

## WORLD CADASTRE SUMMIT

# The Role and Effect of Private Sector on Turkish Cadastral System

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## What do leading institutions in the World think about the surveying private sector?

Some organizations such as the International Federation of Surveyors (FIG), the United Nations (UN), the European Union (EU) and the World Bank (WB) have published various reports or declarations in order to increase the effectiveness of land administration system.

In these declarations, because of the development of the land administration system, The private sector should be made more use of.

One of the important declarations is Cadastre 2014 report.

**Statement 5 on Cadastre 2014**

**Cadastre 2014 will be highly privatized! Public and private sector are working closely together!**

**Comment:** Public systems tend to be less flexible and customer oriented than those of private organizations. Free economies demand flexibility in land markets, land planning and land utilization. Flexibility may be provided better by private institutions. For necessary security, however, public involvement is indispensable.

**Consequences:** The private sector will gain in importance. The public sector will concentrate on supervision and control.



**Private and public sector would work together**

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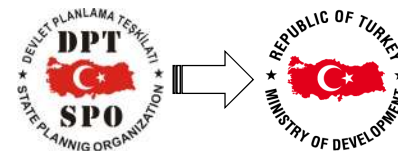
## The tendency in Turkey...

According to the State Planning Organization (SPO) report published in 2001,

**It was maintained that the surveying private sector needs to be restructured.**

In this report, it was emphasized that some services couldn't be conducted by surveying private sector. These are listed as follows:

- Map Application Responsibility
- Basic Cadastre, renovation and other post-cadastre operations
- The establishment of information systems
- Infrastructure Mapping
- The Dissemination of Applications 18. Item
- Mine Operation Maps
- Consultancy and supervision services (SPO, 2001).



**After this report, various developments took place in surveying private sector in Turkey.**

**In this presentation we will give information about :**

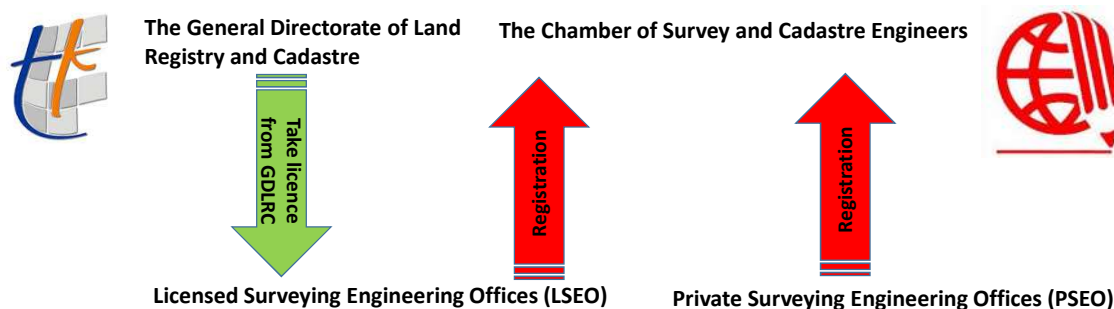
- The developments of the surveying private sector in the last 14 years.
- What the contribution of the private sector in Turkish Cadastral System today is.
- Which transactions are carried out by the surveying private sector about cadastre area?
- What the financial dimension of the market created by services of the cadastral mapping are

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## Organizational Structure

The basic cadastre activities in Turkey, which can be classified as cadastre and post-cadastre operations, are mainly shaped around the General Directorate of Land Registry and Cadastre (GDLRC), the Private Surveying Engineering Office (PSEO), the Licensed Surveying Engineering Office (LSEO), The Chamber of Survey and Cadastre Engineers (CSCE) and other institutions (public institutions, municipalities etc.)



LSEO's are connected to both the GDLRC and the CSCE. LSEO take their licences from GDLRC, but both of them are directly connected to the CSCE.

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## General Directorate of Land Registry and Cadastre

The GDLCR was founded in 1847 in the Ottoman period. Today, it is one of the largest organizational structures among Turkey's public institutions. It has 22 Regional Offices, 1018 Land Registry Offices and 81 Cadastre Offices. It is connected to the Ministry of Urbanization and Environment.

Basic cadastral works had been carried out by public facilities until 2005. In the execution of cadastral activities in this period, the Cadastre High School had undertaken an important role. The General Directorate conducted basic cadastre works with its own staff and internal financial resources. In the following years, as a result of technological developments, the increase of digital cadastral works, urbanization, big engineering projects, the number of Geomatics Engineers in the GDLCR increased.



