TITLE: KAYSERI KENTINDE SANAYI ÇALISANLARININ KONUT/KONUT ALANI TALEBI

GÖSTERGELERININ BELIRLENMESI

AUTHORS: Dilsen ONSEKIZ

PAGES: 39-68

ORIGINAL PDF URL: https://dergipark.org.tr/tr/download/article-file/219437

DETERMINATION OF HOUSING/HOUSING AREA DEMAND INDICATORS OF INDUSTRIAL EMPLOYEES IN KAYSERİ CITY

Inst. Dr. Dilşen ONSEKİZ
Erciyes University
Faculty of Architecture
Department of City and Regional Planning
dilsen@erciyes.edu.tr

Abstract

The characteristics of the housing/housing area demand of industrial employees show differences according to their "preference and behaviour attributes". In this study, it is aimed to determine this behavioural and subjective evaluations in the formation of housing/housing area demand of industrial employees in the city of Kayseri. At the same time this study aims to identify the main demand indicators which create the housing/housing area demand differentiation of industrial employees, considering the "industrial employee profile of the city". The relation between industrial employee profile and housing is examined by means of general housing preferences and demands of industrial labour. The characteristics of employees are investigated on housing/housing area demand with different variables in the activity of behavioural and subjective evaluations. The result obtained at the end of the study is; housing area-working area accessibility, urban life quality, income and status differences are determined the housing/housing area demand in the urban area. Also, the differences at the professional specialization levels are revealed the distinction of the urban region in the preference of housing area. In the context of life quality, culture and income characteristics, behaviour styles of industrial employees are showed differences according to the their status. In the planning process, both the spatial tendencies/preferences of industrial employees and their different behaviours related to the professional specialization levels are revealed determinative attributes in the formation of living environment. For this reason, the consideration of these attributes is necessary and important in the planning processes.

Key Words: Industrial employees, housing/housing area demand, demand indicators.

KAYSERİ KENTİNDE SANAYİ ÇALIŞANLARININ KONUT/KONUT ALANI TALEBİ GÖSTERGELERİNİN BELİRLENMESİ

Öz

Sanayi çalışanlarının "tercih ve davranış özelliklerine" görece, talep ettikleri konut/konut alanlarının nitelikleri farklılaşmaktadır. Bu çalışmada, Kayseri kenti özelinde, sanayi çalışanlarının konut/konut alanı talebinin oluşmasındaki bu davranışsal ve öznel değerledirmelerin belirlenmesi amaçlanmaktadır. Bu çalışma aynı zamanda, "kente özgü sanayi çalışanı profilini" gözönünde bulundurarak, sanayi çalışanlarının konut/konut alanı

talebi farklılaşmasını yaratan temel talep göstergelerini belirlemektedir. Sanayi işgücünün genel konut tercih ve talepleri incelenerek, sanayi çalışanı profili ve konut ilişkisi ortaya konulmaktadır. Davranışsal ve öznel değerlendirmelerin etkinliğinde, farklı değişkenler kullanılarak, çalışanların özellikleri konut/konut alanı talepleri üzerinden sorgulanmaktadır. Çalışmada şu sonuç elde edilmiştir; konut alanı-çalışma alanı erişebilirliği, kentsel yaşam kalitesi, gelir ve statü farklılıkları kentsel alanda konut/konut alanı talebini belirlemektedir. Aynı zamanda, mesleki uzmanlaşma düzeylerindeki farklılıklar, konut alanı tercihinde kentsel bölge ayrımını ortaya çıkarmaktadır. Yaşam kalitesi, kültür ve gelir özellikleri anlamında, sanayi çalışanlarının davranış biçimleri statülerine göre farklılaşmaktadır. Planlama sürecinde, hem mekansal eğilimleri/tercihleri hem de mesleki uzmanlaşma düzeyleri-ne göre farklılaşan davranış biçimleri, sanayi çalışanlarının yaşam çevrelerinin oluşturulması açısından belirleyici özellik göstermektedir. Bu nedenle, planlama süreçlerinde bu özelliklerin göz önünde bulundurulması gerekli ve önemlidir.

Anahtar Kelimeler: Sanayi çalışanları, konut/ konut alanı talebi, talep göstergele-ri.

