

# URBAN REAL ESTATE PATTERNS IN ALBANIA

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## **Purpose of the study**

Under the terms of Land Market Action Plan, the Project Management Unit is required to evaluate the impacts of the registration system and to conduct policy research relating to the emerging real estate markets in Albania. In order to investigate the situation in urban areas, the PMU initiated a comprehensive and systematic study of urban real property markets. The study will provide insight into the evolving market, and will allow for greater consideration of the following assumptions about the market in which the registration system is being implemented.

The market is currently, effectively, unrestricted. Demand for urban properties is vastly outpacing reforms. Illegal and informal construction activity has resulted in a considerable number of conflicts and violation of property rights. The restitution and compensation program has complicated previous privatization initiatives and is fostering tenure insecurity.

Market transactions are either going unrecorded or are recorded using the existing system of hipoteka. There are numerous cases of falsification of ownership documentation and errors coming out of this system, and the level of frustration among market actors is high.

Relatively high levels of investment are taking place against what expectations would be given such low levels of formal tenure security. This includes substantial investments by leaseholders into leased properties despite short-term leasing arrangements and weak regulation of landlord/tenant relations.

This study is an opportunity to carry out systematic and comprehensive description of the emerging markets for land and buildings. It has a strong practical component, in that information on property and tenure irregularities in the market is needed to anticipate registration problems and to create policies and procedures to deal with those irregularities. It has also a strong academic and theoretical importance, investigating complex relationships between tenure status and security, and market behavior and activity.

The purpose of the study is, therefore, to provide factual information on the real situation in urban areas relating to ownership and use of immovable property. Results of the survey will be used to develop both policy proposals and specific procedures for the implementation of the registration system in Albania.

## **Method of the study**

Study is carried out in two phases. Phase 1 involved the conducting of a census on all properties within pre-selected cities such as Tirana, Durrës, Elbasan, Korce, Lushnjë and Gjirokastër to achieve:

1. A descriptive assessment of the current situation in the urban area, and
2. Generate a property list stratified by property uses and physical uses from which a sample can be selected from phase 2 survey.

Principal lines of investigation for the first phase of the study include the following basic information such as property types, occupancy types, property uses, land and building ownership patterns, age of structures, and surface area of the property.

Phase 2 involves selecting stratified samples generated in phase 1 of the study to conduct in-depth research into complex relationship between formal and subjective tenure status and market behavior and activity. Principal lines of investigation for the second phase of the study include:

- formal tenure status,
- subjective tenure security,
- documentation of ownership rights and use of registration mechanisms,
- intra-household and outside ownership and use conflicts,
- inheritance practices and preferences,
- investment and finance behavior,
- market activity,
- property values and
- property satisfaction

Principal results of the second phase of the study will include statistical analysis of variables with direct impact on the registration system and market factors such as:

- levels of investment in the property,
- property values,
- subjective tenure security,
- purchase and sale behavior and
- credit and mortgage lending

### **Selection of cities**

The criteria in selecting these cities is approximately the same applied to the rural study of 1995 (Lemel, 2000) i.e. the geographical representation of population. However, we need to distinguish between rural and urban environment when trying to expand conclusions at national level. Thus, farm size distribution pattern is about the same at all selected districts i.e. it is a normal one. As a result, studying the farming environment in five districts such as Tirana, Korce, Lushnje, Gjirokaster, and Kukes brings to a closer figure to national level. Meanwhile, under an urban context, the representing of small cities or towns is not sufficient compared with the larger ones. In addition to, the urban study involved two other cities such as Elbasan and Durres by completing at a certain extent the so-called “Eighth Corridor”.

The entire area under study was about 6,933 hectares out of which 3,061 hectares in Tirana. Because urban properties and their frequency pattern are principal target of the study, then sampling method is chosen on area basis rather than family basis. The first assumption when sampling is that properties are evenly distributed all over the territory of the city preserving also the ratio among them. Randomly, several sections about one hectare each were chosen and all properties within any section were recorded and analyzed following direct interviews with owners or residents.

### **Coding the information**

Most of the collected information is in the form of categorical variables such as physical type of property, ownership status, tenure status, type of ownership proving document, utilization of property etc. Each variable was coded in such a way to display the reality and possible

differences created by specific events. Therefore, a short description of the main variables and their coding seems appropriate before analyzing the data.

### **Physical type of property**

1. Apartment is any dwelling unit part of a multi-apartment building.
2. Unit is any dwelling space created from the subdivision of a single or multiple structure. The difference between the unit and apartment stands in that the unit is a product of subdivision and might be made even of a single room. While an apartment is a standard dwelling structure that besides the rooms has also a bathroom and a kitchen.
3. Single-structure is a house, villa, or any kind of permanent building that doesn't have any additional structure attached to it.
4. Multiple-structure is a two or more single structures together or a single structure plus additional structures externally attached to it.
5. Multi-apartment building is a building composed of apartments.
6. Vacant parcel is a piece of land not occupied by any structure.
7. Temporary structures include kiosks, garages etc. built up illegally or possessing some business license issued by municipality.
8. Roads, sidewalks, and public squares
9. Green space made of parks, recreation areas, etc.
10. Agricultural land recently included inside the boundary of urban zone.
11. Basement units are the underground space in a multi-apartment building usually used by all the residents.
12. In construction properties are called any kind of not terminated buildings as observed in the moment of survey.
13. Other includes any property not defined as above.

### **Property utilization pattern**

1. Residential
2. Business
3. Mixed (apartments, units, and single or multiple-structures might show this pattern)
4. State and religious institutions, agencies, and enterprises
5. Public use (refers mostly to physical and social infrastructure used by people)
6. Vacant (refers to land still free of construction, or other properties left vacant by owners)
7. Garages
8. Not known (properties where no information was taken because of the missing resident)
9. Other (uses not included above)

### **Ownership status**

1. Single-private
2. State
3. Mixed (state & private, observed after the privatization process where state conserved its shares on the property not fully acquired by the private)
4. Not known (when no direct or indirect information is taken)
5. Multiple-private (when a property is owned by more than one owner)

### **Tenure status**

1. Owner (when property is being used by the owner himself)
2. Renter (when property is being used by the renter)
3. Substitute (when a person other than owner stays temporarily in the privately or state-owned property by permission)
4. Occupier (refers to persons who have intruded in a property without permission)

5. Not known (no information is taken esp. in cases when the resident is absent)
6. Refusal (special category to identify all respondents who refused to give information)
7. Mixed (some properties esp. multi-apartment buildings or even houses display a mixed pattern of tenure, i.e. composed by owners, renters and substitutes)

### **Ownership-proving document**

1. Privatization (property acquired through privatization process and property restitution)
2. Municipality (properties given to homeless families by permission of municipality, while in case of temporary structures such as kiosks that becomes a business permission)
3. Construction license (almost all properties in construction need such a license from municipality that allows the building of property)
4. Private contract (property transaction through selling and buying)
5. Court decision (properties following inheritance disputes and other forms of claims solved by court intervention)
6. Inheritance
7. No document (when owner responds that he has no ownership-proving document)
8. Don't know (refers to cases where the owner probably not the head of family doesn't know about this document or in some cases it can be understood as not having any document)
9. Mixed (it applies mainly to multi-apartment buildings and single or multiple structure properties following subdivision)

### **Structure and parcel ownership**

1. Yes (when the structure and the parcel underneath it have the same ownership)
2. No (when the structure and the parcel underneath it have not the same ownership)
3. No structure (applies for land, roads and similar properties that have no other structure built over)
4. Don't know (when the respondent doesn't know or doesn't like to answer no)
5. Partially (applies for cases when the yard has been added to the property in most of the times without permission)

