU. In the table below Turkish imports from world markets increased from 11 billion USD in 1986 to 69.4 billion USD in 2003. In contrast, total exports increased from 3.2 billion USD to 24.4 billion USD in 2003. Hence, almost three fold increases on total imports relative to exports were observed in Turkey between 1986 and 2003. The outcome is the trade deficit from 3.5 bn USD to 22 bn USD between 1986 and 2003.

**Table 4.16:** Turkish Trade Statistics with the EU 15 (bn USD)

Year	Total Exports world	Total Imports World	Total Exports to EU 15	% of Exports to EU 15	Total Imports From EU 15	% of imports from EU 15
2003	47,255	69,458	24,488	0.52	31,696	0.46
2002	36,206	51,572	18,460	0.51	23,321	0.45
2001	31,320	41,393	16,118	0.51	18,280	0.44
2000	27,769	27,769	14,511	0.52	26,610	0.49
1995	21,648	21,648	11,084	0.51	16,862	0.47
1990	12,959	12,959	6,906	0.53	9,354	0.42
1986	7,456	7,456	3,263	0.44	4,516	0.41

Source: Fahri and Güneş: Turkish Membership in the EU: Challenges and Opportunities for the Agricultural Sector, 2005, table 2

The share of support increased by 5 percent only in imported products from the EU countries, which contributed to increase the competitiveness and market share of the EU producers in and outside the Union. However

Therefore, over time CAP producers became more productive and competitive in the world markets, what contributes to an increase in the market share of internal producers outside the Union, whilst producers outside the Union (as in Turkey) reduced their market share. The outcome has been an increase on balance of payments deficit from 3.5 bn USD to 22 bn USD in the same period. However, the above-mentioned small increase in exports relative to imports in Turkey cannot be dependent only on the CAP measures. The WTO measures which have contributed to reducing the trade distorting measures in the world markets, in particular the green box measures, increased the import in the Turkish market. Turkish exports have also declined and experienced serious difficulties as a result of the IMP

policies which have reduced production in agriculture of cereals and increased imports from third world countries.

It is obvious that a marked increase in the export of Turkish agricultural products has been very difficult to achieve since Turkey's membership, because in the CAP trade distorting measures have been reduced and adopted in accordance with the WTO regulations where the EU and also Turkey are members of the WTO. Therefore, similar reductions have been adopted in Turkey as well as in the EU, which means that removal of all trade restrictions after Turkey's possible EU membership will not cause any significant increase in trade between the EU and Turkey in the near future. Moreover, except for other technical measures, for certain fruits and vegetables and for nuts which are not produced in EU countries, there is no CCT between Turkey and the EU. However, for certain crops such as cereal products CCT was maintained. Therefore, Turkey's membership will probably contribute to an increase in trade capacity only for those products such as cereals which are protected by the CCT. But for those products which, relative to Turkey, it is less advantageous to produce in the EU countries, such as cotton, nuts and some vegetables and fruits, the market share is expected to increase. The reason for this trade increase may depend on the Viner's Customs Union theory, where trade creation between Turkey and the EU is realised and trade distortion for other non-member countries is expected. Therefore, exports from non-member countries to Turkey will become more expensive than before, because of the CCT and some other technical standards such as sanitary and phytosanitary (SPS) measures of the CAP which will be applied in Turkey.

The EU membership of Turkey will also change some important economic parameters in the EU CAP. By 2015 the population of the EU will have grown by 11%, the agricultural GDP in the total GDP will be increased on average seven-fold while agricultural workers will increase eight-fold. As well as this, Turkish membership arable land will increase by approximately 30% and market capacity significantly (see Tables 2.20 and 2.21).

In the EU CAP the share of employed persons in total employment is only 4.3 per cent, but in Turkey this amount increases up to 32.7 per cent. It is evident that after Turkey's membership, free movement of labour will probably not be permitted. Therefore, free movement of the labour force will not occur for Turkish people. However, the cheaper labour force in Turkey will accelerate foreign direct investments (FDI) in the country. The FDI will increase in Turkey which also increases after the eastern enlargement in CEECs too. This will happen after Turkey's membership which will contribute to reducing the production cost and price via FDI in Turkey, thus increasing the productivity and competition of CAP producers in the world markets.

Consequently, EU membership for Turkey and the removal of trade barriers in agriculture will increase the trade capacity between the EU and Turkey, while Turkey's trade relations between other non-member countries will weaken. The trade creation between the EU and Turkey may be developed in two different forms: either the enlargement will force internal producers to reduce the cost of production in order to lower the product prices, or Turkish farmers may be forced to increase their product prices which will contribute to an improvement in their existing production methods and an increase in their product quality to EU standards, such as environment-friendly packaging, healthy, hygienic and organic farm products etc. In the first case, producer gain will decrease and consumer surplus will increase. In the second case, Turkish producers' gain will increase while consumer surplus will fall.

#### 4.13 The Cost of CAP Support Measures in Cereals for Turkey's Membership

There are certain differences between the CAP and Turkish agricultural support system, which increase the financial cost of possible membership. For example, in the EU about 5 percent of the population are employed in agriculture, whereas in Turkey the number is about 32.7 percent. Arable land comprises about 37 million hectares in Turkey but in the EU-25 it is about 167 million hectares. The share of agriculture in the total GDP is about 14.2 % whereas in the EU 15 it is only 1.4 percent and in the ten new CEEC countries it is about 7 %. However, agriculture's contribution to the GDP is about 212 bn Euro whilst for the EU-27 it is estimated as 9.716 bn Euro (see Table 2.20 in section 2.5.3). These considerable differences between the EU and Turkey increase the financial burden of this membership. However, in 2004 the CEECs membership brought to light the fact that in the EU rural development policies have not remained unchanged, which means that EU rules are changed to accommodate the financial requirements of accession of less developed poor countries. As can be seen in the table below, the finance of structural and rural development policies varies in amount between the EU-15 and the CEECs. Increasing negative reactions of member states who are net contributors of the CAP budget, such as the UK and Germany, to financing other members who are net receivers of the Community budget has reduced the amount of transfers to these members in the last decade. Most of the southern countries and CEEC countries are expected to receive less financial support from the Community budget between 2000-2006 periods (see Table 4.17 below). In addition to this, WTO regulations, especially the green box measure, which contributed to reducing trade distorting support measures, reduced the amount of monetary transfers to producers in the CAP. Finally, the current CAP support system is dependent on the member countries' financial capability which allows countries to finance CAP policies as much as possible with their own resources. However, part of the community budget is still reserved for financing the member countries economies but not that much as it was done for other poorer countries such as Portugal, Greece and Ireland in the past.

Consequently, less financial support - only 5.7 million Euros - was allocated to the CEECs between 2004 and 2006, whilst for the EU 15 it was almost 32.9 million Euros (see table below). Similarly, it is expected that the financial transfers' amounts from the Community budget to the Turkish producers and agriculture will be low. This means that an important part of the financial support will be realised by domestic resources and there will be no higher amount of transfers from the Community budget. Turkey's domestic sources will, therefore, be increased to finance the agricultural sector during adoption into the CAP.

The size of the Community budget and the cost of the CAP budget still comprise an important share of the EU budget. For example, between 2000 and 2006 the largest part of the budget - about 38.6 billion Euros was distributed to finance the CAP. However, an important share of the CAP budget goes to finance the developed countries of the EU-15 and a small portion of it is distributed between less developed (relative to the EU-15) CEECs. For example, during the period 2000-2006, 33 billion Euros were appropriated for rural development while the new members (CEECs) received 5.8 billion Euros for the same purpose (see table below).