1. INTRODUCTION

The context of the studies relating to housing demand, have been changing from neo-classic economical approaches to behavioural approaches in the historical process. Neo-classic economical approaches were especially effective in 1960s. Researchers of this movement, as Alonso, Muth, Mills and Harvey etc. examined the relation between demand and utility[1]. Usefulness maximizition was considered the basic determinant in location at patterns. According to this, "individuals may prefer the housing areas in the highly profitable regions near the city center to reduce transportation costs" was the dominant concept of the approach[2]. Another effective model in this vein was Kain's housing area location model which was defined with the differentiation of transportation values of households with different demographic characteristics between housing and working areas[3].

In 1970s, the scope of the studies were related to the location, household size, density and some social-economical characteristics. In 1980s, studies relating to housing demand were carried on the axis of housing market. In addition to this, studies realized by Rosen (1974)[4], Palmquist (1984)[5], Megbolugbe (1991)[6], who

---

[1] Sheppard, E., "A marxian model of the geography of production and transportation in urban and regional systems", **Urban Systems**, Ed: Bertuglia, C.S. and v.d., London, Newyork, Sydney, 12-40 (1987).

[2] Smith, B.E., "A review of monocentric urban density analysis", **Journal of Planning Literarute,** 12: 115-136 (1997).

[3] Glaeser, E., Hanushek, E.A., Quigley, J.M., "Opportunities, race and urban location: the influence of John Kain", **Journal of Urban Economics,** 56: 70-79 (2004).

[4] Rosen, S., "Hedonic prices and implicit markets; product differentiation in perfect competition", **Journal of Political Economy,** 82: 34-55 (1974).

[5] Palmquist, R., "Estimating the demand for characteristics of housing", **Review of Economics and Statistics,** 64: 394-404 (1984).

adopted the hedonic approach related the analysis of the values to housing characteristics. Adopting the hedonic approach, housing demand was related to environment and housing characteristics parallel to socio-economic characteristics[7].

The number of studies based on subjective evaluations and style of behaviour has been increasing following 1980. Individual's preference of housing area, demands, perceptions and evaluations were meant to show diversity with the variation of life prosperity and individual value judgments. The perception and evaluation of living environment are important factors for the determination and differentiation of housing demand. In this context, factors like settled preferences, choices and satisfactions were considered to determine housing demand. Montgomery and Johnson (1988)[8], stated that living satisfaction is closely related to settlement area satisfaction. Amerigo and Aragones (1997)[9], presented studies about relations between people and their living environment, and Amerigo (2002)[10] presented studies in the context of physicological approach related to settlement area.

Numerous studies were realized in the context of profits and location interaction including the profits of employee at different levels of education, race and gender. Blau and Beller (1992)[11], Katz and Murphy (1992)[12] and Murphy and Welch (1992)[13] dealt with the relations between labour economy, wage rates of women and minorities and educational transformations. Gabriel and Rosenthal (1999)[14], examined the impacts of demographic characteristics on profits in relation to location. Examining the accessibiltiy of low-income workers in private of Hong-Kong, Lau and Chiu (2003) stated that "the effectivity of public transportation of

---

[6] Megbolugbe, I.F., "Hedonic prices and housing programme benefits", **Urban Stuies,** 28: 773-781 (1991).

[7] Sheppard, S., "Hedonic Analysis of Housing Market, Handbook of Regional and Urban Economics, **In Elsevier Science B.V**., Ed: Mills, E.S.and Cheshire, P., North Holland, 1595-1635 (1999).

[8] Montgomery, H., Johnson, U.S., "Life values: Their structure and relation to life conditions", **Applied Behavioral Economics,** Wheatsheaf Booles, Brington, U.K, 1:420-437 (1988).

[9] Amerigo, M., Aragones, J.I., "A theorical and methodological approachs to the study of residential satisfaction", **Journal of.Environmental Psychology,** 17: 47- 57 (1997).

[10] Amerigo, M., "A psychological approach to the study of residential satisfaction". In: Residential Environments: Choice, Satisfaction, and Behavior, **Bergin&Garvey**, Westport, Connecticut, London, 81-100 (2002).

[11] Blau, F., Beller,A., "Black-white earnings over the 1970s and 1980s: Gender differences in trends", **Review of Economics and Statistics LXXIV**, 276-286 (1992).

[12] Katz, L., Murphy, K., "Changes in relative wages, 1963-1987: Supply and demand factors", **Quarterly Journal of Economics,** 35-78 (1992).

[13] Murphy, K., Welch, F., "The structure of wages", **Quarterly Journal of Economics, 12:** 285-326 (1992).

