Staff Papers Series

Staff Paper P90-20

March 1990

Volume III

First Annual Conference on

AGRICULTURAL POLICY AND THE ENVIRONMENT

Proceedings of a Conference Sponsored by

University of Minnesota
Center for International Food and Agricultural Policy

Agricultural Development Regional Agency (ESAV)

University of Padova

Motta di Livenza, Italy
June 19-23, 1989

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FARM LAND MOBILITY AND VALUES IN LAZIO

A) INTRODUCTION

A regional analysis of farm land mobility and values for Lazio, to our knowledge, has never been performed so far at regional, provincial and zone area levels.

Several reasons may explain the lack of information relating to these issues, if we compare the Lazio situation with that of other regions, and they relate to different opportunities existing in accademic and administrative structures.

Generally speaking and above existing opportunities, it is not easy to analyse land market as such, because as it is well known its basic features lack trasparency, are scattered and come from discontinuous activity, are biased in reporting transactions, relate to high heterogeneity in the nature of land,

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suffer interactions with other destinations for land and finally bear macro-economic pressures as refuge goods.

This paper presents preliminary results acquired from a wide search of data at different locations in Lazio and will attempt to confront these results in order to evaluate the reliability of sources as suitable indicators for land values.

The sets of data used here for land mobility came from the central office of Cadastral Administration and are neither official, nor issued for that purpose, although they were useful as good insight of the phenomenon.

As for land market values, three sets of data have been used and, on a very small scale, also confronted. They refer to the Lazio section of the national survey of land values carried out by INEA since 1952, the VAM values (Average Agricultural Values) issued by Regional authorities for condemnation purposes since 1972 and data from local (Provincial) Registrary Office derived from direct transactions. The paper will follow the pattern previously mentioned and tentative concluding remarks will close it.

B) AN ATTEMPT TO MEASURE LAND MOBILITY

Until recently the Administration of the Cadastral Services published an Annual Report of its operations. Although the data contained in the report should not be used as such for this purpose, they could be processed to make quantitative estimates of land mobility, a subject not easy to deal with so far.

On the other hand, the work of the Cadastral Land Registry,

remains a useful point of reference. Data for Lazio obtainable from this source pertaining to final, real, transfers in terms of number of plots, or surfaces, in the documentation of Cadastre are limited, incomplete, and full of gaps.

As regards the time series of data referring to the requests for transfer of title, however, the situation is fairly satisfactory. In fact, they are certainly reliable, and, contrary to the number of plots transferred, are independent from the actual work of transfer and thus reflect the effective demand for administrative action, relating to personal exchanges which have taken place over the years.

One element of uncertainty, however, is encountered in trying to convert the requests for transfer into the number of plots concerned and total surfaces. This is because of lack of regional statistics. Thus, the only solution appeared to be to assume that the national average of 2.5 plots per request was valid also for Lazio.

Bearing in mind all the limitations described above, we can now proceed to discuss and process the data contained in table 1.

The most interesting series appear to be those relating to requests for transfer of title. In fact, these differ when considered at Provincial and at Regional Level.

At Regional Level, there is a high degre of stability in figures untill 1984; there follows a sharp drop between 1984 and 1985 and a slight increase in 1986, ending with an even greater fall in 1987.

Provincial data, instead, show a clear difference between Roma

Tab.1: Land mobility indicated by data from the Cadastral Registrary of Lazio

	1981	1982*	1983	1984	1985	1986	1987
Frosinone							
No. of plots (P)	1149050		1023591	1040900	1021060	1021060	1021060
Requests for transfer (V)	10125		10140	10374	8407	7285	8625
Mobility index (I)	2,202906		2,476575	2,491593	2,058400	1,783685	2,111775
Latina							
No. of plots (P)	409092		421388	439278	440029	440029	440029
Requests for transfer (V)	8379		7866	7839	5879	4658	5210
Mobility index (I)	5,120486		4,666720	4,461297	3,340120	2,646416	2,960032
Rieti							
No. of plots (P)	544279		610174	614524	615569	620759	623533
Requests for transfer (V)	4096		4932	5352	3920	3681	3936
Mobility index (I)	1,881388		2,020735	2,177294	1,592022	1,482459	1,578104
Roma							
No. of plots (P)	1460849		1461916	1462031	1464120	1464120	1464120
Requests for transfer (V)	17263		18183	17450	17610	21527	9975
Mobility index (I)	2,954275		3,109446	2,983856	3,006925	3,675757	1,703241
Viterbo							
No. of plots (P)	473366		479619	482608	482608	486640	486640
Requests for transfer (V)	7096		6594	6737	6737	5704	6407
Mobility index (I)	3,747628		3,437103	3,489892	3,489892	2,930297	3,291447
Totale LAZIO							
No. of plots (P)	4036636		3996688	4039341	4023386	4032608	4035382
Requests for transfer (V)	46939		47715	47752	42553	42855	34153
Mobility index (I)	2,907061		2,984658	2,955432	2,644103	2,656779	2,115846

* 1982 not yet available

SOURCE:
Ministero delle Finanze, Direzione Generale del Catasto e dei Servizi Tecnici Erariali
Rilevazione generale sullo stato dell'Amministrazione del Catasto e dei Servizi Tecnici Erariali
(Pubblicazione interna)

and the other Provinces. Without entering into the details about trends, which cam be clearly seen from figure 1 it is important to notice that what happened in the Province of Roma was clearly attributable to "land movements" towards non-agricultural uses (building and industry) and that the quantity and quality of these movements are such as to stand in marked contrast to those in the rest of the Region, and as such to condition the overall trend. Moreover, for the more industrialised areas of Frosinone and Latina the drop in requests in 1984 coincides with the depression under way at that time and with the relevant fall in incomes.

