

# The Use of Land Acquisition Methods in Turkish Urban Areas

Sevkiye Sence TURK, Turkey

**Key words:** Land acquisition method, expropriation method, land readjustment method, voluntary method.

## SUMMARY

The aims of land acquisition methods are to produce the sufficient urban plots for urban needs and to provide the primary and secondary service areas. Three land acquisition methods are applied in Turkish urban areas: Voluntary method, the land readjustment method and expropriation. It is known that these methods have some problems in both theory and practice. This paper is to investigate whether these methods work efficiently or not. To reach this aim, the various hypothesis are to be tested by using descriptive statistics, cross-tabulations and chi-square tests. For this research, a sample survey is used and 468 questionnaires are completed by Planning Office of the Municipalities of urban areas in different population groups and 169 questionnaires are realized by surveying engineers in Turkey. The overall conclusion is that none of these methods are used efficiently in practice and the legal sources cause this.

# The Use of Land Acquisition Methods in Turkish Urban Areas

Sevkiye Sence TURK, Turkey

## 1. INTRODUCTION

Turkey has two basic problems in urban areas like the other developing countries. First one is that there is insufficiency in the production of serviced urban plot with parallel to rapid increase in population and urbanization. Second one is that there is also insufficiency in provision of serviced areas and infrastructure. Various studies have emphasized this problem so far. (Housing Report, 2002; Baharoglu, 1996; Oncu, 1988; Habitat II Report, 1996; DPT, 2001). The lack in producing of urban plots is also determined in Habitat II Report (1996). According to this report, Turkey have to produce urban plots for housing, 25000 hectare in 2000 and 30000 hectare in 2005 and also the same amount urban areas are needed for other functions apart from housing. According to the other study, (Tezesen, Agacli, 1996) Turkey have to produce 320.000 house units in a year depending on the development of population, 70.000 house units for renewal and 5000 house units for disaster. So it is needed 13.680 hectare urban plots in one year in Turkey. In both built-up areas and new developing urban areas in Turkey, it is known that there are legal, administrative, political and technical problems in provision of on-site and off-site service areas and infrastructure (DPT, 2001; Turk, 2003). These findings appear to necessitate to reconsider about land acquisition methods in Turkey. The main purpose of this study is to investigate applicability of land acquisition methods in both theory and practice in Turkish urban areas.

The paper is organized in the following way. Main land acquisition methods in Turkey, respectively voluntary method, expropriation method and land readjustment method are given in the next section. In section 2, methodology of the study and the area of the questionnaire survey is defined. In section 3, various hypotheses is tested by descriptive statistics, cross-tabulation and chi-square test of independence is evaluated the findings. Final section is devoted to conclusion.

## 2. LAND ACQUISITION METHODS IN TURKEY

### 2.1 Voluntary Method

Voluntary method includes the different senses in theory and practice. It is sense in practice is that it is applied when a landowner wishes to obtain a building permit. If an existing cadastral parcel is large enough, it can be subdivided with respect to the local urban plan. The land to be used for public use areas like roads, park, car parks, etc. is contributed to public use in this subdivision process. The contribution percentage of a cadastral parcel can be changed according to the decisions of local urban plans. An entire cadastral parcel can be set aside for public use as in accordance with the local physical plan. In that case, voluntary methods are not applicable, that means voluntary method is used to produce urban plot in urban areas.

According to voluntary method is carried out according to Title 15 and 16 of Development Law, only transactions are defined related to subdivision and consolidation of land. In the context of these titles, no sense is available in practice. Thus, according to circular with No 86 of Ministry of Reconstruction and Resettlement in 2001, Titles 15 and 16 of Development Law are not used as methods to produce urban plots and transactions whereas these titles can be only used after implementation of urban plans. It can be said that there is a contradiction between senses in practice and legal sources.

Some points of the voluntary method in practice have been criticized. These are summarized by Yomralioglu, Tudes, Uzun (1996) and Akdeniz (2001):

- The method only works when a landowner needs a building permit,
- The contribution percentage of each cadastral parcel differs by case. This results in an inequity of plans and a loss of revenue to landowners.
- In some circumstances a legal agreement is required between landowners.
- When this method is applied, main roads cannot be opened easily. So, municipalities mostly apply compensation method.
- Although the voluntary method is viewed as an easy method by municipalities, problems arise in implementation of the local physical plan over the long run.

Despite all of the negative characteristics, this method is preferred in practice over the other land acquisition methods both by the municipalities and the landowners since process is simple and it takes less time with respect to other methods.