### **Parcel ownership** (applies only when the above section answer is No)

1. Private (land has been owned by a private)
2. State (land is owned by the state)
3. Don't know (the respondent doesn't know the owner of the land)

### **Distance from the center of the city**

Any city has a different physical form as conditioned by the topography, historical access to main roads connecting Albania with other countries, economic role of the city, and demographic development. As a result, the interpretation of distance has come out not as absolute figure expressed in terms of meters rather than closeness to the city center measured by analogous and equal fractions. Thus, we have:

1. One fifth of the distance from the center or  $1/5$
2. Two fifths of the distance from the center or  $2/5$
3. Three fifths of the distance from the center or  $3/5$
4. Four fifths of the distance from the center or  $4/5$
5. Full distance from the center or  $5/5$

Table 1. Property selection codes

Property selection	Code description	Reference to physical types of property
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code		
111	Any initial property that conserves the former boundary and not incurring any subdivision	All physical properties but units, and apartments
110	Any initial property that conserves the former boundary but being subject of subdivisions terminating with many units or apartments	Multi-unit buildings and single or multiple-structure properties
100	Any initial property that doesn't conserve the former boundary and subject of subdivision	Multiple-structure properties and land
011	Any property resulting from the subdivision process of 100-coded properties (plus temporary structures built on public places)	Single and multiple-structure properties, land, temporary structures, structures in construction
010	Any property resulting as above but subject of further subdivision in units	Single and multiple-property structures, temporary structures
001	The quasi-final result of subdivision of 110 and 10-coded properties	Units and apartments

### **Direct access to the main street**

It appears as a very significant factor that conditions the preference of people concerning their choice in buying apartments or houses. Particularly, in the case of doing some business, first floors viewed directly from sidewalks are the most preferred. Here we have selected only two values i.e. 1= having direct access and 0=otherwise, simply for purpose of developing a logistic equation. Nevertheless, when immovable property market prices are available a detailed classification can be made in order to measure the role of location on prices.

### **Special coding**

With the purpose of tracking the dynamics of property evolution such as subdivision to smaller units, avoid double counting of properties, identify single family dwelling units, and separate the space occupied by illegally settled properties on public infrastructure a special coding system (table 1) was inserted.

## **RESULTS AND DISCUSSION**

### **Reemerging of private property**

The process of banning the private property in Albania was officially crowned with the Constitution of 1976. The historical events of 80s that involved the Eastern Europe were undergoing even in Albania despite its minor magnitude. Nevertheless, the first step was taken in 1991 through the Law 7512 of August 10, "On sanctioning and protection of private property, free initiative, independently private businesses and privatization". The article 3 of this law opens the green light to full-scale privatization of almost any sector of national economy such as industry, agriculture, services, trade, banking, and cultural activities. Privatization has to be carried out by the National Agency of Privatization through auction, free selling of shares, and granting of state shares to Albanian residents (article 23).

Privatization of retail stores during 1991 and of state housing structures in 1992 (Law 7652 of December 23) was the first step undertaken in urban environment. Immediately, about 60 percent of urban residents found themselves as owners of their apartment or house.

The Law 7698 of April 15, 1993, " On the restitution and compensation of properties to ex-owners", recognized the right of ex-owners to own back not public used properties, such as land and buildings, expropriated by the Communist state in continuance of its policy on

full nationalization of economy. Some direct impact of this law on the recent urbanization process is directly related with its provisions such as:

- Vacant land inside the city boundaries is restituted up to 1 hectare (article 19). As urban land prices get increasing, acquisition by restitution of even small pieces of land was considered of immense concern to individuals and construction sector. But, because of lack of a territory regulation planning and particularly of construction law enforcement, some vacant land in between to multi-unit buildings and used as a playground for children has been recently used for construction purposes.
- According to the article 22, ownership can be proved even through witnessing process in the court in cases when required documents are missing or destroyed. This sentence is enough to incite speculations making people owner through bribing of government and court employees. Normally, any vacant parcel is used for construction, therefore suffocating the free space of the city at the expense of its inhabitants.
- The article 20 regards the right that ex-land owner has on an existing state building to built up an additional floor. Currently, the fever of construction has involved both, the sides or the top of buildings to which some extra rooms are attached.

In addition to, following agricultural land privatization according to the Law 7501 of August 10, 1991 “On land” and the Decision no 452 of Council of Minister dated October 17, 1992, pieces of land were included inside the city boundaries.

As a result of privatization process, it is calculated that only 51 percent of the studied territory remains state-owned composed mainly of administrative buildings, public use buildings, roads, public squares and green space.

### Land use

Land use pattern in Albania is under continuous change because of the highly frenzied construction rate occurring everywhere, inside and outside city boundaries. The privatization process is not yet terminated. The next object of privatization is the large industry that occupies an extended space inside the cities’ boundary. These industries are currently shut down and in some cases occupied by migrants who continuously move down from other regions of the country.

Tab. 2 Present land use in selected cities (in percent)

	Tirana	Durres	Elbasan	Korca	Lushnje	Gjirokaster
Single-structure	20.9	24.8	17.8	25.0	37.0	32.4
Multiple-structure	47.6	10.9	43.3	18.5	19.7	21.8
Multiple-unit structure	3.6	6.1	9.2	6.1	2.2	2.0
Vacant land	11.7	33.3	15.5	16.2	14.7	8.8
Roads, public squares	10.6	12.3	8.9	5.8	11.0	22.1
Temporary structures*	0.5	1.2	0.7	0.2	1.4	0.1
Parks, green space	4.4	0.4	1.5	1.5	0.1	0.1
In construction	0.5	6.2	3.2	1.3	2.9	2.8
Agricultural land	0.0	0.0	0.0	23.9	9.4	8.7
Other	0.2	4.7	0.0	1.3	1.7	1.1
Total	100.00	100.00	100.00	100.00	100.00	100.00
Total city area in ha	3061	1683	760	541	330	558
State owned area in %	60.80	50.27	34.87	55.45	28.78	34.05

\* It excludes the area occupied illegally by such structures at the expense of parks, green spaces and sidewalks.

Much of the data is influenced by the changes in the peripheral part of the cities’ boundary including industrialized areas, agricultural land, or other land inclined to rapid urbanization.

Thus, in Tirana, apart from public infrastructure such as roads, squares, green areas, vacant land, and administrative buildings, there is a wide area belonging to various industries built since 50s or 60s that currently are surrounded by residencies. In Durres, most of the state owned area is made up of vacant land resulting from the expansion of city's boundary. In Korca, the new city's boundary encompasses some agricultural land much in the same way as in Lushnje or Gjirokaster.

Nevertheless, we think that this picture has further evolved because of the increased percentage of private properties through restitution, privatization and construction of new buildings. Some findings could be interesting in terms of city development. Thus, the percentage of vacant land in Tirana is smaller than other cities. It shows that Tirana might fulfill its expansion needs through demolition of obsolete buildings or by extending its municipal boundary to incorporate the adjacent suburban and rural area. The second alternative seems a unique place for rural migrants whose priority was to settle down in vicinities of Tirana. Any further development of this area is highly dependable on infrastructure investments. A second flow of people occurs inside Tirana with a pace that seems will never slow down. An overcrowded city might result in few years making the existing infrastructure outdated and unable to function regularly.

At the contrary, other cities except Gjirokaster have more vacant land than Tirana that could presumably absorb for a longer time the migration flow. Given the population growth rate, and the lower land price, it might be assumed that the construction of houses or villas in these cities would dominate for a while over multi-unit buildings.

