

The Effect of the Land Consolidation on Urban Development

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Key words: Land consolidation, migration, unemployment, urban renewal.

SUMMARY

Land Consolidation is a necessity for rural areas and is regarded as a useful instrument for improving farmer's incomes and life standards. Land consolidation can be described as to unite and reregister the lands which were fragmented because of inheritance, roads, sales or irrigation/drainage canals. Farm structure and the infrastructure are also affected by fragmentation. In Turkey, farmers have generally a large family. After the death of the householder, inheritance leads to the further fragmentation of agriculture lands. After a long fragmentation period, each family has approximately five, six or more different types of land parcels located in different areas. The rural people are aware of the problem but are hopeless and helpless to change this situation. Actually Turkey has rich natural resources. The great diversity of landscapes and climate, as well as the fertile soils has always allowed a huge variety of agriculture products. Because of small and untidy parcels, farmers cannot take productive harvest. Finally they have to immigrate to big cities to earn money. Until now, emigration caused to irregular construction in the cities. But Turkey is an earthquake region and irregular construction cannot be accepted for public health. For this reason the "Ministry of Environment and Urban Planning" of Turkish Government decided to start an Urban Development and Transformation Project. But the application of this huge project is very difficult because of the population density. If the problem of rural areas/farmers could be solved and life standards upgraded, migration can be prevented. Moreover, an opposite migration could be probably realized. In this paper, the importance of Land Consolidation and Urban Development will be emphasized and interaction between them will be displayed by using the data from Turkey.

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1. INTRODUCTION

Land consolidation is applied to improve the rural areas in all countries. Because rural areas comprise substantial parts of the regions and are subject to a range of pressures including water shortage, land degradation, falling commodity prices and depopulation. Land consolidation simply means to unite and reregister the lands which were fragmented because of inheritance, roads, sales or irrigation/drainage canals. Land consolidation is the main measure in an effort to eliminate land fragmentation and improve the current defective land tenure structure which is mainly characterized by a small holding size, intense land fragmentation, mixed land tenures, lack of farm roads and irregularly shaped plots (Kızılsu 2002). Land fragmentation in an agricultural context implies a defective land tenure structure that in many cases may inhibit rational agricultural development more generally. Decision for applying certain land management measures to control fragmentation usually involves undertaking a land fragmentation study, an environmental impact assessment study and a feasibility study (Demetriou 2013). Land consolidation legislation generally provides for landscape renovation within land consolidation areas, which focuses, among other things, on the planting of shrubs and trees, the creation of small parks/recreation areas, in non-agricultural land and the protection/conservation of the cultural heritage and physical environment within land consolidation areas, such as the restoration of traditional fountains, old watermills and railway lines. So this procedure supports tourism, protects natural and cultural riches, improves agriculture, water economy, small industry, arranges environment and inhabiting in rural areas (Kızılsu 2004).

The legally defined goals of a land consolidation project vary from country to country. If it is generalized, the project envisaged the conduct of investigation and research work on various areas including the following: Identification of farming systems most suitable to the ecological, economic and market conditions of the region; exploration of optimum growing techniques for various crops and their specific types; identification of crop pests and diseases along with the best methods of combating them; examination and effective planning of water and land resources; maintenance of soil fertility; and expansion of agricultural mechanization (url1). Likewise, the basic aims of land consolidation into rural development:

- To improve the preconditions for efficiency in agriculture and possibly forestry.
- To protect and improve natural / cultural sites, to keep under control of protection regions and to create recreation areas, etc.
- To improve the production and working conditions in agriculture and possibly forestry and to promote other legally planned land-use in rural living and working space.
- To improve the layout and structure of a rural area in accordance with the functions (agriculture and forestry, nature and landscape, infrastructure, open-air recreation and cultural history) of the area concerned, as these are specified within the framework of (regional) land-use planning (Tenkanen 1990).

