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AVRUPA TOPLULUĞU ENSTİTÜSÜ
AVRUPA BİRLİĞİ İKTİSADI ANABİLİM DALI

INCOME DISTRIBUTION AND STRUCTURAL EFFECTS OF THE COMMON AGRICULTURAL POLICY: WITH SPECIAL REFERENCE TO ITALY

YÜKSEK LİSANS TEZİ

ÖMER FARUK MIZRAKLI

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DANIŞMAN: Yard. Doç. Dr. M. Sait AKMAN

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TÜRKÇE ÖZET

Birçok önemli çalışmada, tarım kesimini desteklemek amacıyla sıkça kullanılan fiyat destek politikasının iki önemli ve istenmeyen etkiye yol açtığı savunulmaktadır. Bunlardan birincisi bu politikaların sağladığı gelir desteği miktarının üretilen ürün miktarıyla doğru orantılı olması sebebiyle büyük çiftliklerin sağlanan gelirden çok daha büyük oranda faydalanması ve dolayısıyla küçük ve büyük çiftlikler arasında bir gelir adaletsizliği yaratılmasıdır. İkincisi ise tarımsal yapı üzerindeki (yapısal) etkisidir. Fiyat destek politikalarının fiyatı sabitlemek yanında çoğu zaman da yükselttikleri göz önüne alındığında, görece yüksek maliyetli küçük çiftlikler ortaya çıkmakta veya bunlar ölçek ekonomilerinden yararlanmak üzere büyüyememektedir. Bu ise tarım sektöründe gereğinden fazla kaynak birikimine neden olabilmektedir. Fiyat destek politikasına alternatif olarak geliştirilen 'doğrudan gelir ödemeleri' ise bu iki açıdan fiyat destek politikası ile aynı etkileri yapabilmektedir.

Bu çalışmada fiyat destek ve doğrudan gelir ödemeleri politikalarının bu iki etkisinin AB ülkeleri tarım sektörlerinde ve özellikle de İtalya örneğinde ortaya çıkıp çıkmadığı araştırılmaktadır.

Gerçekten de ortak tarım politikası tarihi boyunca büyük ve küçük çiftlikler arasında önemli oranda bir gelir dağılımı adaletsizliği gözlenmektedir. Ortak Tarım Politikasından büyük ölçekli işletmeler küçüklerden çok daha fazla faydalanmaktadırlar. Bununla birlikte yapısal etki göz önüne alındığında incelenen dönemde çiftliklerin ölçek ekonomilerinden tam anlamıyla yararlanabilecek ölçüde büyümemelerine rağmen büyüklüklerde belirli oranda da olsa bir artış gözlenmektedir. İtalya da buna bir istisna oluşturmamaktadır

Bu çalışmada ortak tarım politikasının gelir dağılımını bozucu etkisi vurgulanmakta ancak kaynak dağılımı konusunda tarım politikaları yanında göz önüne alınması gereken diğer ulusal politikalar, çiftçi tercihleri ve teknolojik gelişme gibi faktörlerin varlığına da dikkat çekilmektedir. İncelenen dönemdeki gelişmeler ancak bu faktörler dikkate alındığında açıklanabilir.

İNGİLİZCE ÖZET

In many studies, two unwanted effects of price support policy as an instrument for agricultural support are discussed. Firstly, since the income provided with price support is directly proportional to the amount of production, large farms benefit more than the small farms. Therefore, price support policy cause an unfair distribution of benefits among farms of different sizes. Secondly, since price support policy usually includes raised prices, many high-cost small farms could survive. This would cause an over-allocation of resources in agriculture and thus, worsen the agricultural structure. 'Direct income payments policy' could still create the same problems.

This study aims to examine whether these two effects can be observed in the EU agriculture in general and in Italy in particular.

In fact, during the period analysed, there is an unfair distribution of benefits. Large farm always benefit more from the CAP. In terms of resource allocation and structural change however, the situation is more complex. Although farms can not increase in size to the extent that they can fully benefit from scale economies, there is a slight improvement in sizes. Italian example is not an exception to this.

In this study, it is proposed that although CAP has actually worsen the income distribution in EU agriculture, it is not the only factor determining the agricultural structures. There are other factors like national policies, farmers' preferences and technological progress that should be taken into account to be able to explain the developments in farm sizes and resource allocation in European agriculture.

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INTRODUCTION

The aim of this study is to analyse two major effects of price support and direct income payments policies. The first effect is on the income distribution among farms of different sizes. The second effect is on farm structure in terms of farm sizes. The area of research is the European Union in general and Italy in particular.

The study is based on the hypothesis that both price support and direct income payments worsen income distribution among farms of different sizes and cause an over allocation of resources in agriculture which results in small farm size.

Short run fluctuations and long run downward trend in agricultural prices are the main source of income problem in agriculture. Usually, on the farming side, it is this income problem that justifies government intervention. Public authorities regularly intervene in agriculture to stabilize prices at 'reasonable levels' and thus to provide 'a fair income' for the farmers. In some other cases, direct income payments or other forms of transfer of funds are provided for farmers to ease their hardship.

It is not easy however to determine what is 'fair' and 'reasonable' for farmers. These terms are vague and open to abuse. Stabilising prices could well take the form of raising them. Considering the fact that it is the price mechanism that determines the allocation of resources in an economy, distortion of this mechanism could easily distort the allocation of resources. Alternative methods such as direct income support would have a similar effect. High returns in agriculture would prevent resources especially labour to move to other areas of economic activity where they could be more productive. Therefore, intersectoral labour mobility could be prevented or slowed down. As a consequence, farms could stay small and the benefits of scale economies could not be reaped.

However, limiting support and forcing labour out of agriculture are not always found socially acceptable by public authorities. Better allocation of resources in the economy may not be the primary objective. This inevitably leads to a dilemma between the economic and the social objective of the government. Achieveing the social objectives of supporting a certain part of a society suffering continuously from fluctuating and declining incomes and preventing rural-urban migration may result in the overallocation of resources in this sector which is not

economically acceptable. Reducing support to make them leave their land and achieve the economic objective of better allocation of resources however is a socially problematic issue. The choice is to be made by policy makers and thus hides a lot of politics inside. Usually it is the power of farm lobbies that determines the outcome.

It should be mentioned however that there is a contradiction in the social aspect of farm support. Although it could well make sense to support agriculture for social reasons, the use of price and income support could result in other social problems. First of all, price support favors output; the more a farmer produce, the more he could earn from price support. Therefore, it could be expected that large farms could benefit much more from price support than the small farms. Thus, the income gap within farming among farms of different sizes could be widened. Income support payments system is capable of preventing such an unequal distribution of benefits if distributed accordingly. However, if these payments are distributed based on land area or production, they could create the same 'unfair distribution of benefits' problem as in price support. Since large farms have more land and they produce more, they would still claim the largest share of benefits.

European Union is a major agricultural producer in the world and thus an important player in international agricultural trade. It has inherited a small farm dominated agriculture and since the beginning of its formation has mainly relied on high price support. No effort could managed to change the support structure. In the early 1990s however, due mainly to the external factors, direct income support system as supplementary to price support policy is started to be used. Support prices for some commodities are reduced and the resultant income loss was compensated through direct payments. Direct payments are distributed based on land area and productivity. Over the years, this type of shifts to direct payments has continued. Finally in 2003, these replacing income payments are named as 'Single Farm Payments'.

Considering the fact that the price support policy and direct income payments system based on land area could cause an overallocation of resources in agriculture and keep the farms small and may result in an unfair distibution of benefits, the use of these policies in the EU could be expected to result in these situations.

Italy is a southern member of the Community. Unlike in some northern members, Italian national policies were contributed to the support of the CAP in raising incomes and are

considered to be less encouraging for a transformation in agriculture. Therefore, one could expect to find a much slower pace of transformation in Italy. Moreover, Italian agriculture displays some basic characteristics of Mediterranean agriculture, above all, in terms of product coverage. Therefore, anaysis of previously mentioned effects could be found useful for the future members of the community which have similar farming structures.

Latest data from the 'Statistical Office of the Communities (Eurostat) Agriculture and Fisheries Database' enables us to observe the trend in farm sizes and the distribution of aid. Important to mention here that farm sizes are not given as hectares or any other form of land measure but are rather given as European Size Units (ESU). ESU is calculated based on Standard Gross Margin (SGM) which is the value of production less some variable costs. In this sense SGM is similar to value added. Moreover, Annual Work Unit (AWU), is used instead of labour unit. AWU corresponds to the work performed by a full time agricultural worker.

Evidence suggests an overallocation of resources in agriculture and the continuing dominance of small farms in the Community. In Italy, change in farm size is slow and farms are particularly grouped under smaller size classes. Interestingly however, a slight increase in farm sizes in the Community still exists. A highly polarized distribution of CAP benefits is also evident thoughout the Community in general and in Italy in particular. A small number of large farmers benefit much more than a large number of small farmers.

In the first part of this study, theoretical aspects of agriculture's unique nature, the income problems of farmers and government intervention are discussed. Price and income support policies and their impact on resource allocation and income distribution are also analysed in this part. It should be remembered that the effect of support policies on resource allocation and farm sizes is considered as their 'structural effect' throughout this study.

In the second part, the agricultural policy of the European Union based on price and income support and its development are reviewed. Reforms of the Common Agricultural Policy (CAP) is analysed in detail to find out the changes brought to the price and income support mechanism.

The third part is comprised of the use of data to examine whether the theoretical implications of price and income support on resource allocation and income distribution are observed in the Community and in Italian agriculture.

In the conclusion part, the trends observed in examining the data are discussed together with some suggestions on the future of the CAP.

CHAPTER 1. THEORETICAL FRAMEWORK OF FARM SUPPORT

Agriculture has some unique characteristics that has long formed the basis of interventionist policies. Its biological nature[1] prevents the attainment of a stable equilibrium of supply and demand in the short run and creates a downward trend in prices in the long run. For many, agriculture is the very symbol of market failure.

Both agricultural supply and demand are under direct influence of nature. This creates various problems to the sector. On the supply side; production levels could change from year to year depending on the wheather, pests and diseases. Gathering of the produce is concentrated into certain periods of the year. Agricultural demand on the other hand is both price and income inelastic due to the limited food needs of people. Therefore, supply changes would create significant fluctuations in prices. In the longer run income inelasticity of demand puts a downward pressure on prices since there are relatively higher increases in supply thanks to the improvements in technology.

Short run fluctuations and long run downward trend in agricultural prices are the main source of income problem in the farming sector. Usually, it is the income problem in agriculture that justifies government intervention[2]. Public authorities regularly intervene in agriculture to stabilize prices at reasonable levels for farmers, thus to maintain their incomes at a certain level. However 'stabilising prices' often takes the form of 'raising them'. This inevitably distort resource allocation and income distribution, prevents structural change and creates costly surpluses.

More often than not, intervention hides a lot of politics inside. Farming lobby is much more powerful than unorganized consumer groups and mostly display rent-seeking behaviour. This often creates an agenda that is not always economically rationale but rather serving some political constituencies.

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[1] Agriculture's biological nature is further explained in the following parts.
[2] In addition to the income problem there are other reasons for government involvement in the sector such as the necessity to guarentee a regular food supply as in the case of Europe.

1.1 Supply of Agricultural Products

Supply of argicultural products is known to be under direct influence of nature which can not be fully controlled. Droughts, rain and floods, diseases and pests together with excessively favorable conditions for production can not be totally changed by human being. Therefore the level of output coming to the market could significantly change from one year to the other. Moreover, there are many joint products in agriculture and increase in demand to one of it could cause an excess supply of the other (an increase in the demand for sheep meat would cause and excess supply of wool)[3]. Since agriculture has close links with other industries (processed food, chemicals, etc.) instability could also be transferred to these areas.

Agricultural products have biological life cycles. Qne life cycle could last several months or even years. Thus, after putting resources into production a farmer has to wait to be able to gather his output. This time lag, although shortened by technical progress could not be totally avoided at all. In this short run, output is unresponsive to price changes, it could not be altered. Within this period, the price elasticity of supply[4] is zero.

In the longer run on the other hand factors of production could be changed and output could be adjusted accordingly. Therefore in the longer run, price elasticity of supply is more elastic than that in the short run.

However, long run supply curve is still inelastic ((Ep)s<1). This is because the main production factor; land is nearly fixed and technological improvement has limited effect on agricultural production. Specialized equipment and land usually do not have alternative areas of use thus it may still be profitable to produce even when prices fall[5]. Therefore two separate inelastic supply curves could be drawn. In Figure 1.1, totally inelastic (Ep(s)=0) short run supply (SSR) is drawn as a straight, parallel line to the price axis. Long run supply curve (SLR) is flatter than SSR but steeper than the unit elastic 45 degree dotted line.

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[3] Jeffrey Harrop, *The Political Economy of Integration in European Union*, Edward Elgar, 1989.
[4] Price elasticity of supply is defined as the change in quantity supplied in response to a change in the price of that commodity. It could be formulated as: $Ep(s) = \Delta qs/qs \,/\, \Delta ps/ps$. For further information on elasticities see, David Begg, Stanley Fisher and Rudiger Dornbusch, *Economics*, McGraw Hill, 1997.
[5] Zeynel Dinler, *Tarım Ekonomisi*, Ekin Yayınevi, 2000.

Figure 1.1 *Inelastic Short and Long Run Supply Curves*
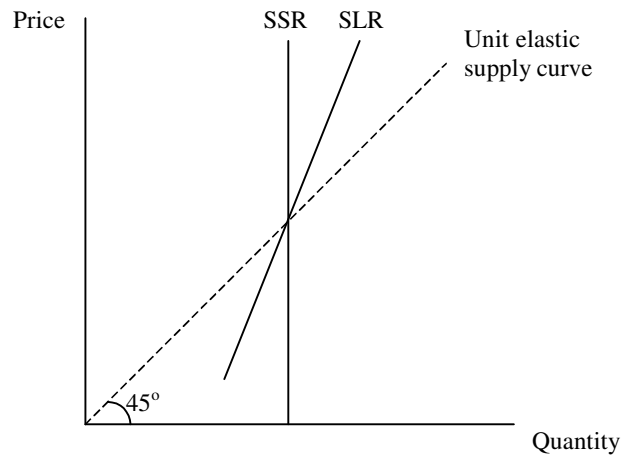
1.2 Demand for Agricultural Products

Agricultural demand also carries some characteristics to the detriment of the farming sector. The first point to note is the low price elasticity of demand[6]. Agricultural demand is price inelastic due to a variety of reasons. Food is a basic necessity for human being and there is a certain amount of food that has to be consumed by every individual every day. It has no substitute and whatever the price, it should be consumed. An increase in the price of food therefore would not result in lower food consumption but people will rather give up other expenses to be able to feed themselves. A decrease on the other hand will not result in a proportional increase in the amount of food consumed since we all have limited nutritional needs[7]. Unit changes in agricultural prices therefore cause less than proportionate changes in the amount demanded. In Figure 1.2 (a), inelastic demand curve is shown.

The second point about agricultural demand was put forward by Ernst Engel, a German Statistician, as early as in nineteenth century. Named after him, Engels Law states that as income rises the proportion spent on food declines. As Hill stated;

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[6] Price elasticity of demand could be formulated as; $Ep(d) = \Delta qd/qd \, / \, \Delta pd/pd$.
[7] Dinler (2000).

"at low incomes people spent most of their income on food just to try to get enough to fill them; as income rises they can soon eat no more in quantity"[8]

The reason for the existence of this law is that people have limited need for food. Thus the increase in the amount of food demanded caused by an income rise will be less than proportionate. This is called 'the low income elasticity of demand'[9]. Although food expenditure may seem to rise as incomes rise it only does so at a decreasing rate. The main part of this increase on the other hand comes mainly from increased expenses to processed food[10]. The part of income spent on basic, unprocessed foodstuff remains almost unchanged.

In Figure 1.2 (b), black areas are representing food expenditures within increasing incomes. As can be seen, total food expenditures are increasing as incomes increase but with a decreasing rate. Area under the white line which is hardly changing in every income level represent the amount of income spent on basic unprocessed foodstuffs. Thus, as income rises, the proportion spent on both processed and unprocessed food declines.

Figure 1.2 *Inelastic Demand and Consumer Expenditure on Foodstuff*

(a)   (b)

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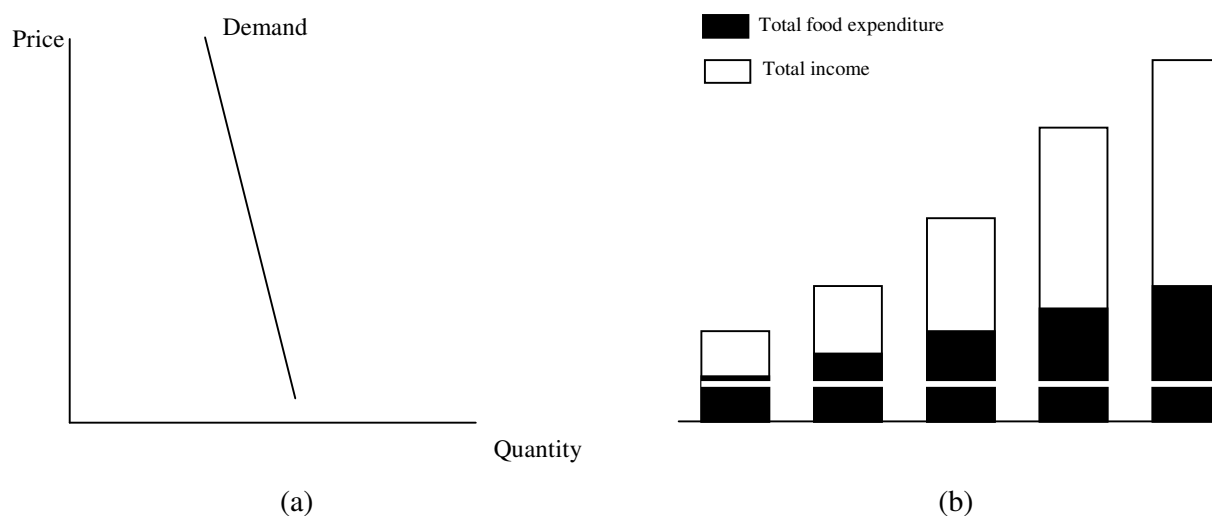
[8] Brian E. Hill, *The Common Agricultural Policy, Past, Present and Future*, Methuen, 1984.
[9] Income elasticity of demand could be formulated as; $E_y(d) = \Delta q_d/q_d \,/\, \Delta y/y$. If $E_y(d) < 1$, demand is income inelastic; if $E_y(d) > 1$, demand is income elastic.
[10] Robert Ackrill, "The Common Agricultural Policy", in Nigel M. Healey, ed., *The Economics of the New Europe*, Routledge, 1995. As further stated by Ackrill; "therefore a larger and larger fraction of total expenditure on food goes to the marketing margin and processing".

1.3 Problems in Agriculture

Agricultural problems could be categorized under short and long runs. These problems are results of previously mentioned specific characteristics of agricultural supply and demand. Interaction of supply and demand in agriculture differs from that in other sectors. As stated earlier, agricultural output is under direct influence of natural conditions which are beyond control of farmers. This inevitably results in gluts or shortages. Together with price inelastic demand, these output changes would cause income fluctuations.

Agriculture carries many characteristics of perfectly competitive markets; unlike industrial or services sectors, in agriculture there are large number of farmers, no restrictions over entry and exit to the sector and homogenous products. Therefore, it is unlikely for farmers to keep control of the amount of output coming to the market by forming cooperatives. While in industry firms could earn above normal profits by lowering their production and selling at above the price of a competitive market firm, agricultural firms face fierce competition from numberless small production units that this would be impossible. Farmers therefore, have to take market prices as given. Cost reducing and output increasing technological improvements in this regard will only result in even lower prices rather than improved profits for farmers[11].

Demand for these products on the other hand is relatively stable over time. Economic growth will not cause proportional shifts in demand for farm products. Over time, people tend to spend more on industrial goods or services rather than additional staples.

1.3.1 Problems in the Short Run

In the short run, changes in the level of output result in fluctuating prices. The magnitude of these fluctuations is particularly high since agricultural demand is inelastic. In Figure 1.3, the effects of a shift in supply curve are shown. Initially, short run supply (SSR1) and demand (DA1) intersect at point A. The equilibrium price at this point is P1 and quantity is Q1. Assume that in the following year, a very favorable wheather gives rise to a bumper crop. This is shown by a rightward shift of the short run supply curve from SSR1 to SSR2. This move inevitably cause the equilibrium price to decrease from P1 to P3. Farm income was

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[11] Theo Hitiris, *European Union Economics*, Prentice Hall, 2003.

initially equal to the area of P1AQ10 but after the supply shift, income will be equal to the area of P3BQ20. It is clear from the figure that the income loss due to the price reduction (P1ACP3) is greater than the income gain due to the increased quantity sold (CBQ1Q2).

However, in the case where demand curve is more elastic (DA2), same supply shift would cause a much lower price decrease from P1 to P2. Therefore the income loss (P1ADP2) would be lower than the income gain (DEQ1Q2). Inelasticity of demand curve magnify the changes in prices resulting from supply shifts and create large variations in incomes.

In the Figure, a contradictory outcome is evident. High agricultural output is not to the benefit of farmers. Named after English economic statistician Gregory King this fact is called 'King Law'. The law says, "at times of good harvests farmer's income declines while at times of bad harvests it rises".