## **2.2 Expropriation Method**

According to Act No. 3194, Title 18 (the rule related to land readjustment) and the by-law related to Title 18, there are two main categories of public areas: The first category includes public areas like roads, squares, parks, car parks, play grounds for children, police stations and religious centers (primary areas). These public areas are obtained with the contribution percentage. According to this Title, landowners who have any parcel in a land readjustment area must surrender 35% the total area of their land for first category purposes. If the contribution percentage within the project is greater than 35 %, the difference should be expropriated by the municipality in order to reduce the project of the contribution percentage. According to Act No. 3194, Title 18, 35 % is the maximum contribution limit for land readjustment projects. The second category includes public areas like schools, hospitals, public service areas, etc (secondary areas). These areas have to be expropriated by the government, but this sort of expropriation is different from the others. These public areas are expropriated from the new landowners after readjustment, not from the former landowners before the land was readjusted (Unal, 1996).

Land expropriation is carried out according to the Expropriation Law that was enacted in 1983 in Turkey. Some changes were made in the content of this law in 2001. These changes have made the expropriation procedure more complex. According to the new changes, once the municipality has determined that the expropriation is in the public interest, it must inform the office of registration and deeds of this decision that may bring restrictions onto the land

usage. A commission is established to determine the value of the land and a conciliation commission is also constituted. The municipality is given the first right to purchase the land. The effects of the new changes in the Expropriation Law on the implementation of local physical plans are not fully known yet. It is expected, however, that these new changes will act to prevent the use of the expropriation method as implementation method. Most municipalities will not have sufficient funds in the budget to block this money in a bank account as required by this law. This obligation to blockade funds was absent in the former Expropriation Law.

### **2.3 Land Readjustment Method**

According to Larsson (1997, p.11), the general aim of the land readjustment method is to seek the cooperation between the landowners of an area of land in order to adapt its subdivisions and facilities to plans for new or more efficient use of an urban nature. According to Sorensen (2000a, p.223, 200b, and p.52), “land readjustment is a process whereby ownership of scattered and irregular plots of agricultural land is pooled, roads and main infrastructure are built, and the land is then subdivided into urban plots. Each landowner must contribute a portion of their previous land holding to provide space for roads, parks and other public space and for reserve land. The attractiveness of method for landowners is based on the fact that substantial increases in the value of land can be achieved by this process, so that the value of the individual land holdings can be greatly increased, even though the remaining area is smaller. The attraction for planning authorities is that projects provide land for public facilities, and build needed urban infrastructure.” According to Viitanen (2000), the characteristics of the urban land readjustment procedure is a change in existing land use and/or land use intensity with the purpose of producing or reorganizing built-up areas. The urban land readjustment procedures can be divided into three categories: readjustment for plan implementation, joint land development and land pooling. According to Viitanen (2000), the procedure readjustment for plan implementation is based on a detailed local plan prior to the procedure and depending on whether or not the profit has been shared out between the landowners. This can be land exchange or urban land replotting. A feature of the joint land development procedure is that the detailed local plan is prepared in connection with the land readjustment process. In the land pooling procedure, landowners organize and implement the readjustment procedure with the related detailed land use plans in one and the same process. Viitanen (2000) classified the German procedure as urban land replotting, the Swedish procedure as joint land development, and the French procedure as pooled land development. According to the Viitanen’s division, Turkish urban land readjustment procedure might be identified as urban land replotting, similar to the German procedure. The procedure is based on a detailed local plan prior to the procedure. This similarity is not a coincidence, because the main laws in the Turkish planning system are based on German planning law (Erkun, 1999).

Land readjustment in Turkey is directly linked with an adopted urban plan defined in Title No.18 of Reconstruction Law (Law No. 3194) and its accompanying regulations. The aim of this method is to achieve a development or reorganization of built and unbuilt areas, produce urban plots of suitable location, shape and size for building or for other utilizations within the framework of the detailed local plans and to supply land for primary and secondary public

areas. This title authorizes implementation to be carried out by the municipality without the consent of owners with the delimitation of project area determined by municipalities depending on the detailed local plan. Thus, the ratio of the land to be contributed to public use is determined in accordance with this law and its related regulations. This contribution ratio is described as the ratio for the entire land in the project as the total land to be contributed for primary (roads, parks, car parks and playgrounds) public use. 35 % is then deducted from each parcel included in the land readjustment project. If the total contribution exceeds 35 % of the total land area, the difference is gained through municipal expropriation as discussed above. The land readjustment in Turkey is applied according to size criterion. Although the land readjustment method has many benefits, there are some problems in practice in Turkey. These problems affect the effective and efficient use of land readjustment model in Turkey and so this method is not frequently utilized municipalities.

