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Greek Agriculture in Transition

Simple Commodity Production in five Mountain Communities of Northern Greece

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Résumé : *Cette étude se concentre sur les facteurs qui ont influencé de façon décisive le modèle de développement de cinq communautés montagnardes du nord de la Grèce dans la période de l'après-guerre. En analysant le processus de transition, l'accent est mis sur la description du mode de production dominant dans la zone et en particulier sur la façon dont l'agriculture est soumise au mode de production capitaliste. De plus, le pouvoir explicatif du modèle de production simple de denrées est examiné au travers d'une analyse détaillée de la situation des revenus agricoles de 57 familles, et la pénétration du capitalisme est analysée en prenant en considération les fonctions et les pratiques du capital privé, le rôle de l'Etat ainsi que celui des technologies avancées.*

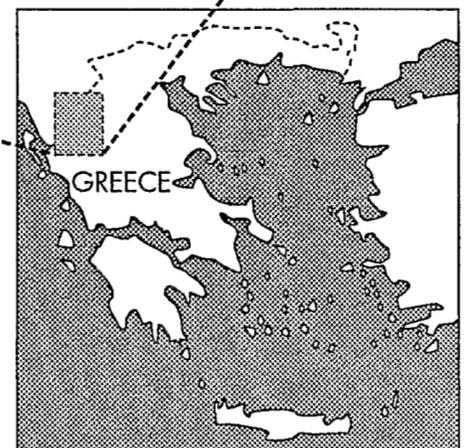
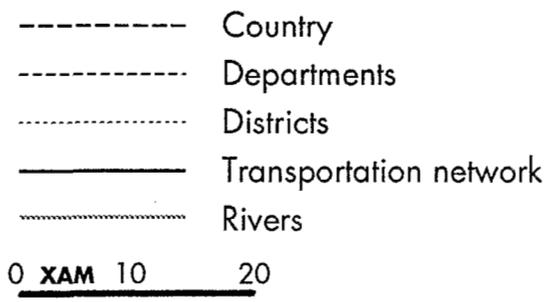
Mots-clés : *Communautés montagnardes – Modèle de développement – Processus de transition – Mode de production – Mode de production dominant – Mode de production capitaliste – Revenus agricoles – Pénétration du capitalisme – Rôle de l'Etat – Technologies avancées.*

Introduction

It is widely accepted that the negative repercussions of the post-war development strategy in Greece were far more significant for the fragile social formation of mountainous areas of Greece than elsewhere in the countryside. The changes in the social and economic milieu which have taken place in the post-war period are manifestations of a complex process characterized by the decisive role of the external political and economic relations of the country (e.g. Mouzelis, 1978 ; Tsoukalas, 1981 ; Yiannitsis, 1979). Regional neoclassical analysis tends to ignore the particularities of the historical process, while the conventional social and economic indicators it uses do not always conform with the actual changes, since they are based on average magnitudes including plains and urban areas as well. On the other hand, the contemporary dialogue on the marxist approach to rural problems reveals that important methodological issues have not been fully clarified (Chevalier, 1983), and there still exists ambiguity concerning the use of appropriate concepts for empirical research.

The present study concentrates on the factors which have decisively influenced the development pattern of five mountain communities. The analysis of their economies which is attempted here focuses on the specification of the prevalent mode of production. In viewing the social relations between production and distribution, we examine how agriculture is subjected to the capitalist mode of production in relation to the mechanisms which are necessary for their reproduction. At the same time we try to evaluate the explanatory power of the theoretical schema of "simple commodity production" *vis-à-vis* the functioning of the existing market forces.

DEPARTMENT OF IOANNINA



Source : National Statistic Service of GREECE, 1972.

1. Simple commodity production and the subjection of the labour process

The specification of the mode of production in one particular region of an open economy implies the analysis of interrelated macroeconomic and historical issues ¹, since the subjection of the labour process cannot be considered in isolation from the internal and the external economic relations of the country. The analysis of these issues facilitates the clarification of the capitalist mode of production which exercises a decisive influence on the rural economy. Consequently, the link between non-capitalist local production with capital may be related to important macro-economic developments and the reproduction mechanisms may thus be viewed in accordance with the functions of the broader market ².

The absence of a wage earning labour force in the area we examined on the one hand and the dominant role of self employed family labour on the other hand, led us to accept the "simple commodity production" scheme as a hypothesis. We are going to examine : a) whether the above scheme may explain the basic functions of the local economies in the five communities, b) whether the necessary modifications which are made for improving its explanatory power, alter significantly its logic (i.e. the approbation of use values, direct control on the means of production), c) whether capitalism reproduces the necessary requirements for its existence (long term stabilization of the family farm), d) whether it may propel the study of capitalist penetration into a non-capitalist social formation.