Figure 1.3 *Change in the Short Run Supply*
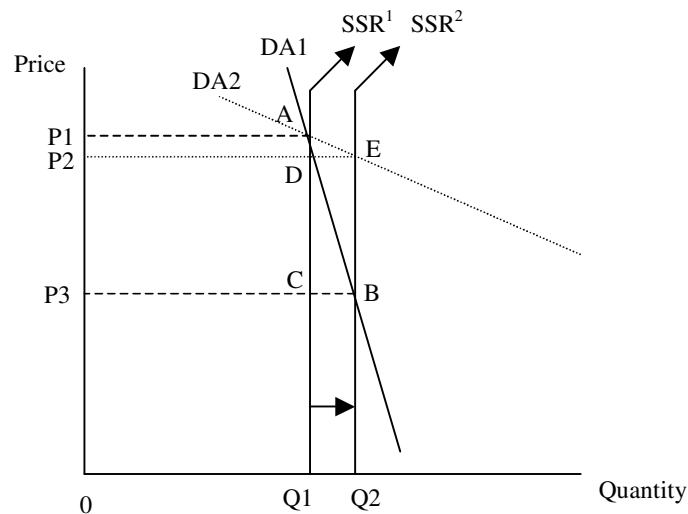
Another problem results from the fact that agricultural supply is also inelastic. Consider a shift in demand from D1 to D2 in Figure 1.4. This shift in demand curve will cause the initial equilibrium price P1 to decrease to P3. This large decline would be much lower if the short run supply curve was more elastic (SSR2). In such a case price would only decrease to P2. Inelasticity of supply curve is another source of wide price and thus income variations in agriculture.

Figure 1.4 *Change in Demand Curve*
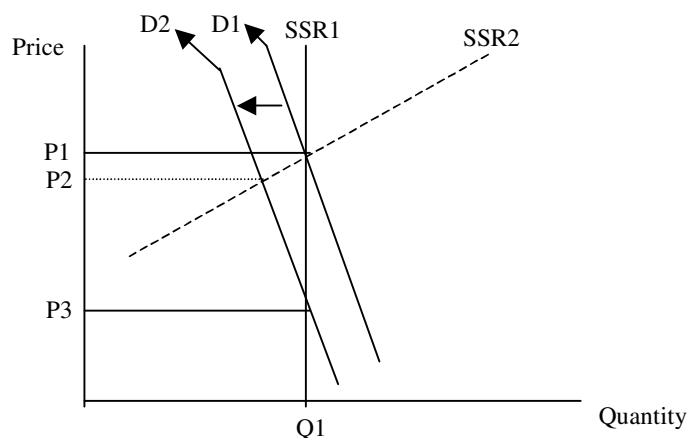
A further problematic issue is that agricultural sector is prone to regular fluctuations in prices and output due to the lag between a price change and the corresponding production response. These fluctuations usually take the form of a cycle. These cycles in prices are called cobweb cycles.Cobweb cycles could take three forms depending on the absolute slopes of supply and demand[12]. In Figure 1.5 (a), both demand and supply have equal absolute slopes. The market is in equilibrium at point A where demand (D1) and short run supply (SSR1) intersect. Equilibrium price is P1 and quantity Q1. Now consider a shift in demand curve from D1 to D2. This shift will move the price along SSR1 up to P2. In this short run, increased demand could not be met by increased output but rather the price has to go up to reach an equilibrium. If it would be possible to simultaneously increase output when demand shifts then the price would move to P3 along the long run supply curve (LRS) rather than P2 on the short run supply curve. In the long run farmers could adjust their output according to the price movements. Since P2 corresponds to Q2 amount of output in the long run, farmers will produce Q2 in the following year and their short run supply curve will be SSR2. Q2 amount of output however, could only be sold in the market at P1 price. This huge decline in price to P1 will induce farmers to produce Q1 amount in next year which would rise the price up to P2 again. This cycle is continuous. In Figure 1.5 (b) the movement of price is shown.

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[12] For detailed explanation on the term 'slope' see Ross L. Finney, Maurice D. Weir and Frank R. Giordano, *Thomas' Calculus*, Addison Wesley, 2001.

Figure 1.5 *Cobweb Cycle*
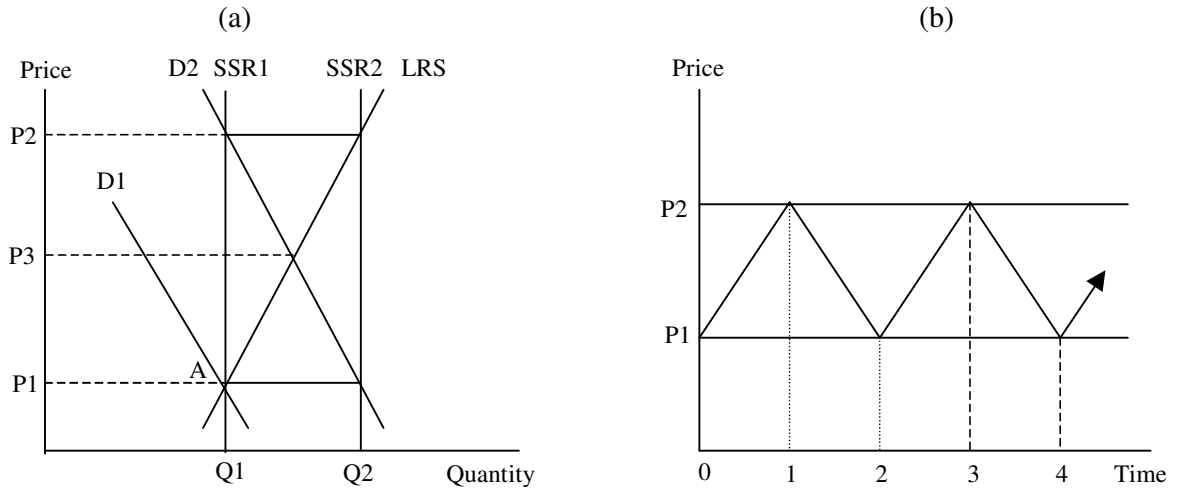
Source: Derived from Colman and Young (1989) and Dinler (2000).

There are two other forms of cycles. In Figure 1.6 (a) the absolute slope of the demand curve is less than that of the supply curve. In this case after several time periods, price will return to its original equilibrium point. This type of cobweb cycles are called 'converging cobweb cycles'[13]. The movement of price is shown in Figure 1.6 (b).

Figure 1.6 *Converging Cobweb Cycle*
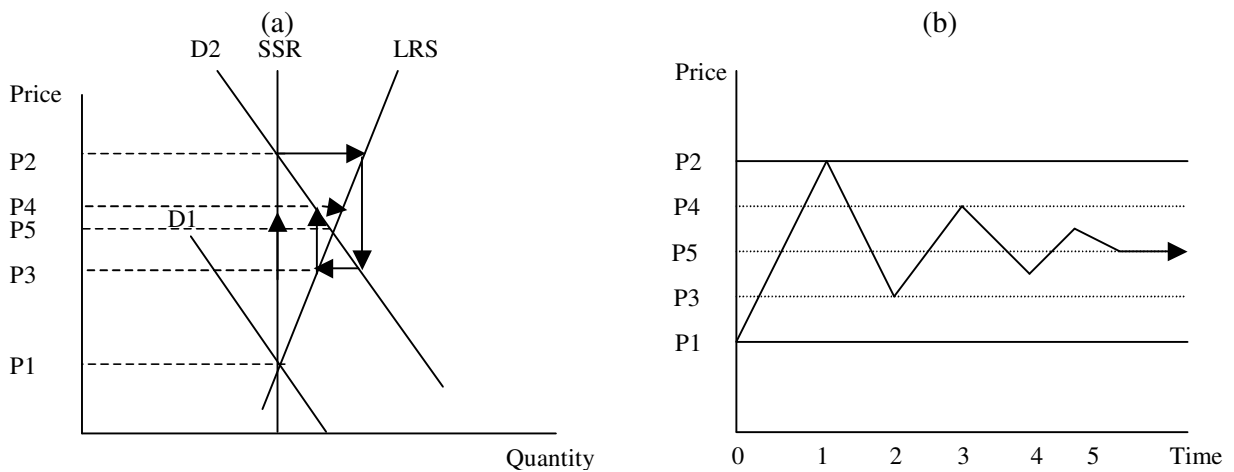
Source : Derived from Colman and Young (1989) and Dinler (2000)

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[13] Graham D. Fitzpatrick, *Microeconomics, New Theories and Old*, Oxford University Press,1986.

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In Figure 1.7 (a) on the other hand, the absolute slope of the demand curve is greater than that of the supply curve. In such a case, price fluctuations will get greater and greater and price will never turn to its original equilibrium point. These type of cycles are called 'diverging cycles'[14]. Price movement is shown in Figure 1.7 (b).

Figure 1.7 *Diverging Cobweb Cycle*
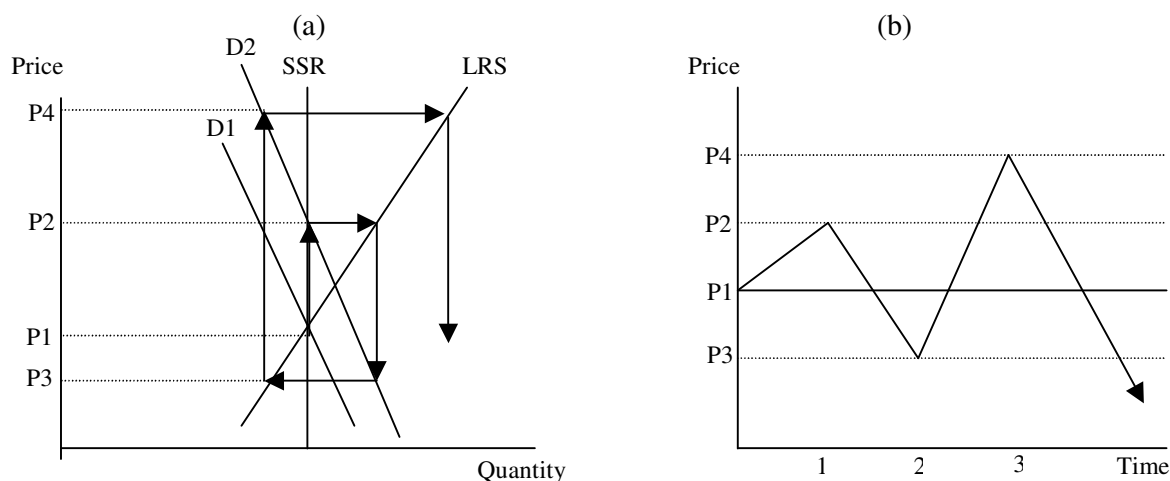
Source: Derived from Colman and Young (1989) and Dinler (2000).

It should be remembered that these lagged adjustments are based on the simplified assumption that farmers never learn from their experiences[15].

Another problem in the short run is the seasonal pattern of agricultural supply. Due to the biological nature of agricultural production, there are only some specific periods in a year that a farmer can gather his output. This type of supply pattern is particularly common in crops. In harvesting periods of the crops, the amount of supply coming to the market is at its peak given that the product can not be stored. In this period, price of that crop is the lowest in the whole year. Once this period ends however, due to a stable demand throughout the year, price would start to rise rapidly. Until next harvesting period, price would continue to rise. In Figure 1.8, this seasonal price pattern could be clearly seen. At harvest times, price is at its trough. Following the harvest period price is gradually rising until the next harvesting period and sharply falling again thereafter.

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[14] Fitzpatrick (1986).
[15] Harrop (1989)

Figure 1.8 *Seasonal Fluctuations in Price*
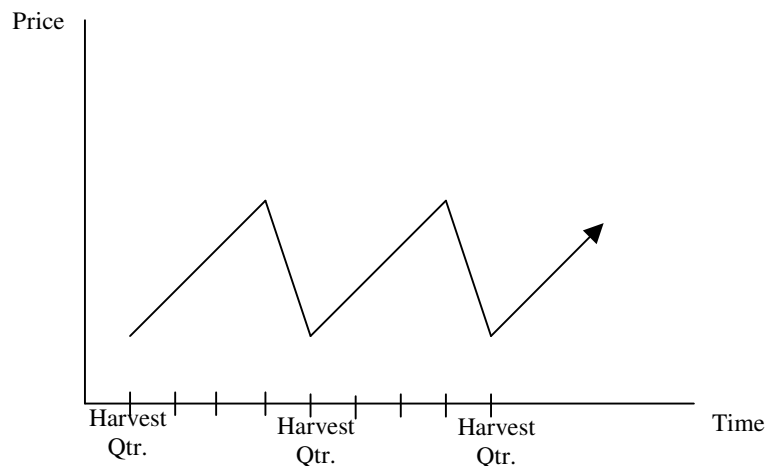
Source: Colman and Young (1989).

1.3.2 Problems in the Long Run

In the longer run, farmers face another serious problem. Especially after World War I, technological progress has significantly increased factor productivity in agriculture. This caused a rapid increase in agricultural output. Technological improvement is the result of many technical improvements like electrification and mechanization of farms, improved irrigation, development of hybrid crops, improved fertilizers and insecticides. The amount of capital per worker increased fifteen times over the 1930-1980 period[16]. Competitive nature of agricultural markets on the other hand do not allow for controlling output coming to the market. Farmers buy high price industrial inputs from imperfectly competitive industrial goods market but they sell their output at the nearly competitive agricultural market[17].

 This increase in supply however could not be absorbed by a correspondingly high demand. As stated earlier agricultural demand is income inelastic. Therefore, increasing wealth of the society is not turning to farmers as proportionally high demand for their products. As put

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[16] Campbell R. McConnell and Stanley L. Brue, *Micro Economics*, McGraw Hill, 1993. McConnell and Brue state that in 1820 each farm worker produced enough food and fiber to support four persons; by 1947, about fourteen. By 1991, each farmer could support one hundred people. This would give an idea of the increase in productivity.
[17] For further information see; McConnell and Brue (1993).

forward by Dinler[18] in a more detailed way, long run agricultural demand could be formulated as follows;

$$D=P+Ey(d).Y$$

In this equation, D denotes increases in the demand for agricultural products, P denotes population growth, Ey(d) denotes the income elasticity of demand and Y denotes income increase. The higher values of Y, Ey(d) and P; the higher would be the increase in demand for agricultural products. However, in most of the advanced countries today, population growth is very low. Considering also the low income elasticity of demand, even large income increases could not push up agricultural demand. Industrial demand for agricultural goods is also declining while synthetic commodities are substituted for these products[19].

As a consequence, agricultural demand lags behind rapidly increasing supply and exerts a downward pressure on prices. Figure 1.9 shows that starting from point A where initial demand (D0) and supply (S0) intersect, in every subsequent period, the shift in supply is greater than the shift in demand. This creates a long term downward trend in prices of agricultural commodities.

Figure 1.9 *Long term trend in agricultural prices*
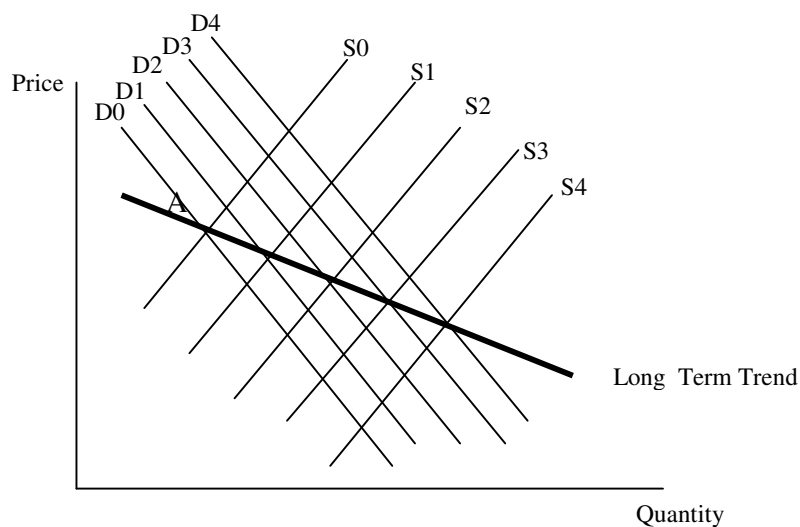
Source: Colman and Young (1989)

[18] Dinler (2000).
[19] S. F. Goodman, *The European Union*, MacMillan, 1990.

Most important aspect of these characteristics of agricultural prices is that it has a direct influence on the returns to farmers. On the one hand, short run price fluctuations cause unexpected movements in incomes and on the other, long term declining trend slowly erode the wealth of producers.

Besides these detrimental effects on incomes, such price movements creates some other undesired outcomes. Unstable prices could make it impossible for farmers to make investment decisions. New technology in the form of capital investments therefore, could hardly diffuse in agriculture. Labor intensive, unproductive practices could persist and farms could stay small. Producers would adapt themselves in such a way as to be least harmed by the unstable market. There are limited meachanism in private markets to hedge the risk of farming[20].

Facing the the high price risk of the market, a farmer could well prefer to produce for his own family rather than for the market. This, however would cause serious problems. Farmers' productivity would decline since they would keep away from specialization and produce a variety of products for their needs. In urban areas, these would create serious food shortages and boost prices[21].

1.4 Government Intervention

Agriculture has been a sector where regular public intervention is usually deemed necessary. The justification for intervention has both social and economic grounds. First of all, it is clear that agriculture, since it provides food as the basic necessity of human being, serve the existence of the society and thus could not be regarded as having the same importance with any other industry. Every government feel obliged to provide mechanisms for the well functioning of the agricultural sector.

The first reaction from governments is to remove the inherent price and income fluctuations and therefore, maintain farming as a sustainable economic activity. It would surely be easier to invest in agriculture with stable returns which would, in the long run, bring about the development of the sector. Moreover since agricultural prices are also a major determinant of wages in other sectors and thus the price of low value added final goods and services,

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[20] Hitiris (2003).
[21] For a detailed analysis of the effects of price problems, see; Dinler (2000).

accordingly adjusted, stable agricultural prices are of significant importance to the rest of the economy[22] It would not be socially desirable that farmers leave rural areas and move to cities in large numbers with hopes of finding higher paying jobs which do not exist except in times of high economic growth.

Moreover, it would be unacceptable for some part of the society to earn less and less than the rest. As stated earlier agricultural prices as the main determinant of incomes of farmers tend to decline in the long run and together with relatively increasing industrial prices of goods that farmers consume, leave farmers in difficulty. This social aspect of farm problem has gained particular importance after the World War II[23].

The role of agriculture as the basic necessity for human life render it a highly strategic sector. No country would like to be dependent on other countries for food especially when there is a risk of conflict. To achieve a certain degree of food self-sufficiency is mostly considered necessary. Development of domestic agriculture without facing the threat of foregin competition therefore, gain particular importance. In the early formation years of the European Community, for example, this motive played a major role in the creation of Common Agricutural Policy since memories of food shortages were still fresh on European minds[24]. Related to this argument is the potential balance of payments problems that a country could face if she is importing a major part of her food. Price inelasticity of demand would make it even harder to prevent the the outflow of foreign exchange.

Another strategic reason, although it is rather a past phenomenon, is that agricultural population has constituted the backbone of infantry of armies not only because farmers have been large in number but also because they were courageous and unquestioning[25]

Reasons stated above are only constituting one part of the justification for intervention. There are some other reasons which should be mentioned in order to fully understand the intervention motive. Political concerns, for example, play an important role in the protection of agriculture.

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[22] Miroslav N. Jovanović, *European Economic Integration, Limits and Prospects*, Routledge, 1997.
[23] Hill (1984).
[24] Neill Nugent, "The Government and Politics of the European Union", in Neill Nugent, William E. Paterson and Vincent Wright, eds., *The EU Series*, Palgrave Macmillan, 1989.
[25] Graham Hallet, *The Economics of Agricultural Policy*, Basil Blackwell, 1968.

As Hill puts it rightly;

"Farmers tend to be rather vociferous. Their organizations are effective lobbying bodies because of the large numbers of voters which they represent. Also it is likely that political ears are particularly receptive to farmers' arguments since an undue proportion of politicians are themselves farmers or landowners"[26].

Another, more recent argument for intervention in agriculture is that agriculture has a role in natural conservation and that agricultural land is an unavoidable part of human habitat. There is a growing demand in many societies for the preservation of the peaceful peasant's life[27]. Moreover there is a growing concern about food health and safety. In Europe, in mid 1990s, BSE/CJD crisis necessitated a deeper consideration of these issues by policy makers[28]. Agricultural policy making in today's world inevitably considers food health and safety issues since there is growing public awareness especially in developed nations.

1.4.1 Price Support

In order to stabilise agricultural prices and thus incomes, governments regularly intervenes in the market. The main aim of public authorities as stated earlier is usually to remove the short run fluctuations in prices, reverse the declining trend in the long run and thus eliminate the income problem of farmers. This would allow the existence and continuity of farming activity which is vital for the society. Since stabilised prices are also capable of meeting various other objectives stated above (political, self-sufficieny in agriculturural production, etc.), it gains particular attention from governments. There are various types of price support policy[29]. What we analyse within the context of this study however, is the one that an intervention price is set and maintained via intervention buying by public agencies, import tariffs and export subsidies. Throughout this study when we refer to the concept of 'price support', we specifically mean only this type of price support policy which was also extensively used by the European Community. Although particularly designed to protect farmers from the vagaries of the market and through this, serve the society in general, if not properly implemented, price support policy would create serious distortive effects.

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[26] Hill (1984).
[27] Jovanović (1997).
[28] Nugent (1989).
[29] For a detailed analysis of various types of price support policy see; Hallet (1968).

Unfortunately, price support policy is open to misuse by its very nature. Support price levels are of significant importance since it is the 'price mechanism' that determines the allocation of resources in an economy. The level of agricultural support prices however, do not always reflect economic rationale. Price policy usually involves increasing of prices above their market levels as well as stabilising them. As stated by Hallet;

"…..stabilising prices is often a euphemism for 'raising' or less frequently 'lowering'. Stabilising means raising prices when they are abnormally low and lowering them when they are abnormally high. If they are 'stabilised' at a 'peak' or 'trough' level, they are raised or lowered as well as stabilised…..Broadly speaking, the effect of price policies has been to hold food prices up in the developed countries and to hold them down in the less developed countries"[30]. In Figure 1.10, the mechanism of a typical price support policy could be seen. Initial market equilibrium is at the point of intersection of supply and demand and equilibrium price is P0 and quantity is Q0. Assume that the government decides to implement product price support policy and raise the price to P1 above the equilibrium level. At this price however, quantity supplied is 0Q2, while quantity demanded is 0Q1. Q1Q2 amount of output should be withdrawn from the market by public authorities in order to maintain the P1 price level.

