THE RURAL-URBAN TRANSFORMATION THROUGH URBAN SPRAWL: AN ASSESSMENT OF ANKARA METROPOLITAN AREA

Kübra Cihangir Çamur*, Sevinç Bahar YENIGÜL**

*Assoc. Prof. Dr. Gazi University, Faculty of Engineering & Architecture, City & Regional Planning Department, 06570, Ankara, Türkiye, Email: ccamur@gazi.edu.tr
**Dr. Gazi University, Faculty of Engineering & Architecture, City & Regional Planning Department, 06570, Ankara, Türkiye, Email: yenigul@gazi.edu.tr

ABSTRACT: In 80s with the influence of the neoliberal policies, rapid changes have come out in urban areas and a growth pattern defined as “urban sprawl” has been seen in metropolitan areas in Turkey. This new metropolitan growth pattern includes low-density, leap frog, scattered and sprawling development that experienced especially around rural settlements. As well cities started to compete with and against each other for great projects; highways, office parks, shopping malls and residences. These uses require empty and large areas that can only be found at the fringe and outer areas of big cities. Rural to urban transformation model (1980-2007 years) at the fringe of Ankara, the capital, is the focus of this paper. At the end of 70s, the city has been decentralized towards mainly west. The idea of this foresight was to solve the air pollution problem of the city due to over dense development in the central area. This forethought has triggered the growth at the periphery. As a result profound and structural change has come up with the concept of 'sprawl', which is a process that hugely affects city form and city planning in metropolitan areas.
KEYWORDS : Metropolitan area, urban sprawl, fringe, urban-rural transformation

1. INTRODUCTION

Neo-liberalism eventually took over Fordism, and became the dominant capitalist regime in many parts of the world. Neo-liberalism is a set of economic policies coming out of the market fundamentalism and the thought theoretically endorsed by neo-classical economics. Armed with this, neo-liberalist regime attempted to make capitalist mode of production sustainable in a way quite different from Fordism. Information technology and financial economy are strategic driving forces for capital accumulation. Neo-liberalism, of course, had profound ramifications for urban development in cities and city-regions throughout the world economy. In the 80s with the influence of the neoliberal policies, rapid changes have come out in urban areas. A new growth pattern, defined as “urban sprawl” has been seen around metropolitan areas.

Urban sprawl is commonly used to describe physically expanding urban areas with leaps and bounds. Sprawl has been described as the physical pattern of low-density expansion of large urban areas, under market conditions, mainly into the surrounding agricultural/rural areas. Sprawl is leading edge of urban growth and implies deficient and weak planning control on land subdivision. Development is patchy, scattered and strung out, with a tendency for discontinuity. It leapfrogs over areas, leaving agricultural enclaves. Sprawling cities are the opposite of compact cities, full of empty spaces that indicate the inefficiencies in development and highlight the consequences of uncontrolled growth. A variety of urban forms have been covered by the term “urban sprawl” ranging from contiguous suburban growth, linear patterns of strip development, leapfrog and scattered development. In terms of urban form, sprawl is positioned against the ideal of the compact city, with high density, centralized development and a spatial mixture of functions, but what is considered sprawled ranges along a continuum of more compact to completely dispersed development [1-5].

After 80s the spread of urban development accelerated with the impact of neo-liberal policies. This growth pattern has become the common characteristics of cities since then. This phenomenon is evident in other developing countries cities, as in Turkey. Settlements that are under influence of a dynamic urbanization process experience sprawl. Nowadays urbanization term does not only mean extension of towns

and cities but represents a whole process that has physically powerful influence on nearby rural areas as well. The increase in urban population, the fast growth of cities in order to provide the requirements of increasing population and the effects of expansion of cities on fringe areas are still common problems of several countries in 21st century [6-10]. It will not be an exaggerated reasoning that cities have grown rapidly and sprawled out into the countryside mainly due to the butterfly effect of automobile technology

