

SOCIAL, ECONOMIC AND ACCOUNTING SUMMARY OF THE GREEK AGRICULTURAL SECTOR 1950-2010: CENTRAL GREECE REGION

Michail Th. PAPAILIAS

Panteion University
Agricultural Bank of Greece, Athens Branch, Greece
papailiasmichail@hotmail.com

***Abstract:** Usually, the analysis of the economic and social development of a country or a region can be achieved either by using macroeconomic theories, or through a microeconomic approach (Sakellaropoulos, 1993). The innovation of this paper lies in the use of accounting techniques for capturing the relevant developments and in the fact that there are no similar studies in the Greek bibliography, except some fragmentary approaches of the 1950's (Euelpides, 1953). Specifically, the objective of this article is the presentation of the social and economic development in a major region in Greece with the use of accounting statements. For this purpose the balance sheets and the income statements of the specific region were estimated per decade throughout the postwar period and the social-economic facts are tried to associate with the figures. The article is structured in three parts. The first refers to the methodology of the research. In the second, balance sheets and profit/loss accounts are presented in detail with the use of financial statement analysis methods and are attempted to correlate with the social-economic incidents. In the third the findings are evaluated.*

***Keywords:** Balance-sheets, income statements, accounting, agricultural, region development, Central Greece*

JEL Classification Codes: M410, M490, Q140

1. METHODOLOGY

The specific article estimates the financial statements of the agricultural sector in U.S. dollars, in order to be widely comparable. This displays for certain categories of capital (because of the way it is calculated) a distortion image. First, it is obvious that changing the current price in foreign currency is not the best deflator. Moreover, the dollar, especially after the collapse (1971) of the treaty of Bretton Woods (1944), stopped possess it's previous stability.

On the other hand, the use of fixed price when the base year is many years ago is not to facilitating the understanding of figures. Several times, developments are presented in fixed prices 1970, which was used by the Hellenic Statistical Authority (EL.STAT) and all the organizations until 1996. Lately, it was often used as the base year 1988, when figures reformed. However, the use of the system ESA 95, canceled this attempt.

Finally, the entrance of the country in the Eurozone from the February 2002 complicated the things. For these reasons, the financial figures were estimated in U.S. dollars.

1.1 BALANCE SHEET - PROFIT/(LOSS) ACCOUNT

a. Fixed capital

The fixed capital concerns only the primary sector (farm products), therefore it was not estimated the expenditures which related to transformation, marketing, etc. The fixed capital was split in two (depending on the entity which made the investments) in public and private.

a.1 Public fixed capital specified as the accumulated investment of public, which concern according Agricultural Bank of Greece (ATE) and the Hellenic Statistical Authority (EL.STAT)

seven categories: agriculture¹, buildings of livestock², forests³, fishery⁴ - aquaculture, agricultural electrification⁵, agricultural road construction⁶ and land reclamation work⁷. Data obtained from the ATE

a.2 Private fixed capital considered as the investments of farmers, regardless whether they were with equity, government's loans or the European Union. Data drawn from the ATE and the Hellenic Ministry of Rural Development and Food (MINAGRIC)

b. Plant nominated the value of systematic plantation (minus non-productive plantations, such as new trees). In the value of plant were included orchards (vegetables), citrus, vines, raisins olive groves and tree nuts. Data collected from the ATE and the Pan-hellenic Confederation of Unions of Agricultural Cooperatives (PASEGES)

c. Livestock is related to working animals, production and reproduction. The number of livestock populations calculated, such as of ungulates, cattle, sheep and goats, pigs, rabbits, chickens, bees. Data obtained from the ATE and the PASEGES

d. Land is the value of land other than plantations. The estimation performed statistical inventory. Of the cultivated land plantations were removed because they were the vegetable section. The greenhouse plantations were not calculated, since their value was measured in the private fixed capital. Data drawn from the ATE