Figure 1.10 *Price Support Mechanism*
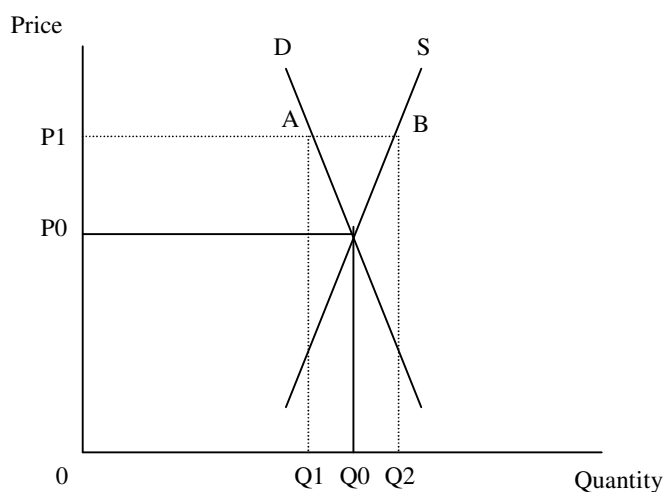
Source: Connell and Brue (1993).

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[30] Hallet (1968).

The most obvious and immediate problem caused by price increases is the creation of surpluses. As can be seen from the figure, the higher the price, the larger would be the surpluses. Consumers would surely lose since they would pay a higher price (P1) for food and they consume less (Q1) than before (Q0). As stated ealier at low income levels people spend most of their income on food and thus it is the poor consumers who would suffer most from this policy. Moreover, intervention buying should be financed from public revenues. This budgetary loss is equal to the area of ABQ1Q2 and it could be regarded as a societal loss.

1.4.1.1 Scale Economies

The concepts of 'economies and disecenomies of scale' are familiar to economics reader[31]. They are also of significant importance in agriculture. First of all, it should be remembered that 'the average cost of production' is the total cost divided by the level of output.

Most common pattern of average costs is a U-shaped curve. It is economies and diseconomies of scale that give the curve in its U-form. If increasing output brings reductions in the long-run average costs, there are 'economies of scale' or 'increasing returns to scale'. This is the case at low output levels. If on the other hand, long-run average costs rise as output increases, there are 'diseconomies of scale' or 'decreasing returns to scale' and this is generally observed at high output levels.

In Figure 1.11, up to point A, there are economies of scale since long-run average cost is declining as output increases. At points after A on the curve, since long-run average cost is rising as output increases there are diseconomies of scale.

Every point on the long-run average cost curve represent a different quantity of fixed production factors. Holding these fixed factors constant, various short run average cost curves could be drawn. Long run average cost curve represent the least costly way of producing each output when fixed factors could be changed.

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[31]For a detailed explanation see; David Begg, Stanley Fischer and Rudiger Dornbush, *Economics*, McGraw-Hill, 1997.

Figure 1.11 *Economies and Diseconomies of Scale*
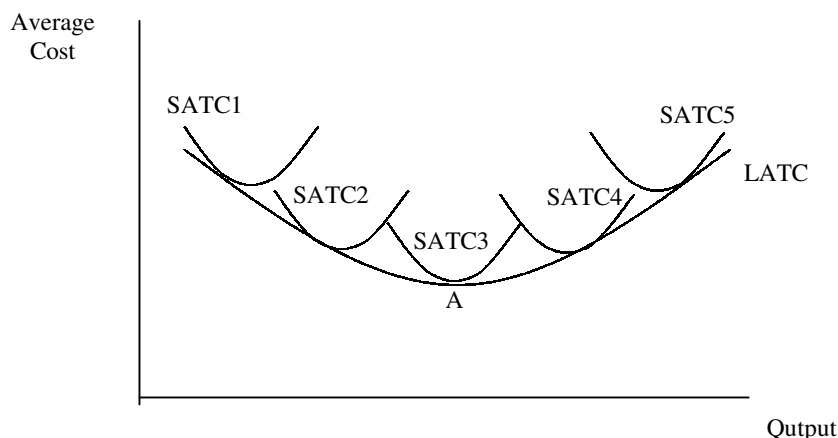
Source: Begg, Fischer and Dornbusch (1997).

The main reason for the existence of economies of scale at low output levels is the 'fixed costs' required by the firm to be in the business even if it does not produce. Fixed costs thus are costs that do not vary with the output. At low output levels a firm could well increase its output without any increase in fixed costs. Thus from the same amount of fixed cost, firm could obtain more output. This allows the spread of fixed costs to additional output and decrease the average cost per unit of output. Specialization that usually results from large size also brings cost reductions by increasing output per worker. Moreover, machinery is indivisible and only at high output levels it would decrease average unit costs. Diseconomies of scale on the other hand would result from the difficultuies of managing large firms. Bureaucracy, co-ordination problems and other difficulties as well as geographical disadvantages would result in higher average costs. Small farms therefore have to bear high costs, while larger farms take the advantage of scale economies and reduce their average costs. This cost difference between small and big farms should be considered when analysing the effects of agricutural policies.

1.4.1.2 Farm Size and Farm Income Problems

It is stated earlier that 'stabilising' agricultural prices regularly includes an element of 'raising' them. Artificially high prices however, creates detrimental effects in terms of resource allocation. Price meachanism in an economy is the main determinant of resource allocation. Production factors tend to move to areas where they have higher returns. High

prices in agriculture therefore, inevitably result in over allocation of resources in agriculture[32] In the absence of price support these resources especially labour would move to other areas of economic activity where they could be more productive. An influential study by Tarditi[33] clearly explains this mechanism. Tarditi first describes a free market scenario where there is no government intervention and the agricultural market is open to international competition. In this scenario domestic prices are equal to world market prices. In Figure 1.12 this price is shown as PW. These conditions would only allow the existence of firms that have low production costs. These firms are, as expected, internationally competitive firms. Firms of type A and B in Figure 1.12 are such firms which have different sizes and thus different average and marginal cost curves. A type firms could exploit scale economies due to their large size and thus have the lowest poducton costs. It should be remembered that in perfectly competitive markets marginal revenue is equal to the price. Price and marginal cost will determine the level of output[34]. Therefore, firms of type A will produce QA amount of output. The difference between its costs and revenues is the firm's super-normal profit (Pwtzy). B type firms on the other hand, could not exploit all its scale economies due to its smaller size. Firms of type B therefore, would only make normal profits. Some other types of firms could appear between firms of type A and B.

Figure 1.12 *Firms Under Free Market Conditions*
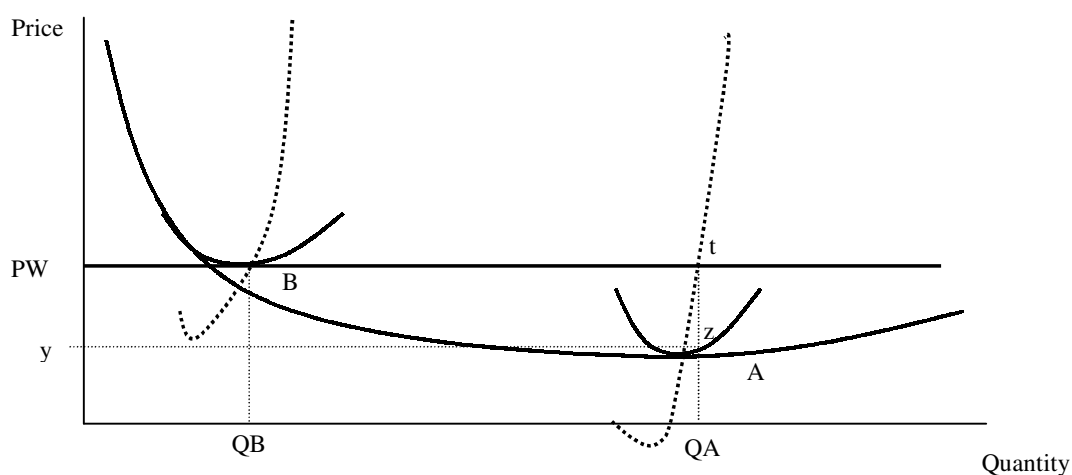
Source: Tarditi (a) (2003)

Tarditi then, describes a price support scenario. In this scenario market price is increased via intervention buying and import restrictions. In Figure 1.13, intervention price is PC. This price inevitably allows the creation and survival of some other types of firms. These firms have higher average costs.

Firms of type C, for example, although they are technically efficient, have very small sizes which prevent the exploting of scale economies and reducing average costs. These type of firms could survive in a price support case. However, the output of C could well be produced at a much lower cost by other efficient firms of type B or A. D type firms on the other hand, are large enough to to benefit from scale economies. Their average cost would be much lower if they employ a newer technology. But high market prices allow them to use backward production techniques but still to stay in the market.

Creation of firms of type C and D are examples of how price support policy cause inefficent allocation of resources[35]. Without increased prices, resources trapped in agriculture could be employed in other areas of economic activity. By allowing the existence of these inefficient firms in the sector, price support policy is also preventing structural change in agriculture. Structural change here refers to the transformation of farms to be able to take advantage of scale economies and of the spread of new cost-reducing technologies.

Tarditi identifies yet another distortive effect of price support. It is related to income distribution. High prices in the market cause a significant rise in the profits of firms of type A and B which are already economically viable without government intervention. Increased prices cause these firms to expand their production (Firms of type A will increase their production from QA to QA1 and firms of type B, from QB to QB1) and sell at supported prices thus gain a significant amount of rent (their total profits now are; for A; PCtzy and for B; PCqrs). On the other hand firms which have higher costs but still manage to survive in protected markets could not benefit from high prices to the same extent as the efficient, low

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[35]Allocative efficiency can be defined as; the market condition whereby resources are allocated in a way that maximises the net benefit attained through their use. A much broader definition on the other hand could be found in, Vural Fuat Savas, *Piyasa Ekonomisi ve Devlet*, Liberte, 2000. Savas states that the concept of 'efficiency in production' tries to determine the allocation of factors of production to various production activities. According to him, the Pareto Approach defines production efficiency as fallows; 'if it is not possible to increase the production of a type of good or service without having to lower the production of another type of good or service then the production could be regarded as 'efficient'. If on the other hand, it is possible to increase the production of one type of good or service without decreasing another type of good or service, production is said to be 'inefficient'.

cost large firms. In terms of income distribution, therefore, price support policy is favoring large and efficient firms not only because their cost is much lower but also because they produce much more.

Figure 1.13. *Firms Under Price Support*
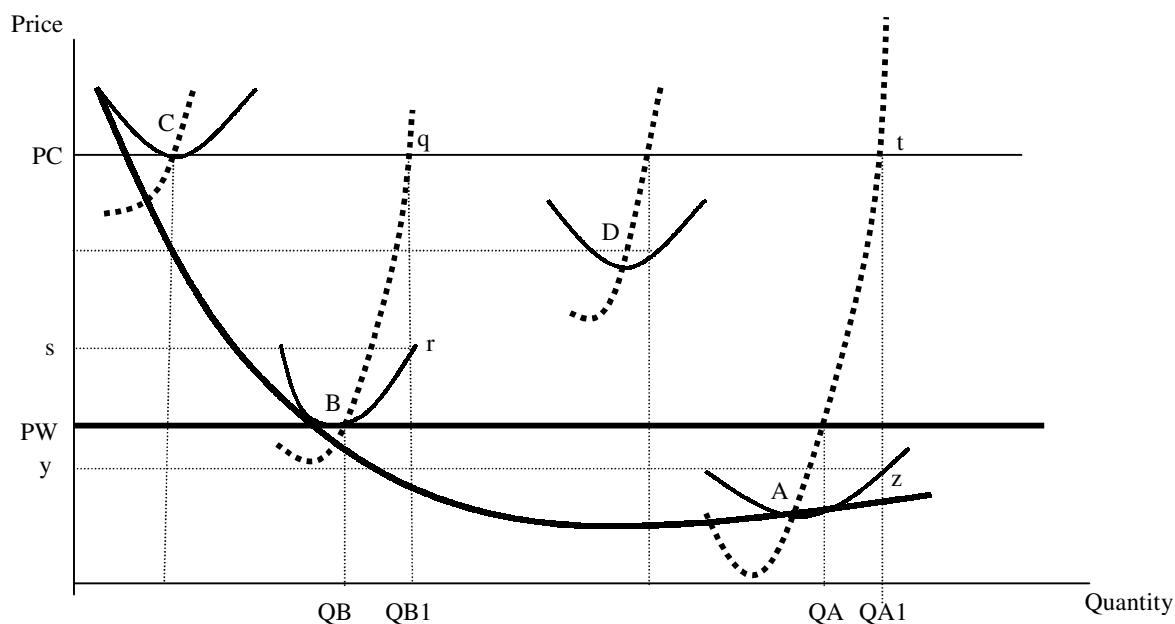
Source: Tarditi (a) (2003).

Moreover, farmers overall could not fully benefit from the income transferred to agriculture. Due to the fact that the costs of farms are earnings of some other non-agricultural sectors, most of the income transferred to agriculture unintentionally flows to these sectors in the form of high production costs of farmers. As Tarditi clearly explains;

"The expansion of production generated by price support policies entails a shift in the demand for inputs and therefore a higher input price, according to the elasticity of input supply. A share of income transferred to farms then flows to the firms producing intermediate products and to owners of land or capital who are not directly involved in farming"[36].

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[36] Secondo Tarditi, "Agricultural Prices and Farm Incomes", *European Review of Agricultural Economists*, 12 (1-2), 1985.

1.4.2 Direct Income Payments

Direct income support is often viewed as an alternative to price support policy. Wıth price support, it is almost impossible to control the destination of income transfers[37]. As stated earlier, price support policy also allows large farmers to benefit more to the detriment of small farmers. Direct income payment on the other hand, is independent of prices. It is a direct income transfer to farmers which allows market determined price adjustments. The criteria for gaining these transfers should be determined by the authorities. The most reasonable method is to base these payments on 'need'. In this way, payments could be oriented towards small farmers who are in most need to eliminate income inequality. It is important to note however, that the payments could well be distributed based on land area rather than the need. In this case however, large farms would still benefit much more than the small ones since they have more lands. Thus, direct income payments and price support would have the same income distribution effect if income payments are based on land area.

Moreover, in terms of the effect on structure, due to the fact that these payments increase factor returns in agriculture, they could well cause the overallocation of resources in agriculture and prevent structural change as happened in price support policy. As Tarditi puts it rightly;

"It is rather obvious that public help eventually increasing workers (largely coinciding with entrepreneurs in agriculture) income will retain workers in the sector or economic activity whatever it is. This comes directly from the theory of the firm. If the entrepreneur is maximising his income, he will remain (or move to) the sector (economic activity) that lets him earn the largest income, no matter if this income comes from actual production socially justified or from government subsidies"[38].

Therefore, these transfers should be designed to last only for a limited time. Moreover, within this time, payments could be gradually reduced to further facilitate inter-sectoral resource mobility. As Hill states;

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[37] Tarditi (1985).
[38] Secondo Tarditi, interview by author, May 2005, University of Siena, Siena, Italy.

"It is generally proposed to limit direct income payments either to the present generation of farmers or to a fixed period-say twenty years. Small farmers would then not be replaced by their heirs; as they departed, their vacated land would be added to neighbouring farms. Thus, agriculture would gradually change, from predominantly small inefficient farms to large efficient ones. This transition would have occurred without disadvantaging the existing generation of farmers"[39].

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[39] Hill (1984).

CHAPTER 2. ORIGINS AND DEVELOPMENT OF FARM SUPPORT IN THE COMMON AGRICULTURAL POLICY (CAP)

West Europe has long had a tradition of agricultural protection. Special treatment to the sector began in the 1920s and 1930s[40]. During World War II, some extra measures to secure food supplies were introduced. Following the war, most governments found it highly necessary to maintain agricultural self-sufficieny not only because of the experienced food shortages during the war but also to relieve balance of payments difficulties. Thus by 1950s, in West Europe, there was already an array of policies towards agriculture to be able to assure food supplies and assist farm incomes. Some of these policies were the continuation of pre-war measures and some of them were the ones introduced during the war[41]. The generally used method was price support although the level of support prices vary among countries.

The formation of the European Community posed a new challenge to the founders; to create a common policy from national policies which were designed to tackle the divergent structures of the agricultural sectors[42]. Such a policy had to accommodate differing national interests. This would surely have significant implications on European agriculture.

The response to this challenge was the formation of a policy based on high support prices; higher than world prices and usually above equilibrium levels[43]. High prices thereafter, constituted the backbone of the policy and could not be reduced or tied to a specific forward-looking program. Improving the structure of farming attract neither adequate attention nor reasonable amount of funds. As stated by George;

"…..agricultural policy itself did not continue to develop. What we know as the CAP is in effect only one part of a common agricultural policy. It is a policy on agricultural price support" [44].

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[40] A. Milward, *The European Rescue of the Nation-State*, University of California Press, 1992.
[41] Keith S. Howe, "The European Agricultural Industry", in David Dyker, ed., *The European Economy*, Longman, 1992.
[42] Divergencies were in terms of; farm size, ownership, degree of capital use, etc.
[43] Robert Ackrill, "The Common Agricultural Policy", in Nigel M. Healey, ed., *The Economics of the New Europe*, Routledge, 1995.
[44] Stephan George, *Politics and Policy in the European Union*, Oxford University Press, 1996.

Direct income payments introduced in early nineties was the first step towards a more economically rationale agricultural policy. The lack of political will for real reform however, rendered the system of direct payments incapable of transforming the sector.

2.1 Agriculture in Europe

Before moving further into the ananlysis of the Common Agricultural Policy (CAP) of the European Community (EC) it is necessary to have a look at the evolution of agriculture and its protection in Western Europe. Such a reminder would help reader in grasping the reasons of the CAP taking its original high-protection form.

In medieval Europe, the land was separated into many plots and each peasant was cultivating a number of widely scattered plots. The overall control of the land and the peasants belonged to the lords of the manor. This structure continued for a long time until it changed in two different ways. On the one hand, the lords of the manor became the landlords and consequently possessed larger fields and peasants in these lands turned into tenant farmers and landless labourers, one the other hand the peasants became the owners of the land they cultivate. Consequently, these peasant-owned farms were small and composed of several scattered plots. Following the peasant revolts, the small peasant-farm became the dominant type of farm around continental Europe. In some cases however, nobles managed to maintain their lands, so in some areas the small pesant-owned farms and larger farms lie side by side.

  Nineteenth century posed a new challenge to the European agriculture. The New World emerged as a strong rival. The establishment of large farms together with the development of railways and steamships gave America a significant cost advantage. Large quantities of cheap grain began to appear in European ports in 1870s. Small and inefficient European producers began to demand protection. High tariffs were adopted. Agricultural protection in Europe became a common phenomenenon ever since. Late 1920s and early 1930s were periods of particularly high protection[45].

Agriculture in Western Europe therefore, is characterized by a large number of small and high-cost farms and high protection since late nineteenth century. Although much less in

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[45] Hill (1984).

number, there were also efficient larger farms which have been inevitably profited from agricultural protection.

2.2 Emergence of the Agricultural Policy

The Common Agricultural Policy of the European Community (the CAP) is created shortly after World War II (WWII) when memories of food shortages were still fresh on the minds of the Europeans.Thus, in the post-war period, the priority was given by the governments to the achievement of an adequate level of food production and remove the dependency on other countries.

The common response to the post-war agricultural challenges in most western European countries was to raise protection. Price support policy took a major place among the particular tools selected. This policy was believed to be able to increase output and to provide stable incomes for farmers.

The formal start of the process of forming a common policy for agriculture in Europe started in 1950 in the Council of Europe which was named *the 'Green Pool' negotiations*. The attempt was to create a Western European Agricultural Community. However, fifteen countries which took part in the negotiations between 1952 and 1954 have failed to reach an agreement.

 A second attempt came in 1955 in Messina. A report from Paul-Henri Spaak, which eventually became the two treaties of Rome laid down the most likely objectives of a Common Policy for Agriculture. They were to form the objectives in the Treaty of Rome. However no detailed explanation on how these specified objectives would be achieved was provided. The reason for this lack of clarity was considered to be the overall desire for progress on a United Europe. Any possible delay that could result from disagreements over specific sectoral issues was unacceptable[46]. Therefore, it was stated that a common policy for agriculture was not obliged to be completed until the end of the twelve-year transition period of the achievement of a Common Market.

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[46] Andrew Fearne, "The History and Development of the CAP 1945-1985", in C. Ritson and D. Harvey, eds., *The Common Agricultural Policy and the World Economy*, CAB International, 1991.

As a cornerstone in the creation of the CAP; the Treaty of Rome came in 1957. In Article 3 of the Treaty the essential elements of a customs union and some common policies involved including a common policy on agriculture were outlined[47]. Treaty established the broad objectives of the Common Agricultural Policy in Article 39.

The objectives were as follows;

1- to increase agricultural *productivity* by promoting technical progress and by ensuring the *rational development* of agricultural production and the *optimum utilization* of the factors of production, in particular labour;

2- thus to ensure a *fair* standard of living for the agricultural community, in particular by increasing the individual earnings of persons engaged in agriculture;

3- to stabilize markets;

4- to assure the availability of supplies;

5- to ensure that supplies reach consumers at *reasonable* prices (*Italics added*).

The second and the third objectives were intended to avoid the problem of low and variable incomes which is inherent to agriculture as stated in the first chapter.

Article 40.3 of the Treaty, did not propose any limit on possible support instruments but suggested the regulation of prices, production and marketing aids, storage facilities and stabilization of imports[48].

One of the key players in the formation of the Community; France was also critical in the formation of the CAP. In France, there was a constant pressure on all the parties of the centre-right from ineffcient small farmers who wanted to retain their independence. This practically means; the sector had to be subsidized by the state through the national price support system. Thus for the French, the reward for participating in the common market in industrial goods should have been the subsidization and maintaining of small farmers[49]. The priority given to the agricultural policy is somewhat shared by the other founding members of the Community.

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[47] Hill (1984).
[48] Robert Ackrill, The Common Agricultural Policy, Sheffield, 2000.
[49] George (1996)

Treaty of Rome gave the task of proposing a detailed CAP to the Commission. As a first step, a conference was held in Stresa in 1958. Ministers of Agriculture, representatives of food industry and farmers organizations all participated in the conference to discuss the differing national policies and their replacement with the new common policy. The Conference conclusion has put particular emphasis on the need to improve the efficiency of family farms as the basis of the European agriculture and to protect them at all costs[50]. Price support mechanism was on the agenda. It also stressed the need for a structural policy to ensure a rational resource allocation within the Community. Other issues agreed were, to increase trade within the Community without threatening established economic and political relations with third countries and to avoid surpluses by keeping supply and demand in balance.