[14] Gabriel, S.A., Rosenthal, S.S., "Location and the effect of demographic traits on earnings", **Regional Science and Urban Economics,** 29: 445-461 (1999).

low-income workers dependent on compact city structure and functionality of dynamic economic growth". In the context of social structure and gender differentiation, Sheng and Shresta (1998) examined the relation of housing supply and demand with the private housing demand of young, single and immigrant industrial women workers devoted to low-income hired apartments sharing with 3 workers[15]. In the research study about the housing needs of immigrant women industrial workers, with set out life stories Arifin and Dale (2005), examined the determination of the main factors that impressed the perception of housing needs[16].

The aim in this study is to determine the behavioural and subjective evaluations in the formation of housing/housing area demand of industrial employees in the city of Kayseri. At the same time this study is an attempt to determine the main demand indicators which create the housing/housing area demand differentiation of industrial employees considering the industrial employee profile specific to the case. The relation between industrial employee profile and housing is put forward, examining general housing preferences and demands of industrial labour. The characteristics of employees are investigated on housing/housing area demands with different variables in the activity of behavioural and subjective evaluations.

2. THE METHODOLOGY OF THE RESEARCH

The determination of housing/housing area demand of the industrial employees in the city of Kayseri is carried out with 1000 questionnaires. The main criterion used in the framework of the questionaire is the general profile of the industrial employees according to the differentiation of professional specialization level and their general tendencies. To classify general tendencies, the survey is implemented among the employees of the "I. Organized Industrial Zone" which consist of the significant part of the industrial workforce in Kayseri. There are approximately 3000 engineers and qualified staff members and 46300 workers in this region[17].

The data of the Ministry of Industry is used to obtain the "profile of the industrial employees" that show the differentiation of professional specialization level. According to the data, the rates of the employees in I. Organized Industrial Zone are identified as: Managers (%2,3), Technicians (%2,3), Administrative Staff (%7,5), Workers and/or Foremen (%87,9). With this information on the special profile of the city, the questionnaire study is realized among the employees at different status, following these rates.

---

[15]   Sheng, Y.K., Shrestha, M., "The Development of Housing for Women Factoy Workers in Bangkok: A Case Study of Klong Luang District", **Habitat International,** 22(3): 313-326 (1998).

[16]   Arifin, L.S., Dale, R., "Housing needs of migrant women industrial workers in Surabaya: insight from a life story approach", **Habitat International,** 29: 215- 226 (2005).

[17]   Kayseri Organize Sanayi Bölgesi Müdürlüğü, "Brifing raporu", **Kayseri Organize Sanayi Bölgesi Müdürlüğü**, Kayseri, 1-9 (2006).

The determination of the housing/housing area demand study is carried out with analyses at the neighbourhood scale. A mathematical method is used in the determination of spatial concentration/preference regions at the neighbourhood analyses based on average values and standard deviation values. To determine the general tendencies, general average and standard deviation *(SD)* values are calculated according to the number of person related to the each variable in each neighbourhood instead of % rates. Certain concentration groups are determined with addition or substraction of these two values. There are 4 groups determined.
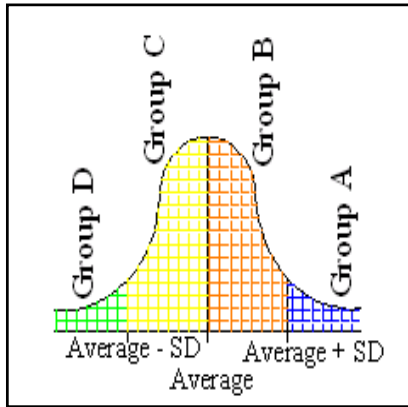
Group A : x >average value + standard deviation (x>average+SD)

Group B : average value <x< average value + standard deviation

(average<x<average+SD)

Group C : average value - standard deviation <x< average value

(average-SD<x<average)

Group D : x < average value - standard deviation (x<average-SD)

Figure 1. Concentration Groups

Group A and Group B values are over average value (general average). They express the high concentration areas. Group C and Group D values are below average value and they express the low concentration areas. Group A is expressed as the highest concentration areas and Group D is expressed as the lowest concentration areas. These groups are also used in the correlational evaluations of preference rates for each variable in the determination of demand indicators and demand differentiation of employees.