This method has been important to produce the serviced urban plots, because of reasons like the production of regular urban plots in appropriate shape and size, the provision of on-site and off-site service areas easily, the provision of regulation in ownership structure. However, there are legal, administrative, financial and technical problems in land readjustment process and these problems prevent the operation of process effectively. (Turk, 2003) The one of the most important problem is that there are a negative prejudice of land owners against to land readjustment projects. Thus, land readjustment method is applied with public power in Turkey, mostly municipalities have financial problems to implement the method. Especially, municipalities in small size groups tend to prefer the voluntary method because of financial problems. (Turk, 2003; Akdeniz, 2001; Yomralioglu ve Tudes, 1996).

### **3. METHODOLOGIES, SOURCE OF DATA**

Testing the applicability of land acquisition methods in Turkish urban areas requires a large-scale empirical analysis. The available data were insufficient to test various hypotheses, so this study took the form of a questionnaire survey to two different groups. As first sample group, municipalities are selected through a stratified random sampling in Turkey. The final sample includes the responses from 468 municipalities and it has a maximum (+/-) 4.5 standard error in 95 % confidence level. As a second sample group, Surveying Engineers are selected through random sampling in Turkey. The final sample includes the responses from 169 surveying engineers and it has a maximum (+/-) 7.5 standard error.

Before sending the questionnaire form to these municipalities and surveying engineers, a pilot survey of 20 questionnaires was made to check the intelligibility of the questions. Some questions were then corrected and the question form reconstituted. Questionnaire forms were sent by post with return envelopes to the planning department of the municipalities and office of surveying engineers. Questionnaires were posted in October 2000. The research questionnaire was collected during the end of December 2000.

## **4. TESTING OF HYPOTHESES**

### **4.1 Hypothesis 1**

Voluntary Method is the most preferred method by municipalities and surveying engineers.

- In questionnaire survey, 61.3 per cent of municipalities prefer the voluntary method as first land acquisition methods. While 35.5 per cent of municipalities prefer the land readjustment method as second land acquisition method, expropriation method is preferred with 3.2 per cent as third land acquisition methods.
- According to surveying engineers, while voluntary method is used with 69.5 percent as first land acquisition methods, land readjustment method is used with 30.5 per cent as second land acquisition methods.

### **4.2 Hypothesis 2**

Titles 15 and 16 of Development Law are used to produce the urban plots in urban areas.

- In questionnaire survey, 85 per cent of municipalities use Titles 15 and 16 of Development Law to produce the urban plots.
- According to surveying engineers, Titles 15 and 16 of Development Law is used with 76.9 per cent to produce the urban plots.

### **4.3 Hypothesis 3**

There is a negative prejudice between land owners against to land readjustment method.

- According to the results of municipality questionnaire, 67.3 per cent of municipalities there is a negative prejudice of land owners to land readjustment method. On the reasons of these, “people do not like to give some amount of parcel for public use” is important reason for 79.9 percent of land owners, for 20.1 per cent of landowners is not valid. While “people believes that they will not get their original plot after re-allocation” is important reason for 83 per cent of land owners, for 17 per cent of land owners is not valid.
- According to the results of surveying engineer questionnaire, 74.6 per cent of land owner there is a negative prejudice against to land readjustment method. On the reasons of these, “people do not like to give some amount of parcel for public use” is important reason for 73.1 percent of land owners, for 26.8 per cent of landowners is not valid. While “people believes that they will not get their original plot after re-allocation” is important reason for 92 per cent of land owners, for 8 per cent of land owners is not valid.

#### 4.4 Hypothesis 4

There is a relationship between the negative/positive prejudices of land owners and the preference of methods in urban areas.

- $H_0$ : There is independency between the negative/positive prejudices of land owners is or not and the preference of methods (Table 1).
- According to Table 1, In result of the pearson chi-square analysis,  $H_0$  hypothesis is rejected. There is dependent between two variables. According to the results of chi-square analysis, municipalities where land owners have a negative prejudice against to land readjustment project, prefer to produce urban plots with 64.4 per cent the voluntary method.

#### 4.5 Hypothesis 5

There is relationship between the city–size groups of municipalities and their preferences in land acquisition methods in Turkey.

- $H_0$ : There is independency between the city–size groups of municipalities and their preferences in the land acquisition methods in Turkey. (Tablo 2)
- According to Table 2, In result of the pearson chi-square analysis,  $H_0$  hypothesis is rejected. There is dependent between two variables. According to the results of chi-square analysis, towards from the municipalities in city–size groups that have higher populations to small ones, an increase is seen in use of voluntary method. While municipalities in city size groups over 300,000 prefer the land readjustment with 60.7 per cent, the percentage of use of voluntary method in these municipalities is 39.3. On the contrary, the municipalities in the city size group of less than 10,000 prefer the land readjustment method with 23.8. Their preference percentage for voluntary method is 76.2.