There was however, not a total approval of the price support policy by everybody involved. Sicco Mansholt, the commissioner responsible for agriculture, in particular, was aware of the risks of supporting prices. Commission, in its 1958 report on the activities of the Community stressed the doubts over price support policy and stated that it would serve no useful purpose to try improving the structure of European farming if prices are set at levels that could cover the higher costs of inefficient farms[51].

In 1960, the Commission's proposals to the assembly cleared the unsettled issue of the policy instruments to be used. Comprehensive support was suggested for most of the products. EEC price would be raised above world market levels by means of intervention buying, and variable levies on imports. Draft regulations designing the market mechanisms for cereals, pork, eggs, poultry, fruit, vegetables, and wine were submitted in 1961. After long negotiations, the Council finally reached an agreement over the levy system and the institution of market organisations. The critical issue of setting prices however, was left undecided to be discussed at a later date.

Throughout the process, three basic principles of CAP had emerged; -*market unity;* a single agricultural market and common pricing, -*community preference*; protection against cheap imports and exports from other EC countries having the first access, -*financial solidarity;* financing of related expenses by the Community.

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[50] Fearne (1991).

[51] Commission of the European Communities, *First General Report on the Activities of the Community*, 2000, available at [http://europa.eu/generalreport/en/2000/index.htm].

Setting up the prices was surely the most contentious issue. Every country had its own position on common price levels for various commodities which were shaped by their particular agricultural structures. However the forthcoming GATT (General Agreement on Tariffs and Trade) negotiations necessitated a certain decision on common prices. In 1964, the Commission, aware of the lack progress on this issue, proposed the establishment of common prices for cereals, pigmeat and poultrymeat and eggs for the coming harvesting year. Cereals were the key sector since they are usually used as inputs to the production of other products (pig and poultry)[52]. The price of soft-wheat for example was much higher in Germany than in France. Thus, a high price level would both damage the balance of payments situation of some member states and would be inflationary in France. A low price level on the other hand, would fall short of the desired objective of raising incomes and would create a severe reaction from German farmers. Deadlock ended by France's ultimatum to withdraw from the Community. German government forced to revise its price proposals. Finally, the agreement came before the end of 1964, not to come into force until 1967. It introduced a target wheat price that is lower than the German, Italian and Luxembourgian levels but higher than other member states' levels and much higher than the French level. Temporary compensation was decided to be granted for farmers in Germany, Italy and Luxembourg.

However as Hill argues;

"The common price for wheat was not a weighted average of the previously ruling national prices but instead comfartably exceeded this figure. Having fixed wheat prices at a high level, the prices of other cereals and of livestock products derived from them, had to be correspondingly high. This naturally caused an upward pressure on the prices of beef and dairy products negotiated later……..the high prices agreed for cereals necessarily set the tone for other products"[53].

It is clear from Hill'argument that when setting common prices an objective method such as taking the weighted average of previous national prices was not used. Then it was the political power that was the key to the determination of common prices. Therefore one of the earlier aims of the policy; setting prices in such a way as to avoid surpluses and to balance

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[52] Hill (1984)
[53] Hill (1984)

supply and demand were lost[54]. In fact, prices tended to be set at levels that could provide an adequate income even to the least efficient farmers in the EC[55]

In 1964, common prices for cereals, pig and poultry meats and eggs were fixed. The regimes for milk and milk products, beef and veal, sugar, oils and fats, fruit and vegetables were set in 1966. Rice, olive oil and oilseeds prices were also specified.

One could think that it was probably unfortunate for the Common Agricultural Policy to be one of the first policies that the Community designed since the real concern was the big project of bringing countries together to form a Community. To create tensions among them due to some details was surely not wanted. Thus, the costs of such economic distortions could have been found tolerable for the sake of the future of the Community.

How high the level of support prices were set at the beginning could be better understood by comparing them with world prices in Table 2.1.

Table 2.1 *Agricultural prices in the EEC as a percentage of world prices*

	1967-8	1968-9	1969-70	1970-1	1971-2	1972-3	1973-4	1974-5	1975-6	1976-7	1977-8	1978-9	1979-80	1980-1
Soft Wheat	185	195	214	189	209	153	79	107	124	204	216	193	163	146
Hard Wheat	200	214	230	231	254	181	116	120	145	236	218	216	159	138
Rice	117	138	186	210	205	115	60	81	137	179	128	157	131	100
Barley	160	197	203	146	185	137	96	107	117	147	206	225	161	134
Maize	160	178	159	141	176	143	98	106	128	163	203	201	190	147
Sugar	438	456	298	203	151	127	66	41	109	176	255	276	134	85
Beef	175	169	147	140	133	112	110	162	196	192	196	199	204	190
Pork	147	153	137	134	131	147	131	109	113	125	137	155	152	135
Butter	397	504	613	481	171	249	320	316	320	401	388	403	411	286
Olive Oil	166	173	167	165	153	125	96	113	207	192	211	200	187	214
Oil seeds	200	203	155	131	147	131	77	80	127	121	153	161	185	168

Source: Hill (1984).

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[54] Ackrill (2000) based on H.von der Groeben, *The European Community: The Formative Years*, Office for Official Publications of the European Communities, 1987. It is also stated that support was introduced for commodities that were previously not supported.
[55] George (1996).

Table 2.1 shows the significant difference between the Community and the world prices. In most cases, the EEC price is double the world price. Compared to the farmers in the main agricultural exporting countries in the world such as United States, Canada, Australia and Argentina, Community farmers are much less efficient. Thus, the target prices were set higher than the prices in these countries[56]

A further point to note here is that the common prices were initially set in common currency (the unit of account) and then converted into national currencies with specified exchange rates. This, however, brought its own problems. The system were set to work in a stable exchange rate regime. Late 1960's however, was an era of instability in exchange rates. The breakdown of Bretton Woods system of fixed exchange rates brought the devaluation of French Frank and the revaluation of German Mark. The response of the Community was to stabilize exchange rates to ease the effect on agricultural prices. Stabilized, institutionally-determined exchange rates were called 'green rates'. Green rates were introduced to make necessary adjustments in response to the movements in market rates and thus to prevent any unexpected rise or fall in prices received by farmers in national currency terms. The use of border taxes and subsidies were also allowed to control sudden changes in import or export flows that could result from exchange rate movements.

2.3 Development of the CAP

Following the agreement on common price levels by late 1960's, an approach of determining prices on a yearly basis has adopted. However, surpluses as the by-product of high support prices together with technological improvements were not late to come.

As stated earlier, Comissioner Mansholt was concerned about the excessive emphasis put on price support and its likely consequences. He believed that price support would not only increase surpluses but also allow inefficient farms to survive which would mean high-cost agricultural production for the Community. Moreover price support would mainly benefit large farmers who are already better-off since it favors output and thus could worsen income distribution among farmers.

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[56] Larry Neal and Daniel Barbezat, *The Economics of the European Union and the Economies of Europe*, Oxford University Press, 1998.

However, cutting prices at this stage was impossible for ministers due to political reasons. The only alternative as put forward by Mansholt was to limit the agricultural area and the number of farmers and then to improve the structure of the remaning farms that could allow price reductions. His 1968 report titled '*Agriculture 1980'*, proposed the following changes; - adjustment of prices considering the real market conditions,- creating larger and more efficient farms, -reducing agricultural land area by 12.5 million hectares, - reducing farm population by 5 million between 1970 and 1980 that would be implemented on a voluntary basis by providing various fianancial incentives.

The plan was seriously opposed by farmers and could not find support among governments. It was too radical to be politically acceptable[57]. One of the main reasons for this objection was that it would be impossible for the rest of the economy to absorb the amount of labour that would change profession[58]. Structural reform was a politically sensitive issue and member states preferred to continue to keep control of their respective structural policies.

In 1972 three measures agreed which certainly fell short of commissioner Mansholt's expectations. These were; - financial assistance for farm development plans to help farmers improve efficieny, - early retirement schemes and training.

A further point to be noted is that in addition to the delay of an agreement coming only after four years later than the Mansholt Plan, countries failed to incorporate these measures into national legislations at once. It took another six years for the first development plan to be submitted.

Despite the efforts of Commissioner Mansholt in improving the structure of Community farming that could allow income gains for farmers without very high support prices, member states gave the signal that extensive use of price support policy would remain in place.

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[57] Wyn Grant, *The Common Agricultural Policy*, Macmillan Press, 1997.
[58] Ackrill (2000)

As Fearne stated;

"the price policy was based on consensus politics rather than economic rationale and the failure of the 'Six' to respond to the challenge of structural reform was a *'shirking responsibility"*[59].

Another point that could have weakened the plan should have been the unfavorable conditions at the time of these discussions. In 1972 and 1973 due to the bad wheather, poor harvests and an increase in the world demand led to price rises in international markets and world prices exceeded Community prices. This eased the immediate pressure for CAP reform[60]. Through 1973 and 1974, due to a large rise in the price of crude oil and the recession casue high unemployment. In such an environment no government would like to apply a programme that would force labor off the land. In these years, the prices of milk and beef were raised by 12 percent followed by another 5 percent increase despite growing surpluses.

In 1975, price rises averaged 9.6 percent; 9 percent for cereals, 15 percent for sugar, 8 percent for beef and over 10 percent for milk. However the price increases were much more dramatic if one considers the additional adjustments made on the politically determined green exchange rates. Together with these adjustments, support prices for milk rised by 40 percent, for beef 50 percent, for cereals over 30 percent and for sugar 40 percent. This, inevitably gave rise to a 46 percent increase in Community agricultural spending in 1975 and a 23 percent in 1976.

2.4 Pressure for change

In the late 1970s the particular problem was the dairy sector which was responsible for 40 percent of guarantee spending[61] and 35 percent of total EC budget.

In 1977, a co-responsibility levy imposed on dairy products; a levy on the output to be paid by producers in excess of a specified amount. It was not intended as a major reform but rather aimed at discouraging surplus production and sharing the cost with producers. However, the

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[59] Fearne (1991) based on Mansholt's own argument in 1972.
[60] George (1996).
[61] The CAP is funded by FEOGA (European Agicultural Guidance and Guarantee Fund). The fund has two sections; the Guarantee section consists of all measures related to farmer's incomes while Guidance section deals with structural measures.

levy never exceeded 3 percent of target price and was ineffective considering further rises in prices especially through green rate manipulations. By 1979, farmers' prices calculated at green rates were 21 percent higher than they would have been if calculated at market rates[62].

Another attempt of change came in the early 1980's. Continued price rises in both common currency and national currency terms were necessitating urgent action since the cost of the CAP to the EC budget was rising. The situation led to the introduction of 'guarantee thresholds' for some products including cereals and milk. In case of an exceed of threshold, the price would be cut in the following year in proportion to the excess amount, up to a maximum of 5 percent.

Although appeared to be an important step, the measure had serious defects that undermine its effectiveness. Some sectors were already in surplus and these surpluses were added into the guarantee thresholds when they were calculated. This consequently increased the level of thresholds. Moreover, prior to the application of price cuts, the Council was allowed to make a normal price rise, only then the price cut could be applied. Not surprisingly, the result was a net price increase on many occasions[63].

The pressure for change intensified until 1984 when Community budget was in a crisis as available resources could not cover the expenditures. The cost of the CAP rose by 23 percent between 1974 and 1979 and after stabilization in 1980 to 1982, it then soared by 30 percent in 1983.

Considering the urgent need for limiting production and the ineffectiveness of the guarantee thresholds, the Commission went one step further. The quota system was introduced in the dairy sector in 1984 together with a system of budgetary discipline. Although the system was similar to guarantee thresholds there were considerable differences mainly in terms of price penalties. A total amount of permitted delivery of milk to purchasers in Member State was specified and then allocated to each individual dairies or producers that the Member States chose. The penalty for over production was a significantly high rate of 75 percent. Regarding the budget, a maximum limit would be set to the size of the budget each year and before the agreement on prices. Agricultural Ministers thus would negotiate within fixed parameters and

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[62] Ackrill (2000).
[63] Ackrill (2000).

an over shoot would be penalized in the following years. Although the quota system has helped to contain the budgetary cost of dairy support it did not work because there was no mechanism designed to be able to authomatically adjust the costs in the following years of an overrun[64].

Despite the fact that the spending on the dairy sector has since fallen, quotas in only one sector were inadequate to contain the costs of the CAP as the spending on other sectors continued to rise. Between 1985 and 1987 the costs of the CAP increased by 18 percent per annum. Cereals were the new problem sector due to the technological advances and the consequent rise in yields together with decline in world prices[65].

In response to these challenges, in 1988, a set of changes were introduced. The system put a legal limit on agricultural price support for 1988 and fixed future increases above that level at an annual maximum of 74 percent of the increase in Community GDP. When this limit is exceeded prices would be automatically cut for the product *in concern*. Together with this system a mechanism based on a stabilizer triggered by production exceeding a specified limit called Maximum Guaranteed Quantity (MGQ) was also employed.

However, cereal stocks have risen year by year despite price cuts. The reductions in prices caused by excess production was effectively compensated through green rate manipulations. Thus prices in national currency terms rose by over 1 percent in 1989/90 and by over 1.5 percent in 1990/1991[66].

It was not until the early 1990s that a fundamental change took place. Important to note that the major driving force behind the strongest attempt of reforming the CAP was external; the GATT negotiations. Agriculture was included in the Uruguay Round of Multilateral Trade Negotiations which was started in 1986 under the auspices of the GATT. One of the major goals of the Round was to reduce protectionist agricultural policies especially of the EU, USA and Japan. The USA was in favor of agricultural liberalization together with a group of major

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[64] George (1996).
[65] George (1996).
[66] Ackrill (2000).

food exporting countries called the Cairns Goup. The EU on the other hand, was reluctant to agree a substantial liberalization. The disagrement has brought the talks to a deadlock[67].

The overall collapse of the talks however would mean serious problems for the industrial and export oriented services sectors. EU governments faced serious pressure from these sectors[68]. The Community had to consider significant reform through lowering support prices. Commissioner MacSharry was keen on changing the way CAP was working.

The MacSharry Reform Agreement came in 1992. The agreement included significant price cuts for cereals and beef sectors. For cereals, prices were decided to be cut by 30 percent over three years, and for beef the cut would be 15 percent. Besides these changes, price support for oilseeds and protein crops were removed. For the sheep sector, limits to flock sizes eligible for support have been set determined by past flock sizes. Excess numbers would not be compensated at all.

The major element of Macsharry reform was the introduction of direct income payments as a compensation for the fall in support prices, thus they are called 'compensatory payments'. These payments were decided to be based on land area and calculated by using regional past area yields thus they were not linked to the current production. Payments are calculated in a way that on average, full-compensation for the income loss was achieved[69].

Originally Macsharry, aware of the unequal support in favor of large farms, suggested extensive 'modulation'; that is to compensate price cuts in full for farms up to a certain size and to provide only partial compensation for farms larger than this size. Modulation idea

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[67] US was pushing for the liberalization of agriculture with a specific plan called 'zero option'. This was suggesting a total elimination of trade distorting support policies within ten years. EU however, proposed to decrease the support relative to its 1984 levels and wanted to maintain the system of export subsidies and import levies. At the heart of the talks, there was the concept of 'decoupled support'. The link between production and support were seen as trade distorting and the removal of this link was the main aim of most exporter countries. Three broad negotiating areas were identified; market access, domestic support and export subsidies. Domestic support were also classified into three categories according to their degree of trade-distortion (the boxes approach). US wanted seperate commitments for each of them while EU is in favor of an overall commitment based on aggregate measurement of support (AMS). While most countries wanted to examine domestic policies by commodity, EU urged for an aggregate approach. Due to these diverse opinions and interests in the talks, an agreement was not likely.
[68] Richard E. Baldwin and Charles Wyplosz, The Economics of European Integration, McGraw Hill, 2004.
[69] Winfried Von Urf, *The Future of European Agricultural Policies*, French-German Economic Forum 9th Meeting, June 25-26, 2001. For detailed information on the calculation method of direct payments see, Ackrill (1995).

however is opposed by countries with large farms such as the UK, France, Denmark and the Netherlands and eventually compensation was decided to be provided for all farmers[70].

As a precondition for compensation, the concept of 'cross compliance' was introduced. This means that the large farmers had to set-aside a certain percentage of their land in order to be entitled for compensatory payments. Setting aside land was voluntary, however a precondition for having direct payments. The requirement for set aside was 15 percent[71].

1992 MacSharry reforms represent the most significant change in the history of the CAP. The effect of GATT negotiations on the reform was considerable. As stated earlier, the pressure from other sectors such as industrial and services sectors was the key to facilitate a change in the CAP. It is therefore, important to have an opposition group as a counter to the agriculturtal interest. It is probably the lack of such a powerful lobby that allows the price policy to dominate the CAP[72].

It should be remembered that although the MacSharry Reform introduced considerable price cuts, prices still remained higher than the world levels. In addition to this, the system of direct payments increased the budgetary cost of the policy. Thus, one could say that the overall annual income transfers to the EU agricultural sector was not reduced[73]. However this immediate increase in the budgetary cost of the CAP was only seen as a by-product of replacing the system with a better one.

Although the Macsharry reform of the CAP was an important step in changing the way of support to European agriculture, the extent of the change was not adequate considering the challenges that the Community faced in late 1990s. The difficulties of maintaining the CAP after the enlargement to the Central and Eastern Europe, the commitments under the World

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[70] For detailed information on the Macsharry Reform see, Ebru Ekeman, *21. Yüzyılın Eşiğinde Avrupa Birliğinde Ortak Tarım Politikası*, İKV Yayınları, 2000.
[71] 1992 CAP reform gave EU some leeway in the talks. In late 1992, an agreement between US and EU was achieved called 'Blair House Accord'. According to this agreement, export subsidies would be cut by 36 percent, subsidized export volumes by 21 percent and domestic support by 20 percent applied to AMS. MacSharry reforms made possible to fulfil the domestic support reducing commitment on AMS. For avoiding EU direct payments and US deficiency payments being included in reduction commitments however, a formula had to be cretated. The creation of 'blue box' was the outcome and paymnets within this box was not subject to reduction commitments. Blair House Accord paved the way for the conclusion of the Uruguay Round Negotiations.
[72] A strong consumer lobby for example could have been an a factor that could balance the power of agricultural interest groups.
[73] Tarditi (a) (2003).

Trade Organization (WTO, previously GATT) and the forthcoming trade liberalization talks necessitated the continuation of the reform agreed in 1992[74].

In Madrid Summit in 1995, a plan called 'Agricultural Strategy Plan' was discussed. The plan was particularly emphasizing the need to maintain the competitiveness of European agriculture in an environment of rapid liberalization in world agricultural trade. Thus, Macsharry reform as a first real change in the nature of support had to be followed by further similar reforms. The strategy plan resulted in the preperation of the 'Agenda 2000' document of the Commission[75]. In Agenda 2000 a set of new objectives of the CAP was specified[76]. It took two years for the negotiations to come to a conclusion due to divergent views and interests[77].

The final agreement came in Berlin Summit in 1999. The reform included arable crops, dairy and beef sectors. Further elimination of price support with an accompanying increase in direct payments in line with 1992 reforms was the main content of the reform. Commission was regarding MacSharry reform a success since it improved market balance, increased incomes and reduced the burden on consumers[78].

It should be remembered that by the time the final agreement was reached the previously proposed changes by the Commission have been softened[79]. The agreed changes were, for cereals; 15 percent reduction in support prices to be phased in over two years that would be partially offset by an increase in direct payments, for oilseeds; a 33 percent reduction in direct payments and a 10 percent base rate for the required land set-aside. For beef; a 20 percent reduction in support price to be phased in over 3 years partially offset by direct payments. For dairy; a 1.2 percent increase in quota in the first two years and starting from 2005 an

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[74] Theo Hitiris, *Europen Union Economics,* Prentice Hall 2003. For further information see, Ekeman (2000).
[75] Agenda 2000 was a document that discusses many other issues besides agriculture like enlargement and budget.
[76] Those were; to increase the competitiveness of Community farmers, to improve food quality and food safety standards, to provide income stability for the agricultural Community, implementation of the CAP in accordance with environmental protection measures, to provide alternative employment and income for farmers and to simplify the agricultural legislation.
[77] Ekeman (2000)
[78] Ackrill (2000).
[79] For further information on Commission proposals see, Ackrill (2000).

additional 1.2 percent increase in the quota over 3 years and a 15 percent decrease in support prices over 3 years[80].

In addition to these changes stated above, rural development measures were brought under one regulation and member states were given the option of modulating some of direct payments[81].

It is important to note here that despite the reforms of Macsharry and Agenda 2000, the total amount of income transfers per Annual Work Unit (AWU)[82], was not reduced. It actually, increased from 10.7 thousand euros in 1990 to 17.2 thousand in 2002[83].

The most recent reform of the CAP came in June 2003. The reform was in line with the previous two reforms. It introduced 50 percent price cut for rice, 15 percent for dry milk powder and 25 percent for butter. The income loss would be compensated through income payments. These payments would partially compensate the income loss. The guaranteed price for rye was eliminated and rye producing areas were set to receive temporary transitional aid. A summary of the changes brought by the latest reform are presented in Table 2.2.

Most of the existing payments to grain, oilseed, cattle, sheep and dairy producers would be replaced by a 'Single Farm Payment (SFP)'. This is still a form of direct income payments and farmers would receive an SFP based on average historical payments received in 2000-02. It is decided that there would be no obligation to produce any specific commodity to be eligible for SFP. Set-aside payments would be calculated based on historical set-aside obligations. Farmers however, would be obliged to keep their land in good agricultural and environmental condition. The single payment scheme was set to enter into force at the latest 2007. Nevertheless, in order to avoid the abandonment of the land, the agreement allows part

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[80] Compensation for cereals price cut was 50 percent, for dairy 65 percent and for beef 85 percent of the income loss.
[81] It is aimed to remove some of direct payments to farmers and channelling them into areas such as rural development or agri-environment schemes. For further information on agreed changes related to rural development see, Ekeman (2000).
[82] For a detailed explanation of the term AWU see p.57.
[83] European Commission DG Regional Policy, *Analysis of the Impact of Community Policies on Regional Cohesion*, 2003, available at
[http://ec.europa.eu/regional_policy/sources/docgener/studies/pdf/3cr/impact_full.pdf].

of the direct aid to remain tied to production (coupled)[84]. The allowed levels of these payments were determined seperately for each sector.