**Table 4.17:** EAGGF guarantee section support on regional and rural development for EU- 15 and ten latest EU members

EU- 15 (2000- 2006)			EU- 10 (2000- 2006)		
Country	Million Euro	Share (% of EU)	Country	Million Euro	Share (% of EU)
Austria	3,207.9	9.7	Cyprus	74.9	1.3
Belgium	379.2	1.2	Czech Rep.	542.9	9.4
Denmark	348.9	1.1	Estonia	150.5	2.6
Finland	2,199.3	6.7	Hungary	602.5	10.5
France	5,763.6	17.5	Latvia	328.1	5.7
Germany	5,308.6	16.1	Lithuania	489.5	8.5
Greece	993.5	3.0	Malta	26.8	0.5
Ireland	2,388.9	7.3	Poland	2,867.0	49.8
Italy	4,512.3	13.7	Slovakia	397.2	6.9
Luxembourg	91.0	0.3	Slovenia	281.6	4.9
Netherlands	417.1	1.3			
Portugal	1,516.7	4.6			
Spain	3,480.9	10.6			
Sweden	1,130.0	3.4			
United Kingdom	1,167.9	3.5			
Total	32,905.9	100.0		5,761.0	100

Source: Gunaydin: EU CAP can be the Way Out for Turkish Agricultural Sector? No: 69/ 70 and 71 issues, P.13

In the coming decade it is expected that agricultural payments to producers will be realised via direct payments. “International Commitments to the WTO after the URAA provided a strong motivation for the EU policymakers to employ decoupled payments as a means of providing domestic support. Domestic policies considered trade distorting is limited by a country’s ‘amber box’ commitments, but countries are free to provide unlimited support for ‘green box’ policies that are considered minimally trade distorting including decoupled payments.”<sup>17</sup> Therefore, support measures other than direct payments will not be preferred to support producers in the CAP. Hence, for the adoption of Turkish agriculture into the CAP system is not required to consider any support measures other than direct payments to estimate the cost of Turkey’s membership to the CAP budget, especially in estimating support in the crop sector.

Finally, the estimation of the EU’s budgetary finance on second pillar policies, namely agriculture and rural development programs, for Turkey’s membership is very difficult, because for this issue, which is expected to be realised in the coming decade, there are no planned programmes. The larger share of agricultural employment must be reduced and realised in a long-term programme, because, on the one hand, the knowledge and qualifications of employees for other sectors than agriculture will need to be improved, and on the other hand, new investments in these regions must be realised otherwise migration is unavoidable.

Consequently, it is obvious that as well as producer support in agriculture, it will also require rural development and investment programmes in Turkey which are not yet planned. But there are rough estimations of the cost of Turkey’s membership, as well as the EU Commission’s estimation. “Based on current *acquis*, the cost of extending the existing

<sup>17</sup> David Kelch and Mary Anne Normile: CAP Reform of 2003- 04, 2004, p.12,



common agricultural policy including rural development to Turkey based on the estimates provided in the section on agriculture would amount 8.2 billion Euro (2004 prices) by 2025, the first year it is assumed 100% of direct payments would be due. Of this figure, 2.3 Euro billion would be rural development funding, 5.3 Euro billion direct payments and 660 Euro million market expenditure (all 2004 prices).<sup>18</sup> However, some of the other estimations of the cost of Turkey's membership vary one from the other. For example, outgoing commissioner Franz Fischler sent a nine page letter to fellow commissioners. In it he estimated the cost of Turkey's membership. He claims, "Turkish accession would cost the EU 11.3 bn Euro in farm subsidies alone and regional funding would also be massive." In his estimation a major part of the financial support (about 8 bn Euros) goes to direct payments.

Although these estimations may give some information on the cost of Turkey's membership, it is difficult to estimate the real cost, because the planned CAP support policies may be reformed and increase support amounts, or they may reduce support for new members. Nevertheless, it is obvious that Turkey's membership will significantly increase the expenditure of the Community budget with the cost of direct payments being calculated as €5.1 bn for Turkish producers in 2005 and €6.1 bn for 2015.

The cost of Turkey's EU membership, for crop products in agricultural only, is calculated below. In the first scenario it is assumed that the existing direct income support is maintained. In the ARIP program it was introduced as 5 USD for a minimum of 199 acres and more in 1999, and increased to 200 acres in 2000 and then 500 acres in 2002; the direct income support was then increased to 50 USD and maintained for 5 ha (500acres) and above arable land to date. This means that an estimation of the DIS is required in order to gain information such as the ceiling of farm land for payments. But, for a better estimation, the fluctuations in the annual reduction of direct payments in nominal USD or Euros can be considered, although it is difficult to estimate future exchange rates. However, it is expected that trade relations between EU and Turkey may/ will appreciate the TR Lira by about 20% against the Euro to increase the export capacity of EU producers.

In the table below the total amount of DIS payments in cereal and rice costs to the community budget are estimated about 1.8 million Euros in 2004 and 2.2 million Euros in 2015.

**Table 4.18:** Direct Income Support for cereals estimation in Turkey (current prices)  
(Euro/ mn)

product	Euro/tonne	Reference yield	DIS unit	Total units	DIS mn/ euro
common wheat	63	2.41	152	8,190	971
durum wheat	63	0.96	346	910	246
barley	63	2.46	155	3,547	429
maize	63	4.81	303	537	127
rye	63	1.82	114	144	13
oats	63	2.08	131	145	15
rice	102	1.43	146	61	7
Total (mn euro) real terms 2004 for Turkey					<b>1,808 bn</b>
Total (mn euro) nominal terms 2015 for Turkey					<b>2,248 bn</b>

Source: EU Commission: Turkey in EU, Chapter 12: Expected Consequence for Turkey of the EU Entry in 2015, December 2004, <http://www.scirus.com>

<sup>18</sup> Commission of the European Communities: Issue Arising from Turkey's Membership perspective, p.46

In the second scenario the estimation of financial support for Turkish producers in the cereals sector is realised via decoupled single area payments. In the coming decade it is expected that there will only be decoupled payments to support producers in the CAP, these being determined by the Commission for certain periods as a fixed amount of money per hectare of the arable land. By applying new decoupled single farm payments it is expected that in WTO terminology, these direct payments will be classified in the green box and not in blue box measures which are less trade distorting measures.

The calculation of the total amount of payments per hectare is estimated as given below:

**Table 4.19:** Reference situation in Turkey:

Total area (average 2000-2002) (mn/ ha)	23,06
Arable crops area ( included cereals, oilseeds protein feed) (mn/ ha)	18,14
Fallow (mn/ ha)	4,93
<b>Reference area (Arable crop+ fallow) (mn/ ha)</b>	<b>23,06</b>
set aside (mn/ ha)	2,31

Source: Turkish Republic Prime Ministerial Statistics: Agriculture, 2005, Table 11.1 data used for the estimation of reference areas, calculated by the Author, Note: as assumption there is no land transfers between 2000 and 2005

In the following table the calculation of set-aside payments is given. It is important to note that the reference yield noted below is considered about 4t/ ha, which is relative to the first scenario high, but it is supposed that in the coming decade productivity in Turkish agriculture will increase as a result of the rural development programmes of the EU. Therefore, instead of three 3t/ha, the reference yield is considered as 4t/ha. The payment per hectare 63€/t for the arable land and for set-aside areas is taken from the council regulations (EC) No: 1782/ 2003 article 134 and the reference period from article 38.

Calculation of the payments:

**Table 4.20:** Set-aside entitlements

number of entitlements (mn/ ha)		2,31
payments per hectare (€)	63 €/t x 4t/ ha (reference yield for cereals)	252
total set aside payments (€)	252x 2306	<b>581.1</b>

Source: Calculated by the Author, Note: Total (real terms)(mn 2005 Euro)

The estimation of the single farm payments can be considered either partly or totally decoupled. In the table below it is considered that 75 percent of the arable land is decoupled and farmers will claim subsidy without the obligation to cultivate cereals. In addition, 25 percent of the arable land is assumed to be coupled for claiming subsidy with the obligation of cultivating cereals on the land.

**Table 4.21:** Normal entitlements

Number of Entitlements	Reference Area (mn ha)	23,06
Reference Amount (mn/ €)	Arable corps : 63 €/t x 4t/ ha x 18.139ha x 75%	3,43
	total reference amount € (x1000) considered only crops	<b>3,428.271</b>
payments entitlements per hectare (€)	total amount/reference area 3,428.271/ 23.065	<b>148.64</b>

Source: Calculated by the Author, Note: Total (real terms)(mn 2005 Euro)

The above estimated decoupled payments for the reference area are used in the table below to estimate the total amount of decoupled and coupled payment to agricultural producers in Turkey; this works out at about 4 bn Euros for decoupled and 1 bn Euros for coupled payments. Finally, the total amount of coupled and decoupled payments at 2005 prices was estimated at 5.1 bn Euros, and at 2015 prices it was 6.1 bn Euros.

