



KTIMATOLOGIO S.A. (Hellenic Cadastre)

The impact of the introduction of a new cadastral system on land transactions in Greece

Dr. Panos Lolonis

Director of the Planning Department and
Head of the Quality Management Division

Ktimatologio S.A. (Hellenic Cadastre)
288 Mesogion Ave
GR-15562, Holargos-Athens
Tel.: +30-210-6505-636

FIG 2008 Stockholm



Background Development of a cadastral system in Greece



Areas surveyed in the first round of projects

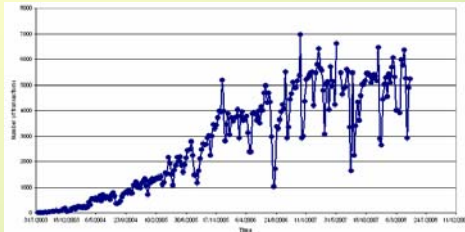
First round of cadastral survey projects

- ◆ Pilot A' (Launched in 1995)
- ◆ Pilot B' (Launched in 1997)
- ◆ 1st Main (Launched in 1998)

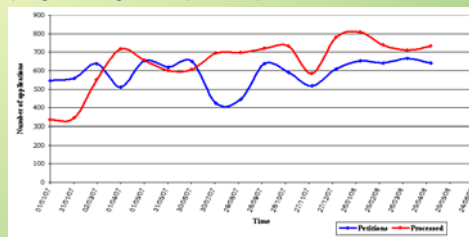
- ◆ Number of municipalities: 340 (6%)
- ◆ Area: 8.400 Km² (6,4%)
- ◆ Rights: 6.400.000 (17%)
- ◆ Registry Offices: 97 (24%)



Background Operation of the cadastre in Greece



A) Registrations per week (2003-2008)



B) Cadastral map updates (per week)

Statistics about the operation

- ◆ Number of petitions: 690.000
 - ◆ Accepted: 645.000
 - ◆ Rejected: 33.200
- ◆ Petitions per week: 5.000-6.000
- ◆ Cadastral plots issued: 621.300
- ◆ Petitions for updating Cadastral maps (Jan. 2007-Jun. 2008)
 - ◆ Total number: 10.004
 - ◆ Subdivisions/Merges: 6.519
 - ◆ Boundary changes: 3.034



The issue of introducing a new cadastral system



On site training of cadastral office personnel

- ◆ The introduction of a new cadastral system in an area causes a disruption in the process of registering land transactions
- ◆ The Deeds Registration System and the new Cadastral System use different business processes and technologies
 - ◆ The Deeds Registration System requires only nominal legality of transactions
 - ◆ The Cadastral System requires checking of the substantive legality of transactions
 - ◆ The Deeds Registration System does not maintain documents about the geometry of properties
 - ◆ The Cadastral System maintains and updates the cadastral maps
 - ◆ Maintenance of the deeds in the Deeds Registration System is in analogue form
 - ◆ Maintenance of the transaction documents in the Cadastre is in electronic and analogue forms
- ◆ Transition requires familiarity of those involved with procedures and technologies

Question:

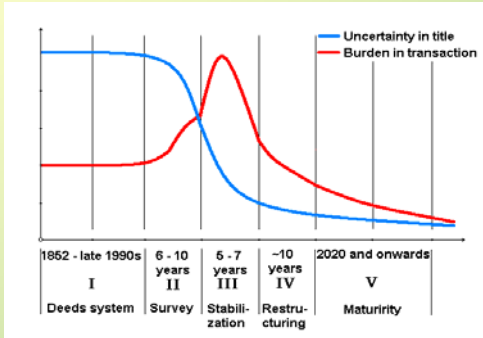
- ◆ How is the number of land transactions affected when the new cadastral system is introduced?