3. DISTRIBUTION OF INDUSTRIAL EMPLOYEES ACCORDING TO THE HOUSING AREAS

According to the results of the research, industrial employees are located in about 75 different neighbourhoods in the city. But, their concentration levels show differences according to the preference number of employees in each neighbourhood.
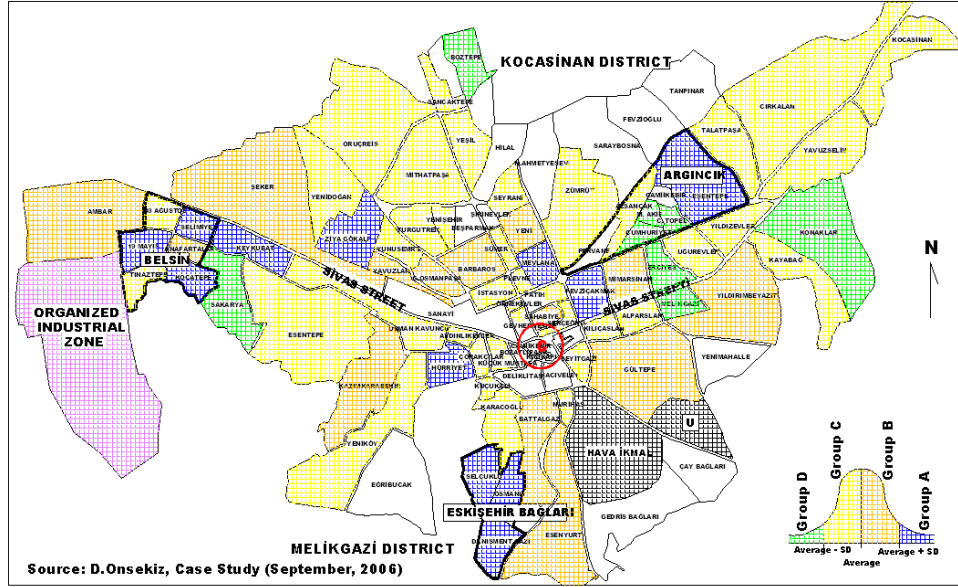
Map 1. The distribution of total industrial employees according to neighbourhoods

According to the resident number of employees in each neighbourhood, the neighbourhoods of Fevziçakmak, Mevlana, Ziyagökalp, Esentepe (Kocasinan), Kocatepe, 19 Mayıs, Selimiye, Keykubat, Hürriyet, Selçuklu, Osmanlı, Danışmentgazi are preferred mostly (Group A) by the **total industrial employees** for residential purposes (Map 1). These neighbourhoods have the highest concentration level and nearly half of the sample population (%42,97) is preferred living in these neighbourhoods. The main characteristics of these neighbourhoods are observed as the spatial concentration in the Eskişehir Bağları District and Belsin District (There are 3 main districts -Eskişehir Bağları, Argıncık, Belsin- in Kayseri city). Considering all neighbourhoods preferred by industrial employees, it is seen that, industrial employees reveal a homogenous distribution in many of the neighbourhoods in the city center and its periphery. The concentration rates are reduced as one moves further away from the Organized Industrial Zone.
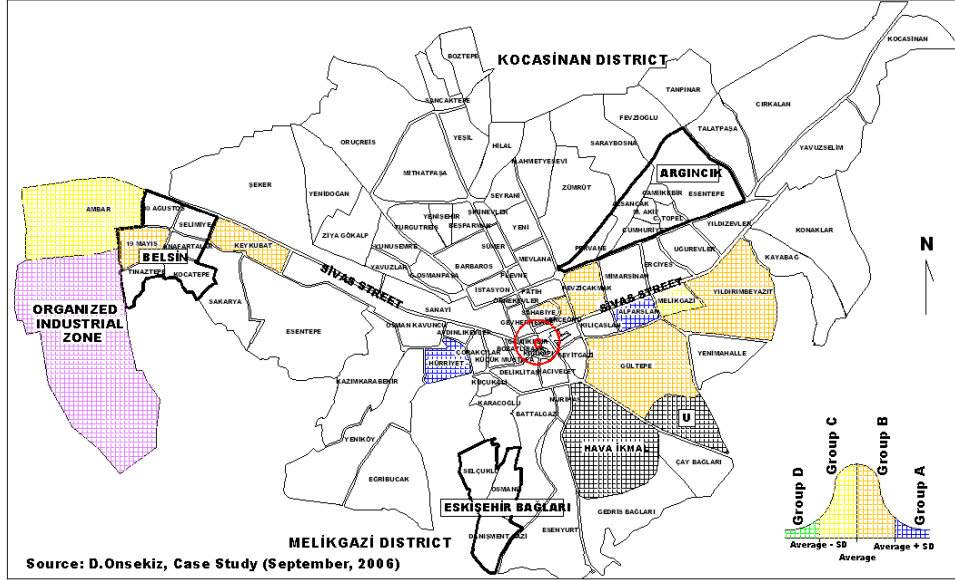
Map 2. The distribution of Managers according to the neighbourhoods