The eligibility for SFP and other direct payments would be linked to the respect of a number of obligatory environmental, food safety, animal and plant health standards (cross-compliance). In the case of non-compliance with these standards, direct payments would be reduced in proportion to the risk or damage concerned.

The rural development measures mainly aiming at improving environmental, animal welfare, food quality and safety standards were strengthened. Part of the funding of these measures would be provided by the system of 'modulation'. Modulation refers to the reduction of direct payments for large farms to be able to channel them into rural development. Therefore, farmers receiving an SFP of 5000 euros or more would see their payment reduced by 3 percent in 2005, 4 percent in 2006 and by 5 percent from 2007 onwards. The first 5000 euros of direct payments a year to any farm holding would be exempt[85].

It is important to note at this point that CAP reforms of 2003 made provision for the operation of the 'financial discipline mechanism' from 2007. The financial discipline mechanism is designed to bring cuts to the single farm payments by the percentage necessary, if total market support and direct sudsidy expenditure (Pillar 1) exceed the agreed Brussels ceiling[86]. Therefore, as enlargement brings further financial burdens on the budget, single farm payments for farmers in EU-15 will likely be reduced from 2007 to 2013. In other words, financial discipline mechanism will divert funds from direct payments to farmers in EU-15 to farmers in the new member states[87].

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[84] Aid independent of production is called decoupled aid.
[85] For further information on 2003 CAP reform see, OECD, *Analysis of the 2003 CAP Reform*, 2004, available at [http://www.oecd.org/dataoecd/62/42/32039793.pdf].
[86] In 2002, European Council agreed on putting a ceiling on the market support and direct subsidy expenditures (Brussels Ceiling). Therefore, in the Financial Perspective for 2007-2013, these expenditures remains static.
[87] For further information see, UK Parliament House of Lords, *European Union Second Report*, 2005, available at [http://www.parliament.the-stationery-office.co.uk/pa/ld200506/ldselect/ldeucom/007/702.htm].

Table 2.2 *The Changes Brought by 2003 CAP Reform*

Rye	Rye intervention price support eliminated. Rye-producing areas receive temporary transitional aid.
Cereals	The intervention price for cereals and direct payment of EUR 63/tonne would be retained. The payment would become part of the single farm payment (SFP) in 2005.
Rice	Intervention support price reduced by 50 percent, intervention purchasing limited. Direct income payment; part included in SFP, part converted to crop-specific aid. 88 percent compensation would be offered through higher payments
Protein Crops	A new maximum guaranteed area of 1.4 million ha for protein crops would be introduced and the payment per tonne (EUR 9.5/tonne) would be converted into a crop-specific area payment of EUR 55.57/ha, which would not be included in the SFP.
Beef	Beef payments converted to SFP. Member states may opt to retain some payments, in full or in part, as coupled to beef production.
Dairy	Reduced intervention prices for butter (25 percent), skim milk powder (15 percent). Intervention purchases of butter limited. Dairy income payments included in SFP after 2008.
Single Farm Payment	Direct income payment based on historical entitlement replaces payments from arable crops, beef, ewe/goat, and dairy sectors. (after 2008)
Member State Payments	Member states may make additional payments to encourage production (up to 10 percent of national SFP ceilings).
Support to help farmers meet standards	Support for farm audits, aid to farmers to help implement standards in areas of environment, food safety, animal welfare, and occupational safety.
Rural Development Measures	Funds from taxation of large farms (modulation) to be used to increase spending on rural development measures.

Source: Kelch and Normile (b) (2004).

Reform process continued even after 2003. In April 2004, cotton, olive oil, tobacco and hops sectors were reformed. For cotton, 65 percent of the 2000-02 historical payments would be decoupled. 22 million euros would be shifted from market support to assistance for farmers to produce alternative crops. In tobacco sector, decoupling of 40 percent of area would be increased to 50 percent from 2010 onwards. From 2010, 50 percent of decoupled aid would go into SFP and the rest would be used to finance more efficient uses of tobacco land. In the olive oil sector, a minimum of 60 percent of payments received between 2002-2003 would be decoupled. For hops, a minimum of 75 percent decoupled payments would be included into the SFP in 2005. Rest of the payments could be coupled.

Finally in 2006, sugar sector is reformed. The guaranteed minimum price of the white sugar was decided to be cut by 36 percent over four years. Farmers would be compensated for, on average, 64,2 percent of the price cut through a decoupled payment which was set to be included in the SFP scheme.

2.5 Structural policy

Even before the formation of the CAP, member states had their own structural policies. France for example was using a system of consolidating small holdings before World War II. Germany adopted the same policy following the war. In the Netherlands, early retirement schemes were employed.

Given the dominance of small farms in Western Europe (with high production costs and low incomes), one could assume that a structural policy aiming at increasing scales had to be incorporated into the CAP. In the early 1960s, the Commission was putting emphasis on the importance of such a policy on the Community agriculture. The first attempt was the co-ordination of national structural policies. Important to note however that in the meantime, Commission's proposal for establishing 'The European Fund for Structural Improvement' which was designed to finance structural improvement measures including land consolidation was rejected by the Council of Ministers. Instead, the Council preferred the fund to be a part of the newly established FEOGA (European Agricultural Guidance and Guarantee Fund in French acronym).

FEOGA was set to include two different sections. Guarantee section is designed for financing the price support policy. Guidance section on the other hand was for structural spending. Structural expenditures were decided to be used as contributions to the funding of projects, other parts of which would be financed by the member state in concern. This aimed at improving the structure of Community farms. Initially, it was envisaged that a quarter of FEOGA expenditures would be spent for structural improvement of the farms but this ceiling has never been reached. Within FEOGA, guarantee section has always been given the first priority.

The move towards Community–wide programs from the co-ordination of national policies was not easy and thus gradual due to the fact that the member states were reluctant to allow a European involvement in this area. The high cost of the wider programmes and the belief that national policies are more appropriate in dealing with local needs caused structural measures to remain mainly national in the early years of the policy. The measures were encouraging the consolidation of land, modernization, irrigation, and providing retirement pensions and assistance for farmers to form farm organizations. The fundamental problems of the Community farming however, could not be addressed with these measures.

As Hill states;

"Whilst these measures helped to produce a more modern agricultural sector with rising productivity, they did nothing to cure the fundamental problems resulting from agriculture's sectoral decline and the constant need to adjust by shedding labour. Indeed, by ameliorating conditions within agriculture such policies tended to reduce the exodus of labour. It was gradually recognized that modernization and productivity increases were not sufficient by themselves to raise farm incomes and that the low-income problem was partly the result of agriculture's total income being subdivided amongst too many people"[88].

Following the Mansholt Plan in 1968, three measures were finally agreed on structural policy as a first step towards Community-wide Programs. The measures were to provide financial assistance for farm development plans to help farmers improve efficiency (up to 25 percent of the costs of the modernization for farmers whose incomes were below the average of non-

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[88] Hill (1984).

agricultural incomes in the area concerned), to encourage early retirement through lump-sum payments or annuities (vacated land could be sold, leased to another farmer or used by the member state for non-agricultural purposes) and to provide socio-economic guidance through training for farmers to help them improve their incomes.

Member states however, were not keen on adopting and implementing these measures immediately. In France, measures were not adopted until 1977 and not one development plan had been submitted until 1978 across the EC[89].

More similar measures were introduced over the years following the adoption of 1972 measures. However as Ackrill states;

"the intention of Mansholt had been to alter radically the structure of farming, in order to make more farms economically viable and permit lower prices. By the 1980's some measures such as development plans had allowed a modest number of farms to improve their structure. Only a small amount of land released by farmers retiring early was made available for restructuring. Even if the policy makers were well disposed to structural change, the economic climate was such that labour outflow from agriculture would probably just add to growing unemployment"[90].

EC Structural Policy therefore, was not a well-functioning and effective policy capable of transforming the sector, increasing farm incomes and remove the need to high support prices.

With 1999 reform of the CAP, many of the previous structural policies were brought under the programme of 'Rural Development'. The new measures were to invest in farm businesses, to reduce production costs, to improve quality and protect environment while meeting animal welfare and hygiene conditions, to encourage early retirement and training programmes to provide financial assistance for farmers in mountainous areas or areas threatened with abandonment, to assist efforts aiming at developing greater value added, to assist farmers adopting extra environmental practices beyond compulsory measures and to promote rural development in a broader sense including land consolidation.

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[89] Ackrill (2000) based on E. Neville-Rolfe, *The Politics of Agiculture in the European Community,* Policy Studies Institute, 1984.
[90] Ackrill (2000).

Moreover, in an effort to re-define the crucial role of agriculture within the European society, a new concept; 'multifunctionality of agriculture' was introduced. 'The multifunctionality of Agriculture' is the basis of the 'European Model of Agriculture' which is thought to be a unique model and defended in international trade negotiations. The essence of the concept is that agriculture is not only about producing food but has many elements of environmental and social nature. The links between farming and visual aspects of landscape, the livelihood of rural communities and the nutritional needs of the society are all elements of multifunctionality. There are concerns however that the European model of agriculture could be used as a justification for continued protection especially within the World Trade Organization (WTO).

By 2003 reforms, Rural Development Measures are strengthened and some new masures are introduced in order to improve the quality of agricultural products and production processes and to make progress in areas of environment, public, animal and plant health and animal welfare. Cross-compliance principle is further facilitating the improvements in these areas. The money available for Rural Development would be increased. Part of the increase in these funds would be financed by modulation**.**

CHAPTER 3. EFFECTS OF THE CAP ON EUROPEAN AGRICULTURE

As stated in the previous chapters; price support policy could cause an unfair income distribution within agriculture among farms of different sizes. Since price support policy favors output, the income provided would unintentionally be much higher in most fertile areas and in larger farms than in smaller farms. Thus, large farms in the EU are expected to benefit more from price support than the small farms. Direct income payments introduced in early 1990's were not specifically designed to alter this situation. These payments were distributed based on land area and were intended to fully compensate the income loss. Evidence presented in this chapter proves an unfair distribution of CAP benefits throughout the Community during the history of the CAP.

Regarding the resource allocation aspect of price and income support, one could observe a continuing dominance of small farms in the Community agriculture. Although agricultural labor force within the EC-6 decreased significantly from 15.2 million in 1960 to 5.2 million in 1987[91], farms are still not large enough to fully benefit from scale economies.

3.1 Income Distribution Aspect of the CAP

The issue of 'income distribution effects of the CAP' is not totally limited to the issue of 'income distribution between farms of different sizes' but in fact it is a much broader concept and extends to areas such as 'distribution among various farm types'[92]. This study however, mainly focuses on the former aspect of the CAP and will not go into the issue of support among different products in detail[93].

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[91] Moreover, total farm labour force measured in terms of AWU (see p.57) in EC-6 except France, has decreased from 3.2 million in 1990 to 2.4 million in 2003.

[92] By various farm types, we mean farms producing different products.

[93] For information on income distribution among farm types, see; Jean Christophe Bureau, "The CAP and the Unequal Public Support to European Agriculture", in Roger Rose, Carolyn Tanner and Margot A. Bellamy, eds., *Issues in Agricultural Competitiveness,Markets and Policies,* International Association of Agricultural Economists, Occasional Paper No:7, 1997.

3.1.1 The Case in the EU in general

Regarding the distributional aspects of the CAP a major study comes from Brown[94]. In his study, Brown analyse the distribution of CAP benefits among farms of different size and type. The empirical results refer to the weighted annual average of the years 1984/85 and 1985/86 for the EC-10 and are given in 1985 prices. The outcome of the study is in line with the assumption that large farms gain much more from CAP support than small farms. Important to note here that Brown's analysis does not include the effect of direct income payments policy since it is only introduced by 1992 Macsharry Reform.

A great variation in CAP benefits among farms of different sizes[95] is evident in Figure 3.1 Benefits to large farms are considerably higher than the benefits to small farms. Gains are directly related to the farm size and thus output. Benefits to large farms are reaching fourteen times the amount going to small farms. In terms of benefits per annual labour unit, gains in large farms still exceed those received on small farms.

Figure 3.1 *Distribution of CAP benefits by Farm Size*
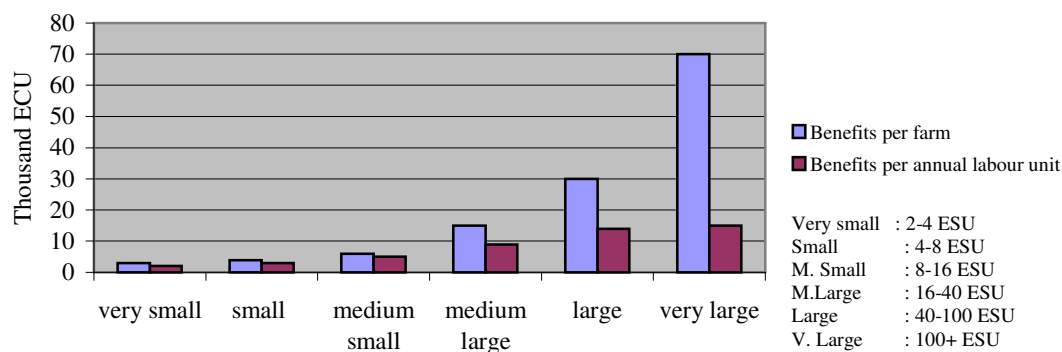
Source: Brown (1989).

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[94] Colin G. Brown, "Distributional Aspects of CAP Price Support", *European Review of Agricultural Economics*, No: 17, 1990.

[95] Farm sizes are given as European Size Units (ESU). ESU is a unit of measurement of the economic size of the agricultural holding. A farm has an economic size of 1ESU if its total standard gross margin is 1200 euros of Standard Gross Margin (SGM). SGM is the average value of production, over a three year period minus certain variable costs. See, European Union, Directorate-General for Agriculture and Rural Development, *Agriculture in the European Union-Statistical and Economic Information 2004*, Office for Official Publications of the European Communities, 2005.

A further point stated by Brown is that the farm size is not the sole determinant of the distribution of benefits. In fact, distribution of CAP benefits is jointly determined by the farm size and type. As stated earlier support to different products and therefore to different farm types is not equal. In Table 3.1, this additional variable is added into the picture. In the table, one could see that within the same size category, benefits to various products are different. In medium small size class for example, benefits to dairy farms is 7290 ECU per farm annually, while it is 4785 ECU for fruit and olive farms. It is also clear that dairy farms are gaining more in most size classes[96].

According to Brown however, farm size is still the main determinant of the variations in the CAP benefits. Although on average dairy farms benefit much more than other types of farms, this is not observed for all sizes of dairy farms. Small and medium size dairy farms gain lower benefits than those received on large non-dairy farms. Within the same farm type, farms in larger size classes are always gaining more than the farms in smaller size classes.

Table 3.1 *Annual CAP benefits by farm size and type (ECU per farm)*

	very small	Small	Medium Small	Medium Large	Large	Very large
Cereals	1418	2598	5636	14454	36715	76418
General Cropping	2011	3292	5474	13001	29907	87109
Horticultural	3150	4010	6976	10809	16088	32027
Vineyards	2310	3727	6660	1307	26910	NA
Fruit/olives	2272	3096	4785	9978	23236	47655
Dairying	1556	3095	7290	18407	42239	96211
Beef/sheep	1857	3288	6085	14337	31615	71221
Pigs/poultry	NA	NA	NA	8938	17983	57478
Mixed	1799	2730	5685	14555	30330	97756

NA: Not applicable: insufficient farms in this category

Source: Brown (1989).

Gini Graph is a commonly used tool in economic analysis to measure the degree of income inequality[97]. The use of such a graph for the distribution of CAP benefits is a simple way of observing the inequality created by the policy. In Figure 3.2, one could see that one third of the farms receiving only 12 percent of all CAP benefits and half of all farms receiving only

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[96] Therefore, countries specialized on highly supported products could gain more than others.
[97] The Gini coefficient ranges between 0 (perfect equality), and 1 (perfect inequality).

about 20 percent of the benefits. Thus, a large number of small farms are gaining much less than a small number of large farms.

Figure 3.2 *Inequality of CAP Benefits*
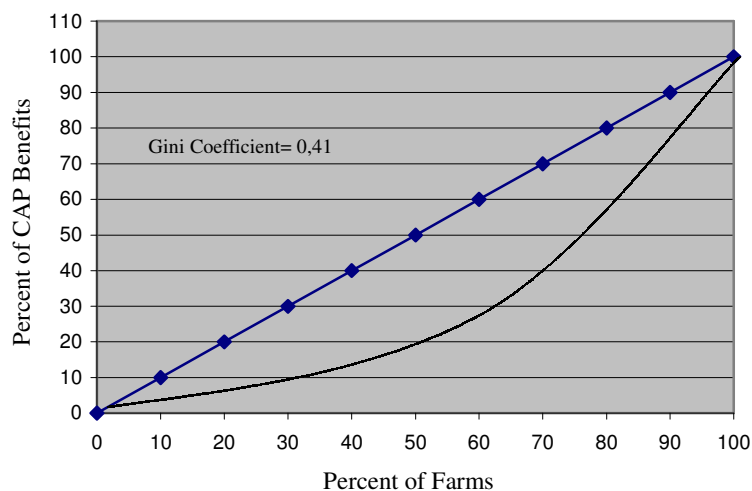
Source: Brown (1989).

In order to see the effects of direct income payments, more recent data should be analysed. Importantly, one can still observe a highly polarized distribution of CAP benefits among farms of different sizes. In Table 3.2 (a,b,c,d,e), for the financial year 2001, direct payments to the producers by size classes are shown for individual fifteen member states and for EU-15 in total. The first columns of the tables show farm sizes which is measured by farm value added[98]. The amount of total direct payments received by the farms in each size class is shown under 'payments' column and the percentage shares of these amounts is provided in the next column. The third column for every member state shows the number of beneficiaries within each size class with percentage shares next to them.

It is clear from the tables that for every member state there is a highly polarized distribution of direct income payments. In Belgium for example, beneficiaries in '0 and 1250 EUR' size class represent 24,93 percent of all beneficiaries. This 24,93 percent of farmers however, only obtain an amount which is 1,9 percent of total direct payments to Belgium. On the other hand,

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[98] Farm value added is the value of total output less intermediate consumption and depreciation, adjusted to take account of taxes, grants and subsidies linked to production.

6,06 percent of all Belgian farmers which are classifed under '20000 and 50000 EUR' size class share 26,07 percent of total payments. In Spain, while 53,54 percent of all farmers share 5,4 percent of total payments; a 3,4 percent get a significant 20,8 percent of all payments. In Italy, 72, 09 percent of farmers are sharing 15 percent of benefits while the remaining 27,91 percent get 85 percent of all payments. Similarly, in Sweden, farmers under the smallest size class represent 26,68 percent of all Swedish farmers and they could obtain 1,6 percent of all payments. Farmers caregorized under '50000 and 100000 EUR' size class however, only constitute 1,39 percent of all beneficiaries but they get 11,5 percent of all payments.