#### 4.6 Hypothesis 6

There is relationship between the number of technical personnel in municipalities and the preferences of municipalities in the land acquisition methods.

- $H_0$ : There is independency between the number of technical personnel in municipalities and the preferences of municipalities in the land acquisition methods (Tablo 3).
- According to Table 3, In result of the pearson chi-square analysis,  $H_0$  hypotesis is rejected. There is dependency between two variables. According to results of analysis, the municipalities where the number of technical personnel is less than 2 prefer the voluntary method with 65.6 per cent. The municipalities where the number of technical personnel is over 5, prefer the land readjustment method with 47 per cent.

## 5. FINDINGS

The provided data in the result of both municipality and surveying engineer questionnaire are tested in the limit of some hypotheses by using descriptive analysis, cross-tabulation and chi-square analysis. According to analyses, municipalities in Turkish urban areas prefer the voluntary method as first land acquisition methods. The land readjustment is preferred as second land acquisition method. Titles 15 and 16 of the Development Law are used to produce the urban plots. Majority of municipalities, there is a negative prejudice of land owners against to land readjustment method. The reasons like “people do not like to give some amount of parcel for public use” and “people believes that they will not get their original plot after re- allocation” is effective in a negative prejudice of land owners. These prejudices influence the preferences of municipalities in land acquisition methods. According to analysis, it is founded that there is relationship between the city–size groups of municipalities and their preferences in land acquisition methods in Turkey. The other important result is that while municipalities in big city size groups tend to prefer the land readjustment method (% 60.7, municipalities in city size group over 300.000), on the contrary, the municipalities in small the city size group tend to voluntary method. (% 76.2, municipalities in city size group with population less than 10.000). Thus it is determined that there is a relationship between the number of technical personnel in municipalities and the preferences of municipalities in land acquisition methods.

## 6. CONCLUSION

This study investigates applicability of land acquisition methods in both theory and practice in Turkish urban areas systematically. It is clear that no one of land acquisition methods in Turkey is used effectively. The application of expropriation method, especially, has been difficult with the changes in Expropriation Law. This prevent to be used to produce serviced urban plots frequently The reasons like a negative prejudice of land owners against to land readjustment method, lack in number of technical personnel and financial and technical problems in the process, the use of land readjustment in Turkish urban areas influences negatively. It is seen that there is difference in sense of voluntary method in both practice and legal sources. Thus, the voluntary method is used to produce the serviced urban plots. However, according to circular with No 86 of Ministry of Reconstruction and Resettlement in 2001, Titles 15 and 16 of Development Law is not used as a method to produce urban plots and transactions in context of these titles can be only used after implementation of urban plans. Despite of this decision, most municipalities prefer the voluntary method as first land acquisition methods.

At the end of all evaluations, it is said that there is deadlocks the point of view from the land acquisition methods in formal land sector in production of serviced urban plots. In this point, legal, administrative, technical and financial problems in the content of the existing land acquisition methods should be eliminated. Thus, to operate system, the different, new land acquisitions methods should be added to the system. Especially, the private initiative methods can be included. The use and effect of voluntary method in practice supports this suggestion.