As regards an "index of mobility", this has been constructed simply by multiplying by 2.5 the number of requests for transfer and expressing the result as a percentage of the total number of plots registered at the Cadastral Registry i.e..

$$I = \frac{C\ V}{P}\ 100$$

where I = mobility index;

C = coefficient for conversion of request to no. of plots;

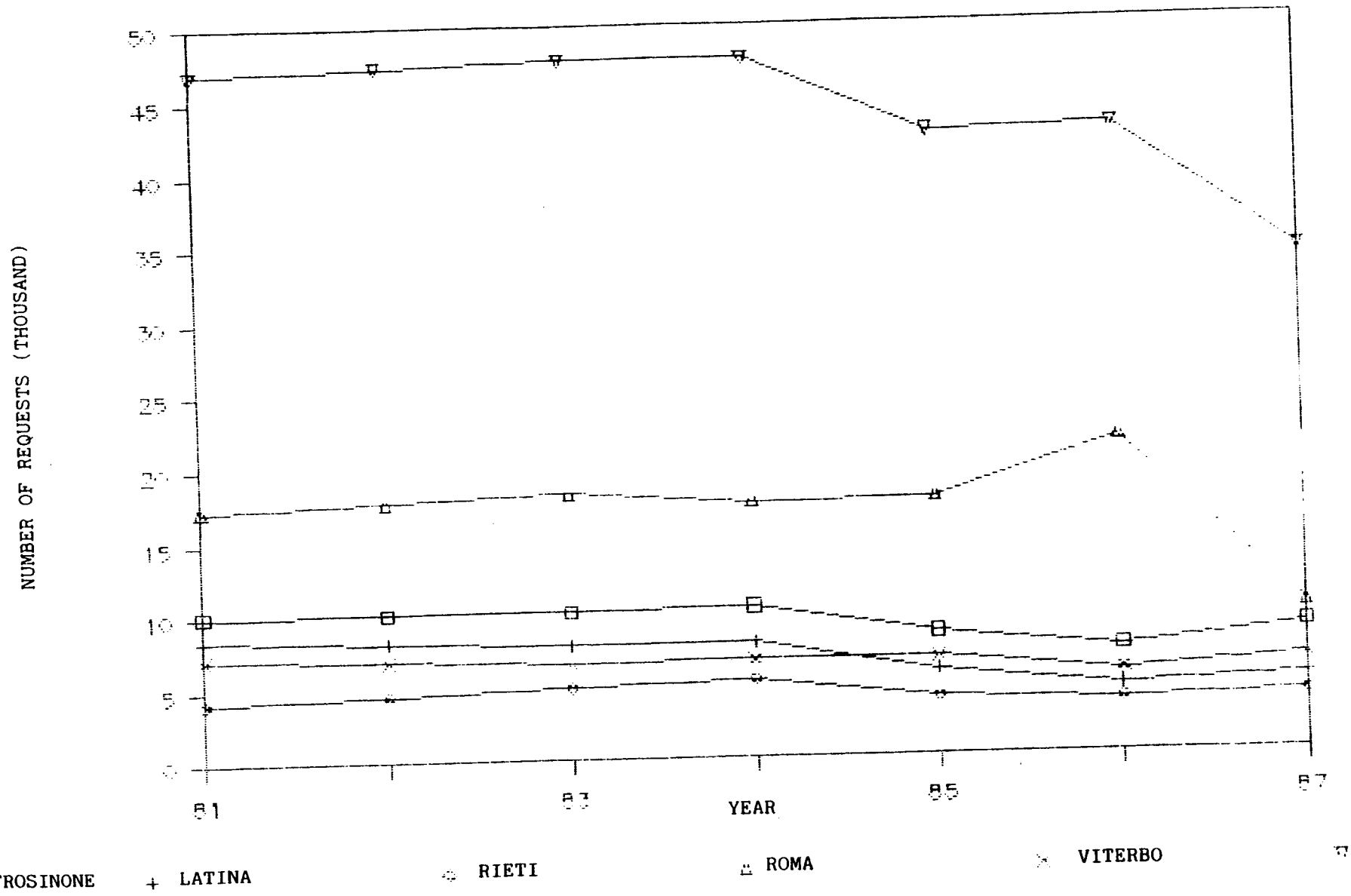
V = no. requests for transfer;

P = existing stock of plots registered.