Objective:

- ◆ To design transition procedures and registration processes which are as smooth and as efficient as possible



The issue of introducing a new cadastral system



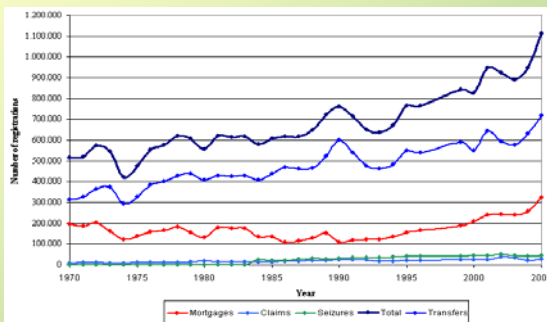
Anticipated evolution of introducing a new cadastral system

Possible effects of introducing a new system on the number of land transactions

- ◆ There is anticipation that during the transition period the burden increases and, therefore, the number of land transactions may decrease
- ◆ In the long run, as the new system stabilizes and the people involved become accustomed with it and the service level increases, the burden should fall and the number of transactions should increase
- ◆ The study aims to explore the effects of introducing the new system on the number of land transactions in an area



Approach to Analyze the Issue Data to be used in the analysis



Land registrations in Greece through time
(Source: Hellenic Statistical Service)

Deeds Registration System Data

- ◆ Available on an annual basis (1970-2005)
- ◆ Classified by registration type (Transfers, Mortgages, Claims, Seizures)
- ◆ Aggregated by prefecture

Cadastral data

- ◆ Available on a monthly basis
- ◆ Classified by registration type
- ◆ Aggregated by municipality

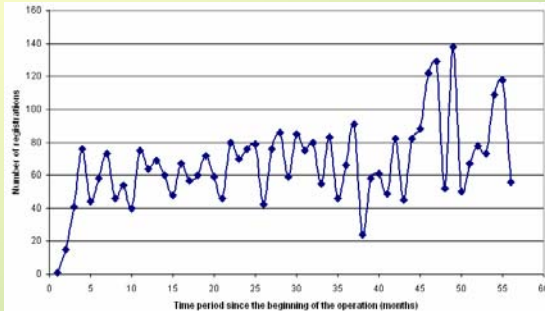
Approach to analysis

- ◆ Analysis of the observed trends for various geographical areas and at various geographical scales
- ◆ Comparison of data during the overlapping operation period (2004-2005)



Analysis of the Results

Trends in the number of registrations through time



Registrations diagram (months since the beginning of the operations)

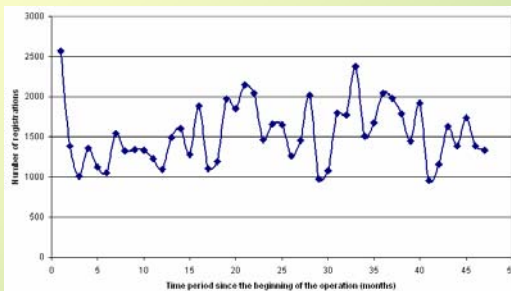
City of Polykastron, Kilkis

- ◆ Beginning of the cadastral operations: August 2003
- ◆ The first municipality in which the new cadastral system started to operate
- ◆ Small municipality surrounded by a rural area
- ◆ Population: 6.900
- ◆ Area: 62 Km²
- ◆ Property rights: 22.500
- ◆ Trends in registrations: slightly increasing



Analysis of the Results

Trends in the number of registrations through time



Registrations diagram (months since the beginning of the operations)

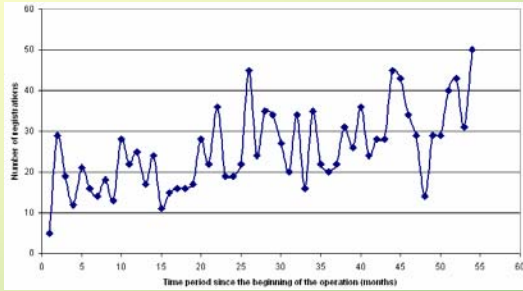
City o Patras

- ◆ Beginning of the cadastral operations: March 2004
- ◆ The third largest city of Greece
- ◆ Population: 161.000
- ◆ Area: 58 Km²
- ◆ Property rights: 254.000
- ◆ Trends in registrations: Stable



Analysis of the Results

Trends in the number of registrations through time



Registrations diagram (months since the beginning of the operations)