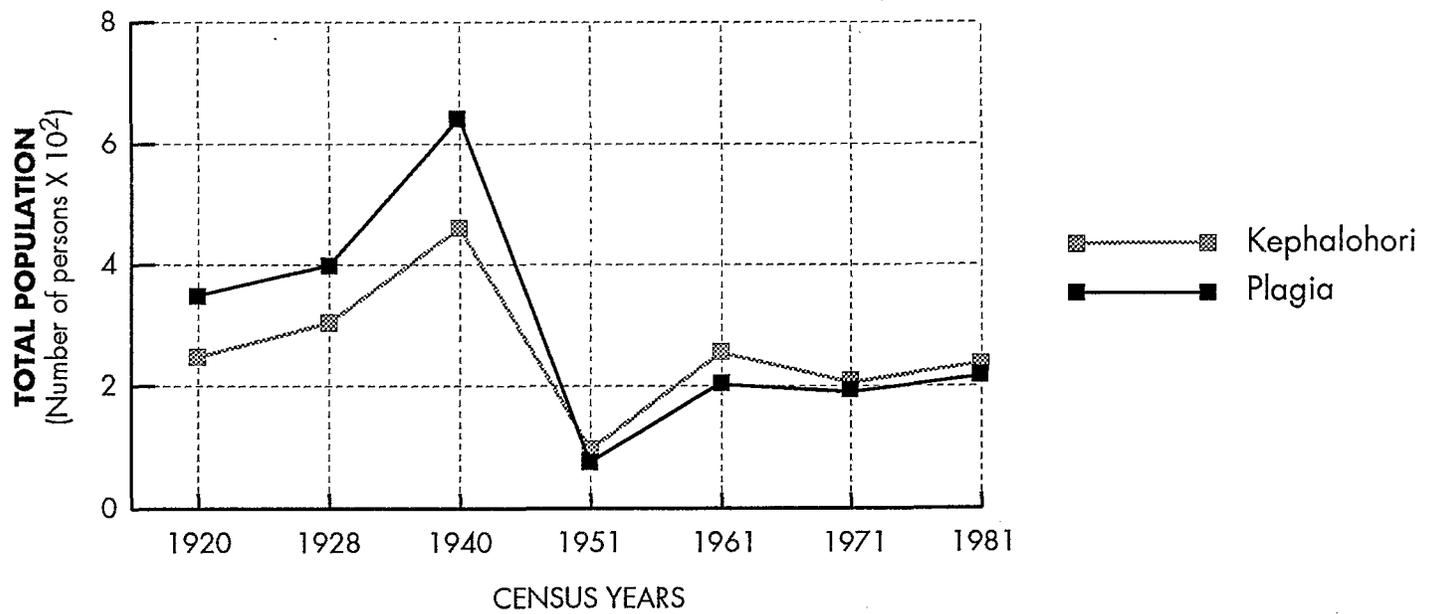
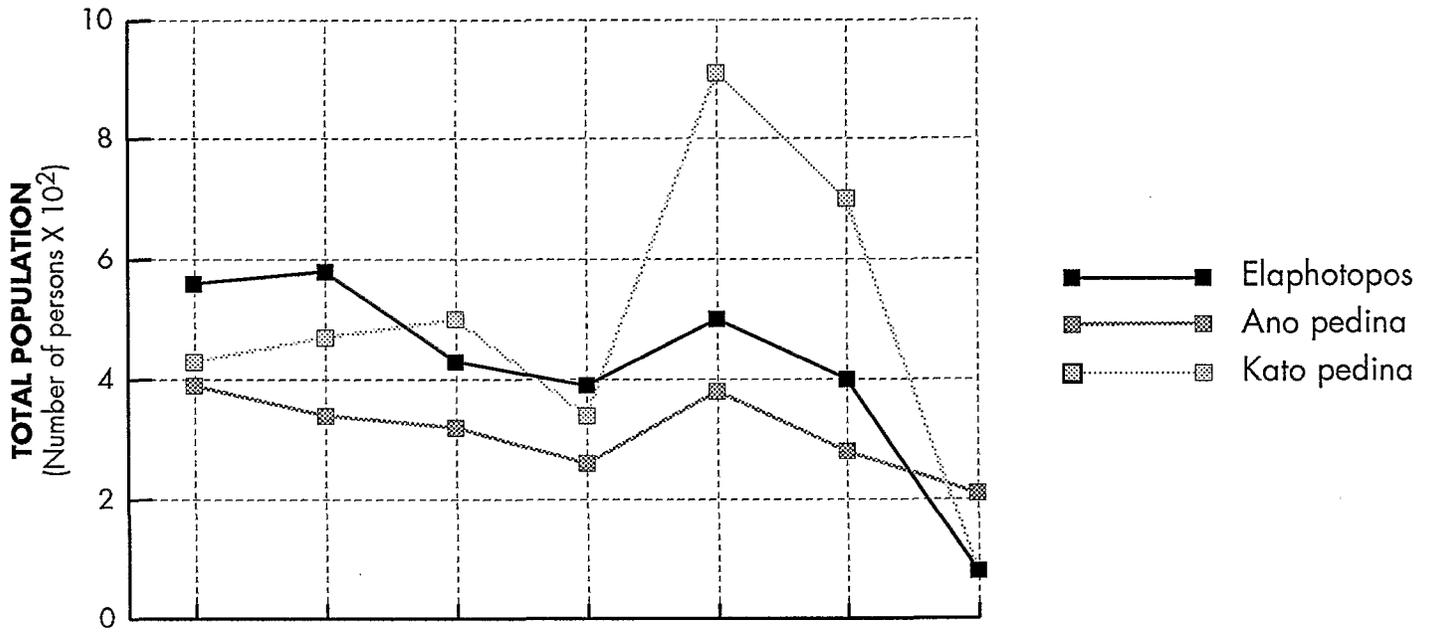
In order to examine the above issues we made a detailed analysis of the farm income situation in the five mountain communities mentioned below.