## REFERENCES

- AKDENİZ, H. (2001) İmar Planlarının Uygulanmasında Arazi ve Arsa Düzenlemesi [The Land Readjustment in the Implementation of Local Urban Plans], Ankara: Teknik Yayınevi.
- BAHAROĞLU, D., (1996) Housing Supply under Different Economic Development Strategies and the Forms of State Intervention: The Experience of Turkey, Habitat International, Vol.20. pp. 43-60.
- Basbakanlık Konut Müstesarlığı,(2000) 2000- 2010 Türkiye Konut İhtiyacı Raporu, Ankara.
- DPT,(2001) 8. Bes Yıllık Kalkınma Planı, Konut Özel İhtisas Komisyonu Raporu, Ankara.
- ERKUN, S. (1999) Türk İmar Hukukunun Ana Çizgileri [The Main Lines of Legislation related to Urban Planning], İstanbul, Yapı Endüstri Merkezi Yayınları.
- LARRSON, G. (1997) Land Readjustment: A Modern Approach to Urbanization, Avebury, England.
- ONCU, A. (1988) The Politics of the Urban Land Markets in Turkey: 1950-1980, International Journal of Urban and Regional Research, 12, pp. 38-64.
- SORENSEN, A. (2000a) Land Readjustment and Metropolitan Growth: An Examination of Suburban Land Development and Urban Sprawl in the Tokyo Metropolitan Area, Progress in Planning, 53, 210-330.
- TEZESEN, C. and AGACLI, O. (1993) Kentsel Arsa Üretimi Politikaları, Uygulamalar [The Policies and Practices on the Urban Land Production], Ankara: Bizim Büro Basımevi.
- Türkiye Unusual Comities Denims Karol (1996) Türkiye Ulusal Rapor ve Eylem Planı [National Report and Plan of Action for Turkey], Habitat II, İstanbul.
- UNAL, Y. (1996) İmar Planlarının Uygulaması [The Implementation of Local Urban Plans ], Yasa Hukuk İctihat ve Mevzuat Dergisi [Law Journal], 175, pp.1004-1014.
- VIITANEN, K., (2000) Finsk Reglering Av Byggnadsmark I Ett Internationellt Perspektiv, Universitetservice US, AB, Stockholm.
- YOMRALIOĞLU, T., TUDES, T. and EREN, E. (1996) Land Readjustment Implementations in Turkey, XXIVth International Housing Congress, pp. 150-161, Ankara.

**Table 1** The Relationship between the negative/positive prejudices of land owners and the preference of methods in urban areas.

The negative/ positive prejudices	The Preference of Methods of Municipalities			TOTAL
	Land Readjustment	Voluntary	Expropriation	
<i>No</i>	57	84	12	153
Row %	37.3	54.9	7.8	100
Column%	34.3	29.3	80.0	32.7
Total%	12.2	17.9	2.6	32.7
<i>Yes</i>	109	203	3	315
Row %	34.6	64.4	1.0	100
Column%	65.7	70.7	20.0	76.3
Total%	23.3	43.4	0.6	67.3
<b>TOTAL</b>	166	287	15	468
Row %	35.5	61.3	3.2	100
Column%	100	100	100	100
Total%	35.5	61.3	3.2	100

**Pearson Kikare : 16.989 df.2 Asymp. Sig: .000**

**Table 2** The Relationship between the city-size groups of municipalities and their preferences in the land acquisition methods in Turkey.

The city-size groups of municipalities	Their preferences in the land acquisition methods		
	Land Readjustment	Voluntary Method Expropriation	TOTAL
300.000>	17	11	28
Row %	60.7	39.3	100
Column%	9.9	3.7	6.0
Total%	3.6	2.4	6.0
300.000-100.000	29	28	57
Row %	50.9	49.1	100
Column%	16.9	9.5	12.2
Total%	6.2	6.0	12.2
100.000-50.000	21	30	51
Row %	41.2	58.8	100
Column%	12.2	10.1	10.9
Total%	4.5	6.4	10.9
50.000-10.000	55	67	122

	Row %	45.1	54.9	100
	Column%	31.9	22.6	26.1
	Total%	11.8	14.3	26.1
10.000<		50	160	210
	Row %	23.8	76.2	100
	Column%	29.1	54.1	44.9
	Total%	10.7	34.2	44.9
TOTAL		172	296	468
	Row %	35.5	64.5	100
	Column%	100	100	100
	Total%	35.5	64.5	100

**Pearson Kikare :24.214 df:4 Asymp. Sig: .000**

**Table 3** The relationship between the number of technical personnel in municipalities and the preferences of municipalities in the land acquisition methods

The preferences of municipalities in the land acquisition methods	The number of technical personnel in municipalities			TOTAL
	0-2	2-5	5>	
<i>Land Readjustment</i>	50	38	78	166
	Row%	30.1	22.9	47.0
	Column%	20.2	38.8	63.9
	Total%	10.7	8.1	16.7
<i>Voluntary Metod Expropriation</i>	198	60	44	302
	Row%	65.6	19.9	14.6
	Column %	79.8	61.2	36.1
	Total %	42.3	12.8	9.4
TOTAL	248	98	122	468
	Row%	23.5	63.5	13.0
	Column%	100	100	100
	Total%	23.5	63.5	13.0

**Pearson Kikare :19.632 df:2 Asymp. Sig: .000**

## CONTACTS

Sevkiye Sence TURK  
Istanbul Technical University  
Faculty of Architecture  
Department of Urban and Regional Planning  
80191 Taskisla/ Taksim/  
Istanbul  
TURKEY  
Tel. + 90 212 293 13 00 Ext.:2273  
Fax: + 90 212 2514895  
E-mail: sstu52@hotmail.com  
Web site: <http://www.itu.sbp.edu.tr>