MODERNISATION OF SQUATTER TOWNS IN TURKEY

TÜRKİYE'DE GECEKONDULARIN MODERNLEŞMESİ

*Kubilay KAPTAN**

Abstract

Within a period of fifty years between 1945 and 2010, a total of 7.1- millions of people emigrated from Istanbul to various Anatolian provinces to have job, education and health insurance. The annual growth rate of population in Istanbul reached to a peak 4.5 percent value, which inevitably resulted in an unhealthy urbanisation. The unfortunate fate of urbanisation in other large cities in Turkey have been almost the same.

Such an unhealthy development of squatter housing brought about a multitude of social, economic and technological problems. No radical solution has yet been implemented. The flux of emigration from underdeveloped into the developed cities is currently at full speed ahead, causing backward living conditions and distress in modern urban planning. In this presentation, a series of financial, social, technical and economical policies have been discussed in order to rehabilitate the areas of squatter housing, to protect and preserve the green zones and to be able to implement the principles of modern city planning. A special auto-financing scheme has been also proposed.

Key words: modernisation, squatter towns, autofinancing, mass housing, housing in Turkey.

Özet

1945 ve 2010 yılları arasındaki elli yılda, toplam olarak 7.1 milyon insan iş, eğitim yada sağlık gibi nedenlerle Anadolu'nun çeşitli şehirlerinden İstanbul'a göç etmiştir. İstanbul'un yıllık nüfus artış hızı, sağlıksız bir şehirleşmeye yol açacak biçimde

* Dr., kaptankubilay@gmail.com

%4,5'e ulaşmıştır. Türkiye'nin diğer büyük şehirlerindeki şehirleşmenin kaderi de maalesef aynı olmuştur.

Gecekondulaşmadaki bu artış sosyal, ekonomik ve teknolojik karmaşaya yol açmıştır. Şimdiye kadar bu sorunlara köklü bir çözüm bulunamamıştır. Gelişmemiş şehirlerden gelişmiş şehirlere olan göç dalgası, modern şehir planlamasında sorunlar yaratarak ve yaşam koşullarını kötüleştirerek tüm hızıyla sürmektedir. Bu çalışmada, gecekondu alanlarını rehabilite edebilecek, yeşil alanları koruyacak ve modern şehir planlaması ilkelerini kurabilecek bir dizi finansal, sosyal, teknik ve ekonomik politikalar tartışılmıştır. Aynı zamanda özel biro to-finansman şeması da önerilmiştir.

Anahtar kelimeler: modernleşme, gecekondu mahalleleri, oto-finansman, toplu konut, Türkiye'de barınma.

Giriş

1 Population growth in Turkey

The following expression is used to estimate $r=$ the rate of growth of population if, $p_o=$ initial and $p=$ final population values are available within a time interval of $n-$ years:

$$p = p_o \, e^{\,n\,r} \qquad\qquad (1)$$

For instance, the population of Turkey was $p_o=18.8$ million and $p=63$ million in the years 1945 and 1995, respectively. Therefore, the rate of growth within this 50 years period is, by Eq.1, $r=2.4$ percent. Assuming a conservative average rate of growth of $r=1.30$ between 1995 and 2045, the population in 2045 may be estimated to be 120 million as shown in *Fig.1*. Similarly, assuming an average growth rate of urbanization as $r=3.4$ percent for Istanbul, its population of $p_o=9.2$ million in 1995, is estimated to reach $p=50.3$ million in 2045.

Unless strict precautions are taken to prevent emigration, neither the urban transit system, nor the utilities for water, sewage, waste, electricity, telephone, etc of Istanbul may tolerate such a huge population increase. New and extensive squatter towns will inevitably develop at the outskirts of the City.

2 Heavy flux of emigration in Turkey

The ratio of population living in villages was 75 percent in 1950, but it is reduced to 35 percent in 1995, due to a heavy and permanent flux of emigration into larger cities, as shown in *Fig.2*. It is estimated that, if the current trend continues, the population ratio in villages will drop down to a mere 8 percent by the year 2050.

Villagers are steadily emigrating into more prosperous and well developed metropolitan areas for search of job, education and health care. A total of 12- million villagers moved permanently into the developed cities and also into the European countries within 50 years, between 1945 and 1995. The population of Istanbul merely is increased from 1.2- million to 9.2- million within this period, corresponding to an urbanization rate of *r=4* percent, which appears to be a world record.