e. The calculation of liabilities in order to avoid inaccuracies, covering only two basic components: the equity and the liabilities (information was drawn from the Agricultural Bank). It should be mentioned that until 2000 (when the entrance of private capital in rural areas had allowed) 90% of all the farms were lend from the ATE. The short-term loans of the Bank accounted for 98% of foreign capital. Equity estimated from sample surveys, which were conducted by the geotechnical services of ATE (Papailias, 2004). This data, in order to be similar, were originally converted to fixed prices 1970 and 1988. For greater comparability the financial statements were converted into U.S. dollars

f. Data for the figure of profit/(loss) account gross value product obtained from the EL.STAT

g. The intermediate imports estimated by EL.STAT only for the year 2000 and included expenses such as seeds, reproductive material, energy, fertilizers and soil conditioners, veterinary expenses, feed, maintenance of materials, maintenance of buildings, agricultural services etc

h. Depreciation calculated on specific rates depending on the asset category

j. Wages estimated with the case that farmers work 250 days approximately each year multiplied by the average cost of payday

k. Interests short/long term relates data from ATE.

1.2 VERTICAL – HORIZONTAL ANALYSIS

In order to compare more properly and accurate (reducing the problems from inflation and exchange rates) the financial statements through the decades a vertical analysis is used. The calculation of financial figures as percentage on the absolute rates size of a figure received as a base (total assets, total liabilities/equity or gross income), revealed the relative size and significance of each figure relative to the amount of base (a common basis of comparison between them is created).

¹ Depreciation calculated with fixed rate of 3% (these rates ranged from 10% for nurseries, greenhouses to 2% for buildings)

² The depreciation rates ranged between 2% (storage, stables) and 10% (veterinary stations). The average rate was 3,5%

³ The average depreciation rate estimated at 3% (2,5 - 3% for torrents and 15% for cleaning projects of forest roads)

⁴ The average rate was at 4,5%. The rates ranged from 2,5% in fishing shelters, fishing stations to 10% equipment at fish hatcheries

⁵ The average depreciation rate estimated at 4%

⁶ Rates was estimated between 10% to 25%

⁷ The depreciation rate was calculated at 3%, from 2% (for various contractors) to 10% (commissions technical rain pipes, ducts, small canal etc)

On the other hand, a horizontal analysis is revealing how much figures have changed from one period to the next. The horizontal resolution is highlighted when data concern a long period, so it is possible to identify the trends. (Kantzos, 2002).

2 FINANCIAL STATEMENTS

2.1 INTRODUCTION

Table 1
Agricultural population 1950-2010

	Total Greece	Central Greece	% of total	% change Central
1951*	1.366.864	113.016	8,27	
1961	1.953.900	169.900	8,70	0,5
1971	1.312.340	98.452	7,50	-0,4
1981	971.828	71.156	7,32	-0,3
1991	671.147	46.334	6,90	-0,3
2001	617.453	48.681	7,88	0,1
2011 ⁸	510.000	43.000	8,43	-0,1

Source: EL.STAT

Table 1 quotes the agricultural population for the period 1950-2010 both for the country and for the region presented by the paper. The percentage through the decades presents small fluctuations and it tends towards 8%, but it is evident that the population both for the country and the region diminished approximately 3 times. This trend confirms that the country's workforce moves to larger cities, avoiding to work in the primary sector. Some of the reasons are the low prestige of the social and economic life in the countryside.

2.2 FIGURES

Table 2
Balance sheet 1950

Current prices - million dollars

Assets	764	100,0%	Total liabilities/equity	764	100,0%
Public fixed assets	15	1,9%	Liabilities	145	19,0%
Private fixed assets	11	1,5%	Equity	619	81,0%
<i>Total Fixed assets⁹</i>	26	3,4%			
Plant	199	26,1%			
Livestock	65	8,5%			
<i>Capital Reserves¹⁰</i>	290	37,9%			
Land	461	60,4%			
<i>Total investment capital¹¹</i>	751	98,4%			
<i>Current</i>	13	1,6%			

⁸ Provisional assessment

Table 2 shows that the public fixed capital constituted the 57,7% of the total. This appears that private investment in the beginning of the period were relatively small (low mechanization of farming). The total fixed capital (public and private activity) throughout the previous period was too small as it was only 3,5% of total invested capital and 3,4% of assets. The largest component of the assets was the value of land. The current was extremely small because of low rural incomes and consisted mainly of ATE funding (short term). The general picture that emerges is that the accumulation of capital was relatively low resulting in rural incomes to be small, which had not allowed a rapid development of the sector. The equity constituted the 81% of liabilities, the rest was loans of ATE (which later became available to farmers for free) from various organisms (eg UNRRA).