The index thus expresses the percentage of cadastral plots which were involved in subjective transfers (sales) during the year - (assuming, of course, that the conversion coefficient is valid).

Its numerical value has no particular significance for land

Fig. 1: REQUESTS FOR TRANSFER OF TITLE:
COMPARISON BETWEEN REGION AND PROVINCES

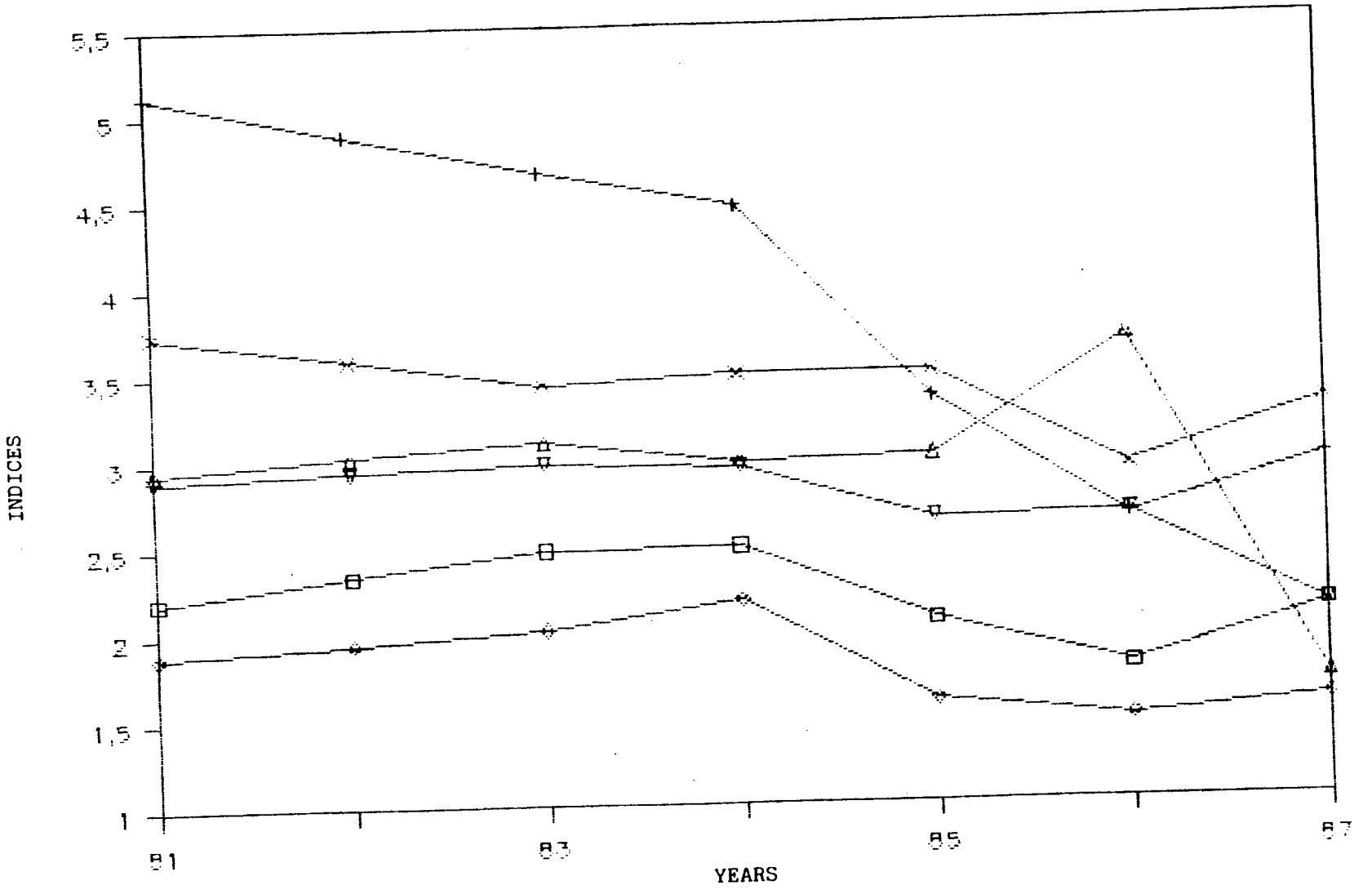


mobility in the strict sense, since requests for transfer of title are made for various changes of ownership (sales, inheritance, gift, transfer by right of use etc.) and change of specified land use (agricultural, or non agricultural). Moreover, no reference can be made to the average size of plot and in fact plots with different sizes may be considered to indicate different levels of land mobility. In this respect, for example, the significance of transfers by sale of many small plots for building sites must be taken in due account.