As for the staff profile in the Cadastre Office:

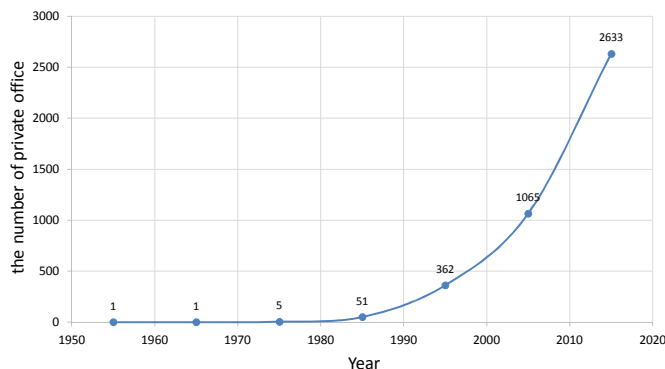
- Cadastre Managers
- Engineers
- Members of Cadastre
- Control Officers
- Technicians

Until 2005, all cadastre works were only carried out by these staff.

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## Private Surveying Engineering Offices



PSEOs (Private Surveying Engineering Office) conduct free mapping works in Turkey. PSEOs is recorded by Chamber of Surveyor and Cadastre Engineers.

- The first PSEOs was established in the 1950s.
- After 1990, an increase was seen in the number of private offices.
- Today, there are over 2000 PSEOs in Turkey and this number is increasing day by day.

### What does the PSEOs do?

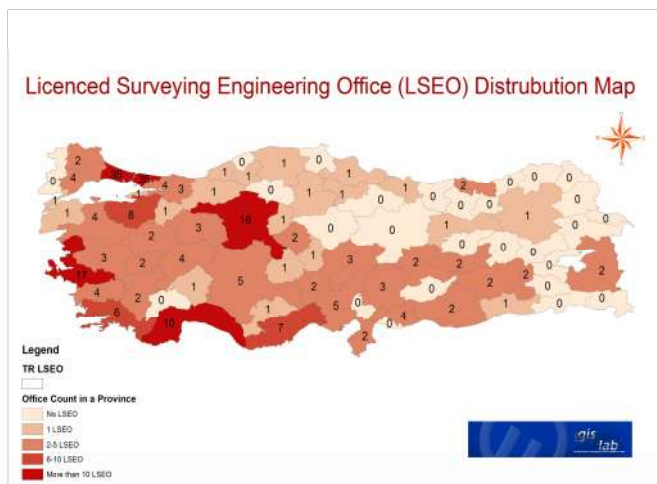
PSEOs carry out works such as,

- Linear or Digital Mapping in any method or scale,
- Cadastral map production
- Rural or urban land arrangements
- Etude or operation mapping
- Geodetic infrastructure works
- Postcadastre applications,
- Deformation surveying,
- Height surveying,
- Hydrographic surveying,
- Mining surveying,
- Studies of determine any position,
- Underground and technical infrastructure surveying,
- Application of all types engineering projects to land,
- Expropriation maps,
- Information systems,

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## Licensed Surveying Engineering Offices



Some mapping services have been transferred to Licensed Surveying Engineering Offices (LSEO) by GDLRC.

Some of these services are **land use conversion, amalgamation, establishment of servitude** which are registered to the Land Registry. The others are **applications, parcel setting mark, cadastral extract** which are not registered.

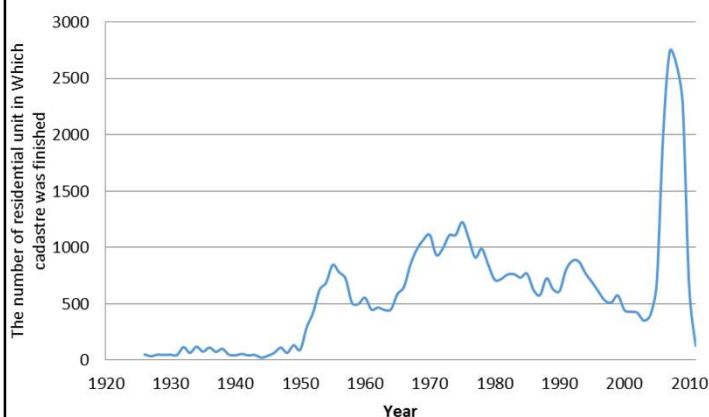
However, this practise has not yet spread throughout the country due to various problems.

Today, **196** licensed Offices are active although totally 2029 LSEOs were planned in Turkey.

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## Contribution of The Private Sector to Cadastral Works



In Turkey, The Civil Code (No.743) was adopted in 1924. Cadastral surveying accelerated after the Civil Code and post-cadastral technical services were mainly carried out by the governmental offices up to now.

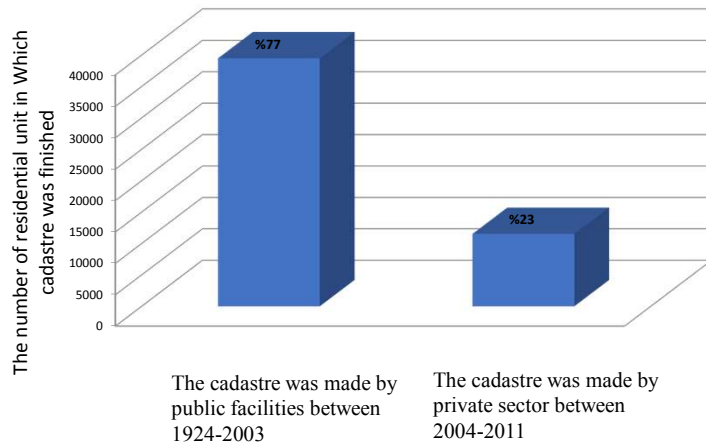
In these studies approximately 57 million parcels have been produced since the 1920s. A very large and variable geography, lack of technology, labor force and fund factors in the country have been effective in prolonging the process (Akay, 1999; Demir, 2002 and 2008).