Table 2.1

Net Profit/(Loss) 1950	Current prices - million dollars	%
Gross value product	75,5	100,0%
Intermediate imports	-	-
Gross agricultural income ¹²	75,5	100,0%
Minus: Depreciation	0,8	1,1%
Wages	41,5	55,0%
Interest short/long term	1,1	1,4%
Net Profit/(Loss) ¹³	32,9	43,5%

From table 2.1 it appears that gross rural income was relatively small, only 75,5 million dollars, but due to small depreciation (small fixed capital) net income appeared high. Wages due to the overcrowding were low and as a result the farms shown remarkable result, which was 43% of gross rural income. As we will show below, it was a special year because of the following period the profit shrank and agricultural enterprises began to show damages.

Table 3
Balance sheet 1960

Current prices - million dollars

Assets	558	100,0%	Total liabilities/equity	558	100,0%
Public fixed assets	16	2,9%	Liabilities	284	51,0%
Private fixed assets	31	5,5%	Equity	273	49,0%
<i>Total Fixed assets</i>	47	8,4%			
Plant	150	26,9%			
Livestock	47	8,4%			
<i>Capital Reserves</i>	244	43,8%			
Land	292	52,3%			
<i>Total investment capital</i>	536	96,1%			
<i>Current</i>	22	3,9%			

⁹ Total Fixed assets = Public fixed assets + Private fixed assets

¹⁰ Capital Reserves = Total fixed assets + Plant + Livestock

¹¹ Total Investment capital = Capital Reserves + Land

¹² Gross agricultural income = Gross value product – Intermediate imports

¹³ Net Profit/(Loss) = Gross agricultural income – Depreciation – Wages – Interest short/long term

Table 3.1

Net Profit/(Loss) 1960	Current prices - million dollars	
	dollars	%
Gross value product	80,7	100,0%
Intermediate imports	-	-
Gross agricultural income	80,7	100,0%
Minus: Depreciation	3,1	3,8%
Wages	72,8	90,2%
Interest short/long term	1,9	2,4%
Net Profit/(Loss)	2,9	3,6%

In 1960 the public fixed capital constituted the 34% of the total capital invested in assets of 2,9% (Table 3). This reduction results to the rapid increase of private capital due to the extensive investments resources of the farmers (mainly borrowing from the ATE). The consequence was the indebtedness of farms resulting in liabilities to constitute 50% of the total liabilities and equity. Remarkable also was the reduction in land value (52% of assets) due to rural depopulation from the extensive immigration held during the period 1950 onwards. The indebtedness the farmers has led to an increase in interest short and long term. The abandonment of the countryside has led to an increase of wages resulting in all the agricultural enterprises to show a marginal profit (3,6% of gross agricultural product).

The transfer of funding to help other countries (such as Korea) resulted in a gradual reduction of the financial assistance of the Marshall plan from 1951 onwards. This decline has forced the Greek economy being reconstructed to take effective measures in order to eliminate the deficit of payment's balance, such as the sharp devaluation in 1953 against the dollar (Sapounas, 1991).