Certain indications can be deduced from the analysis of trend, or, rather, from the relevant positions in the overal picture of graphs relating to these trends. They involve the average size of plots, and are therefore directly correlated with the structure of farms, or with the degree of fragmentation of land. It can be seen that the relatively few requests for transfer, originating from the Province of Viterbo and Lazio in total, resulted in a rather high percentage index of change, whereas the high number of requests in the Province of Rome did not represent a large percentage change whith respect to the number of existing plots. fig. 2)

Since there are not great differences in size between the different Provinces which would create numerous and large plots (or, instead, few and small plots) and since it seems unlikely that there are strong differences at provincial level in the coefficient, it seems reasonable to assume that the phenomenon described above should be interpreted with respect to a differentiated degree of fragmentation in the different

Fig. 2: INDICES OF MOBILITY:
COMPARISON BETWEEN REGION AND PROVINCES



Provinces.

C) THE EVOLUTION OF LAND VALUES IN LAZIO RESULTING FROM OFFICIAL DATA

As for land mobility, the major problem in studying the land values is that of obtaining information, at least so far for us.

In this case, however, the problem is not so much of quantity but of quality of data. In fact, there are numerous sources of information, but the data are not very reliable since there is a widespread tendency to declare less than actual values in land transactions.

It is not possible here to enter into details to explain why this is so, nor to examine the effects of measures adopted to overcome the problem. We will limit ourselves to comparing time series of land values available from different official sources in order to demonstrate the differences and to analyse the degree of reliability.

The sources considered are INEA (1) (National Institute for Agricultural Economics), the Registrary Office (2) and the Lazio Tax Office (3) (the last two are cited in connection with the pubblication of VAM). The land values examined here refer only to different types and qualities of land in the Province of Viterbo, as an example.

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(1) Land values worked out by Regional Observatories of INEA derived from a sample of sales articulated by zone, by type of production and by farm type. (note follows at page 10)

The time series are shown in fig. 3. The first of these compares VAM (average agricultural value) with land values estimated through an INEA Survey. They refer to both dry and irrigated arable land. The first impression from the figure is that of the "strange" behaviour of average agricultural values. Apart from being extremely low, they are also "flat" and indicate an excessively stable land market, unresponsive to demand and supply. Moreover, from the constant increase ratios existing for bothh dry and irrigated land value series, it seems that they have been constructed with reference to something like an annual rate of inflation, rather than with reference to the market (fig. 4). In any case if compared with INEA values, the VAM appear not to be suitable indicators of market values even as an indication of trend.

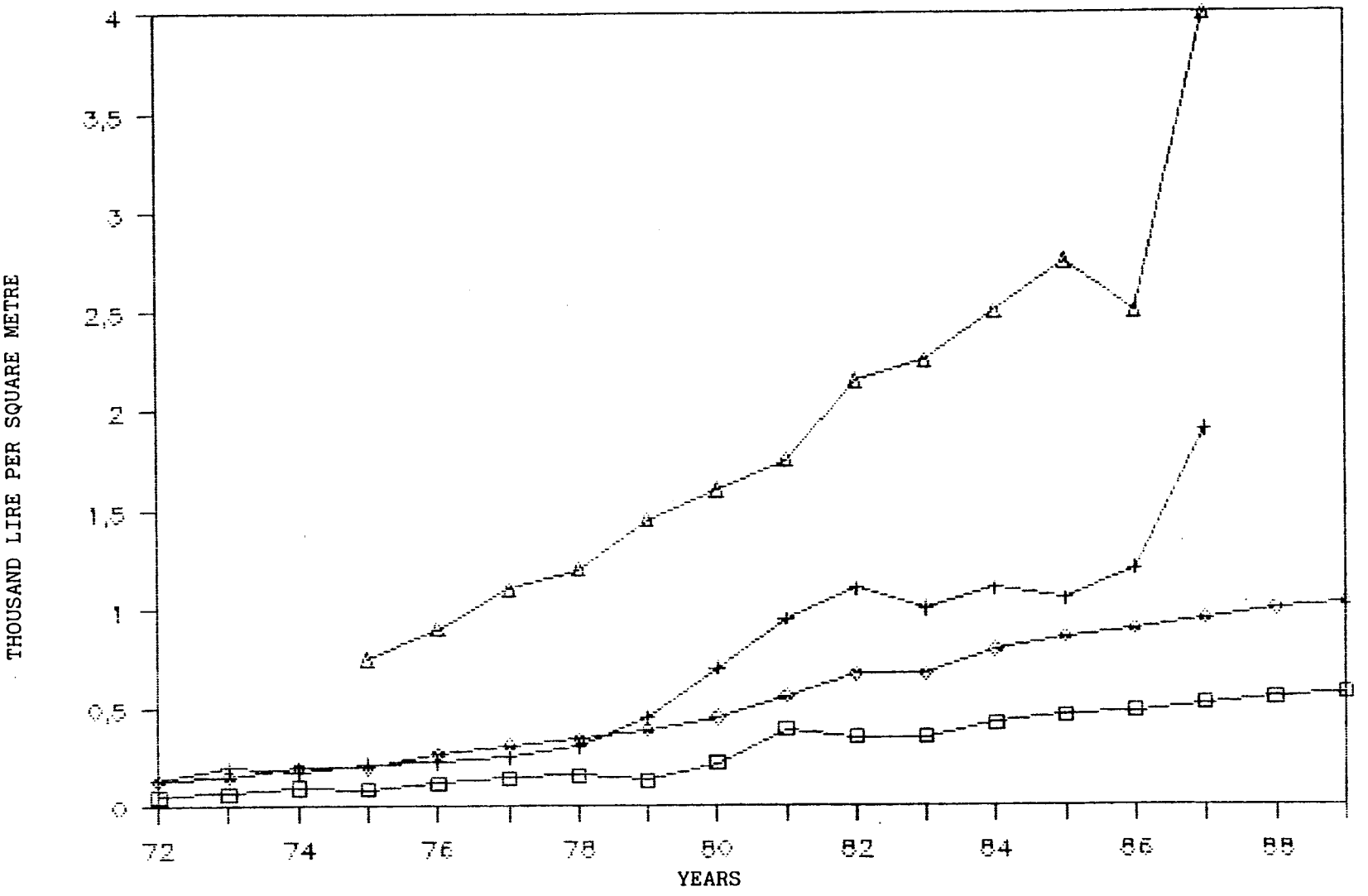
As regards INEA values, instead, from examination of the figures it can only be said that these are considerably higher than VAM. But the difficulties incurred in constructing these series, particularly that for dry arable land, must be mentioned.