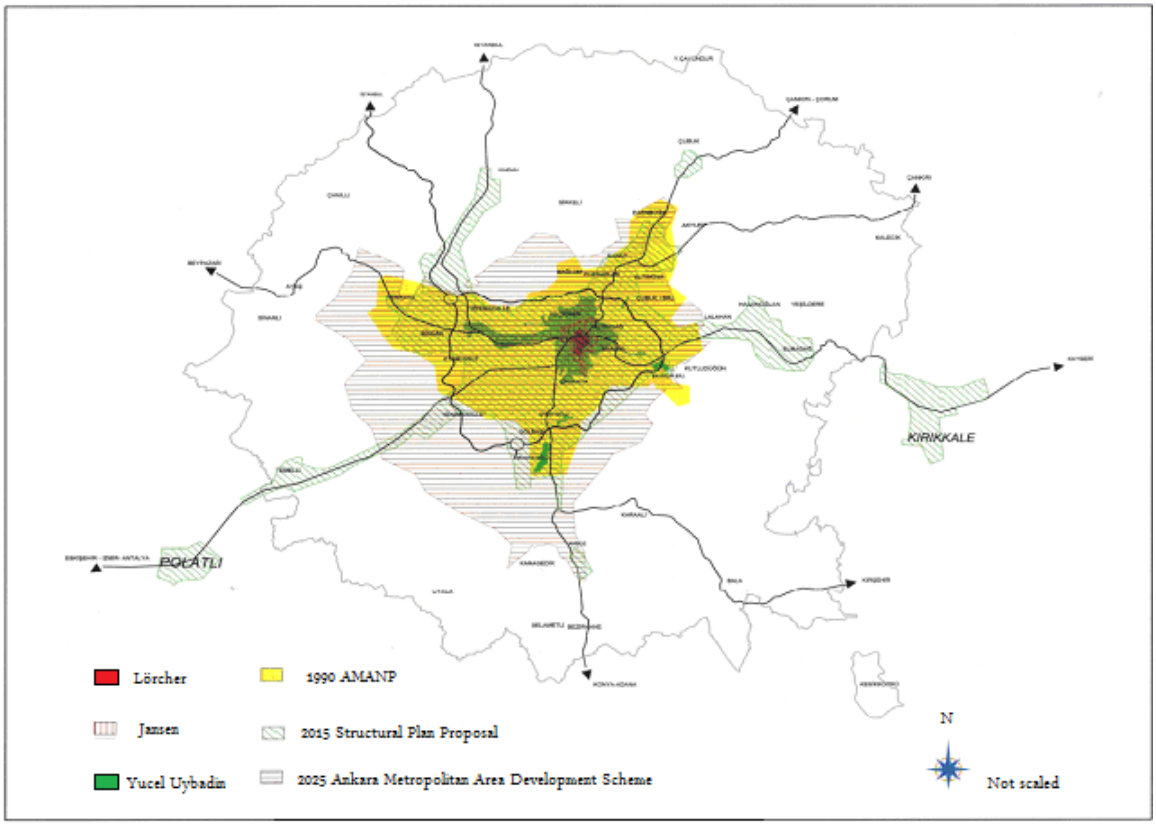
In the period of becoming metropolitan, from 50s up to now, a significant increase in the population of the metropolitan cities in Turkey has taken place not mainly due to the industrial developments but migration from the countryside. Due to the expansion and development exceeding the projections, cities have expanded towards fringe areas. This expansion caused pressure on nearby rural areas. Accordingly, the new settlements that are neighboring to existing urban areas merged with them due to changes in their functional structures [11-12]. Transformation has caused integration of rural areas with metropolitan cities and change of rural settlements into urban-like districts or in some cases into municipalities of the metropolitan area.

2. ANKARA: FROM A SMALL TOWN TO A SCATTERED CITY

Ankara became the capital of Turkish Republic on 13rd October 1923. Since then Ankara Metropolitan City has grown rapidly. Its social and spatial structure has changed completely mainly due to the changes in administrative structure and has become the central decision and control unit of the whole country. The population of the city increased more than 100 times between 1920 -1995. In 1923, it was a small Middle Anatolian city with a population of 30.000. In 1927, the population increased to 74.553, in 1960 to 650.000 and in 2008 Ankara became a metropolitan city with a population more than four million. In the 80s many radical changes have occurred in Turkey. Changes in the planning and legislative system were the most efficient changes on the spatial development [13]. In 1984, metropolitan city administrations were established in Turkey. Ankara took its place in this system. Congestion problem of the main city was on the agenda of 1970s. At the end of the 70s the city was decentralized mainly on the west side. Decentralization triggered the growth at the periphery.