Table 4
Balance sheet 1970

Current prices - million dollars

Assets	882	100,0%	Total liabilities/equity	882	100,0%
Public fixed assets	42	4,8%	Liabilities	555	63,0%
Private fixed assets	114	13,0%	Equity	326	37,0%
<i>Total Fixed assets</i>	157	17,8%			
Plant	266	30,2%			
Livestock	90	10,2%			
<i>Capital Reserves</i>	512	58,1%			
Land	323	36,7%			
<i>Total investment capital</i>	836	94,8%			
<i>Current</i>	46	5,2%			

Table 4.1

Net Profit/(Loss) 1970	Current prices - million dollars	
	dollars	%
Gross value product	155,4	100,0%
Intermediate imports	-	-
Gross agricultural income	155,4	100,0%
Minus: Depreciation	11,0	7,1%
Wages	96,6	62,1%
Interest short/long term	5,0	3,2%
Net Profit/(Loss)	42,9	27,6%

In 1970 (Table 4) it is appeared a parallel increase in private and public investments resulting in a significant increase in total fixed capital (the public fixed was the 27% of total). The importance of land continued to decrease constituting just 36% of assets in 1970. In contrast a significant increase showed in plant forming the 30% of assets. Because of the gift of debts by the dictatorship liabilities reduced with the consequence equity to constitute 63% of total liabilities and equity. Profit/(loss) statement (Table 4.1) shows a significant increase in depreciation and showed a smaller increase in wages. The net profit was recorded by the farms was 28%. This is explained by the loss of interest due to the elimination of agricultural debts last year.

Table 5
Balance sheet 1980

Current prices - million dollars

Assets	3.029	100,0%	Total liabilities/equity	3.029	100,0%
Public fixed assets	201	6,6%	Liabilities	2.544	84,0%
Private fixed assets	611	20,2%	Equity	485	16,0%
<i>Total Fixed assets</i>	811	26,8%			
Plant	834	27,5%			
Livestock	215	7,1%			
<i>Capital Reserves</i>	1.860	61,4%			
Land	1.012	33,4%			
<i>Total investment capital</i>	2.872	94,8%			
<i>Current</i>	156	5,2%			

Table 5.1

Net Profit/(Loss) 1980	Current prices - million dollars	%
Gross value product	693,1	100,0%
Intermediate imports	-	-
Gross agricultural income	693,1	100,0%
Minus: Depreciation	56,8	8,2%
Wages	479,2	69,1%
Interest short/long term	55,9	8,1%
Net Profit/(Loss)	101,1	14,6%

According to Table 5 the fixed public capital continued to decrease constituting the 24% of total capital and 6,6% of assets. The value of the land continued to be the largest component of assets constituting the 33%. The equity increased significantly recommending 84% of the total. In equity are added all subsidies. The profit/(loss) were positive (14,6%) in contrast to what is happening across the country because of the proximity of the area in Athens and the easy availability of agricultural products

In 1973, with the "politicization" of the military regime there was a significant change in the prices of all products (government intervention). The parliamentary regime was installed in 1974 to face completely new situations. The economic crisis continues, the democratic freedoms since 1936 restored to unprecedented levels for the Greek society (legalization of the Communist Party) and the association with the European Economic Community change the economic

conditions, as of 1974 there should be no duties on the Community products, which were not produced in Greece (Maravegias, 1992).

Table 6
Balance sheet 1990

Current prices - million dollars

Assets	4.300	100,0%	Total liabilities/equity	4.300	100,0%
Public fixed assets	382	8,9%	Liabilities	3.440	80,0%
Private fixed assets	612	14,2%	Equity	860	20,0%
<i>Total Fixed assets</i>	994	23,1%			
Plant	1.221	28,4%			
Livestock	528	12,3%			
<i>Capital Reserves</i>	2.742	63,8%			
Land	1.348	31,4%			
<i>Total investment capital</i>	4.090	95,1%			
<i>Current</i>	209	4,9%			

Table 6.1

Net Profit/(Loss) 1990	Current prices - million dollars	
	dollars	%
Gross value product	715,5	100,0%
Intermediate imports	-	-
Gross agricultural income	715,5	100,0%
Minus: Depreciation	62,6	8,8%
Wages	511,5	71,5%
Interest short/long term	171,0	23,9%
Net Profit/(Loss)	-29,7	-4,1%

From Table 6, the private fixed capital is reached to 61% of total assets, while the percentage of land value dropped further, reaching 31% slightly higher than in plantations (28,4%). Equity due to high subsidies were maintained at 80% of liabilities. The net profit/(loss) according to Table 6.1 were negative due to labor shortages and rising wages. The deficit rose to 4% of the agricultural product.