Table 3.2 *Distribution of CAP Benefits*

Table 3.2 a		EU-15				Belgium				Denmark			
		Payments	% in total	No.of Ben.	% in total	Payments	% in total	No.of Ben.	% in total	Payments	% in total	No.of Ben.	% in total
0 and 1250 EUR		992600	4,0	2327,39	51,76	5897	1,9	12,02	24,93	5083	0,7	9,37	15,09
1250 and 2000 EUR		612308	2,5	384,49	8,55	6965	2,2	4,31	8,94	7364	1,0	4,54	7,31
2000 and 5000 EUR		2328672	9,4	715,2	15,91	43310	13,7	12,67	26,28	43782	6,2	12,96	20,87
5000 and 10 000 EUR		3254071	13,1	464,17	10,32	69433	22,0	10,16	21,07	91738	13,0	12,83	20,66
10 000 and 20 000 EUR		4575726	18,4	325,01	7,23	82497	26,2	5,9	12,24	173729	24,7	12,17	19,59
20 000 and 50 000 EUR		6432698	25,8	212,73	4,73	84024	26,7	2,92	6,06	255305	36,2	8,58	13,81
50 000 and 100 000 EUR		3371653	13,5	50,34	1,12	13257	4,2	0,21	0,44	92016	13,1	1,41	2,27
100 000 and 200 000 EUR		1645294	6,6	12,4	0,28	2172	0,7	0,02	0,04	27633	3,9	0,22	0,35
200 000 and 300 000 EUR		552930	2,2	2,29	0,05	0	0,0	0	0,00	4015	0,6	0,02	0,03
300 000 and 500 000 EUR		534689	2,1	1,42	0,03	355	0,1	0	0,00	2688	0,4	0,01	0,02
>500 000 EUR		593049	2,4	0,76	0,02	7217	2,3	0	0,00	1060	0,2	0	0,00
Total		24893690	100	4496,2	100	315127	100	48,21	100	704413	100	62,11	100

Table 3.2 b		Germany				Spain				France			
		Payments	% in total	No.of Ben.	% in total	Payments	% in total	No.of Ben.	% in total	Payments	% in total	No.of Ben.	% in total
0 and 1250 EUR		48620	1,2	89,64	24,74	214143	5,4	497,12	53,54	43397	0,67	83,59	18,156
1250 and 2000 EUR		50699	1,3	31,52	8,70	140334	3,5	88,12	9,49	43876	0,68	27,38	5,947
2000 and 5000 EUR		274100	6,9	81,67	22,54	491298	12,3	152,29	16,40	241128	3,71	71,3	15,487
5000 and 10 000 EUR		493485	12,4	70,5	19,46	678213	17,0	96,18	10,36	578225	8,90	80,29	17,440
10 000 and 20 000 EUR		735250	18,4	52,28	14,43	811692	20,4	58,31	6,28	1302173	20,03	90,43	19,642
20 000 and 50 000 EUR		803003	20,1	27,64	7,63	828640	20,8	28,22	3,04	2607808	40,12	84,32	18,315
50 000 and 100 000 EUR		315005	7,9	4,66	1,29	394087	9,9	5,82	0,63	1350567	20,78	20,55	4,464
100 000 and 200 000 EUR		295515	7,4	2,09	0,58	250349	6,3	1,88	0,20	296830	4,57	2,4	0,521
200 000 and 300 000 EUR		216746	5,4	0,88	0,24	78778	2,0	0,33	0,04	23882	0,37	0,1	0,022
300 000 and 500 000 EUR		327366	8,2	0,86	0,24	48648	1,2	0,13	0,01	7609	0,12	0,02	0,004
>500 000 EUR		426579	10,7	0,57	0,16	50998	1,3	0,06	0,01	4133	0,06	0,01	0,002
Total		3986368	100	362,31	100	3987180	100	928,46	100	6499628	100	460,39	100,000

Table 3.2 c	Ireland				Italy				Luxembourg			
	Payments	% in total	No.of Ben.	% in total	Payments	% in total	No.of Ben.	% in total	Payments	% in total	No.of Ben.	% in total
0 and 1250 EUR	16628	1,9	30,75	22,73	483731	15,0	1196,91	72,09	144	0,8	0,32	14,75
1250 and 2000 EUR	21809	2,6	13,62	10,07	221770	6,9	140,27	8,45	177	0,9	0,11	5,07
2000 and 5000 EUR	127760	15,0	38,39	28,38	601171	18,6	191,35	11,52	1499	7,9	0,43	19,82
5000 and 10 000 EUR	200071	23,4	28,31	20,93	517962	16,1	75,76	4,56	4526	23,9	0,64	29,49
10 000 and 20 000 EUR	227499	26,6	16,58	12,26	491824	15,2	35,7	2,15	6502	34,3	0,47	21,66
20 000 and 50 000 EUR	191572	22,4	6,68	4,94	474525	14,7	16,04	0,97	5258	27,8	0,19	8,76
50 000 and 100 000 EUR	55500	6,5	0,85	0,63	210474	6,5	3,15	0,19	724	3,8	0,01	0,46
100 000 and 200 000 EUR	9884	1,2	0,08	0,06	114948	3,6	0,87	0,05	104	0,5	0	0,00
200 000 and 300 000 EUR	2247	0,3	0,01	0,01	35519	1,1	0,15	0,01	0	0,0	0	0,00
300 000 and 500 000 EUR	763	0,1	0	0,00	37635	1,2	0,1	0,01	0	0,0	0	0,00
>500 000 EUR	0	0,0	0	0,00	35532	1,1	0,04	0,00	0	0,0	0	0,00
Total	853733	100	135,27	100	3225091	100	1660,34	100	18934	100	2,17	100

Table 3.2 d	Netherlands				Austria				Portugal			
	Payments	% in total	No.of Ben.	% in total	Payments	% in total	No.of Ben.	% in total	Payments	% in total	No.of Ben.	% in total
0 and 1250 EUR	17565	7,4	32,84	42,30	31450	6,1	57,55	39,54	80887	17,1	217,65	82,64
1250 and 2000 EUR	14483	6,1	9,03	11,63	29961	5,8	18,71	12,85	25892	5,5	16,49	6,26
2000 and 5000 EUR	71048	30,0	21,41	27,58	124926	24,0	38,51	26,46	53975	11,4	17,49	6,64
5000 and 10 000 EUR	69046	29,2	10,84	13,96	135314	26,0	19,5	13,40	35065	7,4	5,14	1,95
10 000 and 20 000 EUR	36146	15,3	2,69	3,46	122288	23,5	9,05	6,22	37988	8,0	2,72	1,03
20 000 and 50 000 EUR	20624	8,7	0,75	0,97	55087	10,6	2,05	1,41	72867	15,4	2,31	0,88
50 000 and 100 000 EUR	3737	1,6	0,06	0,08	8584	1,7	0,13	0,09	72292	15,3	1,03	0,39
100 000 and 200 000 EUR	2510	1,1	0,02	0,03	4453	0,9	0,03	0,02	57455	12,2	0,43	0,16
200 000 and 300 000 EUR	219	0,1	0	0,00	2962	0,6	0,01	0,01	19834	4,2	0,08	0,03
300 000 and 500 000 EUR	1076	0,5	0	0,00	1754	0,3	0,01	0,01	9718	2,1	0,03	0,01
>500 000 EUR	0	0,0	0	0,00	2878	0,6	0	0,00	6255	1,3	0,01	0,00
Total	236454	100	77,64	100	519657	100	145,55	100	472228	100	263,38	100

Table 3.2 e	Finland				Sweden				UK			
	Payments	% in total	No.of Ben.	% in total	Payments	% in total	No.of Ben.	% in total	Payments	% in total	No.of Ben.	% in total
0 and 1250 EUR	8362	2,1	11,8	16,32	8588	1,6	17,91	26,68	28106	0,9	69,92	33,15
1250 and 2000 EUR	13854	3,5	8,53	11,79	9312	1,8	5,78	8,61	25812	0,8	16,08	7,62
2000 and 5000 EUR	83284	21,3	25,02	34,60	54905	10,5	16,16	24,08	116485	3,7	35,55	16,85
5000 and 10 000 EUR	118870	30,4	17,11	23,66	87505	16,7	12,29	18,31	174618	5,5	24,62	11,67
10 000 and 20 000 EUR	104494	26,7	7,67	10,61	124278	23,8	8,85	13,19	319366	10,1	22,19	10,52
20 000 and 50 000 EUR	56536	14,4	2,09	2,89	148259	28,4	5,02	7,48	829189	26,2	25,92	12,29
50 000 and 100 000 EUR	5452	1,4	0,09	0,12	60288	11,5	0,93	1,39	789669	25,0	11,44	5,42
100 000 and 200 000 EUR	598	0,2	0,01	0,01	21505	4,1	0,16	0,24	561339	17,8	4,19	1,99
200 000 and 300 000 EUR	0	0,0	0	0,00	5677	1,1	0,02	0,03	163051	5,2	0,69	0,33
300 000 and 500 000 EUR	0	0,0	0	0,00	1194	0,2	0	0,00	95882	3,0	0,26	0,12
>500 000 EUR	0	0,0	0	0,00	1063	0,2	0	0,00	57333	1,8	0,07	0,03
Total	391450	100	72,32	100	522574	100	67,12	100	3160850	100	210,93	100

Payments (x1000EUR), Number of Beneficiaries (x1000), Data for Greece is not available.

Source: EU (2005) and own calculations.

A summary of the situation could be observed in the EU-15 column. For the EU-15 in general, farmers under the smallest size class correspond to 51,76 percent of all farmers and they obtain 4 percent of total direct aid. Farmers in '20000 and 50000 EUR' size class however are 4,73 percent of all farmers but they obtain 25,8 percent of all payments. Another 0,02 percent of farmers classified under the largest class receive 2,4 percent of payments which is almost equal to what 8,55 percent get in '1250 and 2000 EUR' size class.

3.1.2 The case of Italy

Italian agricultural structure is generally characterized by small farm size. Average size of the farms is considerably smaller compared to the size in northern member states. However, agricultural farm size in Italy do not display a uniform structure. Italian regions as shown in Figure 3.3 have different agricultural characteristics and most of the time different average sizes.

Generally, in Northern regions especially in Lombardia and Emilia Romagna farms are larger than in Southern regions. In these regions farms are mainly specialized in dairy and cereals sectors[99]. In Southern regions like Marche, Abruzzi or Calabria farms are often too small to be economically viable. In these regions farming is characterized by small, inefficient farms, operating with high costs. In Table 3.3, one can see the differences in farm sizes among Italian regions for the average years 1984/85 and 1985/86. The difference is considerable; in Lombardia for example, average farm size was 30,8 ESU which is four times larger than the average size in Abruzzi. As expected, the distribution of CAP benefits is not fair both in 'ECU per farm' and in 'ECU per annual labour unit' terms. Large farm-size regions gain much more than the others. Farms in Emilia Romagna for example, gain 8779 ECU per farm annually while in Sicilia the figure is only 3639 ECU. The fourth column of the table gives a clearer picture of the situation. Italian average in terms of ECU per farm is specified as 100 and the degree of divergence from this value could be observed. Lombardia is obviously the region with highest benefits (more than double the national average) while Marche for example only gets 76 percent of national average. In terms of ECU per AWU[100] the trend is

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[99] Alessandro Olper, interview by author, May 2005, University of Milan, Milan, Italy. However, as Prof. Olper says there is not a uniform structure in the south.
[100] The Annual Work Unit (AWU) corresponds to the work performed by one person who is occupied with an agricultural holding on a full time basis. Persons with a minimum working time of 1800 hours annually are considered 'full time workers' and count as one annual work unit (AWU). The performance of part time workers is converted into AWU pro rata.

similar. Regions with larger average farm size have higher benefits than the regions with smaller sizes[101]. The final column of the table summarizes the divergence in ECU per AWU. In Veneto for example, benefits per working unit is about 10 percent higher than the national average. In Valle d'Aosta on the other hand, it is 56 percent lower.

Figure 3.3 *Italian Regions*   Table 3.3 *Regional distribution of CAP benefits*

Region	Average Size (ESU)	Ecu per farm	Italy=100	Ecu per AWU	Italy=100
Valle d' Aosta	10,7	3219	57	1539	44
Piemonte	16,7	5649	99	3054	88
Lombardia	30,8	11887	209	5555	159
Trentino A.A.	15,1	5144	91	3073	88
Veneto	15,7	6368	112	3872	111
Friuli V.G.	14,9	5570	98	3767	108
Liguria	19,3	4781	84	2771	80
Emilia Romagna	25,2	8779	155	4221	121
Toscana	16,6	5898	104	3129	90
Marche	9,4	4303	76	2722	78
Umbria	13,5	6077	107	3339	96
Lazio	10,4	4188	74	2857	82
Abruzzi	7,5	3483	61	2240	64
Molise	15,4	7279	128	3635	104
Campania	10,9	5118	90	2691	77
Calabria	8,3	4160	73	3236	93
Puglia	12	5867	103	4841	139
Basilicata	9,2	4166	73	2722	78
Sicilia	10,5	3639	64	3157	91
Sardegna	15,8	4320	76	2740	79
ITALY	14,5	5682	100	3483	100
GERMANY	34	17650	311	10051	289
FRANCE	32,3	16722	294	10085	290
UK	78	34386	605	13179	378
GREECE	8,3	3468	61	1825	52
BELGIUM-LUX.	41,4	19744	347	11731	337
DENMARK	37,5	16113	284	14038	403
IRELAND	14,4	9003	158	7033	202
NETHERLANDS	70	29695	523	15670	450

Source: Tarditi (a) (1993) based on Brown (1989). Average agricultural years 1984/85 and 1985/86.

On the other hand, northern members of the Community have larger average farm sizes compared to Italian average and thus have higher benefits per farm and per AWU. In UK for example, benefits per farm are six times higher than in Italy, while in the Netherlands, it is

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[101] Therefore, price support could widen the income gap among regions.

five times higher. The introduction of direct payments by 1992 Macsharry reform did not seem to alter the unfair distribution of CAP benefits in Italy. These payments were designed to be distributed based on land area and average yields and thus still favors large farms. For Italy, the income ditribution effect of these payments is analyzed in a study by INEA[102]. This study is dividing Italian farms into groups both regionally and nationally according to the amount of direct aid they receive. According to table 3.4, nationally, about 83 percent of all Italian farms receive each less than 2,600 euros in aids. The amount of this aid goes to 83 percent of Italian farms however, represents only about 20 percent of total direct aids. On the other hand, 0.2 percent of the farms receive more than 77,500 euros, which represents 12.2 percent of the aids

Table 3.4 *Direct aid distributed by class and by farms in class (%), 2000*

	Up to 2600 Euros		2600 -5200 Euros		5200 -10300 Euros		10300 -25800 Euros		25800 -51700 Euros		51700 -77500 Euros		Over 77500 Euros	
	aid	farms	aid	farms	aid	farms	aid	farms	aid	farms	aid	farms	aid	farms
	%	%	%	%	%	%	%	%	%	%	%	%	%	%
Piemonte	12,5	59,6	14,1	17,1	20,1	12,7	27,9	8,1	15,6	2,1	4,3	0,3	5,4	0,2
Valle d' Aosta	75,9	97,8	14,8	1,7	7,7	0,4	1,7	0,1	0	0	0	0	0	0
Lombardia	6,7	51	9,5	16,8	15,5	14,6	28,8	12,1	21,3	4,1	7,9	0,9	10,2	0,6
Trentino-Alto A.	50,4	97	7,9	1,6	6,9	0,7	10,7	0,5	5,4	0,1	9,5	0,1	9,2	0,1
Veneto	19,8	78,2	13	11,2	13,6	6,2	15,2	3,1	9	0,8	4,1	0,2	25,4	0,3
Friuli-Venezia G.	22	71,9	17,1	14,9	17,5	7,9	19,9	4,1	9,2	0,8	3,1	0,2	11,2	0,2
Liguria	71,6	97,2	14,1	2	7,4	0,6	5,1	0,2	0	0	1,7	0	0	0
Emilia Romagna	17,4	70,9	16,1	14,6	18	8,6	19,6	4,3	11	1	4,2	0,2	13,8	0,2
Toscana	13,6	80,9	9,9	7,7	14	5,6	20,8	3,8	15,3	1,2	8,5	0,4	17,9	0,4
Umbria	12,9	86	6,7	6,3	7,3	3,4	10,2	2,2	9,9	1	6,7	0,4	46,2	0,8
Marche	21	76,2	16,6	12,1	18,8	6,9	20,4	3,6	11,7	0,9	4,6	0,2	6,9	0,1
Lazio	22,7	90,5	11,6	4,4	14,1	2,7	19,1	1,7	12	0,5	5,1	0,1	15,3	0,1
Abruzzo	42,3	92,7	17,7	4,5	14,9	1,9	11,9	0,7	4,5	0,1	2,5	0	6,2	0
Molise	26,5	81,5	20	9,6	23,9	5,8	23,1	2,8	4,3	0,2	1,4	0	0,8	0
Campania	20,2	84,9	11,8	6,1	18,2	4,7	27,1	3,3	12	0,7	4,4	0,1	6,4	0,1
Puglia	26,6	86,5	13,9	6,6	15,7	3,8	20,8	2,3	9,9	0,5	4,4	0,1	8,6	0,1
Basilicata	22,1	82	15,8	8,3	21	5,5	29,4	3,6	8,7	0,5	1,9	0,1	1,1	0
Calabria	28,1	87,6	13,3	6,7	12,3	3,1	15,5	1,8	9	0,5	5,9	0,2	15,8	0,2
Sicilia	33,3	89,1	17,4	5,8	18,7	3,2	21,1	1,7	6,4	0,2	1,4	0	1,7	0
Sardegna	16,9	67,7	25,1	17,6	28,4	10,5	21	3,7	5,9	0,5	1,4	0,1	1,4	0
Italy	**20,7**	**82,6**	**13,8**	**8,3**	**16,4**	**5,1**	**21**	**3**	**11,2**	**0,7**	**4,6**	**0,2**	**12,2**	**0.2**

Source: INEA (2002).

[102] Roberto Henke and Roberta Sardone, 'From the First to the Second Pillar of CAP; Hypotheses of Direct Aid Modulation in Italy', Istituto Nazionale di Economia Agraria (INEA) Working Paper, No:17, 2002.

A similar trend could be observed for all regions in the country. In Toscana for example 80,9 percent of all farms receive 13,6 percent of direct aids; while 0,4 percent of the farms share 17,9 percent of aids. In Lazio, 90,5 percent of all farms which are receiving up to 2600 euros benefit only 22,7 percent of direct aids while a 0,1 percent receiving over 77500 euros each obtain 15,3 percent of direct aids channeling to the region.

Therefore, as in EU in general, in Italy, a large number of small farms obtain only a small share of the total direct aids, while a small number of large farms enjoy a large share of the total direct aids.

3.2 Effects of CAP on Structural Adjustment

As stated earlier both price support and direct income payments policy increase agricultural earnings. The increase in the earnings however, may well slow down the rate of transformation in agriculture. Labor may find the income provided adequate enough to stay in the business and thus small and ineffient fams may continue to exist. In fact, there is available evidence for the EU to support this view.

3.2.1 The Case in the EU in general

Community agriculture is criticized to be small farm dominated and therefore inefficient throughout the history of the CAP. In one of his studies[103], Hill claims that a farm needs 150 to 200 hectares land area to achieve minimum average costs of production[104]. Average farm sizes in Europe however, were far behind this figure by 1977.

As Table 3.5 shows, even in the UK where average farm size is much higher than in others, farms are far away to achieve minimum average costs.

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[103] Hill (1984).

[104] Such a generalization is open to ciriticisms since every type of agricultural product has its own optimum farm size. However, there is almost an overall consensus among writers that European farms have been 'small'. See among them for example; Ian R. Bowler, *Agriculture under the Common Agricultural Policy*, Manchester University Press, 1985. Moreover, Hill's generalization should be considered valid within its time that is late 1970s and early 1980s. Technological progress could well change optimum farm sizes in the course of time.

Table 3.5 *The Number and Size of Farms over 1 hectare in the EC, 1977*

	Number (000)	Average Area
Germany	859	14,4
France	1149	25,5
Italy	2192	7,4
Netherlands	137	15
Belgium	99	14,5
Luxembourg	5	25,4
UK	262	65,6
Ireland	225	22,5
Denmark	116	23,5
Greece	732	4,3
EC10	5784	15,5
Portugal (1968)	500	8,6
Spain (1972)	1932	14,9

Source: Hill (1984).

Another important point to note here is the degree of divergence in farm sizes. As it is clear from Table 3.6, farms in Italy and in Greece are significantly smaller than in others. In Italy for example, 85 percent of farms are under 10 hectares while in Greece farms smaller than 10 hectares constitute 92 percent of all farms. On the other hand, the same figure is only 24 percent in UK and 29 percent in Denmark.

Table 3.6 *The distribution of farms by farm size, EC, 1980*

Farm size (ha)	Germany Farms	France Farms	Italy Farms	Netherlands Farms	Belgium Farms	Luxembourg Farms	UK Farms	Ireland Farms	Denmark Farms	Greece Farms
1<5	32	21	68	24	29	19	12	15	11	71
5<10	19	15	17	20	20	11	12	17	18	21
10<20	23	21	8	29	26	14	16	30	26	7
20<50	22	30	4	24	21	38	27	30	35	2
>=50	4	13	2	3	4	17	33	9	10	0

Source: Hill (1984).

A clearer picture of the agricultural situation in Europe could be found in Table 3.7 where scale economies in large farms could be observed[105]. In the table, farms in EC-10 are classified according to income classes. As could be observed from the table, most EC-10 farms are under lower income classes where Net Value added per AWU (NVA per AWU) is also low. A significant 30 percent for example lie under 0-4000 income class where average size is 11,9 hectare and NVA per AWU is 1900 ECU. Important to note that labour productivity rises as income and utilised area of holdings increase. Labour productivity is much higher in over 24000 ECU income class where average size is 63,4 hectare. Therefore, in farms with large-size and higher-income it is possible to benefit from scale economies.

Table 3.7 *Farm Accounts Results According to Classes of Income 1984/85.*

Classes of Income (000 ECU)	Holdings in FADN (number)	%	Area (ha UAA)	Average Results per Holding (000 ECU) Net Value Added per AWU (NVA per AWU)
EC10				
<0 to 4	800,644	30	11,9	1,9
4 to 8	718,782	27	17,7	5,8
8 to 12	418,665	15	27,8	9,9
12 to 24	544,253	20	46,1	16,7
>24	219,313	8	63,4	35
All holdings	2,701,657	100	27	10,3

Source: Tarditi (1987).

By early 1990s, the use of a more complex set of data in the literature enables researchers to do more precise analyses of farm structure in Europe. 1990s are also important for the EU because of the introduction of 'direct income payments' to partially offset price support.

Before analysing the development of Community agricultural structure during 1990s and 2000s, it is important to remind the possibility of benefiting from scale economies in European agriculture by increasing farm sizes.

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[105] In his studies, Tarditi uses labor productivity to be able to observe scale economies. See for example Tarditi (2000). Therefore one could say that if labour productivity is higher in large farms, there is economies of scale to benefit by increasing the size of smaller farms.

Figure 3.4 *EU Standard Gross Margin (Euro/year) per Annual Work Unit. (EU-15, 2000).*

Economic size classes in European size units (1ESU=1000 euro SGM)
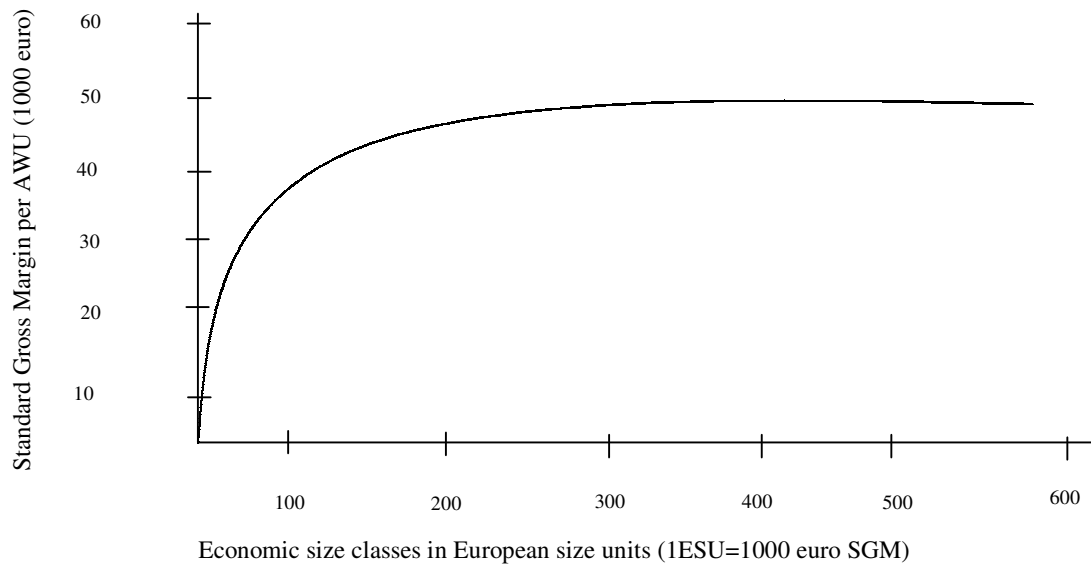
Source: Tarditi (2000)

As can be observed from Figure 3.4, labor productivity which is expressed as SGM per Annual Work Unit is very low in very small farms but rapidly rising up to 50000 euros for farms larger than 100 ESU and then follows a smoother trend[106]. Therefore, in general one could say that increasing farm sizes up to 100-200 ESU or more could bring the benefits of scale economies in EU-15. Among farms larger than 200 ESU on the other hand, it is not possible anymore to further raise labour productivity by increasing farm size.