In the foundation period of Ankara following the structural administrative arrangements, development process of the city started first with Lörcher Plan in 1925 then Jansen Urban Plan in 1932 and Yücel Ubaydin Plan in 1957, 1990 Ankara Metropolitan Planning Bureau Plan, Ankara 2015 Structural Plan Proposal and 2025 Ankara Metropolitan Area Development Scheme are the other planning studies that have influence on today's macro form of the city after the Lörcher Plan . A summary of details of these plans are given below in Table 1 and shown in Map 1.

Urban development process of Ankara as a capital city has started with Lörcher Plan and the expansion of the city has become uncontrollable since 1950. After 1990 Ankara has experienced a period of master plans without approval until the 2007. As master plan of the city was not approved the city growth realized mostly within the market conditions and accordingly the patch–work developments resulted in expansion of the city more than necessary. As mentioned before establishment of many small local and uncontrolled municipalities within the sphere of influence of Ankara Metropolitan area is one of the main reason for urban sprawl of Ankara and other metropolitan cities. The municipalities, which are not under the planning control of Ankara Greater City Municipality according to the former Greater City Municipality Act Numbered 3030, have contributed to sprawl via local plans independent from a master plan. Increase in accessibility in parallel to the increase in private car ownership is also effective on urban sprawl [14].



Map 1. Planning experiences of Ankara

Table 1. Planning experiences of Ankara

Plan	Approval	Existing Population	Existing Urban Area (hectare)	Plan Year	Proposed Population	Proposed Plan Area (hectare)
Lörcher Plan	1925	6 000	280	-	15 000	700
Jansen Plan	1932	75 000	300	1978	300 000	1500
Yücel-Uybadin Plan	1957	455 000	5 720	1987	750 000	12 000
1990 Ankara Master Plan (Ankara Metropolitan Planning Bureau)	1982	1 200 000	22 500	1990	2,8-3,6 (million)	43250
Ankara 2015 Structural Plan Proposal	-	2 300 000	31 000	2015	4,5-5,5 (million)	210000
2025 Ankara Metropolitan Area Development Scheme	-	2 800 000	45 000	2025	6,5-8 (million)	200000
2023 Ankara Master Plan	2007	3 528 806	81 000	2023	7 568 500	850000

It is clear from the Map 1 and Table 1 that Ankara has experienced a rapid development process with and without master plans. To figure out the main point that Ankara's growth pattern is dominated by urban sprawl and rural-urban transformation and details of these processes are given below.

2.1. New Period for Metropolitan Cities: The Greater City Municipality Act Numbered 5216

After this planned/unplanned development period, new regulations started in 2004. The government (The Justice and Development Party) has been trying to apply the broadest local government model in Turkey for years. In this context, the government prepared several legislation proposals and a proposal for greater cities. It was approved as "Greater City Municipality Act (GCMA) Numbered 5216[1]" on 10th July 2004. The act defines boundaries of municipalities based on the enhanced task and responsibilities of greater city municipalities while arranging strong mayor system by giving much more power to the mayor of greater cities. Academicians, chambers and other related organizations have criticized the advantages and disadvantages of this new act since its approval. The most criticized issue in the act is the article regarding the definitions of the boundaries of the metropolitan areas so-called "Pair of Compasses (Pergel) Method". According to this article, the boundaries of Istanbul and Kocaeli (Izmit) Greater City Municipalities are defined as the city boundaries. For other greater city municipalities as the location of the province building being the centre, authorization boundaries are defined as follows:

(a) For a urban population of less than one million the boundaries of the area with a radius of 20 km
(b) For a urban population between one and two millions the boundaries of the area with a radius of 30 km, and
(c) For a urban population of more than two millions the boundaries of the area with a radius of 50 km

are defined as the greater city municipality boundaries.