(continuation of note at page 9)

(2) Registrary Office values of sale declared spontaneously to notaries and subject to test by the Registrary Office on standard values.

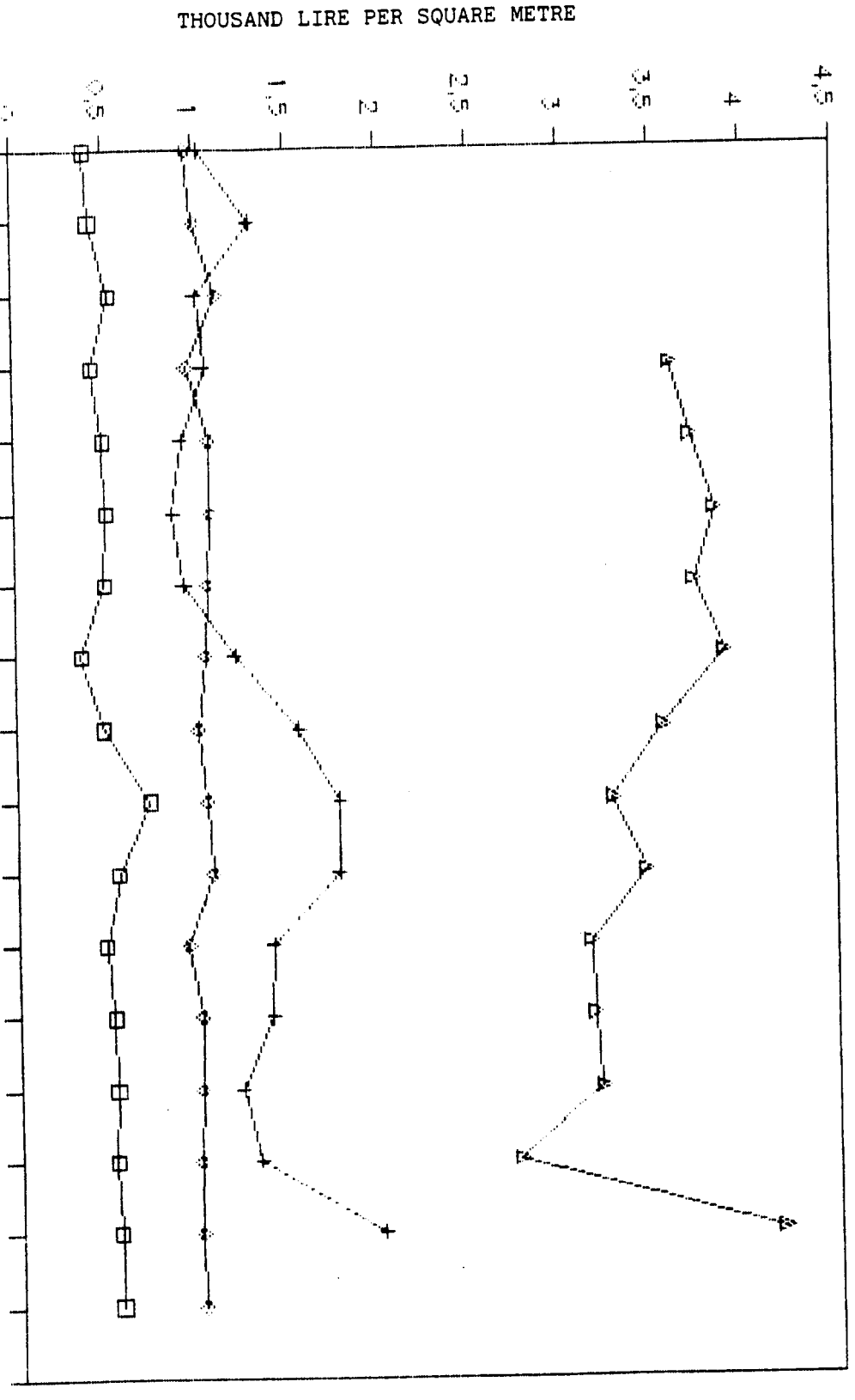
(3) VAM - Average Agricultural Values - determined by a special Commission, or by the UTE (Technical Fiscal Office) to establish values for expropriation according to the quality of crops and to homogeneous zones.