2. The area of the study

The information for this study comes from a research pilot project ³ which served the integrated Mediterranean Development Programmes of Northern Greece. The pilot project was carried out during the second half of 1984 in five mountain communities of Epirus. The region under consideration consisted of two geographically distinct areas (upper and lower) within the broader region of Ioannina (see **map**). In particular, the "upper" area with an average altitude of 1200 m. includes two neighbouring communities, that of Kephalochori (215 inhabitants) and of Plagia (120 inhabitants), whereas the "lower" area with an average altitude of 750 m. includes three neighbouring communities : Elaphotopos (114 inhabitants), Ano Pedina (175 inhabitants), and Kato Pedina (65 inhabitants).

The "upper communities" show all the characteristics of a typical "flysch landscape" with intensive soil erosion as well as landslides following the degradation of natural vegetation. The woodland soils covering almost the entire area are suitable only for limited cultivation, and water storage is not analogous to the rainfall owing to the great velocity of the surface outfalls. The "lower" area consists mainly of calcareous earth which facilitates the penetration of water to great depths. Erosion dangers, however, do not appear to be as great and the soils are suitable for pastureland, while in the existing small valleys agricultural production is favoured by climatic conditions and the productivity of land. All five communities exhibited on average a 20 % population growth between 1920 and 1940, whereas population decreases amounted to 52 % during the years of World War Two and the subsequent civil war (1941-1951) (see **diagram**). It should be mentioned, however, that between 1951-1961 the population of the above communities was doubled while in the following two decades (1961-1981) the manifest negative growth rates were (in absolute terms) much greater than the region's average. Nonetheless, the repercussions of World War Two and in particular those of the civil war were far more significant for the "upper" communities than for the "lower" communities. The negative repercussions are related to the higher population decreases as well as to the different directions of the expatriated inhabitants. In the "upper" communities which faced all the calamities of the last phase of the civil war, the exodus of the adult population was directed to Eastern European countries whereas in the "lower" communities the region's district (Ioannina) was the first place of refuge. The repatriation, however, during the seventies contributed to a population stabilization as well as to a more favourable age pyramid of the "upper" communities particularly that of Kephalochori.

Changes in the total population per community (1920-1981)



The existing differences between the two areas underline the historical, cultural and geographical diversity of the region. It appears that the whole Zagori subregion which incorporates the "lower" communities has stopped playing its leading role in this part of the country, following the abolition of Ottoman rule and the immediate annexation of Epirus to the modern Greek State after the balkan wars of 1912-1913. The dwindling importance of Zagori, which had displayed substantial economic and cultural development in the preceding two centuries due to its semi-autonomous state, is also manifested by the gradual decline of the three communities examined. The growth of the 44 communities which constituted the Zagori*subregion was mainly due to permanent income transfers generated in central-eastern european capitals located either on the Danube river or on the coast of the Black Sea. On the contrary, the "upper" communities which had a different historical background and were less dependent on external income flows, showed a substantial growth in the interwar period.

In viewing the general downward trend throughout the sixties and seventies (see **table 1**), it should be kept in mind that the internal causes of the early compulsory or voluntary emigration determined to a large extent subsequent population movements. Therefore, it is no wonder that the "upper" communities which had almost been depopulated in the late forties showed only moderate emigration rates in the sixties, compared to those exhibited by the "lower" ones. In addition, the political conditions which prevailed throughout the post-war period until the collapse of the military dictatorship in 1974, were extremely unfavorable even for a limited repatriation of the refugees which only started to take place after that date. The much higher population growth rates in the "lower" communities in the fifties may be attributed to the fact that conditions for resettlement were undoubtedly more favourable there. Hence, their early post-war recovery allowed for higher emigration rates in the following two decades. It should also be mentioned that the expatriated population of the "upper" area was characterized by the equal representation of both sexes, whereas the emigration of the sixties, which is attributed to a complex set of economic and cultural reasons, concerned primarily the male population. Notwithstanding improved living standards and the normalization of political life in the mid-seventies which facilitated repatriation, it has become quite evident that the early post-war population movements have influenced decisively the social physiognomy of the region. Today, over half of the population in both areas is over 45 years old, whereas the ratio of the aged (over 65) is almost twice as much (i.e. 23,5%) as the regional and national averages (i.e. 14.7 and 12.7 respectively). In addition, the age group between 10-19 accounting for 8,1% of the total, lies far below the regional and national average (15,4%). Prospects concerning the farming profession are rather gloomy, since the average age of the farmholding heads was found to be 56 years old, whereas none of them in the sample was less than 30. Today, with the exception of Kephaloheri, the extremely unfavourable age distribution of the population appears as the most restrictive factor to economic development. The fact that females are more numerous than males, is restricted exclusively to the age groups of 10-19 and over 65 years old. Women are substantially fewer in the crucial age group of 20-29, since the persistence of traditional attitudes concerning their social status in relation to the prevailing intrafarm division of labour make the urban pattern of living seem increasingly more attractive.