Then, authorization boundaries of the 16 greater city municipalities in Turkey (Istanbul, Ankara, Izmir, Kocaeli, Sakarya, Bursa, Eskişehir, Antalya, Adana, Mersin, Aydın, Kayseri, Diyarbakır, Gaziantep, Erzurum, Samsun) were largely expanded due to this new GCMA .

The boundaries of Ankara Greater City Municipality expanded based on the radius of 50 km and 7 counties, 17 town and 282 villages were included in the boundaries of Ankara Greater City Municipality after the new act. 220 villages became the districts of Greater City Municipality. In terms of surface area Ankara Greater City Municipality enlarged from 202.000 hectares to 855.000 hectares and the service area of the Ankara Greater City Municipality increased by four times. A population of 355.659 was added to city population due to newly defined boundaries.

The new regulation has changed the spatial and service structure of rural areas as well as administrative structure. Greater City Municipalities are responsible for the urban services such as transportation, urban planning, infrastructure, hygiene and environmental health, education, sport, tourism, cultural services, control and authorization services, waste services, housing services, health services, fire department, and social aid services within these settlements as well.

In case of Ankara, budgeting for the new enlarged municipal area and providing the requirements of all settlements is a significant problem for Greater City Municipality, as it could not even manage the existing problems of squatter areas and ruined districts and areas under deprivation in the city due to the limited budget. Under these circumstances, it is obvious that not only the problems in the centre of Ankara will grow to be more and more but also the solution will delay. By the approval of the new act, Ankara Greater City Municipality had to create a new master plan for the metropolitan area with new boundary within 2 years that meant in 2007 [14].

3. THE RURAL TO URBAN TRANSFORMATION THROUGH URBAN SPRAWL

Unplanned and uncontrolled growth demands have caused patch-worked urban sprawl for more than two decades in the metropolitan fringe area of Ankara city, the capital. As well as the central government and local governments (Ankara Greater City Municipality and the lower level local bodies within the municipal boundaries of 50 kilometers) have great difficulties in finding solution to the problems of urban sprawl. Uncontrolled urban expansion has affected the rural settlements negatively under development pressure.

[1] The object of this Law is to regulate legal status of the greater city management, and to ensure undertaking of services effectively, efficiently and in harmony within a plan. This Law covers the greater city municipality and other municipalities within the boundaries of greater city.

These settlements have transformed according to the short and long term needs of metropolitan areas. Deterioration of rural characteristics goes parallel with the urban development process. Physical, social and economical dimensions of transformation process that have influenced by urban sprawl in Ankara Metropolitan area is assessed in this study. The following variables are taken into consideration in the analysis:

- Population data and population growth rates between the years of 1980-2007.
- In-depth interviews with real estate agencies
- Questionnaires with local people

In addition to these, in-dept interviews with local authorities whose experiences are valuable in the analysis of transformation process from the viewpoint of future expectations will be included in the analysis. The required data are collected from the interviews with public institutions, local governments, real estate agencies and households. The study also sheds light on unknown dynamics and factors that are naturally embedded in transformation process. An analysis of population change and opinions obtained from interviews with real estate agencies are used to decide the sample of settlements that are/are not under the influence of urban sprawl in the Ankara Metropolitan area (855000 hectares). With this method, 21 settlements are identified from 220 settlements that locate over the growth and sprawl axis of the metropolitan area. Population size of these settlements varies from 2000 to 20000; they are 12-58 km far from the Ankara city center as shown in Map 2.

Physical, social and economical dimensions of transformation process are assessed with the following variables.

- Administrative: Changes in administrative structure; from village to districts/ municipality
- Demographic: Population size and growth rate
- Social: Education level, income
- Economic: Employment in the sectors
- Physical: Factors triggered the development in these settlements.