2. RURAL PERSPECTIVE IN TURKEY

2.1 Agricultural Perspective

Table 1. Agricultural Land in Turkey (Thousand Hectares) (url3).

Years	Total Utilized Agricultural Land	Sown Area	Fallow Land	Vegetable	Ornamental Plants	Fruits, Beverage and Spice	Meadows and Pastures
2001	40.967	17.917	4.914	909	-	2.610	14.617
2002	41.196	17.935	5.040	930	-	2.674	14.617
2003	40.644	17.408	4.991	911	-	2.717	14.617
2004	41.210	17.962	4.956	895	-	2.780	14.617
2005	41.223	18.005	4.876	894	-	2.831	14.617
2006	40.493	17.440	4.691	850	-	2.895	14.617
2007	39.505	16.945	4.219	815	-	2.909	14.617
2008	39.122	16.460	4.259	836	-	2.950	14.617
2009	38.911	16.217	4.323	811	-	2.943	14.617
2010	39.012	16.333	4.249	802	-	3.011	14.617
2011	38.231	15.692	4.017	810	4	3.091	14.617
2012	38.99	15.463	4.286	827	5	3.201	14.617
2013	38.428	15.618	4.148	808	5	3.232	14.617

- Agricultural area (cultivated area): This refers to totals area of land covered with crops, vegetables, fruits, flowers and other permanent crops and fallow land.
- Sown area: This includes all land used for cereals, pulses, industrial crops and other field crops with a seasonal or annual growing cycle.
- Fallow area: This is land at rest for a period of time (generally 1 year) before re-cultivation and no yield can be gained.

Table 1 is clearly showing that agricultural production is decreasing from year to year. Because of the fragmented agricultural areas, agriculture/crop is minimized. Poor land tenure can reduce productivity. Limited access to finance is a particularly serious problem for rural households (url4). In some regions there is no general accessibility of land parcels by rural roads, and the existing roads are in a poor state. The irrigation system, established during the period of large-scale farming, is insufficiently adjusted to the new land tenure structures. The water management system has collapsed. The basic physical infrastructure in rural areas is very poorly maintained and often defunct. Roads are in poor condition, most households do not have running water and the energy supply is erratic. Most farmers do not have access to agricultural extension or other services such as insurance systems or agricultural credits. Only a few farmers are organised into cooperatives to improve small-scale production or marketing. The marketing of agricultural produce is often carried out at the roadside or at local markets. Researches are proving that there are some different direct/indirect barriers in front of the rural development; land fragmentation, poverty, income inequality, nutrition, gender

disparity, etc. (Kızılsu 2004, url4).

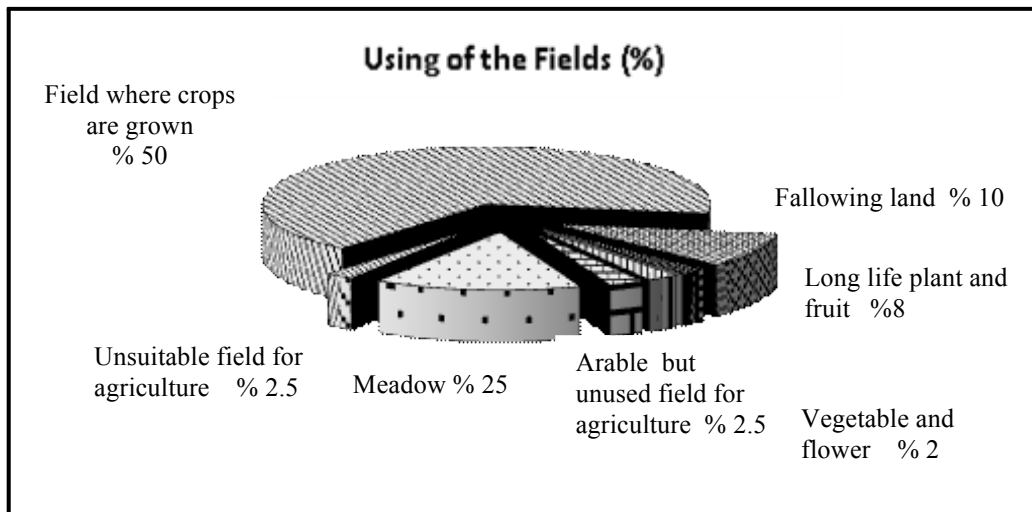


Figure 1.Using of fields in Turkey.