Table 1

Communities	Total population							Population Change (%)			
	1920	1928	1940	1951	1961	1971	1981	1920/40	1940/51	1951/61	1961/81
Kephaloheri	240	299	454	81	256	188	235	+89,2	-82,6	+216,0	-8,2
Plagla	344	403	648	62	208	187	218	+88,4	-90,4	+235,5	+4,8
Elaphotopos	551	577	439	391	506	404	97	-20,3	-10,9	+29,4	-80,8
Ano Pedina	398	344	324	259	374	274	209	+18,6	-20,1	+44,4	-44,1
Kato Pedina	443	475	501	350	919	695	93	-13,1	-30,1	+62,3	-89,9
Total	1 976	2 098	2 366	1 143	2 263	1 748	852	+19,7	-51,7	+98,0	-62,3
Population of the Region excluding (of Ioannina)	146 219	159 993	140 273	121 433	120 329	94 558	120 475	-4,1	-13,4	-0,9	-14,8
Ioannina (city)	21 266	20 485	21 877	32 315	34 997	40 130	44 829	+2,9	+47,7	+8,3	+29,0
Region of Ioannina	167 485	180 418	162 150	153 748	155 326	134 688	147 304	-3,2	-5,2	+1,0	-5,2

Source : National Statistical Service, Census 1981.

The second feature of the population movements which has decisively influenced the endogenous determinants of development concerns the level of education. In viewing the modernization process of the agricultural sector, it might be expected that the introduction of advanced technology should go along with the substitution of capital for labour in the organization of production, which would in turn be facilitated by continuous improvements in the formal training of those who remained on the farms. In the area under consideration the actual changes do not conform with the above schema, as the educational level of the inhabitants remained at extremely low levels. In particular, it was found that the educational level of 2/3 of the population did not exceed that of primary education. As expected, the "lower" communities showed higher percentages of population who had completed primary education. Intercommunity variations, however, concerning secondary or tertiary education, were insignificant. Furthermore, it seems that emigration has not substantially altered the education level of expatriates since the formal education or technical skills of those who returned in the seventies had not been improved to any considerable extent.

The production of handicrafts as complementary source of income has almost disappeared as the terms under which the local economies were linked with the capitalist market caused drastic reductions on previous productive activities. In addition, the continuous adjustment of the indigenous consumption pattern to that of the urban centers has shifted local demand away from traditional products. It should be pointed out that in the preceding centuries the area under consideration exhibited a division of labour which could hardly correspond to a mere subsistence agriculture, as the permanent income flows from abroad along with the absence of any direct control and significant surplus appropriation by the Ottoman administration, allowed a large part of the labour force to undertake numerous professions outside the primary production. The masterpieces of architecture which may still be admired, in most of the Zagori villages, reveal a pattern of living substantially different from a typical subsistence economy. Today, there exists only one State school in Ano Pedina, in which the authorities are trying to revive the once thriving art of weaving.

The present political attitude of the population reflects the turbulent times of the recent past. Although there were not any clear-cut lines between the two areas during the civil war, it might be said that the massive participation of the "upper" communities on the side of the left wing forces 40 years ago is still influencing decisively current political attitudes. Thus, the communist left still commands one third of the total votes, whereas all the conservative and right wing political parties are only able to muster a quarter of the electorate. Needless to say that since 1981 half of the voters have always voted in favour of P.A.S.O.K. (the Panhellenic Socialist Movement). The "lower" communities on the other hand, from 1974 onwards, in the various elections which have taken place, have not exhibited substantial differences from the region's averages.

3. Farm income determination

Farm income is an important determinant of living standards in all five communities since the main productive activities are directly associated with farming (mostly rearing livestock). In estimating farm income, we paid special attention to the composition of invested capital, the structure of productive outlays in relation to the organization of production practices as well as the farms' efficient use of resources. The changes in the farm structure, expressed by the technical relations between capital-labour and capital-output ratios are usually manifestations of much broader changes in the mode of production prevailing in agriculture. That is, they underline the production relations that direct producers have with the local economies and with the input and output markets. In viewing farm viability quantitatively, the determination of farm income may also indicate whether the family farm is capable of covering its total productive outlays and increase its net investment. In its qualitative dimension, farm viability is related to the changes in the relations of production caused by capitalist penetration. These changes concern primarily : a) possible differentiations of the "simple commodity production" model, b) the emergence of small capitalist enterprises at the "point of production", c) intercommunity and intracommunity social differentiations caused by the appropriation of rent.

Table 2 : Basic economic indicators of the five communities

Communities	Kephalochori	Plagia	Elaphotopos	Ano Pedina	Kato Pedina
1. Average net family farm income in drs	170,682	231,974	349,183	461,333	962,594
2. Average family total income (farm + nonfarm) in drs	521,976	357,792	451,520	554,060	1 046,594
3. Farm income as a ratio of total income (1 : 2)	33%	65%	77%	83%	92%
4. Subsidies as a ratio of the net family farm income	36%	32%	39%	36%	13%
5. Own consumption as ratio of the net family farm income	66%	55%	28%	33%	19%
6. Pensions as a ratio of the nonfarm family income	24%	33%	72%	30%	100%
7. Income from State services as a ratio of the nonfarm family income	47%	67%	----	26%	----
8. Transportation as a ratio of the nonfarm family income	17%	----	----	22%	----
9. Private services and commerce as a ratio of the nonfarm family income	6%	----	12%	22%	----
10. Income generated in the Secondary sector (including rents from residential construction outside the community) as a ratio of the nonfarm family income	6%	----	15%	----	----
11. Income of labour per farm in drs	12,485	97,742	146,691	163,363	393,760
12. Income of labour per employee in drs	10,068	67,408	73,345	69,222	151,446

Source : Own research estimates from a random sample consisting of 57 farms or 25 % of the number of farms.