The fate of green space is another important issue that must be considered by urban planners. As seen from the above table, the green space area in Durres, Elbasan, Korca, Lushnje, and Gjirokaster all together is several times smaller than Tirana. Despite some recent efforts to remove a large number of temporary structures built over public land, there are still many such structures that occupy several hectares of green space. Whether Tirana has a chance to restore something from its green lungs in the future, that of other cities appears a little pessimistic. The lack of green space means that future development trends are toward dusty and smoggy cities without any aesthetic value. It's up to urban planners to suggest to government where such green space areas can be established with the lowest costs.

Table 3. Land use of privately owned structures (in percent)\*

	Tirana	Durres	Elbasan	Korca	Lushnje	Gjirokaster
Single-structure	34.44	42.59	27.07	44.31	57.06	64.32
Multiple-structure	49.35	10.89	49.59	34.82	16.19	19.12
Multiple-unit structure	9.27	10.05	14.32	16.42	3.57	4.22
Vacant land	4.40	21.60	4.35	0.69	9.50	4.34
Temporary structures**	1.24	1.99	0.98	0.16	2.21	0.13
In construction	1.27	12.76	3.66	3.56	3.87	5.92
Agricultural land	0.00	0.00	0.00	0.00	7.59	1.92
Other	0.03	0.12	0.03	0.04	0.01	0.03
Total in percent	100.00	100.00	100.00	100.00	100.00	100.00
Total in ha	1200	836	495	241	235	368

\* It refers to the area occupied by the entire property including the yard if any.

\*\* Such structures built on parks, public squares or sidewalks are excluded from the calculation.

Any city has its own features of development conditioned by tradition, historical evolution, and territory planning. Because of the big industries built up until late 70s, cities of Tirana and Elbasan show up a higher multiple/single structure ratio. On the other hand, the

percentage of multi-unit buildings looks higher in larger cities. Building of such less expensive structures in the past served to keep up with planned industrialization rates and land conservation for agricultural purposes.

Table 4 shows the current composition of building structure in the selected cities that is in continuous evolution because of demolition of obsolete and useless buildings and subsequent substitution with a new one. It is a good picture to:

- Indicate the historical up and downs in the expansion of a city.
- Calculate the building replacement potentials, the expected population density, and the carrying capacity of existing infrastructure to match the population needs.

Tab. 4 Present land use picture as related to permanent buildings (in percent)

District	Until 1920	1920-1929	1930-1939	1940-1949	1950-1959	1960-1969	1970-1979	1980-1989	1990-1999
Tirana (buildings)	1.91	7.61	13.90	9.23	22.67	10.76	4.82	6.32	22.78
(area in ha)	0.58	3.12	7.79	11.92	50.21	7.52	8.76	4.03	6.07
Durres (buildings)	0.00	0.44	6.66	7.11	13.34	24.89	10.67	10.22	26.67
(area in ha)	0.00	0.15	5.76	4.24	9.85	18.03	11.21	19.54	31.22
Elbasan (buildings)	17.31	4.32	10.58	10.58	9.62	10.58	10.09	7.69	19.23
(area in ha)	20.64	3.00	15.01	9.57	7.13	8.93	14.82	8.63	12.27
Korce (buildings)	4.19	17.48	15.38	9.78	5.59	14.69	19.58	7.00	6.31
(area in ha)	0.76	7.97	9.48	7.13	3.43	13.23	32.67	19.92	5.41
Lushnje (buildings)	0.00	2.55	3.07	2.55	8.16	28.58	9.18	16.83	29.08
(area in ha)	0.00	1.12	3.15	2.14	4.98	15.00	19.63	24.77	29.21
Gjirokaster (build.)	44.83	1.72	1.72	0.00	5.17	10.34	4.30	7.75	24.17
(area in ha)	33.95	26.04	0.47	0.00	3.04	10.43	4.23	6.20	15.64

**Note:** Any zero encountered in the above figures does not mean that there are no such old buildings. In fact, such structures do really exist, but are not captured by our samples.

In its history of development, any city has its peculiarities. However, it exists a close relationship between urban development and historical and political background. Cities such as Gjirokaster, Elbasan and less Korca have conserved some of their history. Older structures make up a significant proportion over the total.

Following the table, we can distinct three main relative peak periods regarding the construction rate. We say relative because any replacement or new construction tends to modify the picture by smoothing the older peaks. Such change can be observed in Tirana and less in other cities. Because of different political regimes, we subdivide the 20<sup>th</sup> century history in three main periods.

The peak in the first period (until War II) is observed the reign of King Zog (1928-1939) when Tirana was trying to take the form of a modern capital and establish its state institutions and administration. The most illustrious heritage of that time is represented today by administrative buildings such as ministries, banks, main squares of the cities, and some religious institution left physically intact. Although, there are also old houses made of baked clay bricks that have not any historical or monumental value. As most of these are close to the city center, it is probable that under the pressure of construction companies for new building ground, these structures be demolished very soon and hence modifying the



building's age composition. The main concern is the increased risk that valuable old buildings could experience the same fortune, thus erasing parts of the city's history.

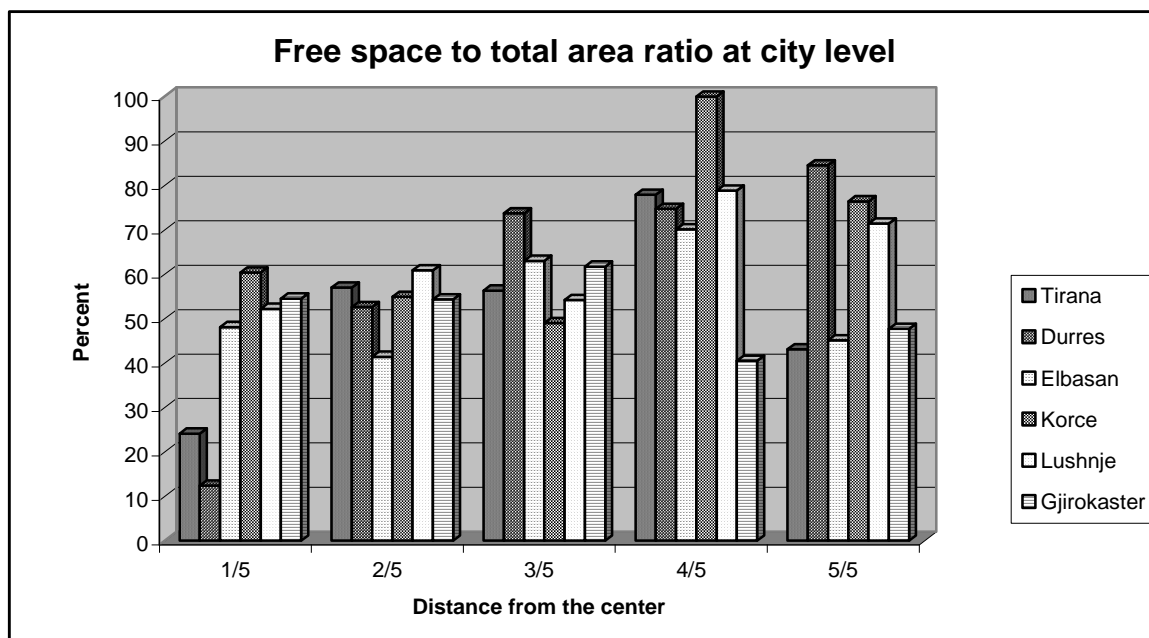
The second period is mainly related to the industrialization plans of the communist regime that extends from 1950-1979. However, in most of the cities under study their industrial development fell in the period 1960-1969. We should recognize that this ten-year period framing is rather arbitrary and not related to single dates or moments. During this second development peak, expansion of the cities was underpinned by a higher building rate of industrial plants outside the cities' centers. Industrial development required also the employment of additional labor force that was ensured by other regions of the country. With exception of Gjirokaster, it results that most of the cities' expansion occurred during the planned economy period i.e. 1945-1990. Generally, the post-War II period until the end of 70s were characterized by intensive building rate closely related to the development of industrial sector sustained by a politically instigated high rate of population growth. During the 80s, economic hardships caused by inefficient use of capital and human resources were worsened by lack of supporting foreign alliances, curtailed industrial investments, thus causing a shift of construction to dwelling purposes.