**Table 4.22:** Determination of the subsidies in 2015 (1000€)

Decoupled payments (bn/ €)	252x 23.06 + 148,64x 23.06	4,01
Coupled payments (bn/ €)	Arable corps : 63 €/t x 4t/ ha x 18.139ha x 25%	1,14
Total payments (bn/ €)	Total (real terms)(mn 2005 Euro)	<b>5,15</b>
Total payments (bn/ €)	Total (nominal terms)(mn 2015 Euro)	<b>6,18</b>

Source: Calculated by the Author

#### 4.14 A Short Comparison of EU and Turkish (Farm Security) Supports and Their Effects on International Trade for cereals

In the CAP agricultural support measures for cereals were mainly concentrated in the higher price support for producers increased the CCT and export subsidies in this sector. However, levels and CAP expenditure increased in the last decade. The CAP support measures are broken down as follows:

The first pillar

- The price support system (PSS) (in particular market price support, CCT, export subsidies, intervention to purchase surplus products) increased the cost of the CAP budget. In addition, the PPS increased trade distortion in the world markets, as was observed in cereals trade in the last decade. On the one hand, excessive export subsidies increased the market share of internal producers and on the other hand the CCT increased the cereals prices of external producers by capturing part of the tax revenues collected by the community agencies.
- Direct payments were introduced in MacSharry reform and paid for arable land which was no longer in agricultural use. The payments based on limited area planted showed a considerable increase on transfers from consumers to producers, although it was assumed as a less trade distorting support measure.

The second pillar

- The second pillar of the CAP comprises rural development and environmental measures available under the rural development regulation. Sustainable development was observed integrating economic social and environmental objectives.

In the Cap an important part of budget expenditure goes to finance the first pillar measures and for the second pillar measures only one fifth of the total Community expenditures are spent.

In the CAP applied reforms had some positive effects on reducing product prices and export subsidies to producers. But on the one hand, product prices were reduced by about 35 per cent in 1992 and 15 per cent in 1999 and on the other hand, various newly introduced payments, especially direct payments, increased the transfers to producers which reduced the positive impact of those reforms (see table below). In the same period, the amount of payments based on output was slightly reduced, but payments based on area still increased although in lesser amounts. Both payments based on historical entitlements and those based on input constraints sharply increased between 1986 and 2003. (see table below).

**Table 4.23:** Effects of the CAP reforms between 1986 and 2003

Payments	1986- 1992 1988 reform	1993-1999 MacSharry reform Uruguay round	2000- 2003, Agenda 2000 Doha round
1. Arable area reduction (see table 5.3)	Voluntary set-aside together with set-aside: less effect	10 percent compulsory set-aside as well as voluntary set-aside	Maintenance of compulsory set-aside
2. Decrease in prices	-35%	-15%	-5%
3. Payments total effect	Total compensation for income loss of producers Income for early retirement	Partial compensation Coupled direct payments	Direct payments is replaced in 2005 with decoupled payments
3.1 Payments based on output	-13% unlimited output payments sharply reduced limited output maintained	18% unlimited output payments increased limited output payments slightly reduced	-11% unlimited output payments again sharply reduced limited output payments maintained.
3.2 Payments based on area planted	900% Partial: payments based on unlimited area reduced limited area payments slightly increased and maintained	70% Partial: payments based on unlimited area reduced Limited area payments after 1992 reform sharply increased.	16% Single Payment: payments based on unlimited are decreased. But limited area payments continued to increase. Decoupled Single area payments (breaking the link between production and payments) planned to apply in 2005.
3.3 Payments based on input use	68% payments based input use increased	2% small increase after the MacSharry reform	30% after the Agenda 2000 increase on input payments maintained.
3.4 Payments based on historical entitlements	Not applied. Introduced in 1989. Based on historical support programme	-28% reduced income support	273% increased excessively
3.5 Payments based on input constraint	290% sharply increased	44% continued to increase	42% increased
Agri-environmental measures	Weak support about 4% of the budget	Small support 10% of the budget	Agri-environmental support measures and sanitary phytosanitary measures increased about 20% in the CAP budget.
Modulation of payments (limitation of payments to the large scale farmers)		At the initiative of community agencies in member states	Modulation set at the European level

Source: Calculated by the Author from the OECD PSE database and from tables 3.10 and 4.15

In the CAP difficulties in the effective application of support measures reduced the success of reforms. These are:

- The PSS (in particular market price support, CCT, export subsidies) increased trade distortion in the world markets. Any increase or decrease in product prices has negative effects on the demand capacity, even if the basic foodstuffs have inelastic demand. A similar

price decrease was observed in cereals trade in the last decade. The excessive export subsidies increased the market share for internal producers while the CCT increased the cereal prices of external producers by capturing part of the tax revenues collected by the community agencies.

- Direct payments were paid for arable land no longer in agricultural use. In addition, direct payments were accepted as a costly but less trade-distorting support measure, as well as market price support which increased the burden on the CAP budget.
- The entitlement for receiving payments was evaluated by the Commission. Once a farmer is entitled to receive payment it is difficult to remove these payments. Each year similar producers received the payment, which could create a hindrance to other producers who wanted to apply for receipt of payments. This meant distribution of direct payments was more difficult relative to the market support or other subsidies.
- The estimation of a producer who needs to be subsidised is very difficult. It depends on production amounts, prices, and now for decoupled payments, arable area, fallow land, and set-aside land have become more important for receiving payment.
- Eligibility to receive export subsidies is dependent on the commission's decisions when applications are made to apply for an export license. Each year producers offer their production and prices to the Commission. The Commission prefer to support producers -mostly the large-scale producers- who have over-production and cheaper prices. This has meant that subsidies were mostly shared between large-scale farms.
- The common custom tariff increased the trade distortion and welfare of the consumers. But the CCT is one of the important measures which contributed to an increase in the revenues of the community budget. However, the cereal price in the internal market fell below the external price but neither the share of applied CCT nor the tax policy has changed in the last decade. The collected tariff revenues were one of the major means of supporting the other measures in the CAP, such as direct payments.

In Turkey as a non-Union member, the CAP measures also had negative effects. In particular, the application of the CAP's price support system reduced the market share of Turkish producers who have lower relative cost advantages.

Before 1999 in Turkey, government support in the crop sector was realised via input subsidies. Interventions were in the form of price support and tariff protection. Input subsidies and lower interest rate bank credits were used to support producers' income and production. The market price for the purchase of crop products which was announced by the TGB (Turkish Grain Board) was usually paid later than at purchasing time, what sometimes was a delay of more than two seasons. Such delays decreased the nominal value of payments, because of high rates of inflation. By delaying such payments to producers the monetary value of support prices, which were announced by the TGB, made only a small contribution to producers' income.

A new agricultural support programme was introduced in Turkey in 1999. The ARIP (Agricultural Rural Implementation Project) programme was proposed by the World Bank for the period 1999-2006. However, at the commencement of the ARIP only the Aegean and South East Anatolian regions were considered. In 2001 it was extended throughout in Turkey. The programme was introduced mainly to reduce input subsidies and replace them by a support system for agricultural producers and farms. Incentives were also given to increase productivity. The ARIP focuses on three main areas:

“The first is to phase out government intervention in the output, credit, and fertilizer markets and the introduction of direct income support (DIS) for farmers through per hectare payment independent of crop choice.

The second theme, closely related to the output price support of the first theme, has been the commercialization and privatization of (State Economic Enterprises) SEEs including Turkseker (Turkish Sugar Company) and Tekel (Turkish Alcohol and Tobacco Company);

restructuring of TMO (Turkish Grain Board) and quasi governmental Agricultural Sales Cooperative Unions (ASCUs), intervened in the past to support certain commodity prices on behalf of the government.