4. Farm income and living standards

The community classification based on a microeconomic estimation of the average family farm income of 57 farmholdings is in line with an overall evaluation of the local economies based on available macroeconomic indicators concerning the average amount of cultivated land per farm, the average size of livestock expressed in livestock units per farm, the percentages of irrigated land, and the employed family members per farm.

The "upper" communities (Kephaloheri, Plagia) have an average net farm income which is substantially lower than the average net farm income of the "lower" communities (Elaphotopos, Ano Pedina, Kato Pedina). In particular Kephaloheri, which is the most handicapped community in natural resource availability has the lowest net family farm income amounting to 170,682 drs./year, whereas Plagia is slightly better off averaging 231,974 drs./year. Among the "lower" communities, Elaphotopos appears to be the poorest with an average net family farm income of 349,183 drs./year. Ano Pedina stands higher with 461,333 drs./years, whereas Kato Pedina is far ahead with 962,594 drs./year (see **table 2**).

On the basis of these figures, average net farm income in Kephaloheri accounts for only 36 % of the minimum subsistence level estimated for the broader rural region of Ioannina ⁵. In Plagia, it accounts for 50 %, in Elaphotopos 75,2 %, in Ano Pedina 99,3 %, whereas in Kato Pedina it is twice as much.

The above percentages show that in four out of five communities in this handicapped region, productive activity in agriculture cannot guarantee even a minimum acceptable income level.

The farm income situation would have been worse without the production subsidies which accounted for 26 % of the net family farm income in Kephaloheri, 32 % in Plagia, 39 % in Elaphotopos, 36 % in Ano Pedina and 13 % in Kato Pedina.

The per capita subsistence level of 116,090 drs. for the region accounts for 38 % of the 1984 *per capita* net national income, estimated at 303,410 drs. from the national accounts, assuming a total population of 10 million.

5. Farmers' personal consumption

The fact that farmers consume their own produces in absolute and relative terms (as a percentage of the net farm income), appears to be an important indicator of current living standards and pattern of consumption concerning basic foodstuffs. Furthermore, it shows to what extent subsistence agriculture has been incorporated into the privatized rural commodity economy.

According to our own estimates (**table 2**) the farmer's personal consumption accounts for 66 % of the family net farm income in Kephaloheri (or 112,560 drs./house hold unit), 50 % (or 115,987 drs.) in Plagia, 28 % (or 97,771 drs.) in Elaphotopos, 33 % (or 152,240 drs.) in Ano Pedina and 19 % (or 182,893 drs.) in Kato Pedina. These percentages are in line with an expected drop in the share of personal consumption as farm income increases. In the "upper" communities personal consumption is of tantamount importance for the reproduction of the farm family, whereas the smaller percentages in the "lower" communities represent on average higher absolute levels. Consequently, in all five communities there still exist strong trends in personal consumption, attributed to the prevalence of the traditional diet, based on goat-sheep meat and dairy products.

6. Intercommunity differentiations

In viewing intercommunity differentiations with respect to the minimum subsistence level of 464,360 drs., in Kephaloheri there exists only one farm in our sample which surpasses this level, in Plagia there are two farms above this figure, in Elaphotopos three, in Ano Pedina three and in Kato Pedina three. That is, only 21 % of the total farms examined have a farm income above the subsistence level.

The figures of **table 3** indicate the adverse conditions under which the family farm is compelled to operate.

Table 3: farm income and total family income as a ratio of the subsistence level

	Kephalochori	Plagia	Elaphotopos	Ano Pedina	Kato Pedina
Family farm income as a ratio of the subsistence level	36%	50%	75,2%	99,3%	207,3%
N° of farmholdings with a farm income above the subsistence level	1 out of 17	2 out of 11	3 out of 12	3 out of 12	3 out of 5
Total family income as a ratio of the subsistence level	112,5%	77,1%	97,3%	119,4%	225,6%
N° of households with a total income below the subsistence level	9 out of 17	6 out of 11	7 out of 12	6 out of 12	5 out of 5

Source : own research estimates.

7. Total family income, living standards and off-farm employment

The actual economic situation of most households in the four communities would have been worse, had agricultural production been the exclusive source of revenue. Most of the farmholdings would have stopped operating a long time ago and the rural population would have abandoned their homes. However, by considering all the sources of revenues contributing to the family budget (**table 2**), the income situation is improved considerably. Thus, total family income is estimated at 521,976 drs. in Kephalochori, 357,792 in Plagia, 451,520 in Ano Pedina and 1,046.594 in Kato Pedina. On the basis of the minimum subsistence level of 464,360 drs., Kato Pedina now shows a satisfactory average family income, Ano Pedina exceeds this figure by 89,700 drs., Kephalochori by 57,616 drs., whereas Elaphotopos and Plagia still remain below by 12,840 drs. and 106,568 drs. respectively. It should be pointed out, however, that over 50 % of the total households examined had a total income which was below the subsistence level (**table 3**).