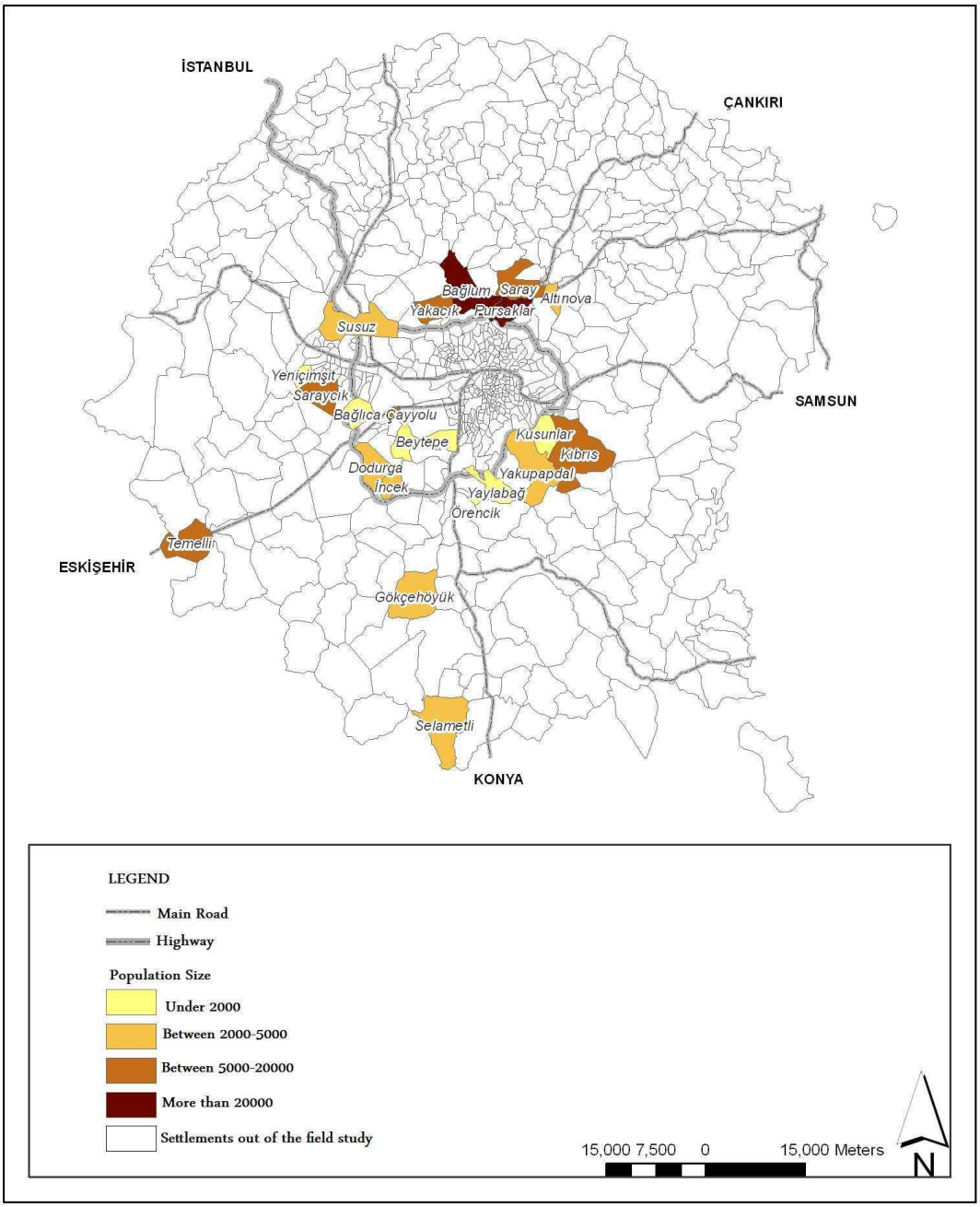
3.1. Physical, social and economical dimensions of transformation process of rural settlements under the sprawl influence of Ankara Metropolitan Area

The rural settlements, identified as “the most influenced ones” from Ankara Metropolitan Area, comprise transformations due to effects of varying dynamics/factors embedded to metropolitanity. This process leads to changes in their administrative, demographic, economical, social and spatial structures in differing ways.

These rural bodies, fringe area villages, with the rapid expansion of urbanized area remained under influence of a different phenomenon leading changes in their administrative structures at the beginning. In time, these “villages” has transformed into different levels of municipalities and quarters mainly due to high rate of increase in their populations arising from the main city.