Today, land consolidation is generally applied to the southeast region in the Southeastern Anatolia Project (GAP) project in Turkey. Due to 3083 numbered act ("land consolidation in irrigation areas") in the GAP region, land consolidation is obligatory. The GAP is the biggest project of the Turkish republic era and the eighth biggest project of the world. It is an ambition project in terms of the geographical area it covers its physical magnitudes and objectives when compared with the similar other projects throughout the world.

The Southeastern Anatolia Project (GAP) is a multi-sector and integrated regional development effort approached in the context of sustainable development. Its basic objectives include the improvement of living standards and income levels of people so as to eliminate regional development disparities and contributing to such national goals as social stability and economic growth by enhancing productivity and employment opportunities in the rural sector. The project area covers 9 administrative provinces (**Adiyaman, Batman, Diyarbakir, Gaziantep, Kilis, Mardin, Siirt, Sanliurfa and Sirtak**) in the basins of the Euphrates and Tigris and in Upper Mesopotamia (Kızılsu 2004). The region is bordered by Syria to the south and Iraq to the southeast. The surface area of the region is 75358 square kilometers constituting 9.7 % of the total surface area of the country. Turkey has 8.5 million hectares of irrigable land and about 20% of this land is in Southeastern Anatolia. Average farm size in Turkey is 68.1 da whilst 104,8 da in GAP (url1).

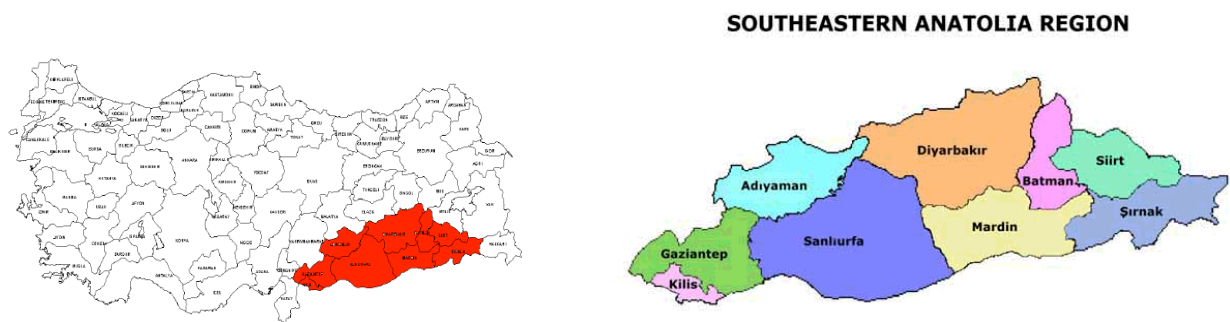


Figure 2. Provinces covered by GAP (url1).

In this project, the most important rule is sustainability. In practice, the concept of sustainability has three footholds: Participation by the State, private sector and people. The target is to consolidate State led infrastructure investments further with the participation of the private sector and people, and thus to impart all projects to the daily lives of people living in the region. This approach is not solely a reflection of a desire for fair development; It is also the result of a sound diagnosis that mobilization of existing potentials in underdeveloped regions will significantly contribute to the realization of such national goals as economic growth, social stability and boosting exports (url1).