In viewing nonfarm income we notice (**table 2**) that in Kephalochori 24% of it comes from State pensions, 47% comes from the Civil Service salaries, 17 % is the income share generated in transportation while trade and construction participate by 6 % and 5 % respectively. These percentages underline the almost absolute dependence of the local economy on the government budget (83 % of the total income flows from State sources in the form of subsidies, pensions and salaries). The other four communities also show high ratios of income, ranging from the government budget to nonfarm income from all sources ; however, their dependence is not as high as in Kephalochori, since the ratio between nonfarm income to total family income is much lower. The data show that as farm income increases the ratio of the various State revenues to total income decreases. It seems that the growth of nonfarm activities, particularly transportation and commerce, is correlated not only to the community's proximity to the broader market of Ioannina (the region's capital) but to the age composition of its population as well. Thus, Kephalochori with a higher portion of younger population, although located at a greater distance from Ioannina than the "lower" communities, has a more complete service network. Furthermore, it seems that the farm income disparities grow larger at higher income levels (Kato Pedina).

8. The technical organization of production and the structure of the family farm

The examination of 25 % of the total number of existing farms showed that in the three communities (Plagia, Elaphotopos, Ano Pedina) the family farms did not vary substantially with regard to the technical

organization of production. The analysis of production costs showed that there existed a substantial variation in the composition of their productive outlays in the prevailing productive activity (animal stock raising for meat and livestock products). This variation may be attributed primarily to the existing differences in resource endowment (arable land and available water for irrigation) of each community, leading thus to different ratios between total costs and locally produced feedgains and fodder. It should be pointed out, however, that the degree of modernization of production in the form of mechanized inputs, fertilizers, pesticides, etc., was significantly higher in Kephalaohori (the less privileged community in natural resources) as well as Kato Pedina (the most favoured).

Intercommunity differentiations with respect to the modernization process may be explained by the existing social and economic differences. Thus Kephalaohori, endowed with a more a balanced age pyramid, a more complete service network and higher nonfarm income flows, is in a better position to undertake the risks associated with the introduction of Fordist technology. On the other hand, in Kato Pedina, the most favoured community in resource endowment, a larger number of farms obtain a gross income level such that it may guarantee the reproduction of the family farm notwithstanding a higher organic composition of capital.

9. The "income of labour" – a digression ⁸

The income of labour was calculated as the difference between the gross farm income on the one hand and the total payments adding to the other factors of production (i.e. capital and land) ⁹. The calculated averages in each community (**table 2**) show that there is no community with a labour income per employee comparable even with the minimum yearly wages of a worker, either in the secondary or in the tertiary sector. Particularly in Kephalaohori the average yearly income of labour per employee is 10,068 drs, in Plagia it is 67,408 drs, in Elaphotopos 73,345 drs, in Ano Pedina 69,222 drs and in Kato Pedina it is 151,446 drs. The above results underline the fact that on the basis of market criteria the family farm cannot operate as an enterprise by guaranteeing simultaneously an average rate of profit on capital invested comparable to its opportunity cost and an income from labour similar to the minimum yearly wages earned ¹⁰ in the other sectors of the economy.

10. Constraints to economic development and the role Fordist technology

In all five communities there exist restrictions in the mobilization of the available productive potential as well as the effective use of natural resources. However, the restrictive effects to economic development do not appear to be evenly distributed. In particular, the "upper" communities have managed to cultivate only a small fraction (14%) of the arable land whereas in the lower communities this percentage is substantially higher (42%) ¹¹. This phenomenon might be explained by the different repercussions of the civil war in relation to the subsequent transformation of the communities' subsistence economy. The gradual absorption of the local economies by the broader market did not take place without serious distortions upon the traditional productive activities and the level of farm output ¹², as small producers and the State failed to create the necessary conditions for the introduction of advanced technology. The introduction of advanced technology in mountainous regions appears to be more complex, if we compare it to the adaptation process elsewhere in the plains imposed by the functions of the capitalist market, since the plains are generally favoured by higher soil productivity, larger public investment funds in infrastructure, improvements of the service network as well as by all the advantages related with their proximity to the urban centers. Furthermore, the undermined internal cohesiveness of the traditional peasant society in these mountainous regions has accumulated additional obstacles to a more rational allocation of resources in accord with the market imperatives in the prevailing conditions of farm structure. Consequently, external assistance requirements grew larger in the area, as the minimum subsistence level could no longer be sustained by the declining activities in primary production. State intervention so far has been directed towards indirect income payments in the form of production subsidies, whereas public works in infrastructure were of minor importance as they did not serve concrete development targets.

In both areas the problem of scarcity either of the privately owned or communal flat arable land appears to be particularly acute whereas crop and livestock production have shown a long term downward trend.

In the "lower" communities the land tenure system emerges as the most restrictive factor to short term increases in farm output. In particular, the property owners who became urban dwellers did not allow for improvements of a more permanent nature in their farms and in general they were not eager to sign contracts of longer than one year for fear of losing their property. Furthermore as soon as they realized that a certain growth of output would take place, they tended to ask for higher rents. In short, the prevailing land tenure system has impeded substantial increases in the farm size and a more efficient use of resources which might have led to a higher farm income.

The introduction and the use of appropriate technology in agricultural production is a complex process, as a variety of economic, political and social factors (institutional setting, etc.) influence decisively the mechanisms which are responsible for the subjection of agriculture to commercial, financial and industrial capital as well as for surplus appropriation ¹³.