According to the resident number of **Managers** in each neighbourhood, the neighbourhoods of Hürriyet and Alparslan are preferred mostly (Group A) by the Managers for residential purposes (Map 2). These neighbourhoods have the highest concentration level. The rate of the %26,08 of the Manager population is preferred living in these neighbourhoods. Considering all neighbourhoods preferred by Managers, it is seen that, Managers reveal a homogenous distribution in many of the neighbourhoods around the university area in the periphery of the center and around the Organized Industrial Zone. For this reason Group D (the lowest concentration) neighbourhoods can not be found.

According to the resident number of **Technicians** in each neighbourhood, the neighbourhoods of Barbaros and Zümrüt are preferred mostly (Group A) by the Technicians for residential purposes (Map 3). These neighbourhoods have the highest concentration level. The rate of the %30 of the Technician population is preferred living in these neighbourhoods. Technicians are generally showed a spatial concentration in the north of the center and they are not preferred the neighbourhoods around the working area. In addition to this, when all residential neighbourhoods of Technicians are considered, it is seen that, they reveal a homogenous distribution in many of the neighbourhoods in the city center and its periphery. For this reason Group D (the lowest concentration) neighbourhoods can not be found.
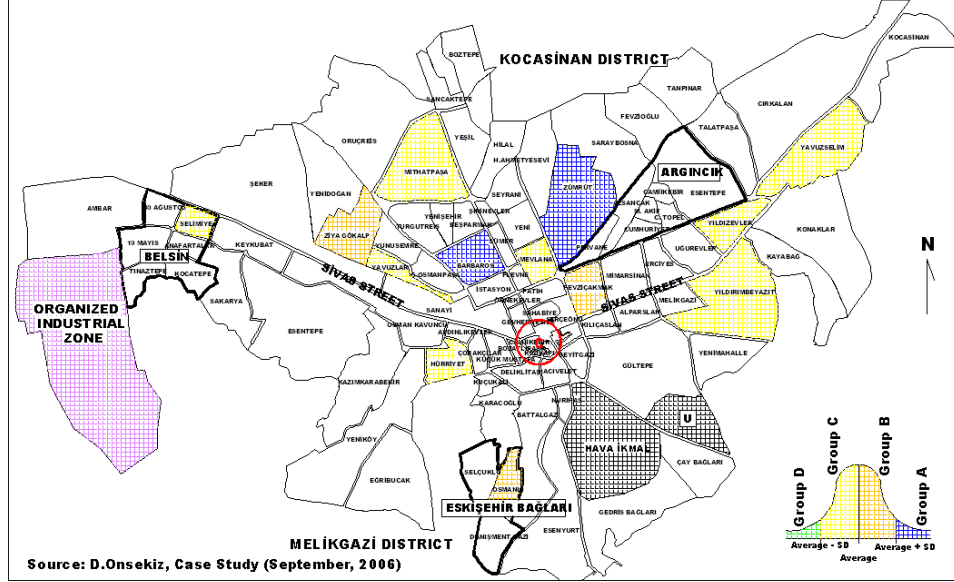
Map 3. The distribution of Technicians according to the neighbourhoods