Available data however, suggests that most of the European farms are far too small to benefit from such scale economies.

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[106] The use of ESU instead of hectares for measuring farm size is more appropriate to observe scale economies since ESU has a closer link with the output.

Table 3.8 *Number of Holdings in Size Classes*

Table 3.8 (a) *Number of Holdings in 1990*		EC Size (ESU) classes									
		Less than 1	1 to less than 2	2 to less than 4	4 to less than 8	8 to less than 16	16 to less than 40	40 to less than 100	100 to less than 250	250 or more	Total
Geo											
Belgium	No of Holdings	8070	5730	7200	8360	10650	23540	18680	2590	220	85040
	Share in Total (%)	*9,49*	*6,74*	*8,47*	*9,83*	*12,52*	*27,68*	*21,97*	*3,05*	*0,26*	*100*
Denmark	No of Holdings	10	480	4070	12180	15010	23430	20910	4640	520	81250
	Share in Total (%)	*0,01*	*0,59*	*5,01*	*14,99*	*18,47*	*28,84*	*25,74*	*5,71*	*0,64*	*100*
Germany*	No of Holdings	.	.	.	.	.	.	.	.	.	
	Share in Total (%)										
Greece	No of Holdings	213760	150170	182850	173630	97530	29640	2190	280	80	850130
	Share in Total (%)	*25,14*	*17,66*	*21,51*	*20,42*	*11,47*	*3,49*	*0,26*	*0,03*	*0,01*	*100*
Spain	No of Holdings	519750	311760	275230	226700	153960	80240	19860	4920	1220	1593640
	Share in Total (%)	*32,61*	*19,56*	*17,27*	*14,23*	*9,66*	*5,04*	*1,25*	*0,31*	*0,08*	*100*
France	No of Holdings	89190	82270	89500	102120	141190	261570	129980	25270	2490	923580
	Share in Total (%)	*9,66*	*8,91*	*9,69*	*11,06*	*15,29*	*28,32*	*14,07*	*2,74*	*0,27*	*100*
Ireland	No of Holdings	23450	20830	28550	29970	28650	29570	8760	750	60	170590
	Share in Total (%)	*13,75*	*12,21*	*16,74*	*17,57*	*16,79*	*17,33*	*5,14*	*0,44*	*0,04*	*100*
Italy	No of Holdings	859050	506630	468450	349970	229630	166640	62520	17180	4480	2664550
	Share in Total (%)	*32,24*	*19,01*	*17,58*	*13,13*	*8,62*	*6,25*	*2,35*	*0,64*	*0,17*	*100*
Luxembourg	No of Holdings	300	250	430	420	480	1170	880	20	.	3950
	Share in Total (%)	*7,59*	*6,33*	*10,89*	*10,63*	*12,15*	*29,62*	*22,28*	*0,51*		*100*
Netherlands	No of Holdings	0	90	3380	14190	16700	29550	47360	12240	1300	124810
	Share in Total (%)	*0,00*	*0,07*	*2,71*	*11,37*	*13,38*	*23,68*	*37,95*	*9,81*	*1,04*	*100*
Austria	No of Holdings	.	.	.	.	.	.	.	.	.	
	Share in Total (%)										
Portugal	No of Holdings	136520	142250	151280	99260	44920	18360	4670	1230	270	598760
	Share in Total (%)	*22,80*	*23,76*	*25,27*	*16,58*	*7,50*	*3,07*	*0,78*	*0,21*	*0,05*	*100*
Finland	No of Holdings	.	.	.	.	.	.	.	.	.	
	Share in Total (%)										
Sweden	No of Holdings	.	.	.	.	.	.	.	.	.	
	Share in Total (%)										
UK	No of Holdings	41170	15230	21030	26060	28540	46540	44510	16230	3750	243060
	Share in Total (%)	*16,94*	*6,27*	*8,65*	*10,72*	*11,74*	*19,15*	*18,31*	*6,68*	*1,54*	*100*
EU-11	**No. of Holdings**	**1891270**	**1235690**	**1231970**	**1042860**	**767260**	**710250**	**360320**	**85350**	**14390**	**7339360**
	Share in Total (%)	***25,77***	***16,84***	***16,79***	***14,21***	***10,45***	***9,68***	***4,91***	***1,16***	***0,20***	*0*

Table 3.8 (b) *Number of Holdings in 1995*		EC Size (ESU) classes									
		Less than 1	**1 to less than 2**	**2 to less than 4**	**4 to less than 8**	**8 to less than 16**	**16 to less than 40**	**40 to less than 100**	**100 to less than 250**	**250 or more**	**Total**
Geo											
Belgium	No.of Holdings	3700	3830	5540	7070	7790	14900	21180	6460	520	70990
	Share in Total (%)	*5,21*	*5,40*	*7,80*	*9,96*	*10,97*	*20,99*	*29,84*	*9,10*	*0,73*	*100*
Denmark	No.of Holdings	0	320	4170	10980	11980	14640	16600	8600	1480	68770
	Share in Total (%)	*0,00*	*0,47*	*6,06*	*15,97*	*17,42*	*21,29*	*24,14*	*12,51*	*2,15*	*100*
Germany*	No.of Holdings	.	.	.	.	.	.	.	.	.	
	Share in Total (%)										
Greece	No.of Holdings	155000	118380	163790	176900	128260	53370	6090	520	90	802400
	Share in Total (%)	*19,32*	*14,75*	*20,41*	*22,05*	*15,98*	*6,65*	*0,76*	*0,06*	*0,01*	*100*
Spain	No.of Holdings	285380	234140	234500	204920	160750	114550	33950	7570	1830	1277590
	Share in Total (%)	*22,34*	*18,33*	*18,35*	*16,04*	*12,58*	*8,97*	*2,66*	*0,59*	*0,14*	*100*
France	No.of Holdings	74740	62440	63590	66450	89740	188130	149020	36080	4610	734800
	Share in Total (%)	*10,17*	*8,50*	*8,65*	*9,04*	*12,21*	*25,60*	*20,28*	*4,91*	*0,63*	*100*
Ireland	No.of Holdings	11040	12530	23370	30310	28570	31300	14430	1730	130	153410
	Share in Total (%)	*7,20*	*8,17*	*15,23*	*19,76*	*18,62*	*20,40*	*9,41*	*1,13*	*0,08*	*100*
Italy	No.of Holdings	846260	464030	398820	320910	222200	150480	59410	16210	3780	2482100
	Share in Total (%)	*34,09*	*18,70*	*16,07*	*12,93*	*8,95*	*6,06*	*2,39*	*0,65*	*0,15*	*100*
Luxembourg	No.of Holdings	210	190	290	340	320	740	1030	60	.	3180
	Share in Total (%)	*6,60*	*5,97*	*9,12*	*10,69*	*10,06*	*23,27*	*32,39*	*1,89*		*100*
Netherlands	No.of Holdings	110	70	1560	10270	13970	20630	36420	26220	3950	113200
	Share in Total (%)	*0,10*	*0,06*	*1,38*	*9,07*	*12,34*	*18,22*	*32,17*	*23,16*	*3,49*	*100*
Austria	No.of Holdings	37240	24050	31670	36780	40990	41470	8970	460	120	221750
	Share in Total (%)	*16,79*	*10,85*	*14,28*	*16,59*	*18,48*	*18,70*	*4,05*	*0,21*	*0,05*	*100*
Portugal	No.of Holdings	108610	106510	111080	64880	32570	19030	6100	1540	310	450630
	Share in Total (%)	*24,10*	*23,64*	*24,65*	*14,40*	*7,23*	*4,22*	*1,35*	*0,34*	*0,07*	*100*
Finland	No.of Holdings	2440	12630	14140	16490	22130	26590	5540	890	110	100960
	Share in Total (%)	*2,42*	*12,51*	*14,01*	*16,33*	*21,92*	*26,34*	*5,49*	*0,88*	*0,11*	*100*
Sweden	No.of Holdings	6670	9890	13970	13910	12130	15820	13370	2670	410	88840
	Share in Total (%)	*7,51*	*11,13*	*15,72*	*15,66*	*13,65*	*17,81*	*15,05*	*3,01*	*0,46*	*100*
UK	No.of Holdings	30820	13240	21980	28000	28590	40910	44220	21700	5040	234500
	Share in Total (%)	*13,14*	*5,65*	*9,37*	*11,94*	*12,19*	*17,45*	*18,86*	*9,25*	*2,15*	*100*
EU-14	**No of Holdings**	**1562220**	**1062250**	**1088470**	**988210**	**799990**	**732560**	**416330**	**130710**	**22380**	**6803120**
	Share in Total (%)	***22,96***	***15,61***	***16,00***	***14,53***	***11,76***	***10,77***	***6,12***	***1,92***	***0,33***	*0*
											100
EU-11	**No of Holdings**	**1515870**	**1015680**	**1028690**	**921030**	**724740**	**648680**	**388450**	**126690**	**21740**	**6391570**
	Share in Total (%)	***23,72***	***15,89***	***16,09***	***14,41***	***11,34***	***10,15***	***6,08***	***1,98***	***0,34***	*0*

Table 3.8 (c) *Number of Holdings in 2000*		EC Size (ESU) classes									
	EC Size (ESU)	Less than 1	1 to less than 2	2 to less than 4	4 to less than 8	8 to less than 16	16 to less than 40	40 to less than 100	100 to less than 250	250 or more	Total
Geo											
Belgium	No.of Holdings	2930	3060	4370	5650	6350	11070	18360	9120	800	61710
	Share in Total (%)	*4,75*	*4,96*	*7,08*	*9,16*	*10,29*	*17,94*	*29,75*	*14,78*	*1,30*	*100*
Denmark	No.of Holdings	130	140	3310	8640	10310	11950	11990	9210	2150	57830
	Share in Total (%)	*0,22*	*0,24*	*5,72*	*14,94*	*17,83*	*20,66*	*20,73*	*15,93*	*3,72*	*100*
Germany*	No.of Holdings	17200	37520	58920	61590	64480	102390	93470	28160	8240	471970
	Share in Total (%)	*3,64*	*7,95*	*12,48*	*13,05*	*13,66*	*21,69*	*19,80*	*5,97*	*1,75*	*100*
Greece	No.of Holdings	155450	129980	162930	168020	130460	62340	7310	490	90	817070
	Share in Total (%)	*19,03*	*15,91*	*19,94*	*20,56*	*15,97*	*7,63*	*0,89*	*0,06*	*0,01*	*100*
Spain	No.of Holdings	195840	218550	247680	223460	182230	149520	52270	14040	3830	1287420
	Share in Total (%)	*15,21*	*16,98*	*19,24*	*17,36*	*14,15*	*11,61*	*4,06*	*1,09*	*0,30*	*100*
France	No.of Holdings	58340	54300	57970	55350	62790	133710	168620	63920	8810	663810
	Share in Total (%)	*8,79*	*8,18*	*8,73*	*8,34*	*9,46*	*20,14*	*25,40*	*9,63*	*1,33*	*100*
Ireland	No.of Holdings	9000	9340	17920	26580	28370	29830	17810	2370	310	141530
	Share in Total (%)	*6,36*	*6,60*	*12,66*	*18,78*	*20,05*	*21,08*	*12,58*	*1,67*	*0,22*	*100*
Italy	No.of Holdings	628700	397820	403810	291500	193850	149390	63370	19610	5670	2153720
	Share in Total (%)	*29,19*	*18,47*	*18,75*	*13,53*	*9,00*	*6,94*	*2,94*	*0,91*	*0,26*	*100*
Luxembourg	No.of Holdings	190	170	210	280	290	550	1010	120	0	2820
	Share in Total (%)	*6,74*	*6,03*	*7,45*	*9,93*	*10,28*	*19,50*	*35,82*	*4,26*	*0,00*	*100*
Netherlands	No.of Holdings	110	40	1140	9160	11940	17240	29730	26760	5430	101550
	Share in Total (%)	*0,11*	*0,04*	*1,12*	*9,02*	*11,76*	*16,98*	*29,28*	*26,35*	*5,35*	*100*
Austria	No.of Holdings	36850	21070	27390	32290	35540	36670	8920	630	120	199480
	Share in Total (%)	*18,47*	*10,56*	*13,73*	*16,19*	*17,82*	*18,38*	*4,47*	*0,32*	*0,06*	*100*
Portugal	No.of Holdings	102030	104110	93770	56130	30160	19830	7220	2160	560	415970
	Share in Total (%)	*24,53*	*25,03*	*22,54*	*13,49*	*7,25*	*4,77*	*1,74*	*0,52*	*0,13*	*100*
Finland	No.of Holdings	3280	5790	9940	12400	13060	21590	13680	1330	130	81200
	Share in Total (%)	*4,04*	*7,13*	*12,24*	*15,27*	*16,08*	*26,59*	*16,85*	*1,64*	*0,16*	*100*
Sweden	No.of Holdings	6360	7480	12710	13850	11680	12750	12120	3940	520	81410
	Share in Total (%)	*7,81*	*9,19*	*15,61*	*17,01*	*14,35*	*15,66*	*14,89*	*4,84*	*0,64*	*100*
UK	No.of Holdings	52130	13750	20570	22190	23610	33330	37440	23370	6860	233250
	Share in Total (%)	*22,35*	*5,89*	*8,82*	*9,51*	*10,12*	*14,29*	*16,05*	*10,02*	*2,94*	*100*
EU-15	**No of Holdings**	**1268540**	**1003120**	**1122640**	**987090**	**805120**	**792160**	**543320**	**205230**	**43520**	**6770740**
	Share in Total (%)	***18,74***	***14,82***	***16,58***	***14,58***	***11,89***	***11,70***	***8,02***	***3,03***	***0,64***	*0*
											100
EU-11	**No of Holdings**	**1204850**	**931260**	**1013680**	**866960**	**680360**	**618760**	**415130**	**171170**	**34510**	**5936680**
	Share in Total (%)	***20,30***	***15,69***	***17,07***	***14,60***	***11,46***	***10,42***	***6,99***	***2,88***	***0,58***	*0*

Table 3.8 (d) *Number of Holdings in 2003*		EC Size (ESU) classes								
	EC Size (ESU)	Less than 1	1 to less than 2	2 to less than 4	4 to less than 8	8 to less than 16	16 to less than 40	40 to less than 100	100 to less than 250	250 or more	Total
Geo											
Belgium	No.of Holdings	2270	2530	3640	4980	5470	9220	16170	9720	940	54940
	Share in Total (%)	*4,13*	*4,61*	*6,63*	*9,06*	*9,96*	*16,78*	*29,43*	*17,69*	*1,71*	*100*
Denmark	No.of Holdings	10	120	2520	7060	8400	10040	8580	8770	3120	48620
	Share in Total (%)	*0,02*	*0,25*	*5,18*	*14,52*	*17,28*	*20,65*	*17,65*	*18,04*	*6,42*	*100*
Germany*	No.of Holdings	22130	29940	43930	49760	50410	78400	88140	39760	9820	412290
	Share in Total (%)	*5,37*	*7,26*	*10,66*	*12,07*	*12,23*	*19,02*	*21,38*	*9,64*	*2,38*	*100*
Greece	No.of Holdings	169580	139600	169240	157950	111910	65480	9760	800	130	824450
	Share in Total (%)	*20,57*	*16,93*	*20,53*	*19,16*	*13,57*	*7,94*	*1,18*	*0,10*	*0,02*	*100*
Spain	No.of Holdings	162280	174470	212770	196800	155830	149000	65110	18910	5570	1140740
	Share in Total (%)	*14,23*	*15,29*	*18,65*	*17,25*	*13,66*	*13,06*	*5,71*	*1,66*	*0,49*	*100*
France	No.of Holdings	47650	44710	50420	50540	58760	122140	162590	67300	9880	613990
	Share in Total (%)	*7,76*	*7,28*	*8,21*	*8,23*	*9,57*	*19,89*	*26,48*	*10,96*	*1,61*	*100*
Ireland	No.of Holdings	8460	11020	19310	26510	25480	24320	16970	2730	440	135240
	Share in Total (%)	*6,26*	*8,15*	*14,28*	*19,60*	*18,84*	*17,98*	*12,55*	*2,02*	*0,33*	*100*
Italy	No.of Holdings	537550	349090	365340	275830	194130	147580	66960	21680	5650	1963810
	Share in Total (%)	*27,37*	*17,78*	*18,60*	*14,05*	*9,89*	*7,51*	*3,41*	*1,10*	*0,29*	*100*
Luxembourg	No.of Holdings	150	110	150	220	270	390	970	180	10	2450
	Share in Total (%)	*6,12*	*4,49*	*6,12*	*8,98*	*11,02*	*15,92*	*39,59*	*7,35*	*0,41*	*100*
Netherlands	No.of Holdings	140	60	1260	8150	10110	14570	23660	22200	5350	85500
	Share in Total (%)	*0,16*	*0,07*	*1,47*	*9,53*	*11,82*	*17,04*	*27,67*	*25,96*	*6,26*	*100*
Austria	No.of Holdings	33140	14960	20660	26430	29480	36060	11710	1150	190	173780
	Share in Total (%)	*19,07*	*8,61*	*11,89*	*15,21*	*16,96*	*20,75*	*6,74*	*0,66*	*0,11*	*100*
Portugal	No.of Holdings	97690	87850	74650	47670	25150	17190	6600	1970	510	359280
	Share in Total (%)	*27,19*	*24,45*	*20,78*	*13,27*	*7,00*	*4,78*	*1,84*	*0,55*	*0,14*	*100*
Finland	No.of Holdings	790	5270	9810	12880	13570	20360	10880	1260	130	74950
	Share in Total (%)	*1,05*	*7,03*	*13,09*	*17,18*	*18,11*	*27,16*	*14,52*	*1,68*	*0,17*	*100*
Sweden	No.of Holdings	7660	7100	10550	11210	8870	9300	8950	3630	620	67890
	Share in Total (%)	*11,28*	*10,46*	*15,54*	*16,51*	*13,07*	*13,70*	*13,18*	*5,35*	*0,91*	*100*
UK	No.of Holdings	98810	18560	22160	23350	23140	31470	34090	21940	7100	280620
	Share in Total (%)	*35,21*	*6,61*	*7,90*	*8,32*	*8,25*	*11,21*	*12,15*	*7,82*	*2,53*	*100*
EU-15	**No of Holdings**	**1188310**	**885390**	**1006410**	**899340**	**720980**	**735520**	**531140**	**222000**	**49460**	*6238550*
	Share in Total (%)	***19,05***	***14,19***	***16,13***	***14,42***	***11,56***	***11,79***	***8,51***	***3,56***	***0,79***	*0*
											100
EU-11	**No of Holdings**	**1124590**	**828120**	**921460**	**799060**	**618650**	**591400**	**411460**	**176200**	**38700**	*5509640*
	Share in Total (%)	***20,41***	***15,03***	***16,72***	***14,50***	***11,23***	***10,73***	***7,47***	***3,20***	***0,70***	*0*

Table 3.8 (e) *Number of Holdings*		Less than 1	1 to less than 2	2 to less than 4	4 to less than 8	8 to less than 16	16 to less than 40	40 to less than 100	100 to less than 250	250 or more	
1990											
EU-11	**No. of Holdings**	1891270	1235690	1231970	1042860	767260	710250	360320	85350	14390	7339360
	Share in Total	*25,77*	*16,84*	*16,79*	*14,21*	*10,45*	*9,68*	*4,91*	*1,16*	*0,20*	*0*
1995											
EU-14	**No of Holdings**	1562220	1062250	1088470	988210	799990	732560	416330	130710	22380	6803120
	Share in Total	*22,96*	*15,61*	*16,00*	*14,53*	*11,76*	*10,77*	*6,12*	*1,92*	*0,33*	*0*
2000											
EU-15	**No of Holdings**	1268540	1003120	1122640	987090	805120	792160	543320	205230	43520	6770740
	Share in Total	*18,74*	*14,82*	*16,58*	*14,58*	*11,89*	*11,70*	*8,02*	*3,03*	*0,64*	*0*
2003											
EU-15	**No of Holdings**	1188310	885390	1006410	899340	720980	735520	531140	222000	49460	6238550
	Share in Total	*19,05*	*14,19*	*16,13*	*14,42*	*11,56*	*11,79*	*8,51*	*3,56*	*0,79*	*0*

Table 3.8 (f) *Number of Holdings*		Less than 1	1 to less than 2	2 to less than 4	4 to less than 8	8 to less than 16	16 to less than 40	40 to less than 100	100 to less than 250	250 or more	
1990											
EU-11	**No. of Holdings**	1891270	1235690	1231970	1042860	767260	710250	360320	85350	14390	7339360
	Share in Total	*25,77*	*16,84*	*16,79*	*14,21*	*10,45*	*9,68*	*4,91*	*1,16*	*0,20*	*0*
1995											
EU-11	**No. of Holdings**	1515870	1015680	1028690	921030	724740	648680	388450	126690	21740	6391570
	Share in Total	*23,72*	*15,89*	*16,09*	*14,41*	*11,34*	*10,15*	*6,08*	*1,98*	*0,34*	*0*
2000											
EU-11	**No. of Holdings**	1204850	931260	1013680	866960	680360	618760	415130	171170	34510	5936680
	Share in Total	*20,30*	*15,69*	*17,07*	*14,60*	*11,46*	*10,42*	*6,99*	*2,88*	*0,58*	*0*
2003											
EU-11	**No. of Holdings**	1124590	828120	921460	799060	618650	591400	411460	176200	38700	5509640
	Share in Total	*20,41*	*15,03*	*16,72*	*14,50*	*11,23*	*10,73*	*7,47*	*3,20*	*0,70*	*0*

Source: Eurostat Agriculture and Fisheries Database and own calculations.