Population growth rates between the years of 1980-2007 are analyzed for Ankara and for these fringe settlements. Metropolitan population growth in urban settlements is not only due to natural population growth but due to the migration from outside as well. Rural areas change according to the demands of metropolitan area since the metropolitan functions also take place outside of the city and this compels the settlements for change. The changes and developments in transportation technology and economical structure increase the accessibility.

On the other hand, the increase of density and prices of land and housing in the city center, has lead to urban development demand spread out. This has caused a rapid increase in rural settlements’s population at the fringe. While population increase rate of central Ankara is ‰29, these settlements indicate much higher rates after 80s. Population increase by the influence of main city is obvious in Pursaklar (‰138), Saraycık (‰110), Dodurga (‰ 86), Saray (‰85), Yakacık (‰85), Kıbrıs (‰78), Çayyolu (‰69), İncek (‰67), Temelli (‰67), Bağlum (‰65), Altınova (‰64), Yeniçimşit (‰55),Yakubabdal (‰53), Örencik (‰44), Selametli (‰39), Bağlıca (‰32), Susuz (‰24), Kusunlar (‰23), Gökçehöyük (‰9),Yaylabağ (‰9) and Beytepe (‰-2) cases.



Map 2. Selected settlements

Economic transformation

The agricultural sector in the assessed settlements shows a decreasing trend although it was basic employment sector in the fringe area all through the previous years. Interaction of these settlements with the main city has resulted transformation from agriculture to urban service sector in employment structure, due to new job and higher income opportunities sourced from the main city. As shown in Table 2 the employment rates in agricultural sector in the case studies were much higher than that in Ankara (26.4%) in 1985.

Table 2. Sectoral distribution of employment in settlements under influence of urban sprawl (Years 1985-2000)

Settlements	Sectoral distribution of employment (%) (Year 1985)			Settlements	Sectoral distribution of employment (%) (Year 1990)			Settlements	Sectoral distribution of employment (%) (Year 200)		
	A	I	S		A	I	S		A	I	S
Yakacık	94	2	4	Bağlıca	100	-	-	Selametli	83	4	13
Selametli	93	1	6	Selametli	86	1	13	Yaylabağ	75	5	20
Bağlıca	91	1	8	Yaylabağ	80	7	13	Gökçehöyük	75	3	22
Dodurga	90	3	7	Dodurga	76	3	21	Örencik	69	7	24
Yaylabağ	85	1	14	Susuz	73	8	19	Saraycık	67	8	25
Çayyolu	82	3	15	Saraycık	73	19	8	Yeniçimşit	67	6	27
Susuz	80	4	16	Kusunlar	69	13	18	Kusunlar	64	17	19
Örencik	77	8	15	Yakubabdal	69	4	27	Temelli	64	11	25
İncek	76	4	20	Örencik	66	10	24	Susuz	62	14	24
Gökçehöyük	74	3	23	Beytepe	66	8	26	Yakacık	60	29	11
Kusunlar	69	12	19	Yakacık	60	17	23	Altınova	57	17	26
Temelli	64	11	25	Çayyolu	60	5	35	Yakubabdal	50	9	41
Saraycık	63	18	19	Temelli	54	14	32	Bağlıca	42	1	57
Yeniçimşit	59	20	21	Gökçehöyük	52	5	43	Kıbrıs	42	13	45
Kıbrıs	58	10	32	Bağlum	49	12	39	İncek	41	7	52
Pursaklar	51	20	29	İncek	43	7	50	Saray	41	22	37
Altınova	47	24	29	Altınova	43	22	35	Bağlum	40	10	50
Beytepe	42	23	35	Saray	39	26	35	Dodurga	34	-	66
Bağlum	37	14	39	Pursaklar	29	26	45	Pursaklar	24	19	57
Yakubabdal	32	21	47	Ankara	18,1	14,3	67,6	Çayyolu	22	10	68
Saray	30	33	37	Yeniçimşit	11	66	23	Ankara	16,2	13,4	70,4
Ankara	26,4	13	60,6	Kıbrıs	1	23	76	Beytepe	4	2	94
A:Agriculture, I:Industry, S: Service											

However, by 2000 the employment rate in agricultural sector in Ankara became (16.4%) while in some settlements (Beytepe % 4) this rate was below the average rate of Ankara even in some places there were no more employment in agriculture[2]. However, in some places agricultural activity was still important although it was not the primary means of subsistence in terms of employment. Agricultural activities appear to be still important in 75% of the settlements included in this study.