2.2 Population and Migration Perspective

Net migration is, the difference of receiving and giving migration at a settlement. If the settlement receive more migration than given then net migration is positive, otherwise negative. The most important region of Turkey about population, agriculture and migration subject is southeastern region.

As a result of GAP project the provinces which are taken the highest immigration; Gaziantep, Diyarbakır and Şanlıurfa. While 180.469 people are migrating to the Gap region between 2011-2012 years, 240.812 people immigrated from this region to others. The provinces which has the highest net immigration velocity; Ağrı 27,02(%o), Muş 25,64(%o), Yozgat 21,56(%o), Kars 21,03(%o).

Even though the most region of the Turkey is urbanized very fast, populations in both rural and urban settings are growing equally. In recent years, the most of big provinces have urbanization rates of upward of 10 % together with land consolidation projects (url1).

Table 2. Population and Increasing Rate (url3).
(The provinces has a population of more than 1.300.000)

Province	2008	2009	2010	2011	2012	2013	Increasing Rate (2008-13)
TOTAL	71.517.100	72.561.312	73.722.988	74.724.269	75.627.384	76.667.864	%7,2
İSTANBUL	12.697.164	12.915.158	13.255.685	13.624.240	13.854.740	14.160.467	%11,5
ANKARA	4.548.939	4.650.802	4.771.716	4.890.893	4.965.542	5.045.083	%10,9
İZMİR	3.795.978	3.868.308	3.948.848	3.965.232	4.005.459	4.061.074	%7,0
BURSA	2.507.963	2.550.645	2.605.495	2.652.126	2.688.171	2.740.970	%9,3
ADANA	2.026.319	2.062.226	2.085.225	2.108.805	2.125.635	2.149.260	%6,1
ANTALYA	1.859.275	1.919.729	1.978.333	2.043.482	2.092.537	2.158.265	%16
KONYA	1.969.868	1.992.675	2.013.845	2.038.555	2.052.281	2.079.225	%5,6
*GAZİANTEP	1.612.223	1.653.670	1.700.763	1.753.596	1.799.558	1.844.438	%14,4
İÇEL	1.602.908	1.640.888	1.647.899	1.667.939	1.682.848	1.705.774	%6,4
*ŞANLIURFA	1.574.224	1.613.737	1.663.371	1.716.254	1.762.075	1.801.980	%14,5
*DİYARBAKIR	1.492.828	1.515.011	1.528.958	1.570.943	1.592.167	1.607.437	%7,7
KOCAELİ	1.490.358	1.522.408	1.560.138	1.601.720	1.634.691	1.676.202	%12,5

Table 3. The number of slums and population in Turkey (Thousand) (Torus et al. 2009).

Years	Number of Slums	Number of Population	Percentage of Slums in Urban Population
1955	50	250	4,7
1960	240	1.200	16,4
1965	430	2.250	22,9
1970	600	3.000	23,6
1980	1.150	5.750	26,1
1990	1.750	8.750	33,9
1995	2.000	10.000	35
2011	4.000	21.000	28
2014	5.000	23.000	30

Squatter's housing in Turkey started in the 1930s. But principally, the intensity grow when the migration accelerate from villages to cities after the 2. world war. In 1966 the first law no 775 with the bearing the name slum was enacted. With regulation in 1980s this law has been getting linked with political purposes, and the expected result could not be received. Today we can mention that the number may be around 5 million. The trend of migration in Turkey is,

beginning with Istanbul, generally from east to west, to large cities and from inland to coast parts. However developed urban centers are receiving some parts of migration from close residential areas which gives migration. The case is the same in GAP region. As the migration tends specially more to Istanbul, the migration rate increases in the region between the provinces.

Table 4. Provincial Migration (2012-2013) (url3).