The latest (2005) statistics indicate, however, that the annual rate of population growth in Turkey luckily dropped down to *r=2* percent, which is still considerably much higher than those of the EU countries. The names of ten major example cities in Turkey, where the population is *a)* increasing, and b) decreasing as a result of emigration, are shown in *Table 1*.

Out of a total 10 million emigrants, from 1955 to 1990 about 8 million moved into 19 relatively well developed cities in Turkey, while 2- million others immigrated into the EU countries.

3 Unhealthy urban planning in Istanbul

It is seen in *Table 1* that, 3.7- millions of people emigrated into Istanbul from different places within a period of 35 years between 1955-90. In fact, the three largest cities in Turkey, namely *Istanbul, İzmir* and *Ankara* accepted 5.13- million, 0.751 million and 0.236 million emigrants from the rural districts between 1945-95, respectively. Within those 50 years, the population of Turkey is increased only 3.3 folds, from 18.8 million to 63 million, while the population of Istanbul is skyrocketed 7.7 folds from a mere 1.2 to 9.2- million.

An average estimate for the population of Istanbul, assuming a lower growth rate of *r=2.3* percent per year, will be 29 millions by the year 2045 as shown in *Fig. 1*. It means when compared with the current (2006) inhabitants of 13- million, a new population of 16- million should be accommodated within the next 39 years. How and where, and under which conditions will these new inhabitants live?

assuming approximately 100 persons per hectare, there will be a need for an additional (29 million/100)= 290 000 hectare to be newly developed

urban areas. This is almost impossible without destroying the green areas, lakes and other natural surroundings. Furthermore, a total of 937.3 million square meter new buildings should be constructed in order to meet the conventional needs of this new population as shown in *Table 2*. The budget necessary to complete these buildings, on the basis of   *$ US 400* per square meter construction area, is annually around *$ US 9.6* billion. No such huge funding is available. Therefore, the usual unhealthy squatter towns will be multiplied all around of Istanbul.

Table 1: Change in population in Turkish cities (1955-1990)

a) Example Cities *taking* emigrants

No	CITY	Increase[†]	r percent
1	34 İSTANBUL	3 710 166	4.5
2	06 ANKARA	606 584	3.0
3	35 İZMİR	558 344	3.1
4	01 ADANA	460 157	3.2
5	33 İCEL	394 900	3.5
6	41 KOCAELİ	342 105	3.7
7	07 ANTALYA	293199	3.3
8	21 DİYARBAKIR	288 048	3.3
9	31 HATAY	256 515	3.2
10	27 GAZİANTEP	256 058	3.2

b) Example Cities *giving* emigrants

No	CITY	Decrease[†]	r percent
1	58 SİVAS	-618 959	-7.5
2	37 KASTAMONU	-500 275	-2.1
3	36 KARS	-482 542	-8.7
4	10 BALIKESİR	-462 739	-13.3
5	25 ERZURUM	-371 892	-14.0
6	51 NİĞDE	-363 926	-2.0
7	66 YOZGAT	-340 374	-11.2
8	19 ÇORUM	-332 344	-11.9
9	29 GÜMÜŞHANE	-327 045	-6.4
10	17 ÇANAKKALE	-298 550	-9.4

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[†] Country total in 35 years: 8 081 571 people.   *[†] Country total in 35 years: -10 040 096 people.*

About 2 million people immigrated into the European countries.

Table 2: Social and technical infrastructure for 29- million persons

Buildings necessary	Need per person	Total area needed
	m²	*10⁶ m²*
Pre-school centers	0.7	20.3
Elementary schools	2.0	58.0
High schools	2.0	58.0
Hospital and medicare	1.5	43.5
Administrative, social and cultural	4.6	133.4

Commercial buildings	1.5	43.5
Technical infrastructure	0.02	0.6
Residential-housing	20.0[†]	580.0
Total buildings necessary	**32.32**	**937.3**

[†] *80 m² house is assumed for a family of 4 persons.*

4 Measures and incentives to prevent emigration

The first and the foremost measure to prevent emigration from underdeveloped cities is to increase the quality of specialist doctors there. For instance, there is statistically one specialist doctor for each 2445 persons in *Ankara*, while this figure is 26 486 in the eastern City of *Kars*. In highly developed countries, however, like Germany and the USA, this figure is around 370.

The second preventive measure should be to discontinue any kind of amnesty for housing constructions completed without a proper city permit. Historically, the squatter housing constructed illegally on the properties of others, without any valid permit, have been legalised and registered officially by the Municipalities, from time to time just before the elections, in order to win the votes of these poor people.