Fig. 3: CURRENT FARM VALUES IN LAZIO



(S.I.: irrigated arable land; S.A.: not irrigated arable land)

Fig. 4: CONSTANT FARM VALUES IN LAZIO



(S.I.: irrigated arable land; S.A.: not irrigated arable land)

In the surveys undertaken by INEA, within the same Province, there are frequent changes in "zone" and in "farm types" reference. Even if that is an advantage as regards contact with real situation in agriculture, it means that the time series is not homogenous and comparisons can be made with certain difficulty.

The second figure shows land values relative to a specific and particular agricultural activity i.e. to values of filibert nut groves in the village of Capranica (Province of Viterbo) with VAM data, those from the Registrary Office and from INEA (fig. 5).

The VAM time serie confirms the observations made previously with reference to dry and irrigate arable land. Thus, no more will be said on this subject.

Much more information, however, can be obtained from the Registrary Office and fom INEA. Altough these series differ one from another, they show al least similar trends (fig. 6). This implies that they reflect, even if approximately, market moves. In fact, it seems reasonable to assume that values available from the Registrary Office, whilst not corresponding because of tax underestimation with real sales values, are effectively correlated with them.

It also seems feasible that INEA values are a good approximation of the truth, if only because collected on the basis of direct knowledge of the actual situation. The fact remains that they cannot be used, except as indicators, because they take no account of the considerale variation between farm values within the same "homogeneous" area.

Fig. 5: LAND VALUES FOR FILIBERT NUTS GROVES (CURRENT VALUES)