Alternative crop payments formed the third theme. It provided grants to farmers who require assistance in switching from surplus crops to net imported products. The programme was intended to cover the cost of shifting from producing tobacco and hazelnuts to the production of oilseed feed crops and corn.<sup>19</sup> However, an important effect of the ARIP project on Turkish agriculture is observed especially in the agricultural support system. Input subsidies and agricultural credits were reduced and a DIS was introduced for Turkish producers. The DIS payments were based on a flat rate per hectare and 50 USD per hectare of arable land was made to all agricultural land users, thus implying that both owning and hiring land for agricultural use would be a reason for receiving DIS payments. This application brought the Turkish agricultural support one step closer to the CAP support system, but still there are some other differences between Turkey and the CAP. The application of market price support, CCT, some non tariff measures such as direct payments based on area/ output/ animal, compulsory set-aside and some other miscellaneous payments in the CAP support system differ from the application of the Turkish support system. However, in Turkey there is no need to adopt these measures, which are expected to be sharply reduced or removed from the CAP system in the coming decade. It is expected that by 2015 there will only be decoupled single area payments. Therefore, the application of the DIS payments and the reduction of other support measures facilitate the adoption of the Turkish agriculture into the support system of the CAP. However, during the accession period of Turkey into the EU, there are some other structural and regional differences, such as lower productivity, higher employment etc, which require to be supported by rural development programmes (second pillar measures) of the CAP.

The important difference between Turkey's DIS measure of the ARIP programme and the CAP's direct payment measure was the application time, because in Turkey the application of the DIS was realised and replaced with other support measures in a very short time, whilst in the EU application of the direct payments and replacement with other measures extended until 2013. Due to this difference on running time in Turkey the application of the ARIP programme sharply reduced or replaced all other support measures such as input subsidies, agricultural credits and fertilizer aids within three years, which caused a considerable income loss for producers and created differences in applications in different regions. In particular, income loss is observed for small- and medium-scale producers, because DIS payments were unequally distributed especially for large-scale producers and producers in less favoured areas have been neglected (see Figure 4.5). In contrast, in the CAP the application of direct payments was introduced in 1992 and steadily applied through the whole community, which was again reformed in 2003 and it was planned to replace these with decoupled direct payments by 2005 in some member countries such as in Spain, Portugal and in some other northern member countries. But for all community members it is expected to be applied in 2007. In addition, decoupled direct payments will be steadily increased and replaced with other support measures which will have a trade distortion effect in the CAP until 2013.

Consequently, ARIP programme and application of the DIS payments which sharply reduced other support measures has caused strong income loss for producers in Turkey (see table below).

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<sup>19</sup> Cakmak Erol: Structural Changes and Market Opening in Agriculture: Turkey Towards EU Accession, WP: 04/ 10, 2004, p.5,

**Table 4.24:** Effects of policy changes in agriculture in Turkey between 1986 and 2003

Payments	Until - 1999 ARIP programme	2001-2005 ARIP programme
1. Arable area reduction (see table below)	no planned programme	10 percent set-aside introduced and small scale farms reduced whilst 20+ increased
2. Increase in prices	Higher inflation caused a sharp price fluctuation	Since 2000 fiscal policies reduced the inflation and price fluctuation
3. Payments total effect	Small compensation for income loss of producers	Partial compensation Coupled direct income support (DIS)
3.1 Payments based on output	Not applied	Not applied
3.2 Payments based on area planted	Not applied	Not applied
3.3 Payments based on input use	230% input use decreased	75% decrease on input use after the ARIP programme
3.4 Payments based on historical entitlements	Not applied. Introduced in 1999. Based on ARIP programme as DIS payments	1999 introduced for 199 acre 5 USD and 2001 distributed unequally in all regions started for 200 acre and increased to 500 acre in 2002 and maintained in 2003 similarly (10acre=1ha) (Payment for 1 ha was 50 USD). DIS 240% increased
3.5 Payments based on input constraint	Not applied	Not applied
Agri-environmental measures	Weak information and support	Very Small support. Agri-environmental support measures introduced for adopting into the CAP
Modulation of payments (limitation of payments to the large scale farmers)	Not relevant	Distribute mostly to the large farms and producers

Source: Calculated by the Author from the OECD PSE database and from tables 3.10 and 4.15

In Turkey major difficulties in effective application of support measures reduced the success of the ARIP programmes in agriculture. These difficulties are given below:

- In Turkey small- and medium-scale farms have been mostly neglected regarding DIS payments. Bureaucratic difficulties and hurdles increased the cost of DIS payments between regions.
- The large-scale farmers divided their lands on paper because of insufficient bureaucratic inspections and received significant amounts of DIS payments. In particular, in the East and South East Anatolian regions, the existence of the Agha concept (Ağalık) allows the opportunity for the Agha to have an important part of the land in those regions in a system almost akin to slavery (Kesim). By means of this system most of the people who work on the land will then be dependent on this Agha who employs them for a cup of meal. Due to this Agha concept most of the DIS payments are collected by the Aghas and farmers who work on the land receive nothing, thus increasing more and more the abyss between rich and poor.
- In these regions where Agha sovereignty is maintained people who have closer relations to the Agha were easily registered as farmers and collected DIS for the Agha.
- In western regions there was also a problem in the distribution of the DIS payments. The land owners in the western and Aegean regions hire their land to the peasants who argued that most of the DIS payments were being distributed to people who were not working on the land.

- There are almost 2.7 billion registered farmers in Turkey but only about 4 million farmers are registered to receive DIS. This is the outcome of the above-given difficulties. But not all farmers have been properly informed about the DIS; therefore some of them suppose that they are not eligible to receive the DIS.
- “About 23.4 million hectares of arable land was used by 3.9 million farms. But approximately 16.5 million/ ha landowners applied for DIS payments, of which 70% of these applications were entitled to receive DIS payments.”<sup>20</sup> Moreover, most of these payments were distributed to the Agha’s men who were registered as farmers. Therefore, real farmers who work on the land received nothing to help improve farmland and agricultural productivity in Turkey.

A comparison of the farm size changes in the EU and in Turkey is also indicated in the table below, to bring about a better understanding of the effects of the CAP reforms and ARIP programme. In Turkey the number of farms of less than 5 ha in size fell between 1991-2001, whilst in the EU a small increase was observed between 1987 and 2001. In Turkey a considerable decrease has been observed in the number of farms from 5 to 20 ha in size, whilst the number of farms from 20 to 55 ha and 50 ha plus in size increased between 1991 and 2001. Similarly, in the EU the number of farms from 5 to 20 and 20 to 50 ha in size decreased, whilst those farms of 50 ha plus rose from 1987 to 2000.

**Table 4.25:** Number of farms and arable areas in Turkey and in the EU

Farm size (ha)	Turkey x1000		EU X1000	
	1991	2001	1987 (EU- 12)	2000 (EU- 15)
0- 5	2,761.4	177.8	3,411	3,903.2
5- 20	1,096.6	829.8	2,099	1,525.6
20- 50	173.4	950.5	946	738.4
50<	36.8	559.9	473	603.4
Total	4,068.4	3,021.2	6,929	6,770.7

Source: DIE (SIS): 2001 Genel Tarım Sayımı, SIS, 2004 and EU Commission: The Agricultural Situation in the EU Report 1999 and Europe EU Commission Agricultural statistics: The 2003 Agricultural Year – (Farm structure). And Eurostat: European Commission DG 6 for Agriculture FAO and UNSO and 1987 data from Baldwin and Wyplosz: The Economics of European Integration,

In a comparison of the price support system and agricultural structure between the CAP and Turkey it can be observed that in the CAP system there were various support measures which increased the amount of transfers to EU producers relative to producers in Turkey. The agricultural measures of the CAP were mostly concentrated in rural areas to increase the productivity and self-sufficiency of producers. But in Turkey support measures have mostly been distributed to those persons who are not actually working the land such as Aghas and owners of arable land.

Over time the negative effects of direct payments, which increased the burden of the CAP budget together with production, have been reformed through decoupled direct payments which break the link between subsidies and production. By doing this producers became more independent in estimating in accordance with consumer demand, what product should be planted on their land which would create more market oriented production. In contrast, in Turkey, the ARIP programme which in 1999 introduced the DIS to producers has also experienced some negative effects, although DIS payments were planned to reduce

<sup>20</sup> Gunaydin Gokhan: EU CAP’s Direct Income Support: Agricultural Support or Poverty Aid?, No: 69/ 70 and 71 issues., p.50



the effect of other measures, such as input subsidies and price support which caused trade distortion in the market. The reason for the problems experienced in Turkey was not only the sharp changes on applied policies in agriculture but also the bureaucratic hurdles which limited the proper application and inspection of measures in agriculture.