In 1988, the method of the purchase of services from the private sector was tried for the first time for the cadastral works. However, this study conducted in pilot regions failed throughout the country. After 2005, cadastral work was intensively carried out by using both domestic sources (The GDLRC Revolving Fund) and foreign loans (The World Bank Sources) (Demir and others, 2014). In this process basic cadastral works in Turkey were carried out by purchasing from the private sector.

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## Contribution of The Private Sector to Cadastral Works



According to the graphic; Between 1924 and 2003, in approximately 80 years, 77 percent of all the villages had been completed. During this period, an average annual of 493 cadastral units were made.

However, after the purchase of services from the private sector, between 2005 and 2011, about 23 percent of all the villages had been completed in seven years.

In a year, on average, the cadastre of 1440 villages were completed during this period.

After the private sector got involved, the performance increased three times and this is rather striking.

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## Contribution of The Private Sector to Cadastral Works

	Operations	Production	Control
Cadastral	Classical Cadastre	PSEO	GDLRC
	Forest Cadastre		
	Pasture Cadastre		
	2B Cadastre		
Post-cadastral operations	Land-Registry Application Map	LSEO	LSEO
	Expropriation Maps		
	Parceling Maps		
	Subdivision Maps		
	Renunciation for Road		
	Create for Road Maps		
	Village Residential Map		
	Land Consolidation		
	Land use Conversion		
	Amalgamation		
Others	Disaster Cadastre	GDLRC	GDLRC
	Correction of Surveying Error		
	Demands from Court and Public Institution		
	Disaster Cadastre etc.		

The table reflects operations conducted by cadastre Office in Turkey.

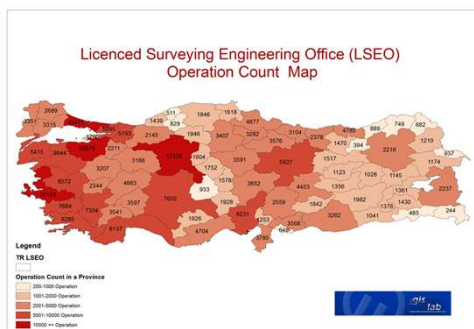
- The classical cadastre, forest cadastre and others are conducted by PSEOs, controlled by the GDLRC.
- A part of post-cadastral operations (like parceling maps, subdivision maps) are conducted by PSEOs, controlled by the GDLRC.
- Others are conducted by LSEOs, controlled by the GDLRC and LSEOs.

**This table shows that; almost all of basic surveying and cadastral works are carried out by the private sector in Turkey today.**

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## The Financial Dimension of The Study Conducted by Cadastre in Turkey



Operation	Number of operation
Land sudivision maps	31596
Expropriation maps	23683
Village residential maps	672
Parcelling maps	17170
Renunciation for road maps	20664
Formation for road maps	3724
Border demarcation from written record	3223
Others	28166
Total	128898

### LSEO :

Throughout Turkey, the average number of operations in the last three years which are under the jurisdiction of LSEO is determined as approximately 320.000 according to the data of the GDLRC. 85 percent of total operations is shared by 196 active licensed offices. This number of operation corresponds to a financial magnitude of over \$ 50 million according to the price of 2015.

### PSEO :

According to data received from the GDLRC, In total, about 130 000 post-cadastre operations were conducted by PSEOs. Because accurate recording couldn't be kept, the financial dimension related to post-cadastre operations couldn't be calculated.

According to some other information which is taken from the GDLRC, in the last decade, 1170 tenders worth **1.032.000.000** Turkish Liras have been carried out. These include classical cadastre, renovation and 2B (determination of tenure in the regions Which is taken them out of forest). This rate of realization corresponds to an average annual of around \$ 45 million.

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## Conclusions and Recommendations

International approaches in the cadastral area show that private sector will have an important role in the future of cadastral systems.

In Turkey, all cadastral works have been almost carried out by the private sector. It is observed that the controls of these studies are still carried out by the GDLRC. In the last decade, the GDLRC has expanded the market share of the Private Mapping sector.

The weaknesses of Turkey's Cadastral activities conducted by the private sector are:

- Failure to record the basic cadastral activities conducted by the private sector in terms of administration and finance,
- Failure to provide the minimum price control,
- Failure to provide standards among PSEOs in technical and institutional terms.

The following measures can be taken to increase the quality of basic cadastre and growth of the sector in Turkey

- Consultant firms may be involved. Thus, new employment can be provided in the sector.
- PSEOs can be standardized in technical and administrative terms.
- Minimum price control can be achieved.

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