Province	In-Migration	Out-Migration	Net Migration	Rate of Net Migration (%0)
ISTANBUL	437.922	371.601	66.321	4,7
ANKARA	186.642	153.791	32.851	6,5
İZMİR	113.673	99.681	13.992	3,5
BURSA	75.518	61.744	13.774	5,0
ANTALYA	88.605	64.075	24.530	11,4
KONYA	51.080	55.006	-3.926	-1,9
GAZİANTEP	41.978	42.291	-313	-0,2
ŞANLIURFA	33.383	47.429	-14.046	-7,8
DİYARBAKIR	35.466	47.949	-12.483	-7,7
KOCAELİ	71.159	54.742	16.417	9,8

Table 5. Proportion of Migrated Population by Reason for Migration (October 2011) (url3).

Reason for Migration	Migrated Population	Proportion of Migrated Population
Total	2.207.844	100,0
To Find a Job	268.400	12,2
Change of Job	295.906	13,4
Education	498.137	22,6
Marriage/Divorce	166.284	7,5
Health	22.649	1,0
Migration related to any member of the household	916.761	41,5
Other	39.115	1,8
Unknown	593	0,03

(One year migration among provinces are covered.)

Considering whole Turkey, 30 % of the population has been living in buildings built illegally. From the illegal buildings in Turkey are; 33 % in Istanbul, 30 % in Ankara, 12 % in Izmir, 5

% in Adana, 4 % in Bursa, 3 % in Samsun. Today in Istanbul, there is about 2.5 million buildings.

2.3 Employment Perspective

Table 6. Non-Institutional population by labour force status (Thousand) (url3).

Years	Labour Force	Employed	Unemployed	Unemployment Rate (%)	Non-Agricultural Unemployment Rate (%)	Employment Rate (%)
2004	22.016	19.632	2.385	10,8	14,2	41,3
2005	22.455	20.067	2.388	10,6	13,5	41,5
2006	22.751	20.423	2.328	10,2	12,7	41,5
2007	23.114	20.738	2.376	10,3	12,6	41,5
2008	23.805	21.194	2.611	11,0	13,6	41,7
2009	24.748	21.277	3.471	14,0	17,4	41,2
2010	25.641	22.594	3.046	11,9	14,8	43,0
2011	26.725	21.110	2.615	9,8	12,4	45,0
2012	27.339	24.821	2.518	9,2	11,5	45,4
2013	28.271	25.524	2.747	9,7	12,0	45,9

The agricultural and industrial potential of the region boosted through the GAP will raise the income level of the region fivefold and create employment for about 3.8 million people in the region (url1).

To reduce the *official rate of unemployment* in rural regions, which is above national averages; to attract investors and qualified workforce, who have earlier left the region for various reasons; to take measures to encourage women's participation to labor force and eliminate factors that prevent this participation; to take economic and social measures to increase income levels and to ensure a balanced distribution of income; to support agro-based and non-agricultural industries and organizations that create in situ employment opportunities; to channel natural and cultural endowments of the region to productive investments that will enhance employment and incomes; to consider the dimensions of employment, health and environment besides efficiency and productivity while selecting and adopting technologies (url1).

3. URBAN PERSPECTIVE IN TURKEY

The main objectives of urban renewal are restructuring and re-planning of concerned urban areas; designing more effective and environmentally-friendly local transport and road networks within the concerned urban areas; rationalizing land uses within the concerned urban areas; redeveloping dilapidated buildings into new buildings of modern standard and environmentally-friendly design; promoting sustainable development in the urban areas; promoting the timely maintenance and rehabilitation of buildings in need of repair; preserving buildings, sites and structures of historical, cultural or architectural value; preserving as far as practicable local characteristics; preserving as far as practicable the social networks of the local community; providing purpose-built housing for groups with special needs, such as the elderly and the disabled; providing more open space and community/welfare facilities; and enhancing the townscape with attractive landscape and urban design (URS 2011).