In Turkey planned policies must be applied in accordance with the statistical data, but regional information is also required for the confirmation of producers' declarations on their land. It is obvious that adoption into the CAP system of Turkish producers, who have economic difficulties and inefficiencies on their planting methods, will be very difficult. Moreover, after Turkey's membership, competition between Turkish producers and CAP producers will be very difficult, because, on the one side Turkish producers, who, relative to the EU producers, have small- and medium-size production with financial difficulties. And on the other side CAP producers, who were supported for almost 50 years by the Community budget (about 50 %) have solved all structural and technical problems and have secured reasonable income and production for producers.

The maintenance of DIS payments, which are given on the use of arable land and are not dependent on what product is produced on this land, creates difficulties, because the Turkish Grain Board (TGB/ TMO) purchases the farmers' products and then payments are realised in accordance with the limited output which is contradicted by DIS payments. On the one hand, the TGB purchases farmers' products and on the other hand it supports producers with direct payments according to their land but with limited output. By doing this it is supposed that certain products will be intensively supported when the TGB announce the product prices for each one every year, whilst others will be neglected because of limitations on production.

Therefore, it can be concluded that decoupled payments can be applied in countries where structural and regional problems in agriculture are already being solved and where things are properly functioning.

In the last decade reforms which were planned in the CAP considered only producer gain, although CAP objectives considered both producers and consumers. The objectives of the CAP are to increase productivity and to ensure reasonable incomes with the preservation of employment opportunities, but CAP objectives comprise of consumer welfare too. However, planned reforms in the CAP significantly increased producer gain while consumer welfare was neglected.

In the last decade the increasing trend for environmentally-friendly production methods, healthy breeding and organic farming has been noted and applied in the CAP. By doing this, internal consumers became more conscious of purchasing organic products which are produced by environmentally friendly methods, without hormones or other chemical substances. The above-mentioned standards are also expected from producers outside the Union who are exporting into the EU market. Therefore, imported products below the EU's requirements, some of which are explained above, will not gain access into the EU markets. Apart from these technical measures, some trade-distorting measures such as export subsidies and market price support are expected to be reduced or removed from the CAP agenda. More liberal and technical measures are expected, such as sanitary and phytosanitary hygiene, healthy environmentally-friendly production methods, labelling and quality increase will become more important in the EU CAP.

It is obvious that the application of these requirements (healthy products and prevention of pollution by means of environmental friendly products) will be a hindrance to Turkish producers and some other non-member producers. However, application of these measures will not create any more reaction between countries in the world markets, but will restrict trade with reasonable objections such as quality assurance or environmentally-friendly production requirements with the EU countries.

## Conclusion

The estimation of the PSE on cereals has contributed to determining the effects of the price support system of the EU CAP on producer gain and consumer welfare in the Union and outside it in Turkey as a non-member country. The major focus of this study was the evaluation of benefits and costs of common agricultural policies of the EU on fair trade in the EU market and in Turkey. This may contribute to the formation of a new reform proposal considering the impact of the former measures that had positive effects on fair trade and consumer welfare relative to other measures which had only contributed to an increase in transfers to producers. In particular, the CAP measures that have been reformed for improvement of producer gain in accordance with the theory of comparative advantages can be considered for the development of support measures in agriculture.

The CAP of the EU Commission between 1986 and 2003 followed interventionist economic policies and tariff/ non-tariff measures together to protect internal producers from those outside the Union. At the end of the last decade it was observed that these measures had significant negative effects, explained in the following section, on consumer welfare and fair trade in the agricultural sector.

### 5.1 Findings

The major problems of the price support system of the CAP can be classified into three groups. These are:

- Export subsidies: Create transfer to producers from consumers and reduce the welfare of consumers and taxpayers.
- Import access: Higher product prices which are required to protect internal producers with tariffs from exporters outside the Union,
- Market support: In the last decade the green box (minimal trade distortion) and the blue box (for direct payments with supply control such as acreage set-aside) were mainly maintained, whilst the amber box measures were sharply reduced in accordance with the WTO regulations. However, a decline in market price support and export subsidy at a desired level to increase fair trade in accordance with the comparative advantages theory was not realised. But the new support system tends to move towards less trade distortion despite former measures which affected production decisions and trade outcomes. However, this has not meant that the new system reduced the transfers from consumers to producers. The new system of direct decoupled payments has only changed the form of transfers to producer. In addition, these payments are still unequally distributed to producers. This implies about 75 percent of the distributed subsidies have gone to large-scale producers and only 25 percent of subsidies are given to the small- and medium-size enterprises. Unequal distribution of subsidies is not only observed in the CAP of the EU but also in other countries as well as in Turkey.

Apart from the problems mentioned above, which increased trade distortion in and outside the Union, there were additional problems which caused difficulties between 1985 and 2003. These are:

- The CCT of the CAP stayed almost intact in the last decade. However, the price gap between internal and external producers on cereals was in decline. Furthermore, at the end of the decade, internal prices on cereal products were well below the world prices but neither the CCT nor the share of applied tariff had been reduced for imported product access. In the next decade it is expected to cut the tariff amount for cereal products in order to reduce the negative effect of the CCT on fair trade.

- Agri-environmental farming, introduced in the last decade, is accepted as a new form of protection which may cause a hindrance for importers to the EU markets. However, by applying this new protection measures EU farmers undermine their international competitiveness, because those regulations desired by the EU increase the cost of production which is not important in most of the least developed countries. It can be suggested, therefore, that those agri-environmental regulations may be made a voluntary rather than a compulsory measure.
- Over time the applied reforms of the CAP and support policies have indicated that endeavours are made to maintain the agricultural support in a way which is more suitable to reduction of the reactions of other WTO members. Through five reforms of the CAP it is still far from having market-oriented production methods and being multifunctional in general. Moreover, the CAP measures lead other nations to follow the same regulations to increase trade. But it must be remembered that agricultural politics are no better off in other parts of the world; in Japan, in Korea, in the United States etc. But unfortunately the CAP policies were mostly blamed for distorting world trade relative to the other nations' agricultural policies. In Turkey transfers from consumers and tax payers to producers, which were partly reduced and replaced with DIS at the end of the decade, had less effect on reducing the trade distorting effect of the agricultural support measures.

In the Doha round trade talks the EU offered to eliminate export subsidies on farm produce, although elimination of export subsidies was not supported especially by the US commissioners.

- The EU brought to light the pollution and environmental damage in and out of the Union. In particular, after Mediterranean countries joined the EU intensification of agriculture could have lead to soil erosion and water damage problems through using pesticides, fertilizers and machinery. Therefore, the need for environmentally-friendly production methods and some other technical measures such as sanitary and phytosanitary measures were introduced.

## 5.2. Effects of the Producer Support Measures

The impact of the producer support measures which mostly influenced the export and import capacity of producers and changed producers' gain and consumers' welfare in and outside the Union, is given below.

Positive effects:

- Market intervention and subsidies protect producers and rural welfare,
- Support measures protect inefficient producers to maintain their production,
- The intervention price prevents price fluctuation if the intervention price is below the equilibrium (see section 1.3),
- Export subsidies increase the competition opportunities of domestic producers on the world market.
- Reduction of preventive measures and subsidizing producers increases trade capacity of producers and countries which have bilateral subventions on trade,
- Production subsidies contribute indirectly to imported product amounts, where there is a lesser output, because subsidized internal products increase the imported product amount,
- Subsidies increase producer surplus,
- Subsidizing producers in the form of direct payments is more preferable than tariff measures, subsidy is a direct form of aid and has less distortion effect than the common custom tariff,

- Increased export of agricultural products,
- The world market share of the EU producers' increase by means of export subsidies.
- Storage costs are covered by the community agencies which reduces the cost to producers.
- Set-aside increases the grassland for the animal husbandry sector
- Export subsidies contribute to an increase in the welfare of consumers in an importing country
- Export subsidies are dependent on the price gap between world and EU cereal product. Any decline in the price gap is expected to reduce the export subsidies.
- Direct payments have no direct effect on the product prices.
- Direct payments, CCT and export subsidies increase the transfers from consumers and tax payers to producers,
- Direct payments relative to other measures have less negative effects on unfair trade,
- Direct payments reduce the tension between member and non-member countries' producers,
- Direct payments increase the income of the internal producer,
- Set-aside payments are given to reduce surplus amounts.