The preceding observations imply that the economic problems in these areas have nothing to do with market disequilibria caused by existing external forces. Hence, State intervention is not supposed to be geared toward policy readjustment measures, which would simply make it easier for small producers to improve the economic performance of their farmholdings ; it should rather be in line with a strategy of economic and social transformation aimed at reversing those processes which have undermined the preexisting social cohesiveness and have disintegrated the traditional structure of production.

The introduction of advanced technology has triggered a significant intercommunity as well as intracommunity differentiation. On the other hand the non-economic instances of the mode of production such as politics, ideology and/or the State are strongly associated with the modernization process at the "point of production" as they have influenced directly population movements and the age composition in each community. Consequently it is not accidental that in the "upper" communities, Kephlohori, with a more unfavourable resource endowment, has a higher organic composition of capital than Plagia. The analysis, however, of the farm income situation, showed that notwithstanding the willingness of certain small producers to undertake exclusively the responsibilities for productivity growth, the existing constraints, associated with the natural environment and farm structure (lands highly sloped, land tenure system, high overhead costs of mechanization, etc.) have blocked the possibility of moving towards small scale capitalism thus leaving the development of productive cooperatives as the only viable alternative.

The quantitative estimates of farm income show that family farms operating on the basis of the existing co-ordination mechanisms with the capitalist mode of production, cannot sustain themselves in the process of common reproduction without external financial assistance provided by the State. The observed limited introduction of Fordist technology, under current circumstances has altered the traditional functions of most farmholdings with respect to control maintenance of the production process. In particular, extended mechanization in the production of feedgrains and fodder, has replaced traditional techniques and means of production and has aggravated farming debts.

Capitalist penetration in the farm input market concerns primarily the purchasing of foodstuffs and accounts for the highest portion of costs paid by the proprietors (e.g. 77% in Kephlohori), whereas production expenses in the form of fertilizers, pesticides, seeds, etc., are of minor importance. On the other hand, the inexistence of cooperatives coupled with the absence of State intervention in the sales of livestock products have left small producers completely unprotected from the monopolistic practices of commercial capital.

Summary and conclusions

The analysis of the five communities attempted in this text shows that farm production takes place in a relatively large number of small sized farms. Of the existing production units, only a small fraction manage to guarantee the farm families with the region's minimum living standard. The observed interfarm differentiation with respect to the simple commodity production model, refers to production-exchange relations located outside the functions of the commodity market : that is, the operating units do not produce/consume as entirely separate units, because of the survival of social relations and practices derived from a mode of production which existed before the privatized rural commodity economy. This old-

fashioned set of relations and practices is still responsible to a large extent for the maintenance of social cohesiveness and has facilitated the reproduction of the family farm. By considering the farm income situation with respect to the production outlays in constant and variable capital, it seems that the above divergence from the simple commodity model constitutes a structural parameter of the area's farming system.

The strong trend of personal consumption underlines on the one hand the incomplete incorporation of the local economies into a broader commodity market as well as the reduced penetration capabilities of commercial capital in the area. In the penetrated sections, however, the latter may take advantage of certain "imperfections" in the market mechanism and may gain a large portion of the generated agricultural surplus. These "market imperfections" are closely associated with the State's economic role regarding the creation of appropriate infrastructures as well as intervention policies. Nonetheless, surplus appropriation is enhanced the more the local production and consumption are incorporated into the commodified economy.

Commodity production in the area is characterized by the maintenance of the animal stock raising activity whereas such traditional activities as cereals, vegetables, grapes, etc. which were closely associated in the past with a subsistence economy, have now almost disappeared. It should be pointed out, however, that so far the modernization process has been restricted to the declining feed grain-fodder producing activities, whereas production techniques in the lucrative livestock raising activity remained predominantly traditional. The acute scarcity of flat arable land in the four communities further reduces the survival possibilities of small producers as the mere substitution of labour power for Fordish technology does not appear to be the answer concerning the complexity of the development process in such areas. Cases of social differentiation on the basis of rent appropriation were not observed inside the communities ; the problem, however, of resource mobilization and in particular the productive use of available arable land on the slopes, appears to be of great importance. The prevailing land tenure system in the "lower" communities appears to be a serious constraint to the growth of feedgrain-fodder producing activities, as land utilization disputes between urban and rural populations have minimized medium and long term private investment projects.

The particularities of the two subregions concerning the events which took place during the civil war and political repression which followed in the subsequent two decades, are reflected in the two distinct population movements during the period of migration as well as in the organization of production which was considerably disrupted. The absence of any distinct tendency, among the family farms towards small scale capitalism at the point of production, implies that the necessary conditions for the reproduction of simple commodity production have not been ensured. Furthermore, it has been shown that the mechanisms which link agriculture with the capitalist mode of production have reduced the long term survival possibilities of the family farms through the double squeeze on farm income ; that is from the side of the input and output markets, as the technical organization of production is being altered by the introduction of advanced technology. In those marginal cases we have observed the use of wage labour, it was evident that there were no profits nor surpluses for proprietors, since wage labour power was bought simultaneously with the "services" of farm machinery in the declining productive activities. Small producers are generally in a more disadvantageous situation *vis-à-vis* the few farm machinery owners drivers, since the latter tend to operate more as contractors in a highly oligopolistic market than as wage labourers. It is evident that the ongoing modernization process does not favour small producers, and the existing constraints associated with the natural environment and socio-economic conditions have so far blocked a capitalist path towards growth in primary production. Consequently, the labour process cannot be considered as formally subjected to capital on the basis of the classical theoretical scheme, since the prospects for the present day family farms to be transformed into small scale capitalist enterprises are negligible. Finally, the quantitative estimates presented in this text show the great dependence of the local economies on State support. Therefore, it would be unrealistic to envisage any sort of social transformation in the area without the active role of the State. This, however, appears to be a highly political issue which surpasses the scope of this article, since an alternative development strategy for the area cannot be viewed independently from the analysis of the overall economic and social rearrangements taking place in agricultural production and distribution.