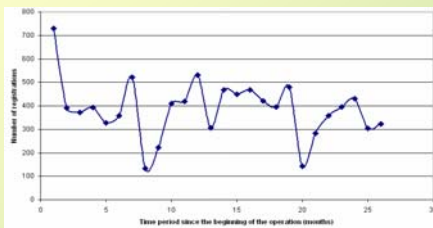
Town of Astros, Arcadia

- ◆ Beginning of the cadastral operations: Sept. 2003
- ◆ Developing coastal town
- ◆ Population: 2.670
- ◆ Area: 61 Km²
- ◆ Property rights: 21.500
- ◆ Trends in registrations: Strongly increasing

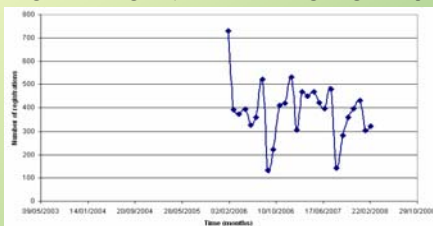


Analysis of the Results

Trends in the number of registrations through time



Registrations diagram (months since the beginning of the operations)



Registrations diagram (regular time scale)

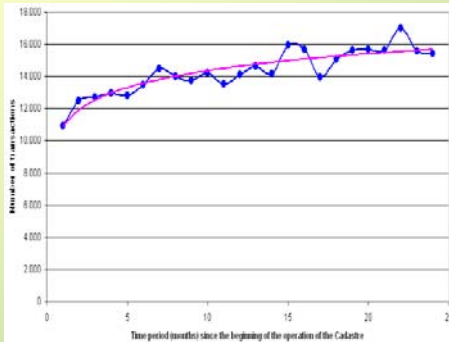
City of Korydallos, Attica

- ◆ Beginning of the cadastral operations: Jan. 2006
- ◆ Suburb of Athens
- ◆ Population: 67.500
- ◆ Area: 4,5 Km²
- ◆ Property rights: 82.000
- ◆ Trends in registrations: Decreasing

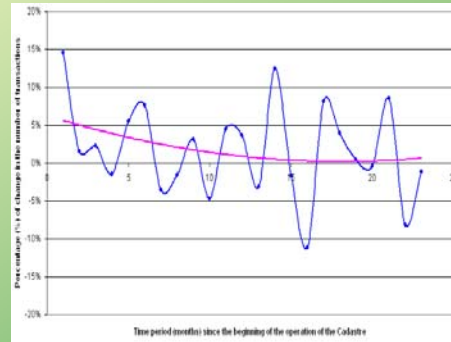


Analysis of the Results

Registrations through time since the start of the operation of the Cadastre in each area



A) Aggregate number of registrations as a function of the duration of the operation of the cadastre.

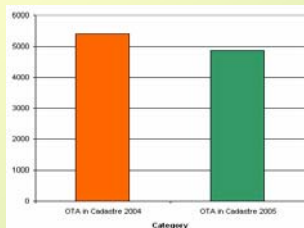


B) Percent (%) of change in the aggregate number of registrations as a function of the duration of the operation of the cadastre

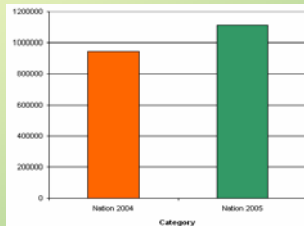


Analysis of the Results

Comparison of nationwide trends with trends of municipalities in the Cadastre



A) Registrations of municipalities in the Cadastre 2004 and 2005



B) Registrations at the National level 2004 and 2005

Municipalities in the Cadastre

- ◆ Number of municipalities: 20
- ◆ Total number of registrations during 2004: 5.398
- ◆ Total number of registrations during 2005: 4.873
- ◆ Change: -9,7%

Nation

- ◆ Number of municipalities: 5775
- ◆ Total number of registrations during 2004: 947.610
- ◆ Total number of registrations during 2005: 1.113.758
- ◆ Change: +17,5%



Conclusions-Future work



Headquarters of the Hellenic Cadastre

The preliminary exploratory analysis shows that:

- ◆ There is extensive variability in the pattern of the trends observed at the local level
- ◆ At the aggregate level, there seems to be an adaptation phase in the early stages of the cadastral operations, although this phenomenon could be attributed to other exogenous factors that affect the number of registrations
- ◆ The introduction of a new cadastral system in an area may have, at least in the initial stages of the cadastral operation, an inverse impact in the number of transactions
- ◆ Further analyses, using more extensive data, are needed to verify the above observations