The implementation of the Common Agricultural Policy during the period 1981-1982 was combined with a significant improvement in the degree of mechanization of livestock farms as well as significant support to the farm in the mountainous and disadvantaged areas. Accompanied by a slight increase in the size of livestock farms and small decrease of the fragmentation. Community practices followed in the period 1981-1992 had the effect of increasing the number of producer groups, and have not resulted in significant improvement in the level of education of Greek farmers. The fall in employment occurred in this period, created the need for a new or additional employment in rural residents, such as agrotourism, part timing agriculture, etc (Sapounas & Miliakos, 1996).

Table 7
Balance sheet 2000

Current prices - million dollars

Assets	8.554	100,0%	Total liabilities/equity	8.554	100,0%
Public fixed assets	444	5,2%	Liabilities	6.073	71,0%
Private fixed assets	739	8,6%	Equity	2.481	29,0%
<i>Total Fixed assets</i>	1.183	13,8%			
Plant	3.230	37,8%			
Livestock	539	6,3%			
<i>Capital Reserves</i>	4.952	57,9%			
Land	3.301	38,6%			
<i>Total investment capital</i>	8.252	96,5%			
<i>Current</i>	302	3,5%			

Table 7.1

	Current prices - million dollars	
Net Profit/(Loss) 2000	dollars	%
Gross value product	745,1	100,0%
Intermediate imports	163,9	22,0%
Gross agricultural income	581,2	78,0%
Minus: Depreciation	72,2	9,7%
Wages	466,3	62,6%
Interest short/long term	86,9	11,7%
Net Profit/(Loss)	-44,2	-5,9%

In 2000 (Table 7) private fixed capital was 62% of the total and 8.6% of assets. The land formed 38% of the value of assets compared to 37,8% of plant. In essence, that the vegetable section and the earth were more than $\frac{3}{4}$ of assets. Shareholders' equity reduced to 71% of total liabilities/equity. The reasons for this was the significant reduction in grants and the loan markets with the most unfavorable terms (abolition of the monopoly of the ATE). Regarding net profit/(loss) the calculation of the intermediate imports, the amount of wages and the high cost of money because of interest led to the agricultural enterprises present losses of 6%.

Table 8
Balance sheet 2010¹⁴

Current prices - million dollars

Assets	9.667	100,0%	Total liabilities/equity	9.667	100,0%
Public fixed assets	497	5,1%	Liabilities	6.187	64,0%
Private fixed assets	842	8,7%	Equity	3.480	36,0%
<i>Total Fixed assets</i>	1.339	13,9%			
Plant	3.488	36,1%			
Livestock	520	5,4%			
<i>Capital Reserves</i>	5.347	55,3%			
Land	3.700	38,3%			
<i>Total investment capital</i>	9.047	93,6%			
<i>Current</i>	620	6,4%			

¹⁴ Provisional assessment

Table 8.1

Net Profi/(Loss) 2010¹⁵	Current prices - million dollars	%
Gross agricultural income	560,0	100,0%
Minus: Depreciation	78,0	13,9%
Wages	430,0	76,8%
Interest short/long term	100,0	17,9%
Net Profit/(Loss)	-48,0	-8,6%

Table 8 and 8.1 presents some provisional assessment for the year 2010. The figure of land stabilized at the same level of the previous decade. Liabilities presented a slight decreased because banks did not enforce the primary sector, so farmers could not use foreign capital. Regarding net profit/(loss) the figure appeared a little higher, due to the rising payday and the high cost of money because of the interest.

3. CONCLUSION

3.1 BALANCE SHEET

Looking at the period 1950-2000 the following are observed:

At the beginning and at the end of the period the value of land was quite high (higher in the beginning). The lowest percentage of land in the assets was in the middle of the season, due to the continuous abandonment by the migration. Thereafter, especially after the country's accession to the European Union immigration reduced or disappeared and the value of land began to rise again. Steady increase presented by the plant, because of the result of changes in land use. The fixed assets increased during the period 1960-1980 and the private fixed assets was the most important factor in the overall asset.