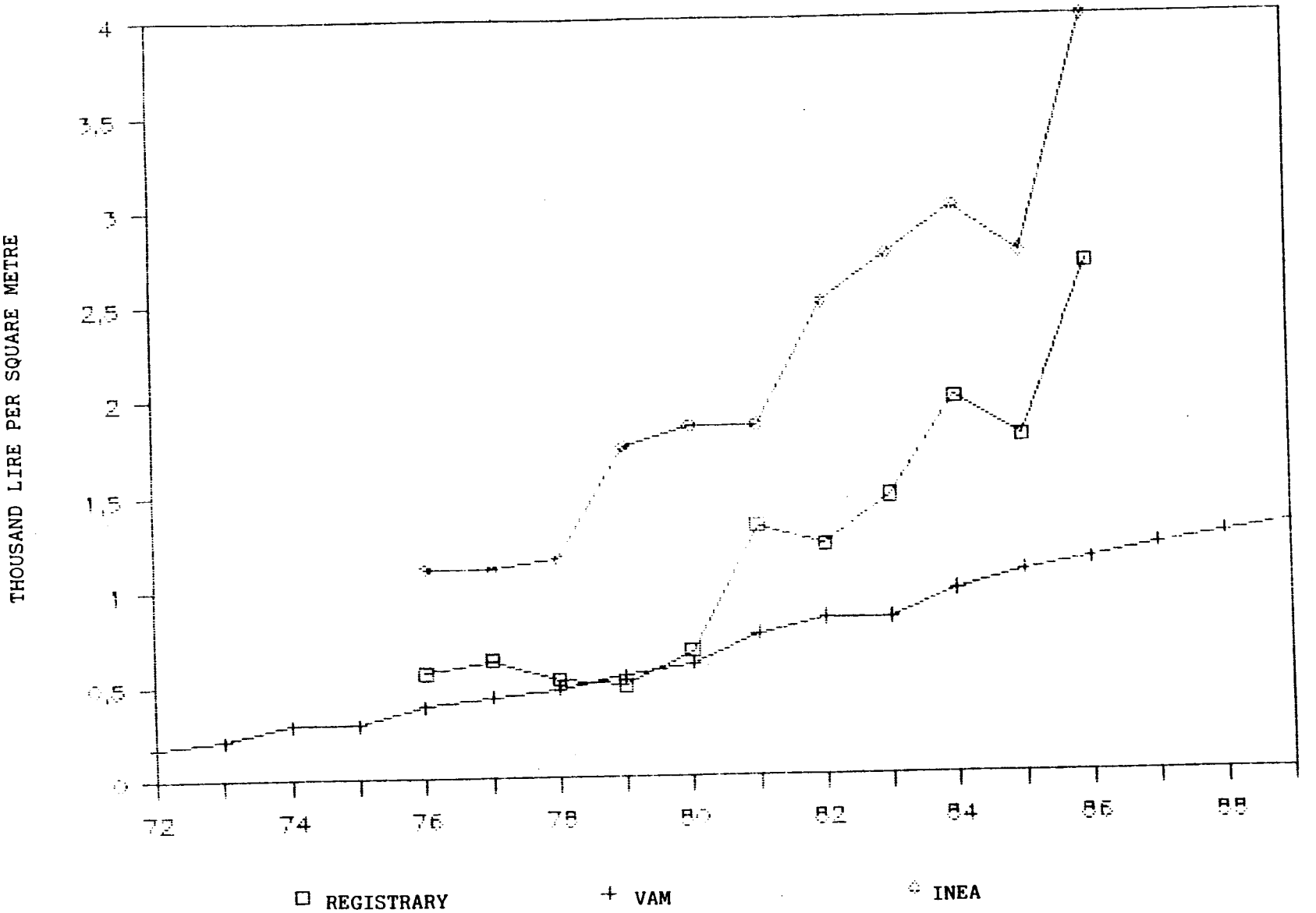
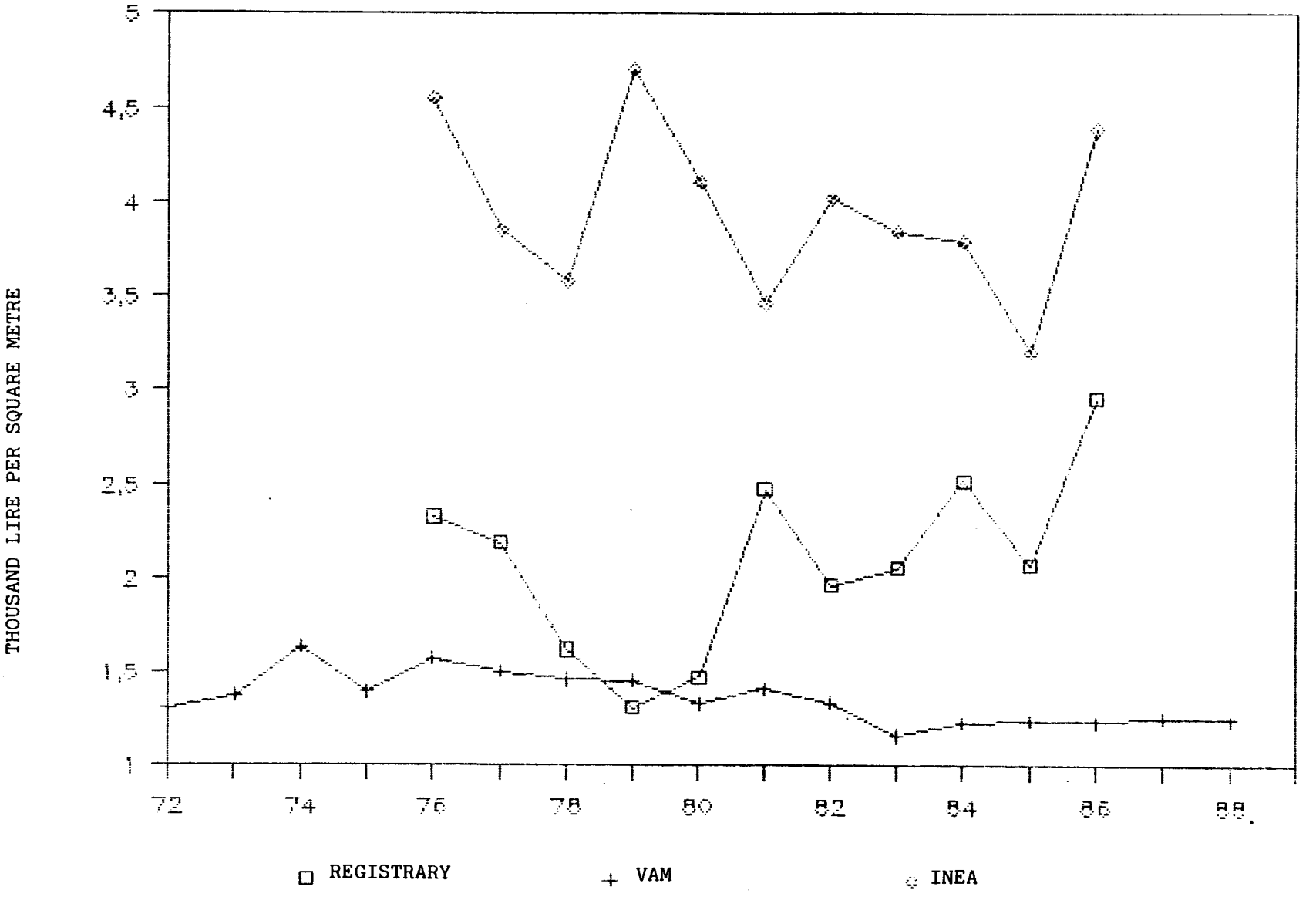


Fig. 6: LAND VALUES FOR FILIBERT NUTS GROVES (CONSTANT VALUES, base 1988)



D) AN ATTEMPT TO EXPLAIN MARKET SALES VALUES

Knowledge of farm values is an essential element in the process of appraisal. Limited market transparency and strong differences in values are the condition in which appraisers are called to operate in the land market.