The third period, i.e. 1990-1999, is characterized by the willingness to build the market economy disregarding the enforcement of laws and regulations. The building rate is the highest among the selected periods. Almost all investments in dwelling or business are made by the private sector. As seen from the table 4, almost all the cities except Korca have exhibited an increasing rate of construction that during 90s was the highest in terms of number of permanent buildings constructed so far. By time, the pattern of age composition of the buildings tends to change in favor of recent-built structures. The danger of chaotic development is that it can erase old and historical buildings as witnesses of our history. Fragments of old or ancient city are mixed together with contemporary buildings that in a long term aspect might entirely compromise the chances for a brighter future of the region, part of which is made up of the well-preserved history.

A feature of Albanian cities is their ring-shaped development i.e. any city has a distinct center that includes the main square, parks, administration buildings, and cultural centers. With some exception, urban expansion has evolved by adding "rings" of buildings around the existing urban space.

From the figure 1, we conclude that any city shows its own patterns of urban development probably significantly altered during the last decade. In general, land coverage picture follows an ascending pattern. It means that closer to the center the less free space remains. The phrase free space is not designated to available free space for constructions. The available free space is severely reduced in the center of cities like Tirana or Durres, where practically nothing is left for new construction unless some old buildings are demolished. It appears that available free space is a function of the distance from the center (that by itself includes many other significant factors such as level of services, cultural life, recreation and entertainment, quality of physical infrastructure) and government power to enforce the laws.

Fig.1



**Note:** Free space refers to the difference between total land area to area occupied by buildings, roads, squares, and green space. While, distance from the center is expressed as a relative one to the whole.

One of the common patterns of city development is the continuous splitting of land parcels with respect the distance from the city center. As any city has its own features of territory expansion that are historically and geographically related, then follows that it is difficult to discover an ordered and circular development of city layers.

Table 5. Private parcel size in square meters as related to the distance from the center of the city.

	Distance from the center				
	1/5	2/5	3/5	4/5	5/5
Single-structure	196	223	298	237	418
Multi-structure	278	405	388	1293	254
Multi-unit building	411	408	367	284	
Vacant land	567	620	745	1126	1200
In construction	195	438	328	246	761
Total average	234	288	325	431	399

Obviously, the total average is reduced by the presence of temporary structures whose parcel size is small. However, under the context of the whole picture, it follows that the general development pattern is circular. Developing some equation on the parcel size it results that:

- The average size of the private parcel tends to be smaller when the percentage of the area occupied by public property gets larger. This result might be related to the increased value of neighborhood because of larger space, closeness to public and private services, and less densely populated area. Obviously, all these factors assume a higher land price and thus more splitting of parcels.
- The average size of the parcel tends to get smaller as much as closer the property is to center of the city.
- Having ownership proving documents acquired through privatization, private transfer, or inheritance generates larger parcels than through Municipality permission.

- Parcel size tends to get smaller in time. Crowding of buildings is occurring because of infrastructure limitations and probably the circular pattern of city development.

There are several implications of results:

- Parcel size follows an asymptotic pattern and as soon as the total average approaches the lower limit then a new city ring could emerge,
- In sites where few public spaces exist, a drastic congestion of population might follow producing acute air pollution problems and outburst of sewage,
- State owned vacant land could still be privatized through false restitution pretexts, thus causing a further congestion of urban area.
- Urban planners should consider these facts by looking forward in the future of urban sites. Improving physical and social infrastructure in peripheral areas of the city releases the population pressure to the center, thus causing less problems of pollution and infrastructure maintenance.

### Utilization pattern of properties

When we talk about the utilization of properties, we consider those properties that are used by a single family or person no matter its ownership. Thus, a house with several rooms might be rented to different users. It means that not only the house as a whole, but also its composing rooms perform in the market as single properties. However, let explain the evolution of properties in the last decade to understand the factors that have conditioned the subdivision of some properties such as single and multiple structures.

Table 6. Subdivision of single and multiple structures in units

	Total number	Subdivided structures in percent	Units produced	State-owned units in percent*
Tirana	29392	4.5	6160	61.5
Durres	17503	10.8	9743	21.0
Elbasan	15248	0.5	320	0.0
Korce	7473	8.9	1716	0.0
Lushnje	5027	2.1	291	63.2
Gjirokaster	6910	1.4	329	0.0
Total	81553	5.1	18559	32.5

\* More than 62 percent of units belong to state enterprise buildings occupied by the people mostly during the 1997 disorders.

A simple tabular information shows up that subdivision of private properties is significantly related to type of ownership documentation and distance from the center of the city.

Table 7. Occurrence in percent of private property subdivision\*

Distance from the center	Ownership proving document				Total by distance
	Privatization and private transfer	Municipality	Inheritance and court decision	No document	
1/5	28.6	24.1	10.1	3.5	17.0
2/5	4.4	0.0	2.4	0.0	2.0
3/5	1.4	3.7	0.0	0.0	0.7
4/5	2.4	0.0	4.6	0.0	2.8
5/5	0.0	0.0	0.0	0.0	0.0
Total by document	8.3	2.7	2.8	0.3	3.9

\* It refers to privately owned single and multiple structures

Properties acquired through privatization process or private transfer show up a higher subdivision rate. A closer figure is displayed by properties acquired through municipality in form of housing care or construction permissions. However, subdivision following properties acquired through privatization makes up more than 50 percent of subdivided properties. In this context, we may state that process of privatization or private transfer confers to property a higher security as displayed by the figures in the table. On the other hand, the lower rate of subdivision in properties acquired by other means, particularly through inheritance or court decision, can be explained with fragile relationships inside the family or between relatives which share the property.

Distance from the center of the city is a significant factor that affects the property subdivision rate. As observed from the table 7, most of such process evolves in vicinity to the city center followed by a sharp decline at the other distances. Since, there is no any reliable indicator on the effect of utilization way or tenure status of the property over the differences in the subdivision rate, then we assume that there are other factors that together make up the quality of living.

The implication of this result is directly related to property market and city congestion. Higher prices in the center induce a higher rate of transfers, thus making people to sell or rent part of their property. A more intensive property market means more investments that are directly indicate on increased family income and improved living conditions.

Under a social aspect, more investments mean better surrounding environment that undoubtedly might lead to the cohesion of community and its active participation in preserving the values of neighborhood.

Therefore, improvement of physical infrastructure such as roads, sewage disposal system, water supply, electricity, parks, combined with encouragement of private investment that aim to improve living quality made up a strong prerequisite to a modern city development. The creation of a sustainable urban environment cannot be achieved through fragmented actions whose primary purpose is the temporary diminution of acute problems afflicting today the urban reality.

The discussion to this point has concerned urban land use patterns observed during the XX century in some cities of Albania.