Industrialization, globalization and economic changes in the world since 60's caused a rapid urbanization process that has determined the form of big cities. Increase of population in metropolises has been very high and consequently urbanization process has been experienced in a short time span, thus, demand for urban land and housing raised to a very high level. In order to meet that urgent need for shelter, immigrated population have built slums which is shack that put up quickly without proper permissions on seized lands. Therefore, those immigrants changed the structure of the big cities and they created slum settlements. It is known that the unplanned and uncontrolled area development has created negative life and sheltering conditions with many infrastructure and social problems that could not be solved yet (Korkmaz 2013). The biggest obstacle in front of regular urbanization is slum which is formed results of migration. A slum, as defined by the United Nations Agency (2002), is a run-down area of a city characterized by substandard housing and squalor and lacking in tenure security. In other words slums are poor-income, informal settlements with inadequate living conditions and basic services. The traditional meaning of slum is housing areas that were once respectable or even desirable, but which have since deteriorated, as the original dwellers have moved to new and better areas of cities (Torus et al. 2009).

Turkish metropolises suffer poor infrastructure systems and weak structures due to unplanned urbanization as a result of migration waves from rural to urban. Slum clearance was a necessity to provide safe and quality life in the metropolises. Through the enactment of related laws and establishment of Housing Development Administration of Turkey (TOKİ) a new era started on urban regeneration. Since 90's Turkey has been implementing several Urban Regeneration Projects due to fortify and change the urban structure (Korkmaz 2013).

Because the problem of slums and shanty settlements cannot be solved through the efforts of the local governments only, TOKİ has followed a comprehensive policy toward supporting modern urbanization in cooperation with local administrations. TOKİ's practices constitutes a model for local governments and other actors of the housing sector. TOKİ not only transforms slum and shanty settlement areas, but also tries to prevent formation of new slum areas with the houses it produced for narrow-income groups. The tender works for 74.413 houses have been started in 156 different projects as a part of the slum transformation project of 265.192 houses in total divided into 277 projects formed within the scope of urban transformation as

of February 2013, and 70.033 houses have been produced in 143 projects whose tenders are complete, and 45.998 houses being completed in 64 regions, were delivered to beneficiaries. With this model, areas are developed by the Administration where slum clearance is made/to be made by the local managements, and project-based solution suggestions and implementations are implemented after acquisition by the concerned municipality of the proprietorship of the area in cooperation with the local governments within the scope of relevant laws (url2).

The other activities are mainly the “agricultural village projects”, “migrant dwellings”, “restoration of buildings of historical-cultural importance”, cooperative credits, housing credits. TOKİ’s affordable housing includes producing all the social facilities within the projects. TOKİ also invests a great of effort in infrastructure (roads, water lines, etc.) Landscaping is provided for the projects. TOKİ is also working with the Ministry of Education to build schools and outlying buildings in required areas (url2). Up to now TOKİ planned and realized 2234 social housing and urban/rural renewal projects. And thousands of people became homeowners. But this is very inadequate in the face of high immigration.

4. CONCLUSION

Turkey is a country, which has very productive fields. Using of these fields efficiently, farmers are made conscious of land consolidation, regulations are renovated and rearranged, and the most important of these actions; the government must be consider the agriculture, road and irrigation net, farm-life, natural and cultural heritage.

The main reasons of sqatter’s housing are uncontrolled migration, population increase, fast urbanization, lack of planning and infrastructure, lack of resources and wrong approches of politicians and administrators. To avoid the squatter’s housing, migration must be stopped by eliminating the causes of migration source.

It is obvious that the solution of the rural problems as; migration, decreasing of population, unemployment, lack of agriculture land and harvest is land consolidation. The researches and projects are focused on land consolidation policies and public investments that affect the growth of, efficiency of resource allocation in, rural economies, as well as the well being and poverty of rural populations.

The rural development project must be rests upon the philosophy sustainable human development, which aims to create an environment in which future generations can benefit and develop. The basic strategies of the project must include fairness in development, participation, environmental protection, employment generation, spatial planning and infrastructure development.

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