Exploring liabilities seems that the first years the growing costs covered by the income of farmers. After 1955 and until 1980 there was extensive bank financing of the sector leading up to the bank debt and over indebtedness of rural households. The dictatorship of 1968-1969 wrote off farmers' debts to avoid bankruptcy. Then, low interest loans were given and emphasis on the long term rather than short term borrowing were given. After 1980 the major subsidies from the European Union played a crucial factor in maintaining the same high levels of capital and reduce the debt of farmers.

Table 9
Balance sheet in summary

Year	Current prices - million dollars	% of 1950
1950	763,7	100,0%
1960	557,6	73,0%
1970	881,7	115,5%
1980	3.028,6	396,6%
1990	4.299,6	563,0%
2000	8.554,2	1120,1%

¹⁵ Provisional assessment

Table 10

Current prices - million dollars												
	1950		1960		1970		1980		1990		2000	
Assets	764	100,0%	558	100,0%	882	100,0%	3.029	100,0%	4.300	100,0%	8.554	100,0%
Public fixed assets	15	1,9%	16	2,9%	42	4,8%	201	6,6%	382	8,9%	444	5,2%
Private fixed assets	11	1,5%	31	5,5%	114	13,0%	611	20,2%	612	14,2%	739	8,6%
<i>Total Fixed assets</i>	26	3,4%	47	8,4%	157	17,8%	811	26,8%	994	23,1%	1.183	13,8%
Plant	199	26,1%	150	26,9%	266	30,2%	834	27,5%	1.221	28,4%	3.230	37,8%
Livestock	65	8,5%	47	8,4%	90	10,2%	215	7,1%	528	12,3%	539	6,3%
<i>Capital Reserves</i>	290	37,9%	244	43,8%	512	58,1%	1.860	61,4%	2.742	63,8%	4.952	57,9%
Land	461	60,4%	292	52,3%	323	36,7%	1.012	33,4%	1.348	31,4%	3.301	38,6%
<i>Total investment capital</i>	751	98,4%	536	96,1%	836	94,8%	2.872	94,8%	4.090	95,1%	8.252	96,5%
<i>Current</i>	13	1,6%	22	3,9%	46	5,2%	156	5,2%	209	4,9%	302	3,5%

Table 10.1

Current prices - million dollars												
	1950		1960		1970		1980		1990		2000	
Total liabilities/equity	764	100,0%	558	100,0%	882	100,0%	3.029	100,0%	4.300	100,0%	8.554	100,0%
Liabilities	145	19,0%	284	51,0%	555	63,0%	2.544	84,0%	3.440	80,0%	6.073	71,0%
Equity	619	81,0%	273	49,0%	326	37,0%	485	16,0%	860	20,0%	2.481	29,0%

In 1950 Greece was a very rural country. The financial results were positive despite the low accumulation of capital that exist. The extensive migration has led to rural depopulation increase in lending (over indebtedness) of farmers and as a result negative figures. It should be noted that the Central Greece because of the proximity to Attica, which was directed towards the great mass of farmers continued to show for many years positive results in contrast to most regions of the country that gave negative results. The consequence was the emigration from the solid or Greece would be small compared to other regions.

In 1970 net results are shown positive as the previous year the dictatorship donate the debts of farmers resulting in disappear damage. In 1980 a significant increase is shown due to the fact that the period 1977-1980 was the pre-accession period in which there have been major increases in the prices of agricultural products. From 1990 and then the results in Central Greece shown the same image with the other regions of the country. The reasons must be found in fundamental turn that occurred crop and rising labor costs due to lack of labor force.