The third appropriate and effective measure to prevent emigration would be to survey, monitor and prevent any construction without a proper ownership of the land, and without a city permit.

The fourth group of measures would be to improve the standards of living in the underdeveloped cities. Educational, health, social and cultural facilities should be improved, and also relatively higher salaries, reduced income tax rates, more attractive investment and financing incentives should be applied [1].

There are however a series of other measures to be taken at cities receiving emigrants, as follows:

a) Final urban planning maps must be completed at scales of 1/5000, and also 1/1000. When there are no urban planning maps at these scales, unhealthy urbanisation and also the squatter housing fill the gap [2].

b) Heavy penalties, to the degree of imprisonment, should be given to those engaged in unlawful construction.

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c) Extensive new laws should be inacted as listed below, in order to discourage self-employed business opportunities in relatively developed cities. For instance;

- Property management system should be encouraged, in place of self employed, one man care taker *'kapıcı'* system.

- The mobile street sellers, who are mostly the self-employed new emigrants to a city, without being registered into any income tax scheme. The street sellers engaged in selling fruits, vegetables, chestnuts, melons, water melons, doughnuts=*'simit'*, or those engaged in street porter business should be strictly prevented.

d) Public lands, forest areas and undeveloped peripheral zones must be carefully surveiled and protected against illegal occupation.

e) Additional income tax and property tax surcharges should be imposed for persons emigrating into larger cities.

f) Exemption of property tax for newly constructed buildings in well developed cities should be cancelled. Such an exemption should exist at emigrant producing cities only.

g) Attractive income tax as well as property tax incentives should be introduced to those investing in the underdeveloped cities.

h) No construction permit should be issued to any site, unless the social, cultural, health and educational centres are built and also the infrastructure facilities and utilities, such as roads water, sewage, garbage, natural gas, electricity, telephone, etc., are completed.

5 From squatter housing into modern towns

Any squatter housing may be converted into modern towns by means of an auto-financing scheme as will be outlined herein. Usually, the squatter housing is low rise with one or two storeys and the area appears to be uncongested. If the squatter area is heavily congested with buildings closely spaced to each other and/or contains medium or high rise structures, it may not be suitable for redevelopment purposes. Because, the basic secret behind converting the squatter housing into modern looking towns is to increase the number of storeys and also to build additional modern social, cultural, educational, commercial and technical centres within the area.

Let us assume that for *1 m²* squatter housing, a city permit may be obtained to construct at least *3 m²* modern housing.

Considering an example of 1000 squatter units, the cost of demolishing old squatter houses, and constructing new modern complexes

with three times larger construction area, and the expected income from the sale of the extra houses, are shown in *Table 3*.

Table 3: An example auto-financing scheme for 1000 squatter units

Item	Housing Units	Area	Value per sq.m.[†]	Cost /Profit
		m^2	$ US	$ US
Income	2 000	100	1 300.-	260.- million
Cost	3 000	100	600.-	180.- million
Profit			**44 %**	**80.- million**

[†].The $ US 600 construction cost per square meter includes design, demolishing, infrastructure, rental compensations and all redevelopment costs. The sale price of $ US 1300 per square meter, is a bare minimum and may go up as high as $ US 3 000.- depending on the quality, scenery and the extent of available environmental facilities.

It is seen that for every square meter of squatter housing three times more modern housing should be constructed, and the original owner should be given a brand new residential unit, free of charge.

The overall profit of the developer or the respective Municipality is $ US 80.- million, for 1000 squatter units, representing a gross profit ratio of 44 percent. The gain is three folds. The original resident of the squatter house receives a new suite in an entirely modern environment, with recreational and commercial facilities. The developer guarantees a minimum 44 percent gross income for its financing raised. Above all, the city enjoys the conversion of an unhealthy housing site into a modern and healthy town.

6 Details of urban transformation

For the success of such an urban transformation, there should be some revisional regulations within the *Turkish City Planning Act No. 3194*, as well as certain rules and provisions should be taken into consideration as follows [3]:

a) The inhabitants of a squatter housing will sign a contract with Municipality or a developer on an individual or collective basis, for the purpose of possessing a brand new residential unit, after his/her old squatter house is demolished.

b) The owners of the squatter houses should receive a predetermined compensation of rental income from the developer, for the entire duration of construction, until they move into their brand new residents.

c) The developer should be permitted to construct new houses with at least 2.5 or 3.0 times larger plan area than that the original inhabitants possessed. Such an increased floor area is essential for the financial feasibility and success of the entire urban transformation project.

d) All social, cultural, health, educational, sportive, administrative and commercial centres with all the necessary infrastructural facilities such as roads, parking, recreational areas should be completed and offered to the use of the new inhabitants, free of charge, since the cost of all these extra items will be included inside the purchase price of the residential units.