Table 8. Privately used properties (expansion from the sample frequencies)

Physical type of property	Tirana	Durres	Elbasan	Korca	Lushnje	Gjirokaster
Apartments	64672	37678	33289	23422	3757	6256
Units	6160	9743	319	1716	291	327
Single-structure	17937	12849	5189	3267	3810	5930
Multiple-structure	8299	1811	9660	3211	1058	935
Kiosks, garages	8551	1724	1118	443	1323	234
Vacant land	1018	1638	559	553	132	887

\*These grouping of properties considers more their use status rather than ownership. Some of these properties are state-owned but occupied and used by private persons. Other properties are subdivided and rented to other private people. The user is a single family that might be the owner of unit, renter, or occupier.

From the table 8, it comes out that the more industrialized cities such as Tirana, Durres, Elbasan and Korca show up a higher ratio of apartments to single and multiple structures

together. Obviously, this feature is related to housing policies pursued until the end of 80s. Currently, the number of properties is larger than displayed in the table. First off, the survey was conducted mainly during 1998 thus it can be expected that many properties have been privatized in the past year. Second, it is a number of properties whose owner was not found at the moment of interviews. However, the figures shown in the table present a clear picture on the physical composition of privately owned properties.

Table 9. Property rental market of privately owned properties (expansion from the sample frequencies)

	Distance from the center of the city*									
	1/5		2/5		3/5		4/5		5/5	
	Owner	Renter	Owner	Renter	Owner	Renter	Owner	Renter	Owner	Renter
Apartment	22952	2201	67643	4456	41698	2718	5674	481	0**	111
Unit	4495	3332	1810	424	874	259	345	345	0**	0**
Single-structure	6082	515	12293	393	12639	986	7570	161	2810	432
Multiple-structure	2609	116	6221	374	10300	80	1626	0**	2316	135

\* Distance of the property from the city center is expressed in relative terms. Thus, 5/5 means that property is located in the peripheral part of the city, while 1/5 is the closest to the center.

\*\*This value doesn't preclude the occurrence of such cases, only that these were not captured from the sample.

In general, private properties displayed the same tenure pattern. These are used predominantly by owners such as apartments 93.2 percent, single-structures 94.3 percent, and multiple-structures 97.0 percent. On the contrary, units exhibit a notable deviation from the rule i.e. 63.6 percent are being used by owners. Generally, the percentage of rented properties is the highest in the vicinity of the city center.

Undoubtedly, the use of properties for residential purposes is prevailing over the other uses. Nevertheless, during the last years, a remarkable diversion of properties toward business has occurred. In relative terms, the percentage of apartments used for business is smaller compared with other properties, while in absolute ones it takes up to 18 percent. Probably, the demolition of kiosks and complete freeing of parks from such temporary and illegal structures will increase the conversion rate of apartments and expand to larger distances from the center.

Table 10. Utilization of privately used properties (in percent)

	Residence	Business	Mixed	Garage	Unknown uses
Apartments	96.9	1.7	0.5	0.0	0.9
Units	87.7	10.4	0.3	0.0	1.6
Single structure	79.0	14.7	2.9	0.0	3.4
Multiple structure	80.4	4.4	14.3	0.0	0.9
Temporary structure	0.0	54.4	0.0	40.9	4.7

There is no rule that relates the utilization of specific properties to distance from the center with respect to each city.

In general, business properties are more concentrated in the center of the city. However, this rule doesn't hold when looking over specific cities. For example, in Tirana, despite having a similar distribution pattern of analyzed properties, there is still some difference produced under the effect of historical development and urban policies.

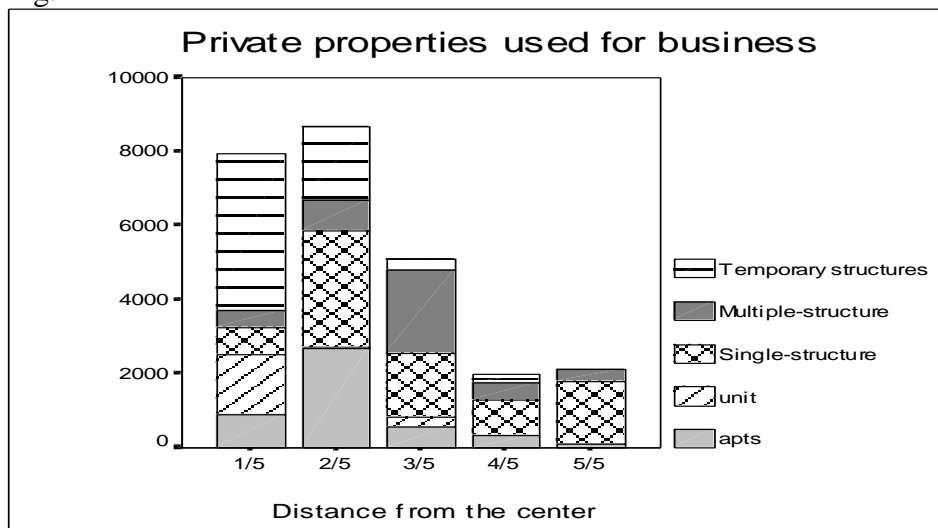
Table 11. Percentage of private permanent structures used for business\*

Distance from the center	All selected cities			Only for Tirana		
	Percentage of business properties	Percentage of residential properties	Business to residential ratio	Percentage of business properties	Percentage of residential properties	Business to residential ratio
1/5	30.77	18.93	0.17	43.72	8.22	0.74
2/5	33.56	39.68	0.09	29.99	47.30	0.09
3/5	19.74	29.67	0.07	13.15	33.90	0.05
4/5	7.70	9.29	0.10	7.88	5.65	0.19
5/5	8.23	2.43	0.26	5.26	4.92	0.15

\* It refers only to single and multiple properties.

Thus, the percentage of business properties is the highest in Tirana among the selected cities showing a regular declining pattern beginning from the center. Obviously, many properties close to the center are temporary ones that recently are being demolished. Although, this event might reduce the absolute number of such properties but will keep the same ratio as conversion of properties from residential to business will continue as long as the demand for a certain kind of services will remain unchanged.

Fig.2



Starting from the third distance (3/5), the ratio of business to residential increases again. This is explained by the nature of business that in the center is dominated by temporary structures and offers services such as restaurants and coffee bars. On the contrary, at the peripheral parts of the city, the number of temporary structures is too small and businesses are more oriented to production of goods rather than services.

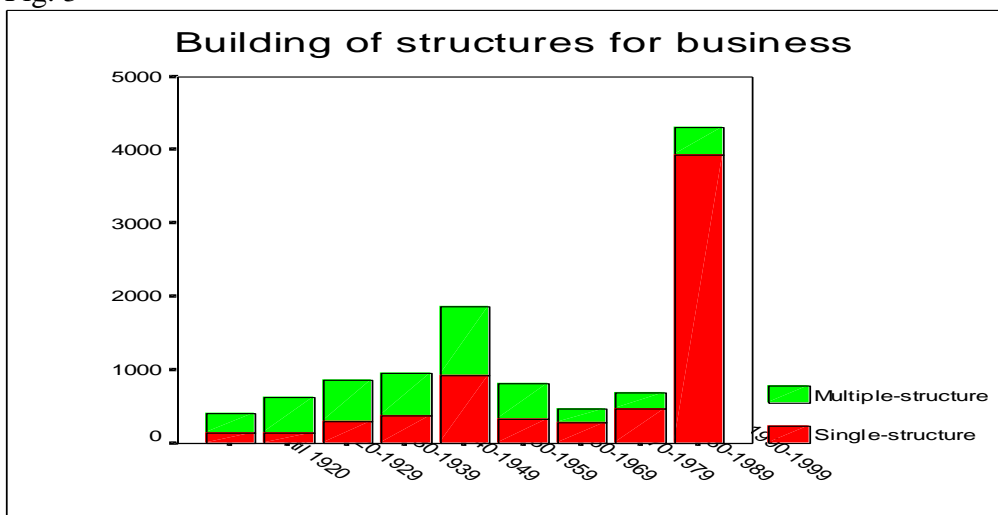
Also, there are differences between the permanent properties used for business. Thus, the percentage of apartments used for business is higher at the center of the city, while single and multiple-structures show a different pattern. Their respective ratio seems a better indicator on the share these properties take in a business. In a short term, this ratio might change particularly closer to the center because of replacement of old houses with new multi-unit buildings which first floors are fully used for business. In a long-term aspect, the real distance within each 1/5 might get larger, thus involving properties that today are found at another relative distance.