Social transformation

The people from different cultural and social background prefer these settlements that are under main city influence and therefore the social and economic structure of them show cosmopolite characteristics. Huge differences in education level have been observed in cases of the study. High education levels are observed in some of the settlements (Çayyolu %50,4, Dodurga %37,9, Beytepe %9,6, İncek %9,2, Altınova %9,1) while a very low levels continue in the others (it varies from %0 to %1 as in Örencik, Saraycık, Selametli, Yaylabağ and Yeniçimşit) This result supports one of the expectations of this study that education is an important determinant in defining a settlement whether under influence of the urban sprawl or not..

[2] The last census of population (social and economic charasteristic of population) year is 2000. The recent social and economic charasteristic of population are analyzed with deep interviews. It is obvious that, in Çayyolu and ,Pursaklar there are no more agricultural activity or employment .

Evaluation in terms of income has shown that mainly the people with income level lower than the poverty line live in the settlements under the metropolitan influence (70.4 %). The population with income above the poverty line is 20 % and the population with income below the hunger line is 9.6 %. The population with high incomes prefers west and southwest of the city (settlements such as Çayyolu, Susuz, Dodurga, İncek, Gökçehöyük, Bağlıca, Beytepe, Örencik) while the lower income population mostly live at the east and north fringes of the city. This structure reflects itself directly on social life those cultural facilities are seen more in the west and southwest part of the city. The results of the study support that different social groups with different characteristics prefer fringe areas according to their expectations.

Spatial transformation

Dynamics of metropolitan urban development at the fringe areas have been effective in changing the spatial structure of rural settlements. This influence has begun with the change in legal, administrative and planning system. Decentralization started on the west side of the city at the beginning. The aim was to find place for industrial and residential developments. Sincan, Ostim, Ivedik industry areas and Eryaman residential areas were formed. These developments have influenced the settlements such as Susuz, Saraycık, Yeniçimşit and Yakacık. Then the development scattered to south and south west direction by leaping. Commonly preferred by the high income households, Çayyolu, Beytepe, Dodurga, Incek, Bağlıca, Temelli, Örencik, Yaylabağ, Yakupabdal and Gökçehöyük developments have occurred.

On the north side , rapid transformation processes in medium and small-sized municipalities (Pursaklar, Bağlum, Saray and Altınova) with independent planning authorities due to the former Greater Municipality

Act Nımbered 3030.have been experienced. Low-income households have preferred the east direction (such as Kıbrıs, and Kusunlar).

The changes and new developments in the settlements have produced different results for the current texture. Development process in new and organized developments (eg. social housing areas, organized housing areas) provided with the services and existing rural settlements (the villages) are different. Settlements such as Pursaklar, Temelli, Saray, Altınova and Selametli (they are in municipality status) the development/transformation started from the former village center. But in settlements such as Çayyolu, Beytepe, İncek, Dodurga, Gökçehöyük (especially preferred by the high income groups) there are obvious differences by infrastructure and land prices).

4. CONCLUSION

Urban sprawl in fringe area of metropolitan cities leads to the establishment of new residential areas with differences.. Increased accessibility opportunities and high housing quality, attract population to near rural fringe settlements. These settlements experience high population increase rates. They loss their rural character and transform into urban or semi-urban character. Their administrative, demographic and economic structure transforms in time This transformation also leads to changes in the social and spatial structures. Some of them completes the urban transformation process and become totally urban even consisting a more attractive living environment when compared to main city (eg Çayyolu, Beytepe, İncek, etc). Although having intensive connections with the main city in terms of daily relations, employment, education, and social infrastructure some of the settlements are neither rural nor urban but semi-urban settlements. They suffer from surviving with inadequate and problematic physical and social infrastructure, This dual structure necessitates urgent development of new policies and tools for administrative and planning agendas .

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