In Table 3.8, number of farms and their share in total are shown for every size class for various years. Starting from Table 3.8 (a) which shows the agricultural structure in 1990 for eleven member states, one can clearly see that in these eleven countries most of the farms are concentrated in size classes less than 40 ESU. Number of holdings with less than 1 ESU is a significant 25,77 percent. Share of farms under 40 ESU in total is reaching 93 percent. It is important to note here however that there is a signifciant amount of divergence among countries. Some members have a comparatively better agricultural structure than the others. In the Netherlands for example almost half of the farms are larger than 40 ESU and only 14,15 percent are below 8 ESU. In Denmark, farms larger than 40 ESU constitute an important 32,09 percent while 20 percent are below 8 ESU. On the other side, there are Italy, Greece, Spain and Portugal. In Italy for example farms larger than 40 ESU are only 3,16 percent of all farms while farms smaller than 8 ESU constitute 81,96 percent in total. In Portugal, 88,41 percent of holdings are below 8 ESU, the same figure is around 84,73 percent in Greece. Finally in Spain only 1,64 percent of holdings are larger than 40 ESU.

However, over the years from 1990 to 2003, one can observe a tendency for improvement in farm structures. In the Netherlands for example, there is a big jump in '100 to 250 ESU' size class from 9,81 percent in 1990 to 25,96 percent in 2003 and the share of most of the sizes lower than 100 ESU is decreasing. In Denmark, a similar trend could be observed. Share of farms in '100 to 250 ESU' size class is increasing from 5,71 percent in 1990 to 18,04 percent in 2003. Moreover, share of farms in '250 or more ESU' size class also rising from 0,64 percent in 1990 to 6,42 in 2003[107]. Looking at the other side of the picture, in Italy for example one can not see comparable jumps in the shares of highest size classes but there are rather slight improvements in lower size classes. Share of farms less than 1 ESU is decreasing from 32,24 percent in 1990 to 27,37 percent in 2003. In all classes larger than 2 ESU there are slight increases. In Spain, there are significant increases in '16 to 40' and '40 to 100 ESU' size classes from 5, 04 percent to 13,06 percent and from 1,25 percent to 5,71 percent respectively. There is also an important decline in the smallest size class from 32,61 percent in 1990 to 14,23 percent in 2003. In Greece, the shares of classes larger than 8 ESU is increasing gradually with a corresponding decline in lower classes.

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[107] The increasing share of '250 or more ESU' size class may not be a sign of improvement since labor productivity remains stable after around 150 ESU. See Figure 3.4. Therefore, it is not possible to benefit from scale economies anymore by increasing farm size over 250 ESU.

In order to see the overall picture in the EU, Table 3.8 (e) and Table 3.8 (f) could be viewed[108].

According to Table 3.8 (f), in EU-11, the share of the farms less than 1 ESU in size is decreasing from 25,77 percent in 1990 to 20,30 percent in 2000 and rising slightly to 20,41 percent in 2003. A decline in share is also observed in '1 to less than 2' size class although it is not as high as in the previous class. In '2 to less than 4 ESU' size class there is a jump in 2000 from 16,09 to 17,07 percent but in 2003 the share is turning back to 16,72 which is slightly lower than the share in 1990. Increasing shares starts from '4 to less than 8 ESU size class. In this size class , the share is incresing from 14,21 percent in 1990 to 14,60 percent in 2000 and then lowering to 14,50 percent in 2003. In '8 to 16 ESU' size class there is another increase from 10,45 in 1990 to 11,23 in 2003. Similarly in '16 to less than 40 ESU' size class the increase is from 9,68 to 10,73 percent. The most significant rises in shares are in '40 to less than 100' and '100 to less than 250 ESU' size classes. In the former, the rise is from 4,91 percent in 1990 to 7,47 percent in 2003 and in the latter from 1,16 percent in 1990 to 3,20 percent in 2003. When we look at the overall situation in EU-11 in 2003; we see that the share of farms under 40 ESU in total is 88,63 percent. In 1990 the same figure was 93,73 percent. Farms in classes larger than 40 ESU is 11,37 percent in 2003 while it was 6,27 percent in 1990.

In Table 3.8 (e), the situation in fifteen EU countries is shown. Trying to find a trend in this table may be misleading due to the inclusion of new members. However, it is important the see the overall picture for EU-15. By 2003 in EU-15; 87,13 percent of farms are under 40 ESU while the remaining 12,87 percent are in larger size classes. Therefore, one could say that no major change took place in the farm size structure in the EU following the inclusion of new members.

3.2.2 The case of Italy

The dominance of small farms in the farming sector is a significant problem in Italy. Over the years as a member of the EC, this dominance has persisted.

In Table 3.9, Italian farms are categorized according to income classes for the years 1984/1985. Net Value Added per AWU (NVA/AWU) and Farm Net Value Added (FNVA) are also included for farms in every income class. It could be seen from the table that both FNVA and

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[108] There are two summary tables in this section; Table 3.8 (e) and (f). The first one is prepared considering the new memberships to the Community. Data for Germany is not available until 2000. The second summary table is provided for the twelve members except Germany to be able to observe the trend more clearly.

NVA/AWU are highest in the '> (higher than) 24000 ECU' income class where average farm size is 44,2 ha. However, only 3 percent of all Italian farms are under this income class. The second highest values for FNVA and NVA/AWU are under 12000-24000 ECU income class where average size is 23,8 ha. In this class there lie 12 percent of the farms. 43 percent of the farms on the other hand are under the smallest '0-4000 ECU' class where FNVA and NVA/AWU values are the lowest. Another significant 30 percent are in the following income class and its FNVA and NVA/AWU are still much lower than the ones in highest income classes.

Therefore, during 1980s, Italian agricultural structure could be criticized based on the fact that most Italian farms gathered into smallest size classes where NFVA and NVA/AWU are lowest. It was however, possible to benefit from scale economies by increasing farm sizes to upper classes where there is a much higher value added (both in terms of NVA/AWU and FNVA) as Table 3.9 suggests.

Table 3.9 *Farm Accounts Results for Italy According to Classes of Income 1984/1985*

Classes of Income (000 ECU)	Holdings in FADN (number)	%	Farm Net Vale Added (FNVA)	Area (ha UAA)	Net Value Added per AWU (NVA/AWU)
ITALY					
<0 to 4	407,279	43	3,5	6,7	2,1
4 to 8	277,589	30	9,8	9,9	5,7
8 to 12	116,029	12	18,1	15,3	9,8
12 to 24	110,853	12	34,9	23,8	16,4
>24	29,105	3	86,0	44,2	35,2
All holdings	940,855	100	13,4	11,9	7,5

Source: Tarditi (1987).

However, it is equally important to see the trend in the structure of farming. Examining more recent data one can observe an improvement in Italian farm structure although the adequacy of the pace of this change is open for discussion. Before analysing the trend of improvement in farm structure, it is necessary to show the scale economies in Italian agriculture with the help of a labour productivity-farm size graph.

Table 3.10 *Scale Economies in Italian Agriculture: Agricultural Labour Productivity by Farm Size for Farms of Various Specializations*

| Farm Specialization	Size class in Economic Size Units							
	0-2	2-4	4-8	8-16	16-40	40-100	100+	Total
Specialistcereals, oilseed and protein crops	3866	7107	9718	13909	21624	37085	53327	21412
General field cropping	2166	4307	6485	9670	16850	31467	46934	17774
Specialist horticulture	2527	4702	6046	8221	12566	21802	45197	25097
Specialist vineyards	3065	5757	7921	9600	14972	22560	28893	13526
Specialist olives	3337	6056	7532	10227	12690	15738	20033	7398
Permanent crops combined	2940	5143	6741	8921	13356	20710	33418	12323
Specialist fruit and citrus	3848	6690	8343	10528	14349	19832	22175	11623
Specialist dairying	1545	2753	4445	7415	14858	30375	47675	19280
Mixed cropping	2006	3329	5405	8017	13591	23040	28380	9560
Mixed livestock (mainly grazing)	1376	2058	3797	7144	14570	26178	31792	8750
Crops and livestock combined	1778	3037	5132	8282	16299	33331	45045	15196
All holdings	**2414**	**4226**	**6220**	**9071**	**15410**	**28203**	**40973**	**15321**

Labour productivity is expressed as the standard gross margin (SGM) per annual work unit (AWU) in ECU/year; farm size classes are expressed in terms of economic size unit (1 ESU=1200 ECU per year since 1990).

Source: Tarditi 2000

In Table 3.10, agricultural labour productivity in Italy is expressed in terms of the Standard Gross Margin (SGM) per annual work unit in ECU/year. Farm size classes are expressed as European Size Units (ESU) where 1 ESU is equal to 1200 ECU per year. It is evident from the table that regardless of the farm type, labour productivity is directly proportionate to the economic size of the farm. In 'all holdings' category, the productivity of an annual work unit employed in the size class of '40-100 ESU' (28203 ECU/year) is reaching almost 14 times the productivity of a worker employed in the '0-2 ESU' size class (2414 ECU/year).

In Figure 3.5, scale economies in Italian agriculture are shown on a graph based on the previous table. From the graph one could easily say that in Italy, for various products, labor productivity is much higher in higher size classes without exception. Therefore, an increase in farm size may well bring an increase in labour productivity.

Figure 3.5 *Scale Economies in Italian Agriculture (Various Products)*
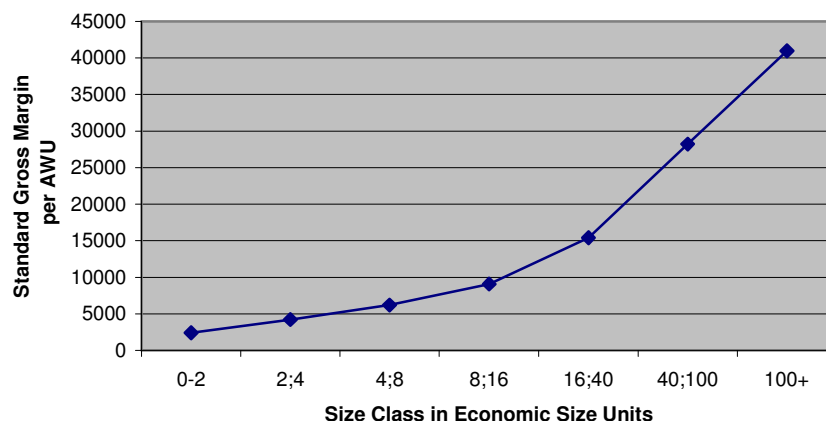
Source: Derived from Tarditi (2000).

When we look at the distribution of all Italian farms among farm size classes for 1990s and 2000s we could see that the majority of the holdings are gathered in smaller size classes where, compared to higher classes, there is a much lower labour productivity. However as stated earlier, there is a slight trend for improvement.

Table 3.11 *Number of Italian Farms under Various Size Classes*

		ESU									Total
		< 1	1;<2	2;<4	4;<8	8;<16	16;<40	40;<100	100;<250	>250	
1990											
Italy	No of Hold.	859050	506630	468450	349970	229630	166640	62520	17180	4480	2664550
	(%)	32,24	19,01	17,58	13,13	8,62	6,25	2,35	0,64	0,17	100
1995											
Italy	No.of Hold.	846260	464030	398820	320910	222200	150480	59410	16210	3780	2482100
	(%)	34,09	18,70	16,07	12,93	8,95	6,06	2,39	0,65	0,15	100
2000											
Italy	No.of Hold.	628700	397820	403810	291500	193850	149390	63370	19610	5670	2153720
	(%)	29,19	18,47	18,75	13,53	9,00	6,94	2,94	0,91	0,26	100
2003											
Italy	No.of Hold.	537550	349090	365340	275830	194130	147580	66960	21680	5650	1963810
	(%)	27,37	17,78	18,60	14,05	9,89	7,51	3,41	1,10	0,29	100

Source: Eurostat Agriculture and Fisheries Database and own calculations

According to Table 3.11, by 1990, a major share of all Italian farms are under the size classes lower than 40 ESU (96,84 percent) where labour productivity is much lower compared to the productivities of '40-100 ESU' and '100+ ESU' size classes[109]. Important to note here that the biggest share belongs to 'lower than 1 ESU' size class (32,24 percent) which has the lowest labour productivity. Over the years however, there are slight changes in the shares of most of the size classes. First of all, there is a considerable decline in the 'lower than 1 ESU' size class from 32,24 in 1990 to 27,37 percent in 2003. The changes in other size classes are comparatively moderate. There is a small decline from 19,01 percent to 17,58 percent in '1 to less than 2 ESU' size class. Shares of all the other size classes except 'more than 250 ESU' size class are slightly increasing about 1 percentage point. Therefore, the most productive, more than 40 ESU size classes (40;<100, 100;<250 and >250 ESU) are increasing their shares from 3,16 percent in 1990 to 4,8 percent in 2003.

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[109] See Figure 3.5.

CONCLUSION

Considering the fact that the European Community has used price support policy based on high prices during most of the history of the CAP and partly replaced it with direct income payments system based on land area and income loss, one could expect to find the previously mentioned resource allocation and income distribution effects of these policies on EC agriculture.

In fact, available evidence suggests a highly polarized distribution of CAP benefits. Both price support and direct income payments based on land area favors large farmers. This may not be done intentionally by the authorities but it is an eventual outcome of the policies. Price support policy is operated through intervention buying of stocks and since large farmers produce and sell more to the intervention agencies they also gain more than small farmers. This unfair distribution of CAP benefits may have been changed by the use of income support policy if it was implemented accordingly. The eligibility for getting these payments could have been designed in such a way as to provide equal support for farmers. However, the income support system is intended to compensate the income loss of farmers due to the price reductions and these payments are distributed based on land area. Therefore, from an income distribution point of view it created the same effect as price support policy.

Italian case is not an exception to this; like other members of the Community, in Italy a small number of large farms are gaining the lion's share while a large number of small farms are benefiting much less. Interestingly enough, a policy created to provide a fair standard of living for farmers is a source of 'unfairness' among them. Important to note here that the Community is on the other hand, trying to reduce the income gap among various parts of the society or among regions through some other policies.

Income distribution among farms of different sizes is only one aspect of the income issue. There are other aspects such as income distribution between landowners and landless workers. These different income distribution effects of price and income support policy in general and of the CAP in particular should be areas of further research. The persistence of the situation throughout the history of the CAP and its causes are other areas that need careful consideration. Studies on this issue should take political processes into account.

The income distributive aspects of the CAP is of great importance for the future member states of the EU. Governments aiming at lowering the income inequality in the society should consider the related implications of the CAP.

Important to note here that the compulsory modulation of a maximum 5 percent brought by 2003 CAP reform is not capable of significantly altering the situation. The likely reduction in single farm payments necesessitated by the Financial Discipline Mechanism as enlargement continues on the other hand, could only bring a change if cuts are applied to the payments to large farms and small farms are excluded. This could be done by putting a payment floor and applying cuts only to the payments higher than this floor. If payment cuts are applied to all farmers, then there will still be a large income gap between small and large farms. The extent of such payment cuts is also decisive and will be decided according to the additional burden brought by enlargement.

The resource allocation aspect of the CAP is a much more complex issue. Evidence suggests the domination of small farms in the Community throughout its history. However, there is a significant amount of labour outflow from agriculture since 1960 and farm sizes are changing in the period observed. Community farms are in general evolving towards larger farms although the adequacy of the pace of it is open to discussion. At first sight, this outcome may look contradictory. Since theory suggests that both price and income support policies, by raising the income of the labour, prevent labour outflow and therefore allow the survival of small farms, how could we explain the labour outflow and the change in farm sizes in the Community agriculture?

 In fact, agricultural policies are not the only factors in determining the labor outflow from agriculture. There are various other factors at work. Different rates and nature of industrial growth for example is an important determinant. Fast growing labour intensive industries and higher wages may pull labour out of agriculture.

Moreover, farmers' preferences are also decisive. A farmer may find it more attractive to find a job in a city than to remain in farming although he was provided a certain level of income in farming by the agricultural policy. Farmer's children for example may not want to replace their

fathers and choose to find employment in cities even though they could earn from support by staying in farming.

National policies could create the necessary environment for these forces to remove labour from agriculture and thus could well assist them. Removing the constraints in the land market for example, may help to increase labour outflow. Adjusting the tax system accordingly could also accelerate labour outflow from agriculture.

Another point to note is the technological progress. Technological improvements are usually labour-saving and thus labour may be forced out of land as new technology replace them. The nature of labour outflow from agriculture in the EC should be examined for more complete analyses.

Therefore, above mentioned forces could have worked in opposite direction with the CAP. They could have managed to remove labour from agriculture and increase farm sizes even though CAP provides income incentives for farmers to remain. They could also explain the different paces of transformation in member states since the power of these forces could be different in each of them.

However, important to see that Community farming is still characterized by small farms. The main reason for this could well be the income incentive provided by the CAP. That means, although some farmers have left the sector, a significant amount of them, adequate enough to keep farms small, remained mainly because of the income provided by the CAP. These income-oriented farmers could be the source of the dominance of small farming in the Community.

Therefore, the logical conclusion is that if income is not provided by the CAP these remaining labour may also leave and farms could increase in size to be able to benefit from scale economies and reduce costs.

Table 4.1 could help to understand the overall mechanism.

Table 4.1 General Effects of the CAP on Income Distribution and Farm Structure in the EU.

	Price support	Direct Income Payments	External factors (National Policies, Farmer's preferences, etc.)
Income distribution among different farm sizes	Favors large farmers	Favors large farmers	These factors do not alter the income distribution situation.
Farm structure	Cause an overallocation of resources (especially labour) in agriculture.	Cause an overallocation of resources (especially labour) in agriculture.	These factors could make it possible to achieve a certain level of labour outflow from agriculture and thus a slight trend for improvement could be observed in farm sizes.

The number of small farms are particularly high in Italy. In fact, Italy has a tradition of agricultural protection which has roots in early 1930s. The price of wheat is raised tremendously in 1935 as a reaction to the economic sanctions enforced by the League of Nations because of the fascist regime's policies in Northern Africa. Following World War II, although many sectors were liberalized, agriculture remained a highly protected sector. The reason was then to prevent a rural-urban migration. In the following years price support was not reduced and protection persisted[110].

Important to state that national policies in Italy has supported the CAP in raising incomes of farmers and thus retaining them in farming. By the early 1980s, total income transfers to Italian agriculture provided by both national (lower tax rates, tax rebates, social security subsidies, other social contributions, etc.) and common policies amounted nearly to its net value added[111].

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[110] Secondo Tarditi, (a), "Agricultural Structural Adjustment in Italy", in Paolo Rosato, ed., *Agricultural Policy and Environment: Proceedings of a Conference held in Italy 22-26 July 1992,* Unipress, 1993.
[111] Tarditi (a) (1993) based on Secondo Tarditi and E. Croci-Angelini, 'Aspetti Metodologici e Criteri di Volutazione della Politica Economica nel Settore Agricolo', in *La Politica Economica nel Settore Agricolo*, Società Italiana degli Economisti Agrari, INEA, 1988.

By 2001, national and regional expenditures account for 47 percent of all transfers to Italian agriculture and 40 percent of agricultural value added.[112]

As an example to the effects of factors other than agricultural policies on farm sizes the differing rate of transformation in the north and south of Italy could be given. As stated in the previous chapter, in the north, farms are generally larger than in the south. The reason for this could well be the different levels of macroeconomic development between these two parts of the country. There are more employment opportunities out of agriculture in the north than in the south[113]. Therefore farmers tended to leave agriculture for various reasons could do so in the north while it is harder in the South.

Despite all distortive effects of support policies, removing support to force labour out of the land for economic reasons, in this case to increase farm sizes may not be always be acceptable. Labour exodus may add to the unemployment in cities if the industrial growth is slow or if labour does not have necessary skills. Such a case could cause serious social problems. Usually, the farmers are so influential politically that no policy maker could dare to initiate such a transformation. This political influence of small farmers in various countries could be analysed in future studies. It seems obvious that there is a dilemma for policy makers. The loss of votes and the potential social problems on the one hand and distorted resource allocation in the economy on the other.

Clearly, if such a transformation is aimed, this could only be done within a plan in the long run. First of all, such a plan is expected to have clear long-term objectives. Two separate ways could be followed. Farm support could be reduced gradually in the long term for the existing generation of farmers. In such a case, the plan should include training for alternative employment, income support for farmers in their transition period, guidance and consultancy. The success of such a plan is totally dependent on the growth of industrial and services sectors. Institutions could be set to improve the co-ordination among sectors. Alternatively, support could be provided in full for the existing generation of farmers but declared to end in a future date. Farmers would then not be replaced by their successors[114]. To provide alternative areas of

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[112] For detailed explanation on the amount of support provided by national and regional governments see; Tarditi (b) (2003)
[113] Tarditi (interview) (2005).
[114] Hill (1984).

employment for the forthcoming generation is still of vital importance and should be considered carefully.

Similar but less challenging schemes are tried to be applied by the European Community as a part of its structural policy. However, there has never been a clear and strong commitment to resolve this problem. Therefore, these policies remained weak and did not transform the sector successfully. However, in the future the single farm payments are expected to decline in EU-15. The Financial Discipline Machanism is likely to bring cuts in farm payments in EU-15 to keep agricultural spending within agreed limits as enlargement necessitates more funds to agriculture. The extent of these cuts and its effect on labour outflow and farm sizes remains to be seen.

However, it is important to note here that once the aim of releasing excess labor from agriculture has been achieved, the remaining large farms would still face the inherent problems of agricultural sector. Alternative methods of support for these large farmers to overcome the difficulties could be discussed and policies of countries with successful agricultural sectors should be examined. In doing so, every possible side-effect of these policies should be considered. In the complexity of the agicultural sector, every step should be taken cautiously.

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