Cross sectional differences in prices are the result of marked differences in the natural and man-made characteristics of farm holdings. The difficulty in obtaining information about land prices derives both from the limited market and from the traditional reticence of the operators. All these circumstances mean that the farm real estate appraiser must often rely on his ingenuity and capacity to summarise, in order to solve the questions confronting him. One good thing is that despite differences, there are some basic trends and some common patterns of behaviour. By applying statistical methods, particularly regression analysis, a model explaining the relationship between the dependent variable (i.e. value) and independent variables can be constructed.

The usual form

$$V = f(X_1, X_2, \ldots\ldots, X_k)$$

seeks to explain land values correlating them with different intrinsic characteristics of the farm so far. This type of analysis has been applied to Capranica area. The relevant information comes from the Registrary Office. The model used was as follows:

$$V = f(SUP, DIS, RD, RA, ETA)$$

where: V = land value;

SUP = area;

DIS = distance from residential area;

RD = land rent (tax assessment);

RA = farm income (tax assessment);

ETA = age of filibert grove.

The results obtained from regression analysis showed that not all variables considered concurred to determine value, according to the following estimates based on 64 observations:

$$V = -4780433 + 670.64\ SUP + 793.52\ DIS + 2263.58\ RD +$$
$$(2.17) \qquad (1.95) \qquad (0.27)$$
$$+ 103074.70\ RA + 27436.04\ ETA$$
$$(1.16) \qquad (197.38)$$

R Sq = 0.53 Degrees of freedom = 58

Closer scrutiny of observations and putting together another set of them, relating to transactions of small land tracts not mentioning filibert groves, but where it was ascertained that those were on site, allowed to improve the statistical results, by also siplifying the model as:

$$V = f(SUP, DIS, ETA)$$

The estimates yielded the following results:

$$V = 6{,}390{,}486.00 + 1{,}953.00\ SUP - 113.00\ DIS + 7{,}632.00\ ETA$$

(38.0) (.41) (2.2)

R Sq = 0.95 Degrees of freedom = 84

As value determinants these results were quite predictable, though distance disappointed expectations in terms of reliability, but for the sign of the relationship.

E) CONCLUDING REMARKS

The data collected and tentatively analysed so far have given a picture of land mobility and values for Lazio which has still many aspects to be further investigated.

As a general feature it is possible to perceive that Lazio land market presents a dichotomous behaviour, determined by the presence of a single large entity as Rome, which works along different policy orientations (urban, industrial etc.) and the rest of the other provinces which, instead, show a more agricultural oriented connotation.This explains the more dynamic trend for Rome land mobility, which also affected, by its size, the total Lazio mobility figure and indexes.

Unfortunately, the only available element in oder to measure mobily was the Cadastral survey relating to single surface plots, a some-how remote element to give a sound picture of farm dynamics. Even so, the rural provinces showed an homoneons, steady behaviour, in terms of request of transfer, very likely even a reduction in the share of transfers due to market deals, since the figure shown relate also to hereditary and condemnation

cases.

The second issue considered in the paper dealt with land values in a short period, over 15 years, a period not sufficient to catch significant endogenous features of land use structure, particularly those of land use structure as forest and tree crops. Exogenous elements and those of more economic, than technical-institutional, nature have, however, influenced farm value series when they referred to market transactions. Other authors in this seminar have discussed the overall development features of the Italian land market; certainly they worked as well in Lazio too, and we fully agree with that interpretation.

Data of land values coming from INEA gave a clear indication of the appreciation of the market for best land (arable irrigated, or not) in current prices, but the extent of it did not show too relevant when considered in terms of constant prices. Other qualities of land did not fare so well and they little increased in current prices, but actually their appreciation rate was below current inflation rate.

The comparison between VAM and INEA values showed clearly the "difficult" origin of the former and their inadequacy to monitor any market peculiarity in behaviour. Moreover, being VAM data a base for condemnation values, to be increased according to the agricultural qualification of affected parties, they were perhaps left by design at the lowest levels, somehow to implement a wealth redistribution.

In the example drown at lowest geographical level, i.e. the village of Capranica, a full scale comparison exercise has been

carried out, including this time also data collected from the Registry Office for transactions, checked at local level by us for technical and structural features. Again, market data from sales and INEA time series for that particular environment showed high degree of correlation, still allowing for obvious differences due to independent source, but VAM values clearly appeared out of context.

Finally a comment on the results from the explicative model for price determinants relating to filibert nuts groves. It was a preliminary investigation, somehow promising, but not yet satisfactory, as more structures have to be tested and the model has also to be experienced on other crops and different environments.

Summing up, sources of land values and land mobility in Lazio are still scarce and often biased by institutional features. Further investigation is pending on land values, but at regional level it has to be taken in great consideration the effect of a large city like Rome, not only in terms of urban land use, but also as source of flow of investments (purchases) into land for status, leisure and also for agricultural purposes.

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