#### Negative effects:

- Market intervention and subsidy are costly and given for arable land which is no longer in use in agriculture,
- Set-aside payments reduce mostly land use, but set-aside payments have less effect on reducing the surplus amount if producers use the rest of their land intensively.
- The largest and most efficient farms are estimated to receive about three fourths of budgetary support while the rest received approximately one fourth of total subsidies
- Some efficient production of exportable commodities in the third world countries are replaced by the inefficient production of exportable commodities of the CAP,
- Market support measures cause a trade distortion for producers in non-member countries, and reduce the welfare of the consumers,
- Subvention redistributes income from the internal consumer who pays a higher price for products of internal producers,
- Subsidies cause unfair competition which is inconsistent with the comparative advantages theory,
- Price intervention reduces the welfare of consumers if there is over-production,
- Subsidies are the guaranteed income for producers. Once it is allocated it will be paid every year because it is difficult to remove,
- Reduce consumer surplus,
- Intervention price increases product price,
- Subsidies cause producer and consumer (deadweight loss),
- Reduce competition of producers in non-member countries,
- CCT reduce the imported product access into the EU market,
- CCT is determined on the price gap between internal and external products. Therefore application of CCT compels producers in third world countries to increase their exported product prices to capture part of the revenue income which will be collected by the community agencies.
- Direct payments, which are dependent on production, influence producers to concentrate on products which receive the best subsidy. By doing so consumer demand is not considered on the market.

- Reduces the productivity of producers because producers are getting paid to do nothing
- It has an indirect effect on production as it depends on the producer whether it is used to increase production capacity or not,
- Secure income guarantee but reduce the entrepreneurial spirit
- It is difficult to estimate application and control,
- Price support measures are often used for political purposes such as vote guarantee rather than increasing self-sufficiency and rural welfare,
- Producers are forced to apply policies of non-agricultural people,
- Producers become more dependent on the support measures for their production rather than market-oriented production.

In the European Union producers are dependent on the CAP support measures which are concentrated on income security. Support measures are expected to increase productivity and self-sufficiency and these increases may contribute to increasing market-oriented production. However, market-oriented applications are reduced through politicians' vote-oriented policies. Such policies are inconsistent with the Comparative Advantages theory which bases international trade on the lower relative cost advantages of producers.

The CAP price support system, because of its restrictive measures, has adverse effects on non-member countries' trade.. Indeed, the "CAP has depressed world agricultural trade and has denied farmers in other countries fair access to one of the world's most important markets."<sup>1</sup> There have been large amounts of products which were cheaper in the world markets, but CAP policies, which increased the protection of internal producers in the Union, reduced third world countries' product access to the EU market. The CAP policies create pressure on the market prices, increase world supply and cut the world demand. An additional reason for trade distortion is the gaining of EU membership, as joining the CAP means accepting all the regulations which increase trade capacity between members and decrease it with non-members.

Turkey's membership will obviously effect the creation of trade between the EU and Turkish producers. However, the rate of this trade creation must be questioned. Firstly, both the EU and Turkey are members of the WTO which means that both countries apply the same WTO measures in order to increase trade liberalisation; during the last decade, the amber box measure especially was preferred to the green box measure, and tariffs and quotas were also reduced.

This means that EU membership probably will not add much to Turkish exports. In addition, in the CAP, the PSS stimulates internal producers to increase similar products trade. But in the last decade firms in developed countries moved to IIT and firms in less developed countries turned to the Ricardo model of trade. Therefore, this increasingly similar product trade between member countries negatively affects trade relations of producers in and outside the Union.

For the producers in less developed countries, as well as in Turkey, subsistence farming is an important characteristic of agriculture. This type of farm is not sufficiently productive where hidden unemployment and lower competitiveness are mostly observed. Lack of information, a shortage of communication technologies and insufficient infrastructure has reduced planned goals, especially in those regions which are geographically and climatically unsuited to supporting agriculture. Subsistence farming reduces the planned goals because farmers are mostly oriented to produce for their regional markets and their production

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<sup>1</sup>Valerio Lintner and Sonia Mazey: The European Community, Mc Grawy-Hill Book Company Ltd, England 1991,p.99

is limited within this regional scope. Therefore, production by such farmers is mostly dependent on their previous market sales. It is important to reduce the scepticism of farmers of innovation and the rapidly developing know-how. Changes in regional state planning and policies are required in order to improve this condition in rural areas.

Another disadvantage for producers in non-member countries is the single currency, which facilitated and reduced the transaction costs between member countries, but which is maintained for non-member countries. External producers often incur the cost of exchanging their currency when exporting to the EU market.

Finally, in the CAP system the more you produce the more subsidies you effectively get. This system greatly increases the income of large-scale producers while the income of small-scale producers is only maintained at its current level.

### **5.3 The CAP's Best Possible Support Measure**

In the CAP to date applied policies have mostly had a positive effect on the producers' gain whilst consumer welfare has been neglected. However, in the last decade CAP support measures were mostly blamed by the WTO and third world countries' producers for trade distortion and some important reforms have been put into effect in order to reduce trade distortion effects in the world markets. The CAP reforms mostly replaced the existing support measures by new measures but did not remove them from the CAP agenda. Therefore, it is difficult to determine the best possible support measure, which may contribute to reducing transfers to producers. Some of these measures contributed to reducing the direct intervention effects. Reforms in the CAP were designed to reduce the trade distorting support measures by other measures, which are accepted in the WTO terminology as 'green box measures' for increasing fair trade.

The PSE estimation for cereal products has helped to identify support measures in the CAP, which were less trade distorting, both, inside and outside EU markets. The direct payments, which were first introduced by the MacSharry reform, can be seen as the best possible support measure in the CAP system. It is obvious that application of the limited area payments reduced the negative effects of the transfers from consumers to producers. Decline in arable area use also had a considerable impact on reducing excessive cereal production. By 2005, application of decoupled direct payments to producers, which break the link between production and payments, is expected to reduce, both, overproduction and excessive payments to producers, thus leading to a reduction in the welfare loss of consumers, too.

The impact of the CAP support measures on trade distortion is higher relative to Turkey's support measures. But Turkey's support measures, which used to be concentrated on input subsidies, also increased the transfers to Turkish producers. The ARIP program in Turkey, which replaced the input subsidies with DIS payments in 1999, and the CAP's decoupled single area payments, which were started in 2005, are expected to lead to a reduction of the amount of transfers to producers by 2013, at which time the CAP support measures are expected to be concentrated only on decoupled single area payments. It is also important to remember that Turkey's possible membership will not be realized before 2015. Therefore, if Turkey's EU membership application is successful, the above-mentioned single area payments will be applied both for the EU and Turkish producers. This means that application of single area payments, on the one hand, will reduce the trade distortion in world markets, and on the other hand, these payments will also decrease the amount of transfers from consumers and taxpayers to producers.

## 5.4 Future Perspective of the CAP Reform Proposal

In the CAP, on the one hand, a significant reduction in support measures has been realised, but on the other hand, new support measures have been put into effect in the last decade. By that transfers are not reduced nor are the welfare of consumers increased. However, the acknowledgment of green box measures by the WTO as less trade-distorting, compelled countries to reduce or replace amber box measures by blue or green box measures. Direct payments, which are considered as blue box measures, still are trade-distorting. These measures should be reduced under AMS.

The Strategy of change in agricultural product trade must not be concentrated only on the support measures, because these measures not only restrict the relative lower cost advantage of producers, but also reduce the welfare of the nations. A new policy should support the developing countries' food security policy and rural development programmes, which will lead them to pursue appropriate agricultural policies and developments.