3.2 PROFIT/(LOSS)

Table 11. Net Profit/(Loss) in summary

Year	Current prices - million dollars	% of 1950
1950	32,88	100,0%
1960	2,92	8,9%
1970	42,88	130,4%
1980	101,14	307,6%
1990	-29,67	-90,3%
2000	-44,17	-134,4%

Table 12

Net Profits/(Loss) - m. dollars - %	1950		1960		1970		1980		1990		2000	
	Gross value product	75,5	100,0%	80,7	100,0%	155,4	100,0%	693,1	100,0%	715,5	100,0%	745,1
Intermediate imports	-	-	-	-	-	-	-	-	-	-	163,9	22,0%
Gross agricultural income	75,5	100,0%	80,7	100,0%	155,4	100,0%	693,1	100,0%	715,5	100,0%	581,2	78,0%
Minus: Depreciation	0,8	1,1%	3,1	3,8%	11,0	7,1%	56,8	8,2%	62,6	8,8%	72,2	9,7%
Wages	41,5	55,0%	72,8	90,2%	96,6	62,1%	479,2	69,1%	511,5	71,5%	466,3	62,6%
Interest short/long term	1,1	1,4%	1,9	2,4%	5,0	3,2%	55,9	8,1%	171,0	23,9%	86,9	11,7%
Net Profit/(Loss)	32,9	43,5%	2,9	3,6%	42,9	27,6%	101,1	14,6%	-29,7	-4,1%	-44,2	-5,9%

In 1950 Greece was a very rural country. The financial results were positive despite the low accumulation of capital that exist. The extensive migration has led to rural depopulation increase in lending (over indebtedness) of farmers and as a result negative figures. It should be noted that the Central Greece because of the proximity to Attica, which was directed towards the great mass of farmers continued to show for many years positive results in contrast to most regions of the country that gave negative results. The consequence was the emigration from the solid or Greece would be small compared to other regions.

In 1970 net results are shown positive as the previous year the dictatorship donate the debts of farmers resulting in disappear damage. In 1980 a significant increase is shown due to the fact that the period 1977-1980 was the pre-accession period in which there have been major increases in the prices of agricultural products. From 1990 and then the results in Central Greece shown the same image with the other regions of the country. The reasons must be found in fundamental turn that occurred crop and rising labor costs due to lack of labor force.

REFERENCES

Books

- ATE, 1973. *Structural and Financial Data Household Agricultural Enterprises*. ATE, Athens, Greece
- Bank of Greece (1978), *The first fifty years of the Bank of Greece*. Athens, Greece
- Euelpides, Ch., 1953. *Chronic agricultural crisis in Greece*. Papazisis, Athens, Greece
- Relief and Rehabilitation Organization of the United Nations (UNRRA), 1947. *Plan for recovery productive resources of Greece*. Athens, Greece
- Georgakopoulos, T. A., 1991. *The Greek agriculture in the EEC: Impact of accession*. ATE, Athens, Greece
- Hellenic Statistical Authority (EL.STAT), Censuses 1951-2011, Annual Publication
- Kantzos, K., 2002. *Financial Statements Analysis*. Interbooks Publishers, Athens, Greece
- Klimis, A., 1961. *The rural economy before and after the foundation of ATE*. ATE, Athens, Greece
- Maravegias, N. 1992. *Agricultural Policy and Economic Growth in Greece*. New Frontiers, Athens, Greece
- Ministry of Rural Development and Food (MINAGRIC), Annual Publication, 1950-2011
- Ministry of Finance, Public Investment Program, annual editions 1948-1987
- Papailias, T., 1996. *Aquaculture Current Situation and Prospects 1980-1996*. Studies of Rural Economy,
- Sakellaropoulos, T., 1994. *Crises in Greece, 1830-1857 - Economic, Social and Political Aspects*. Kritiki, Athens, Greece
- Sapounas, G., et al, 1996. *The Greek agriculture in the postwar period. Impact of EU membership and lessons for the future*. ATE, Athens, Greece
- Sapounas, G., 1991. *Rural development problems and prospects*. Agricultural Economics Studies, Research & Planning Division, No. 42, ATE, Athens, Greece

Journals

- Liidakis, G., 1985. The impact of Greece's accession to the EEC foreign trade in agricultural products. *Journal of Agricultural Research*, Volume 1, Issue 1, pp. 79-98