Tab 12. Percentage of properties used for business

Relative distance from the center	Percentage of apt. and units	Percentage of single and multiple structures	Apt.+ units to single + mult. structures ratio
1/5	7.42	12.49	2.14
2/5	3.54	19.76	0.68
3/5	1.73	16.34	0.21
4/5	4.03	15.14	0.22
5/5	0.00	34.54	0.06

As a matter of fact, under the conditions of private initiative, a soaring up of structures used for business has followed. There is a significant difference between historical periods, i.e. until 1939, from 1940 to 1989, and 90s. In addition, the number of single structures built up in the recent period dominates over the number of multiple structures.

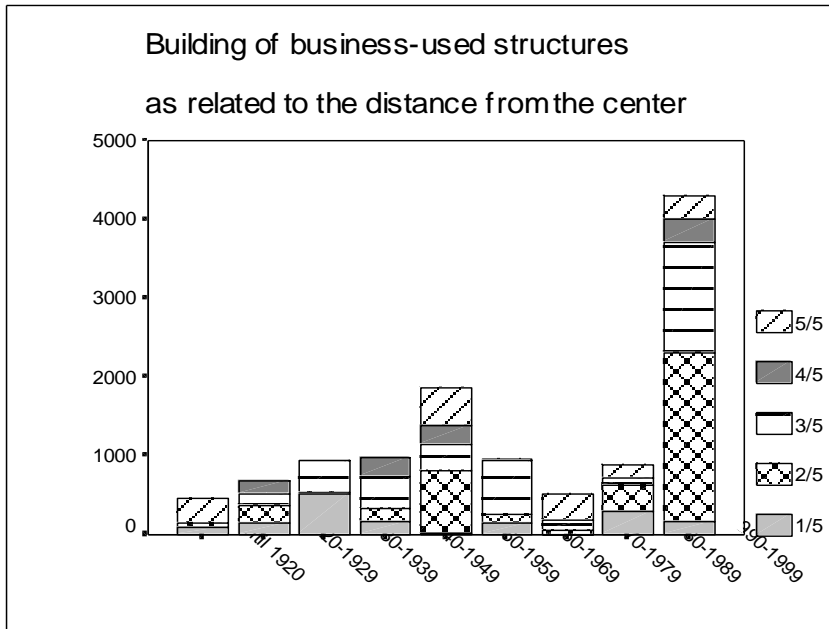
Fig. 3



\*It refers to the current status of properties.

On the other hand, the last period is dominated by constructions between 2/5 and 3/5 of distance (fig.4), probably driven by the higher demand for services and not rarely by the choice of having a mixed structure that fulfills both family requirements for living and handling the business.

Fig. 4\*



\*It refers only to single and multiple properties.

The logistic regression of the general form  $Y=a_0 + b_iX_i + \sum_i\sum_j\gamma_i\gamma_jX_iX_j$  is developed where  $Y=1$  if a property is used for business and  $0=$ otherwise. Independent variables are assigned as:  $L=1$  if property has direct access to the main road and  $0=$ otherwise,  $W=1$  if property is used by owner himself and  $0=$ otherwise,  $P=1$  for permanent properties such as apartments, units, and houses and  $0=$ otherwise,  $D_1=1$  for properties acquired through privatization or buying and selling process and  $0=$ otherwise,  $D_2=1$  for properties acquired through the municipality permission or license and  $0=$ otherwise,  $D_3=1$  for properties acquired through inheritance or court decision and  $0=$ otherwise, and  $S=1$  if property is located close to the city center and  $0=$ otherwise. The coefficients and their signs indicate that:

- In general, permanent properties have less chances of being used for business compared with other properties such as temporary ones. Demolition of illegally constructed kiosks is expected to increase the utilization of permanent structures for business.
- Properties that have direct access to the main road have more chances to divert to business.
- Owners are less likely to divert their property to business compared with other tenure categories such as renters.
- People who have acquired some ownership-proving document through municipality permissions are more prone toward business. In fact, temporary properties make up the most of this ownership documentation class.
- Center of the city is much preferred for business purposes, thereby increasing chances to start a business. However, this is not true for permanent structures and properties used by owners.

-2 Log Likelihood	130506.187						
Goodness of Fit	250140.428						
Cox & Snell - R <sup>2</sup>	1.000						
Nagelkerke - R <sup>2</sup>	1.000						
		Chi-Square	df	Significance			
Model		33539.064	22	.0000			
Block		33539.064	22	.0000			
Step		33539.064	22	.0000			
----- Variables in the Equation -----							
Variable	B	S.E.	Wald	df	Sig	R	Exp (B)
Street access (L)	1.0255	.0730	197.3057	1	.0000	.0345	2.7885
Perm. struct. (p)	-1.5600	.0681	524.8843	1	.0000	-.0565	.2101
Owner used (W)	-1.8114	.0873	430.4867	1	.0000	-.0511	.1634
Privatiz. (D1)	-.3468	.0914	14.3982	1	.0001	-.0087	.7069
Municipality (D2)	.8008	.0699	131.2945	1	.0000	.0281	2.2273

reet as more business presents easing value ulates



people to invest in some neighborhoods that are not preferred by residents because of reduced chances to generate a profit.

### Temporary structures

Because of loosening the enforcement urban law during the last decade, a large number of temporary structures were legally or illegally built. About 32.3 percent of such structures were constructed over parks and other green areas.

Table 13. Distribution and use of privately owned temporary structures\*

Districts	Distribution among cities in percent		Distribution within the city in percent	
	Number in percent to total	Area occupied	Business	Garage
Tirana	61.0	42.1	53.3	44.5
Durres	14.1	33.9	65.0	35.0
Elbasan	8.5	12.3	61.5	38.5
Korce	3.6	1.8	74.9	12.4
Lushnje	10.8	9.1	53.9	44.0
Gjirokaster	2.0	0.8	20.1	59.8
Total (in absolute figures)	12198	48.45 ha	6770	5092

\* There are calculated to be about 13650 temporary structures such as kiosks and garages out of which 97.3 percent are privately owned.

Despite being the capital city of the country, Tirana has the highest number of temporary structures that not long ago were extended at the doors of the most important institutions such as Parliament, Council of Ministers, National Bank, and National Museum. Almost all structures built on parks were used for business. On the contrary, structures used as garages were built over vacant land between multiple-apartment buildings.

The age of temporary structures has had several impacts on land use, psychology of people and the society. First, it canceled the trust of people in the administration in respecting the democratic institutions. Second, it shifted investments toward easy money activities such as coffee bars. Third, the demolishing of such structures constituted an economic loss for society despite the high return rate at the benefit of owners. Fourth, many garages are built in the space between buildings, thus occupying the available space for playground. Probably, the direct impact is on children because of some diversion on their natural games.

### Documenting ownership rights

Acquisition of properties is carried out through various ways as listed in the table below. Privatization includes all processes following the proper legislation according to which first the retail stores and after the apartments and small and medium industry got privatized. Change of private ownership is done through buying and selling. Initially, such properties have been acquired by another process that might include some previous private transfer.