Support measures for EU internal producers affect agriculture in developing countries', their trade capacity, food security and economic development. Therefore, the impact of CAP policies should be considered, both, in and outside the European Union to reduce trade distortions and secure maintenance of livelihood for producers both in and outside the European Union. Some CAP policies, which of necessity require reform, are given below. These are:

- If the tariff rate of input is lower than the tariff rate on final product this will cause an increase in the profit rate of the producer, or in other words, reduce tariff expenditure. Therefore, it is necessary to consider the Effective Rate of Protection (ERP) in estimating the Common Custom Tariff (CCT) which is only dependent on the price gap between internal and external producers. In addition, a decline in the price gap has no effect on reducing the CCT which was intended to be adjusted according to the price gap between internal and external product prices.
- New regulations on tariff commitments, such as reducing some tariffs for rarely produced commodities and raising some others that had over-production, are required. This will contribute to controlling the surplus amounts and price fluctuation in the market.
- The common custom tariff (CCT) can be replaced by variable import levies, which may better regulate the effects of price changes on applied tariffs in the Union. In the last decade, internal product prices fell below world prices in cereal products, but custom tariffs stayed high because these are fixed and can only be changed by a decision of the Commission. In contrast, a variable levy could be adjusted according to the difference between internal and world product prices without requiring any change in the regulation.
- Decoupled direct payments should be related to use of arable land, but must not be totally decoupled from production. For example, 75% of the arable land could be decoupled, but the other 25% could be used to limit the production of a certain type of production. Above a certain production amount, producers could receive a reduced rate of payments. Breaking the link between production and payments will influence producers to become more market-oriented and producers will shift production in accordance with consumers' demand.
- Set-aside measures should be maintained to reduce over-production in cereals. However, in the past the application of the voluntary (1988) and compulsory (1992) set-aside measures doubled payments to producers. Replacement of compulsory set-aside by voluntary set-aside could reduce the amount of these payments to producers. For small- and medium-scale producers with farms up to 10 ha no set-aside application is required.
- The removal of export subsidies will reduce trade distortions on the world markets. In recent years, EU cereal prices fell below world prices what meant that the price gap between internal and external producers applied to export subsidies was no longer an argument to

provide subsidies. Maintenance of export subsidies will only increase the trade distortions on world markets. Export subsidies should be removed from the CAP agenda. If the existing high price level for some cereal products is maintained, then it is obvious that after EU accession producers in Turkey will require to be subsidised from the CAP budget to maintain their exports. The total cost of decoupled payments for the cereal products is forecast as 6.18 bn Euro in nominal terms by 2015.

- Ethnical products effects: In the EU consumers are used to buy the products they are accustomed to. This implies that ethnical foods create a permanent market for producers without considering the substitution effect. Apart from this, hygienic production, quality and labelling affect consumer demand and production. Therefore, producers in small- or medium-scale firms must concentrate on ethnical production which increases their competition in the EU markets.
- Removal of de minimis allowance is required for countries where AMS level is high. According to the de minimis allowance agricultural support level (payments) must not exceed more than 5 percent of the total production value for producers in developed countries and 10 % of the production value for producers in developing countries.
- Provisions or reduction commitments are required for some developing countries to cut transportation and marketing costs from taxation of imported products. In particular, transport facilities for developing countries, because transport difficulties such as delays in port, product damage of perishable agricultural products etc., increase the loss to third world countries' producers who are dependent for their economies on agricultural product trade.

In the EU, southern countries and the CEECs are poor relative to northern countries. A comparison of the previous financial support to the southern countries of the EU with transfers to the CEECs shows that finance of the southern enlargement was rather high relative to the CEECs enlargement (see also Table 4.17). Many development programmes and much financial assistance were required in both enlargements to increase regional development and economic prosperity. Insufficient use of technology and planting methods required high levels of support for development of rural communities in different regions. Over time, both the increasing negative reactions of net contributors, such as the UK, Germany and France, to financing net receiver countries from the Community budget, and the previous policy, which was aimed at the full economic and monetary integration of member countries into the EU, were affected, and changed these conditions for becoming an EU member. Therefore, it is expected that new members of the EU will not receive any more high level support to reduce economic differences between them. In addition, it is expected that from the first pillar of the community budget there will be only single area payments for producers. This implies that countries will finance their agriculture more from their own resources than from the CAP budget. And from the second pillar of the community budget only suitable rural development projects will be financed for economic development in agriculture as a whole.

In the coming decade the CAP reform is expected to concentrate on productivity increase, self-sufficiency and more market-oriented production. However, support measures will continue to support innovative and highly technological production methods to increase high quality environmentally-friendly organic farm products with a lower cost advantage. In the CAP producers are protected with tariff and non-tariff measures. But, unilateral restrictions (such as CCT, price intervention measure etc.) are very dangerous, because they may incite rivals ( non EU producers) to react in a similar manner; some measures in the last decade, for example, higher CCT, compelled non-member producers to increase their product prices to capture part of the revenues collected via CCT. By doing this consumers both in and outside the Union suffered a loss. Higher protection may also compel countries to abandon trading with such highly-protected countries and try to increase their trade relations by



directing their trade to those countries where restrictions are low in relation to those of the highly-protected nations. This would reduce the substitution effect of products which are chosen by consumers for their lower prices, or high qualities, or better tests than internal products. Thus, a decline in substituted products in the internal market will obviously negatively affect consumer welfare.

Agricultural support measures imply high prices not only for producers but also for consumers as well.

## **Glossary**

**Ad valorem tax:** A tariff on imports estimated as a percentage of the value of the products, such as, 10 % of tax on a product means 10 % value of the product.

**Agenda 2000:** The EU Commission draft prepared in 1997. It covers the period 2000-2006. Agenda reform comprises mainly of environmentally-friendly production, improvement of the competitive power of the CAP and maintenance of production and set-aside measures, which require alternative job opportunities for those producers who have become redundant.

**Agricultural levies:** Agricultural levies are applied for certain agricultural products to support internal producers' income and to secure the price stability in the market.

**Agricultural prices:** In the CAP, there are different price supports, which are applied by the CAP. Internal prices are the market prices (guide price) and intervention price outside the Union. There is a threshold price for imported products, an indicator price for fruit and vegetables, and a sluice gate price for pig meat.

**Agricultural spending:** Agricultural expenditure comprises of almost 50 percent of the CAP budget.

**Agricultural storage:** This is applied for surplus products which are bought by the community agencies and are stored to prevent an excessive price fall in the market. It is a support measure for the intervention price mechanism.

**Agrimonetary System:** In 1995 the agrimonetary regime was introduced to prevent dramatic price changes. According to this system "minimum import prices, intervention prices, import levies and export subsidies are all fixed in terms of ECU's and converted into each of the member states national currencies using the so called 'green rates' of exchange."

**Agricultural Reform Implementation Programme (ARIP):** The programme was introduced to reduce the trade-distorting support measures in agriculture and to increase rural development in Turkey.

**Balance of trade:** Balance of trade is a record of the economic transactions between one country and the rest of the world. The balance of payments deficit means excessive purchases of foreign goods and services, or excessive investment overseas. A balance of payment surplus can occur when export of goods and services exceed imports or excessive foreign investments.

**CAP:** The common agricultural policy was founded in 1962. The CAP is based on the internal market, which provides higher prices to producers compared to the world market.

**Common market:** it was established according to the treaty of Rome in 1958; it was called the EEC / EC until 1993 and then the European Union with the Maastricht agreement in 1993.

**Common market organisation:** It is designed to monitor EU agriculture.

**Community preference:** This is one of the important principles of the CAP. The products of community origin are bought in preference by using common custom tariffs and export refunds.

**Common custom tariff:** After the formation of the Customs Union (1968) in the EU, within the EU zone, the common custom tariff (CCT) began to apply for the rest of the world. Qualified majority in the Council decides the CCT rates.

**Compulsory set-aside:** It was introduced by the MacSharry reform (1992) to reduce surplus amounts by reducing use of arable land.

**Customs Union:** An agreement between two or more countries to remove internal tariffs and restrictions on trade such as quotas VER (voluntary export restraint), etc

**Decoupling:** It was planned by the Commission to break the link between production and payments. It was put into effect in 2005.

**Deficiency payments:** Deficiency payments were first used in the UK. It is a subsidy per unit of production. These payments were used to cover income losses of producers where there was no internal protection. In the CAP system, frontier protection is the most visible element in the price and market system. These payments support producers without damaging consumers and keep prices close to world market prices.

**Direct Coupled Payments:** It was planned by the Mac Sharry reform to replace the PSS with direct payments to reduce the trade distortion effect of the CAP. Direct payments are based on the limited or unlimited output / area/ animal.

**Direct income support:** It was planned in Turkey's ARIP programme in 1999 for replacing market support with direct income support.