Conclusions

Based on the statistical figures of the population census, as well as the data available for squatter housing in Turkey, the conclusions may be summarised as follows:

a) There is a constant flux of emigration in Turkey, from rural areas into well developed cities. Already, 8 million people emigrated into larger cities in 35 years, between 1955-90. The trend is still the same.

b) Unless strict measures and series of incentives are implemented in the fields of urban planning, construction supervision, income and property tax rates, employments, social, cultural and health services, the enlargement of squatter towns cannot be prevented.

c) Any squatter town, unless heavily populated and congested, may be converted into modern looking towns, by means of an autofinancing scheme, which is based on redeveloping the area and selling more than one half of the newly constructed residential units.

d) Examples of redevelopment and modernization of squatter housing towns by autofinancing scheme are currently *(2006)* in progress in the Cities of *Ankara, Samsun* and *Adana*, in Turkey.

7 References

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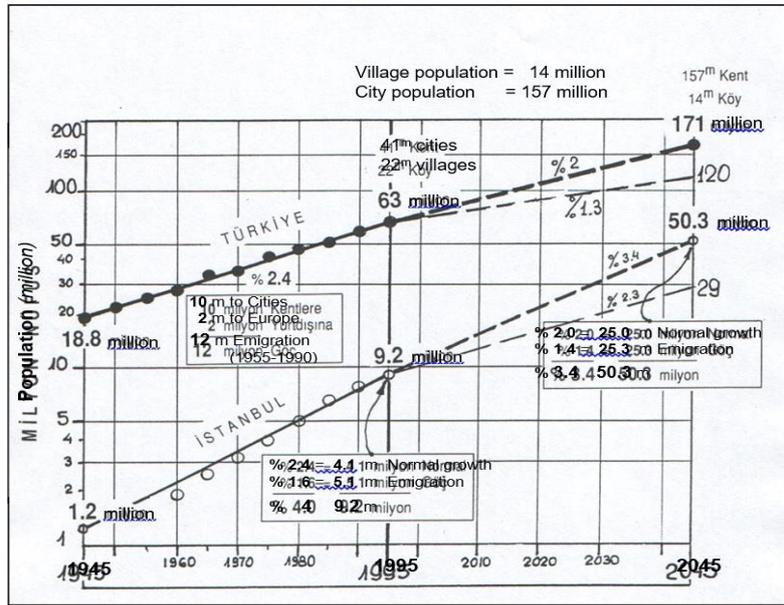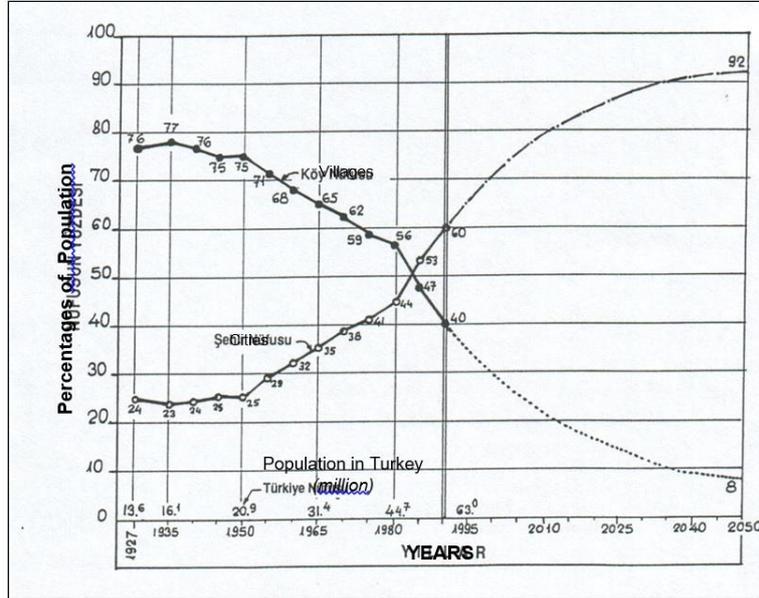
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Figure 1. Expansion of Population by emigration

Figure 2. Interchange of City and Village populations (1927-1950)