Table. 14. Status of ownership-proving documentation (in percent of each property)

	Privatization	Buying	Municipality	Court decision	Inheritance	Without document
Apartments	75.4	19.4	3.0	0.0	0.5	0.9
Units	51.8	11.9	11.1	4.2	19.6	1.1
Single-structure	15.0	10.2	15.8	3.4	41.9	11.6
Multiple	3.6	13.9	10.3	1.9	65.8	3.6

structure						
Temporary structure	5.0	2.8	69.3	1.8	0.9	18.5
Vacant land	22.6	4.3	0.0	11.3	44.8	17.0
Agricultural land	17.6	0.0	17.6	0.0	37.4	27.3

Role of municipality has been important in sheltering homeless people in state owned properties and particularly in releasing construction or business licenses to private individuals or agencies. Inheritance has been a major element of conceding to people properties expropriated by the communist state in the past. From a certain point of view, that is not a pure inheritance expressed by a will rather than an equal sharing among heirs of properties that got restituted to people following the respective law. Acquiring a property through court decision is not a frequent case. However, disputes over the acquired property will continue as this issue makes up a matter of principal interest for individuals.

There are also cases when respondents answered they had no ownership proving document. That holds true for single, multiple structures, temporary structures, and vacant land.

Table 15. Temporal and spatial occurrence of private properties without ownership-proving document\*

Period	Distance from the center of the city				
	1/5	2/5	3/5	4/5	5/5
Percentage of structures constructed before 1990 over the total	92.6	67.7	75.8	69.3	70.2
Percentage of above structures without document	2.0	2.3	4.5	7.7	0.0
Percentage of structures constructed after 1990 over the total	7.4	32.3	24.2	30.7	29.8
Percentage of above structures without document	11.1	15.7	31.1	14.0	9.4

\*Refers only to single and multiple structures

A first question might arise after noticing that some lacking ownership document properties belong to pre-1990 period. It doesn't imply that these properties are illegally constructed knowing the tight restrictions and control exerted by the state during that period. It could be better referred as cases where people have considered themselves as old residents.

Second, referring to the table, it results that the intensity of construction in the last ten years was on average the highest among all analyzed periods. But, it also results that the without-permission construction cases numbered the highest occurrence within the same period. Obviously, the first thing that comes to mind is that, after 1990, a weakening of state control and urban law enforcement together with a high demand for housing pulled by massive migration of people from the inner areas of the country has increased the number and percentage of illegal constructions.

### Property conflict potentials

We can distinguish two main kinds of conflicts over the property:

1. Between individuals and the state when:

- State properties such as enterprise offices, schools dormitories, and holiday distraction buildings are occupied by people,
- Public land such as parks, squares and even sidewalks used by individuals for business purposes,

- Buildings constructed by individuals without any permission from the urban planning office in municipality.
1. Between the individuals themselves on:
    - Land that is subject of restitution rights but occupied by other people who have constructed houses or other businesses,
    - Buildings that are used for residential purposes but are claimed by ex-owners.

Table 16. Occurrence of cases (in percent) in private properties where the land beneath the structure has a different owner\*

	Total	At the district level					
		Tirana	Durres	Elbasan	Korce	Lushnje	Gjirokaster
Single structure	13.1	12.0	20.9	14.0	2.1	12.6	1.0
Multiple structure	4.4	4.4	15.0	2.7	1.9	10.8	0.0
Temporary structure	84.1	84.7	87.5	85.7	100.0	86.6	0.0
In construction	39.7	3.3	70.9	0.0	0.0	66.7	0.0

\* Multi-apartment buildings are excluded from the calculation because the potentials of producing a conflict are negligible.

Should this contradiction produce conflicts, it usually will depend on the political environment. Political freedom obtained after 1991 along with economic reform were not sustained by the establishing of adequate institutions. Thus, acquisition and protection of private property interests are prevailing over the public property and its role to society. When the number of illegitimate cases becomes too large then it's hard for the government to restore the order without causing to these individuals a damage that partly is transmitted to society and national wealth. Therefore, the current interventions have been carried out partially such as those of demolishing kiosks at the center of the cities.

Table 17. Occurrence of cases where land has a different ownership from the building

Structures according to the construction period	Type of ownership proving document			
	Privatization + private contract	Municipality	Inheritance + court	Without document
Single structure in %	48.2	0.0	100.0	69.1
Multiple structure in %	51.8	0.0	0.0	30.9
<b>Total (before 1990)</b>	<b>166</b>	<b>0</b>	<b>15</b>	<b>696</b>
Single structure in %	45.6	27.0	16.3	38.0
Multiple structure in %	0.0	8.2	30.4	2.0
Temporary structure in %	30.0	57.6	21.3	36.5
In construction in %	24.4	7.2	32.0	23.5
<b>Total (after 1990)</b>	<b>353</b>	<b>2294</b>	<b>263</b>	<b>3411</b>

Almost, all the respondents independently from the age of the structure and acquisition pattern answered that the land belongs to the state or they don't know the owner of the land. There could be at least two reasons on such behavior of respondents. First, as most of the cases belong to structures built in 90s, it is probable that people were aware of potential conflict they could have with the landowners. Second, it could be some distrust of people to interviewers as they could reveal the presence of such conflict in their property. An interesting case is that of illegal possession mainly of state properties occurred during turmoil periods.

Table 18. Distribution of illegally possessed properties

District	Total	According to physical type of property in percent				
		Units	Single structure	Vacant land	Basement unit	Other
Tirana	4623	79.9	15.2	0.0	4.5	0.4
Durres	775	55.6	11.1	11.1	0.0	22.2
Elbasan	80	0.0	0.0	100.0	0.0	0.0
Lushnje	185	100.0	0.0	0.0	0.0	0.0
Gjirokaster	187	74.9	0.0	25.1	0.0	0.0
Total	5850	73.7	15.9	3.6	3.6	3.2

**Note:** About 96.4 percent of this kind of properties are used for housing.

### Registration of properties

The number of cases that contain some potential conflict is too small compared with the great number of properties. However, the point whether to register an illegal property is of principal importance. First, when registering a property we legally qualify the user as the legitimate owner. There might be cases when an illegally settled person who has benefited directly through the occupation of land or property has not paid either the land or the building. Since the illegal occupation of a property constitutes a law violation, why we should in the name of the law register the property even restricting it from the right of being transacted. Maybe, the current possessor doesn't mind about the security offered by the IPRS because he is not interested to sell the property for a while. Secondly, as it always happens in fragile environments with unconsolidated law enforcement, if the property is registered, then through order from above or some decision of the Territory Planning Council, this property acquires full rights like other ones.

Therefore, the right of registering such properties should be enforced by a special law or any amendment of existing laws. This kind of property can be designed on a simple map for urban planning purposes but not registered. Obviously, the IPRS constitutes a sound and reliable basis as a source of property addresses. For example, no address is assigned to illegal properties that would miss such kind of service. If based on the law, any illegal property will miss all services such as the mail, electricity, water, insurance, etc., then the property value in the market will drop so much that it would discourage other people of undertaking such illegal actions. This kind of action must be taken for all occupied properties that belong to legal owners which have acquired property rights through restitution process.

There is another category of people who have built the property on their own land, thus missing a construction license from municipality. In this case, land is registered but not the building until the owner provides a construction license from municipality.

On the other hand, not registering an illegal property might concern the government because of losing revenues from property tax that can be instituted in the future. As the rate of urban sprawling is increasing, it is expected also that the number of illegally constructed buildings get larger. Therefore, to avoid problems and conflicts new rules on the territory planning and their consecutive enforcement must follow. Not registering a property might reduce illegal actions but not eliminate completely.