**Doha Development Agenda:** It was started in November 2001 and is scheduled to end by January 2005. At the new Round of CAP meetings, the EU put forward concrete measures which will contribute to liberalising world trade. It is planned to offer a greater market access for all, lowering the trade-distorting farm subsidies, a sharp reduction for all forms of export subsidies, and also food safety and environmentally friendly production for third world countries' producers.

**Domestic support commitments:** Domestic support commitments are defined in domestic support reduction commitments for agricultural producers.

**Effective rate of protection:** ERP is the percentage increase in value added per unit in an economic activity which is made possible by the tariff structure relative to the situation in the absence of tariffs, but with the same exchange rate.

**External protection:** These are namely the export subsidies, which are given to export the over production and increase the export of the internal producers, which increases the expenditure of the CAP budget.

**Export restitution:** it is paid by the community agencies to agricultural exporters.

**European Monetary System:** European Monetary System was introduced in March 1979 with eight of the nine members of the EU participating in its exchange rate mechanism (ERM), which was introduced in 1972. At that time differences in inflation rates across members of the ERM were as large as 10 percentage points. This caused a difficulty in maintaining stability in the ERM. Fixed exchange rates differences in inflation translate directly into changes in relative price, which shifts competitiveness across countries. Inflation rate differentials narrowed across Europe by the Mid 1980s.

**Fair trade:** The fair trade implies price support for sustainability and equity of traders to decrease the trade distortion effects of protectionist measures (such as tariffs, subsidies or quotas) on the nation's welfare.

**Fischer Franz:** Austrian Commissioner of Agriculture (DG -VI), Rural Development and Fisheries.

**Flat rate area payment:** It is based on the direct payments the farmer received in 2001 or the average of three preceding years. Currently direct aid schemes make no distinction between farmers receiving small amounts and those receiving larger amounts, with the eligibility conditions and administrative and control provisions being the same.

**Institutional policies:** It is the price, which is used in the agricultural support system. It is set according to the proposal of the Commission and consultation of the EU parliament.

**Internal protection:** Internal protection is given to protect producers from exporters outside of the Union. This can be dependent on the 'community preference' principal, which implies products of community origin are bought in preference.

**Legal (explicit) protection:** The annual fixing of the intervention price determines the overall level of support for producers. The fixing of intervention prices (and, following them, threshold prices) influences the prices of products in the market and secures the prices and incomes of producers.

**Market unity:** Market unity means that all agricultural products within the Union will be protected against lower prices of imported products.

**Market price support:** Market price support means price intervention mechanism. This is used to prevent market price stability and to secure producers' reasonable prices.

**Maastricht Treaty:** The Maastricht treaty was signed in 1992; known as the treaty of the European Union. The treaty of Maastricht was put into effect in 1993, when the name of the EEC was changed to the EU. It introduced the economic and monetary Union, established the Ombudsman (a civil servant who considers complaints from ordinary citizens against the public authorities), introduced more qualified majority voting and increased the influence of the EU parliament.

**MacSharry Reform:** The Ray MacSharry reform was introduced in 1992 into the CAP. It was planned to reduce the support price for cattle and cereals 15 %, and for beef 29 %. He introduced the compulsory set-aside into the CAP. The PSS would be replaced with direct payments to support loss of producers from the result of the set-aside application.

**Market price support:** MPS is the most important component of the PSE. It is an amount of price support which is given by a community agency (government) to support producers.

**Merger Treaty:** The three communities (European Coal and Steel Community (ECSC), Euratom, EEC) were knitted together through the Merger Treaty in 1965.

**Method of Producer Subsidy Equivalent:** PSE is a precise way of measuring the transfers from government / community agencies to producers. According to OECD data and current OECD methodology, measurement of the support and use in agricultural policies is classified in three categories; transfers to producers individually, producer support estimate (PSE), transfers to consumers individually, consumer support estimate (CSE), and transfers to general services to agriculture collectively (GSSE).

**Nominal rate of protection:** The NRP protection afforded an industry directly by the tariff and/ or NTB on its output, ignoring effects of other trade barriers on the industry's inputs.

**Non- tariff Measures:** The non-tariff measures are divided into two parts according to their direct and indirect affects. Quantitative measures, such as, import quotas and VER restrict import directly. However, levies, minimum price requirements and technical standards have an indirect effect on import.

**Organic Farming:** The EU rules, which, in the last decade, have been increasingly applied to reduce the chemical substance use in agriculture. It allows a certain non- organic content in ecological products.

**Quotas:** It is in the form of export quotas, import quotas and production quotas, which limit the product amount.

**Sanitary and Phytosanitary measures:** Technical measures for protecting human health or control of animal and plant pests and diseases.

Set-aside: It was first introduced in the 1988 reforms in the form of voluntary set-aside, but later in 1992 it was developed and divided into voluntary and compulsory set-aside to reduce the surplus amount in the CAP

Single area payments decoupled: Single area payments mean breaking the link between subsidies and production. This has also meant that there will be no dependency on production volume to avoid abandonment of production.

Single European Act: The SEA was signed in 1987. All technical, fiscal and physical barriers were removed and all member countries confirmed the objective of the progressive realization of an economic and monetary union.

SLIM Project: Simpler Legislation for the Internal Market. SLIM simplified the rules and reduced the difficulties of the single market. It simplified agricultural measures to ensure facilities for the domestic producer within the market.

EAGGF: European agricultural guarantee and guidance fund (EAGGF) consists of two sub sections: the guarantee section, which finances the support measures of the CAP, and the guidance section, which finances the policies of the CAP. Approximately 90 % of the CAP budget goes to finance CAP support measures, while the other 10 % is used for the implementation of the CAP policies

Price support system: In the CAP, there are different support measures, which were planned to support producers. These are intervention price mechanism, export subsidies and common custom tariff.

Price intervention mechanism: Price intervention is used to prevent an excessive price fall. The state agency intervened in the market to purchase a part of the supply, affectively increasing the product price. It is the price gap between internal and external product prices for cereals.

Producer Subsidy equivalent: PSE is an indicator of the annual monetary value of gross transfers from consumers and taxpayers to agricultural producers. It is measured at the farm-gate level, arising from policy measures that support agriculture, regardless of their nature, objectives or impacts on farm production or income.

Single Currency: It was the planned goal of the Maastricht agreement which was signed in 1992. In 2002 the Euro was put into circulation.

Specific tariff: Specific tariff is a fixed charge per unit of import

Surplus: The products which are excessively produced in the CAP and cause beef and butter mountains.

Subventions: According to the 92<sup>nd</sup> article of the Rome treaty, a proposal of the Commission to the Council gives subvention for financial promotion to less developed regions to create a unified market.

Structural funds: It was designed to achieve social and economic cohesion in the EU

Tacis: EU program which was planned to aid Eastern Europe and central Asia and Mongolia.

Trade creation: Trade creation occurs when internal tariffs are removed between member countries. This contributes to increased trade between member countries.

Trade distortion: Some efficient production of exportable commodities in third world countries is replaced by the insufficient production in the EU, which is prevented by tariff barriers in the countries outside the Union.

Treaty of Rome: It was signed in 1957 to set up the EEC and Euro Atomic Community in 1958. By 1987 the treaty of Rome contained 248 articles divided into six parts, principles, foundations, policies, association, institutions and final provisions. In the Rome treaty, articles 38 – 47 comprise the CAP of the EU. Article 85, comprises rules on competition, taxation and approximation of laws.

**Tariff escalation:** Tariff escalation is the process by which higher tariff rates are applied as a protection from imported products. However, from manufactured products to raw material, tariff rates are increasingly reduced, which compels importers to prefer raw material imports. By doing so, the growth of manufacturing industries in the exporting countries is hindered by the results of this tariff escalation.

**Turkish Grain Board (TMO):** It is the State purchasing office for crops products. TGO every year announce the producer prices in October for cereals.

**Uruguay Round:** The 1994 Uruguay Round reform of the EU. CAP. Agricultural subvention was planned to reduce, and export and import would gain more support.

**Variable levies:** The price difference between internal and world products is applied as a tariff on imported products.

**Value added Tax:** Value added tax is applied as a VAT rate, between 15 % to 25% on prices of all products and services.

**Voluntary export restraint:** VER's are arrangements by which the government of an importing country forces foreign exporters to agree voluntarily among themselves on how to restrict their exports into that country.

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