Notes

1. In viewing the repercussions of the division of labour (international and domestic) on the endogenous determinants of development, the following issues should be taken into account : a) How have commercialization and agriculture's international exposure been developed historically ? Agriculture's vulnerability to the fluctuations of external demand. Interpretation of the major changes in the composition of farm output. b) How have the linkages between the commercial, financial and industrial capital with the rural economy been established and developed historically ? c) How do we proceed in the analysis of domestic technology *vis-à-vis* the requirements of domestic production ? How have the roles of the State and private capital been developed historically ? How should we proceed in developing a domestic technology in order to organically connect production and consumption patterns ? When did the capital intensive technologies come to the forefront ? At what levels have the rates of return of capital invested in agriculture fluctuated with time ? How have the rates of growth of farm output been related to the growth of demand for farm inputs (domestically produced or imported) ? For a detailed discussion of the above issues (see Evelpidis, 1956 ; Lazanas, 1981 ; Maniatea 1986 ; Martinos, 1987 ; Mergos, 1980 ; Tassopoulos, 1979 ; Vergopoulos, 1974).
2. The adopted methodological approach of this paper benefited greatly from M. Godelier's (1987) seminal work on "The transition process" and in particular from the extensive discussions which took place during the seminars on this subject held at the Athens Panteion University of Political Science in 1987. See also Byres (1985), Sweezy (1984).
3. The necessary statistical information was derived from primary sources by means of a questionnaire distributed randomly to 50 % of all farmholding heads concerning production and the mode of living as well as from a random sample of 57 farms accounting for 25% of all farmholdings. During the visits of the research team there were open discussions in which a high percentage of the local population participated, as well as interviews with the local authorities. Furthermore, the authors made use of all the available information from the National Statistical Service, the Ministry of Agriculture and the Community's Archives (see Louloudis, Martinos, Panayotou, 1984).
4. The 57 family farms are distributed among the five communities as follows : 17 for Kephalaohori, 11 for Plagia, 12 for Elaphotopos, 12 for Ano Pegina and 5 for Kato Pedina.
5. The minimum subsistence level per rural household (4 family members) was estimated in 1979 at 188,000 drs. (Ziogas, 1983). By adjusting this figure with the C.P.I. increases up to the first semester of 1984, the minimum subsistence level amounts to 464,360 drs. Although it would be reasonable to augment this figure by taking into consideration the G.D.P. increase in agriculture, the growth of domestic private consumption, etc., during 1979-1984, we preferred to use the above estimate since we believe that the downward bias was counterbalanced by the family size prevailing in all five communities which is smaller than the regional average.
6. Source : Our own research estimates. The percentage variation is caused by the existing differences in the composition of the animal stock, as well as in the number of subsidized farms in each community.
7. It should be noted, however, that the civil servant households are overrepresented in our sample thus causing an overestimation of the average total family income in the community. The overrepresentation was unavoidable because random sampling was repeated in order to obtain the necessary replacements for the absent farmholding heads during the visits of the research team.
8. This notion, based on the neoclassical theory of distribution, is in contrast with the *problématique* of our paper, which focuses on the interpretation of the established social relations of production. However, the rate of return on capital invested as well as rent are assumed to be exogenously determined, i.e. on the relative bargaining power of simple commodity producers. Notwithstanding the contradictions inherent in the hypothesis of value productivity of capital, empirical research shows that in our case agricultural production in a free enterprise system cannot operate on the basis of the established capitalist criteria.
9. The share of invested capital in gross farm income was estimated on the basis of an average interest rate of 15 %. We took into account the Agricultural Bank's credit policies on short, medium and long term loans at that time, and the nature of a sheep/goat breeding farm. The partition of land was estimated on the basis of the prevailing rents for arable land in each particular community.
10. The sum of 490,000 drs. was taken as the minimum yearly wages of an industrial worker, on the basis of the collective agreements between the Workers Confederation and the Industrial Employers Association.
11. Our own research estimates on the basis of sample consisting of 50 % of the total number of farms.
12. The cultivation of cereals, vegetables and vineyards has been almost brought to an end, whereas the gradual abandonment of traditional technics and the loss of skills has been followed by significant decreases in the numbers

of animal stock. Meanwhile the importance of imported inputs (particularly feedgrains and fodder) has grown larger and the surplus transfers mechanisms have been strengthened.

13. We should bear in mind that the external political and economic transactions played a decisive role in designing the country's growth strategy. Hence the country's external transactions are of crucial importance in interpreting the long-term changes in the patterns of production and consumptions, particularly the relationship between the use of resources and the structure of demand for agricultural commodities. A theoretical formulation and quantification of this relationship for the agricultural sector supports an analysis of the endogenous factors of development. For a detailed analysis on this topic, see Martinos, 1984.