### Property market

It has been not the objective of this short survey to investigate on property market. Nevertheless, its observations could be useful to measure the rate of property transfers through buying and selling and in particular the rental market. There are many factors that

determine the market behavior of a property such as ownership security, neighborhood, location, purpose of use, and price.

From the available information, a logistic equation of the form  $Y = a_0 + \sum_i b_i X_i + \sum_i \sum_j \sum_n \gamma_i \gamma_j \gamma_n X_i X_j X_n$  was produced to capture the apartment market.

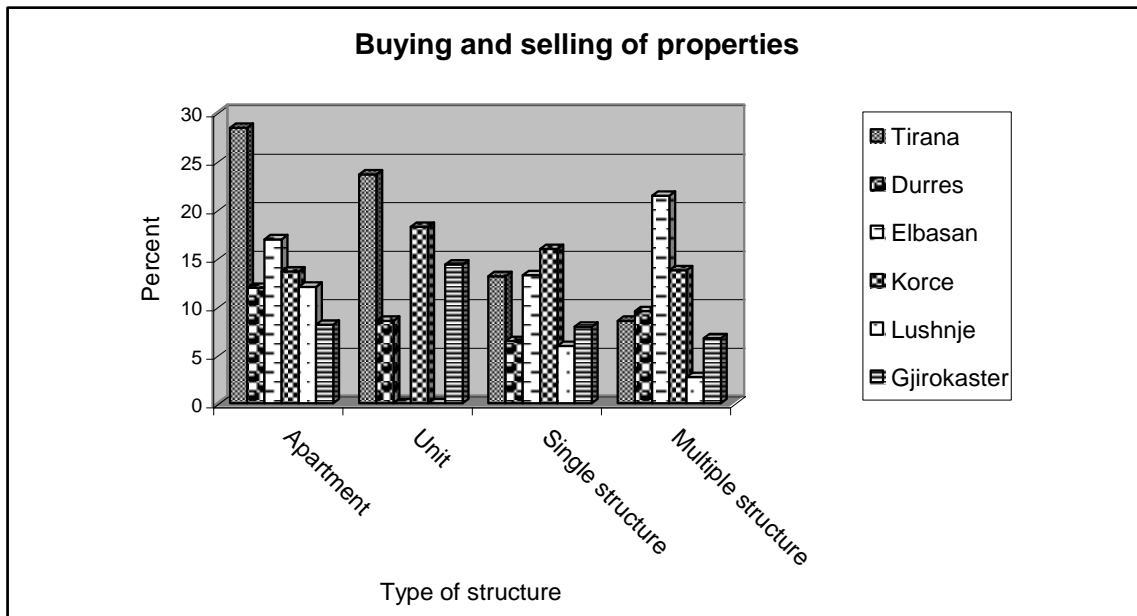
In this equation the selected variable is  $Y = 1$  if an apartment is bought and  $0 =$  otherwise. While, the independent variables are:  $F = 1$  when the apartment is in the first floor and  $0 =$  otherwise,  $U = 1$  when apartment is used for business or mixed and  $0 =$  otherwise,  $S_{1-3} = 1$  when apartment is located in one of the distances and  $0 =$  otherwise,  $FUS_{1-3} =$  interaction among the three variables.

From the equation comes out that:

- First floors of multi-apartment buildings have generally a lower probability of being bought.
- Probability to buy an apartment is higher with respect to residential purposes.
- Variations of the distance from the center of the city have no significant influence in the probability that an apartment is bought. Nevertheless, there is a slight difference between the first to other distances.
- The interaction of all variables produces a different picture. Thus, first floor apartments if used for business has a higher probability of being sold of about 0.19 as compared with an apartment in the upper floors (0.02). This figure might change a little if a further reduction of kiosks is going to continue in the future because second floor apartments might be diverted to services.

-2 Log Likelihood	146371.707						
Goodness of Fit	167377.819						
Cox & Snell - R <sup>2</sup>	.003						
Nagelkerke - R <sup>2</sup>	.003						
		Chi-Square	df	Significance			
Model	421.133	8	.0000				
Block	421.133	8	.0000				
Step	421.133	8	.0000				
----- Variables in the Equation -----							
Variable	B	S.E.	Wald	df	Sig	R	Exp (B)
Utilization (U)	-1.9710	.2562	59.2014	1	.0000	-.0197	.1393
First floor (F)	-.0639	.0166	14.7925	1	.0001	-.0093	.9381
1/5 distance (S1)	.2923	.0367	63.3148	1	.0000	.0204	1.3395
2/5 distance (S2)	.4442	.0344	166.8580	1	.0000	.0335	1.5592
3/5 distance (S3)	.3120	.0354	77.8628	1	.0000	.0227	1.3662
U*F*S1	2.3040	.2745	70.4727	1	.0000	.0216	10.0141
U*F*S2	1.7417	.2631	43.8364	1	.0000	.0169	5.7071
U*F*S3	2.3000	.2777	68.6202	1	.0000	.0213	9.9744
Constant	-2.0034	.0333	3615.376	1	.0000		

Fig. 5



What are the main factors that condition rent market? A simple logistic regression that doesn't include rent prices because of lack of information displays some interaction between not less important factors that determine prices in property rent market. Thus, a general model of the form:  $Y = a_0 + \sum_i b_i X_i + \sum_i \sum_j b_{ij} X_{ij}$  was developed where Y= the probability an apartment has to be rented out, while X refer to such independent variables such as L= direct access to the main road, U= use of property for business, F= being this property in the first floor or not, S= floor space of property in m<sup>2</sup>, A= age of property in years, and D= distance from the center.

Breaking down the signs of the variables, it results that:

- Direct access to the main road (L) increases the overall probability that an apartment is rented out.
- In general, the first floor (F) has less probability of being rented out than other floors. It might imply this floor is more preferred to be sold or combined with a small business.
- Use of the apartment for business (U) presents more chances toward renting.
- Apartments close to the city center (D) have less probability of being rented out.
- Aged buildings (A) have more chances to be rented out.
- Larger space structures (S) have fewer chances to be rented out.
- First floor apartments with direct access to the main road if used for business have more probability of being rented out.

-2 Log Likelihood	67696.446						
Goodness of Fit	153896.880						
Cox & Snell - R <sup>2</sup>	1.000						
Nagelkerke -R <sup>2</sup>	1.000						
		Chi-Square	df	Significance			
Model	4752.523	21	.0000				
Block	4752.523	21	.0000				
Step	4752.523	21	.0000				
Variable	B	S.E.	Wald	df	Sig	R	Exp (B)
Location (L)	.4689	.1002	21.8931	1	.0000	.0166	1.5982
Use (U)	2.9750	.2705	120.9319	1	.0000	.0405	19.5889
Floor (F)	-.8154	.1023	63.5402	1	.0000	-.0291	.4424
Floor space (S)	-.0026	.0013	3.8174	1	.0507	-.0050	.9974
Distance (D)	-2.3333	.1189	384.9183	1	.0000	-.0727	.0970
Age (A)	.0168	.0035	23.1504	1	.0000	.0171	1.0169
L by U	.7005	.1378	25.8205	1	.0000	.0181	2.0147
L by F	.4023	.0717	31.4697	1	.0000	.0202	1.4953
L by S	-.0263	.0014	339.8552	1	.0000	-.0683	.9740
D by L	.8863	.0674	173.1195	1	.0000	.0486	2.4262
U by F	-.7069	.1801	15.4139	1	.0001	-.0136	.4932
U by S	-.0292	.0024	146.9868	1	.0000	-.0447	.9712

g kiosks of these rate of roads. In first floors

induce a expected to access