According to the resident number of **Administrative Staff** in each neighbourhood, the neighbourhoods of Keykubat, Selçuklu, Yenişehir, Fevziçakmak, Alparslan, Gültepe are preferred mostly (Group A) by the Administrative Staff for residential purposes (Map 4). These neighbourhoods have the highest concentration level and the main characteristics of them are observed as the spatial concentration in the east of the center and the university area's periphery. The rate of the %37,31 of the Administrative Staff population is preferred living in these neighbourhoods. Considering all neighbourhoods preferred by Administrative Staff, it is seen that, Administrative Staff reveal a homogenous distribution in many of the neighbourhoods in the city center and its periphery. For this reason Group D (the lowest concentration) neighbourhoods can not be found.
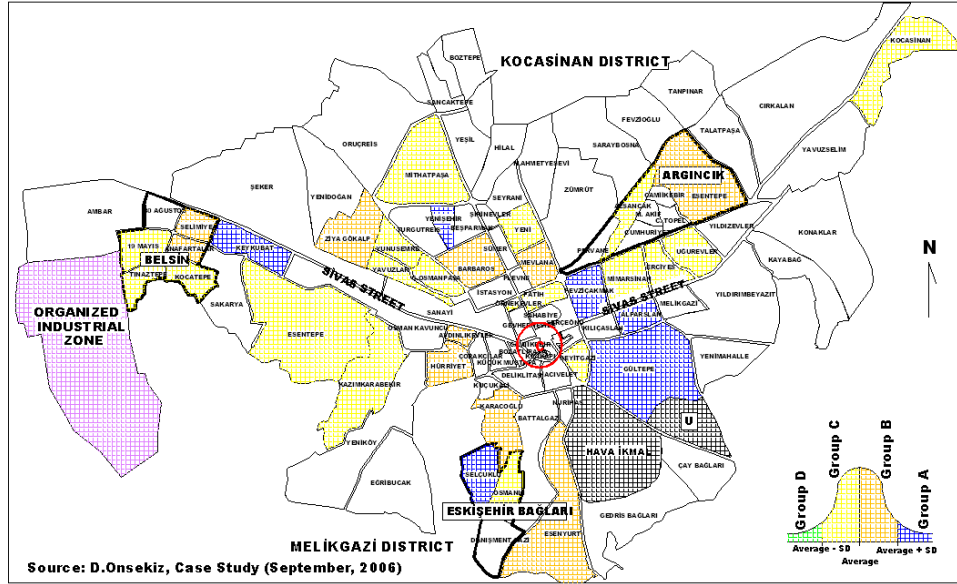
Map 4. The distribution of Administrative Staff according to the neighbourhoods
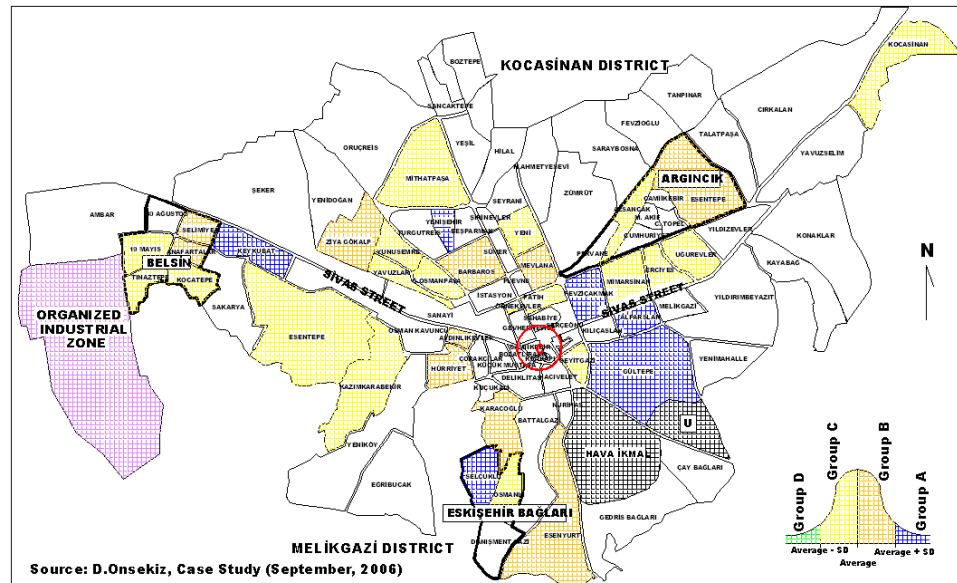
Map 5. The distribution of Foremen according to the neighbourhoods

According to the resident number of **Foremen** in each neighbourhood, the neighbourhoods of Keykubat, Ziyagökalp, Gaziosmanpaşa, Osmanlı are preferred mostly (Group A) by the Foremen for residential purposes (Map 5). These

neighbourhoods have the highest concentration level and it is observed that they are relatively the nearest neighbourhoods to Organized Industrial Zone. The rate of the %40,35 of the Foremen population are preferred living in these neighbourhoods. Considering all neighbourhoods preferred by Foremen, it is seen that, Foremen reveal a homogenous distribution in many of the neighbourhoods in the city center and its periphery. For this reason Group D (the lowest concentration) neighbourhoods can not be found.
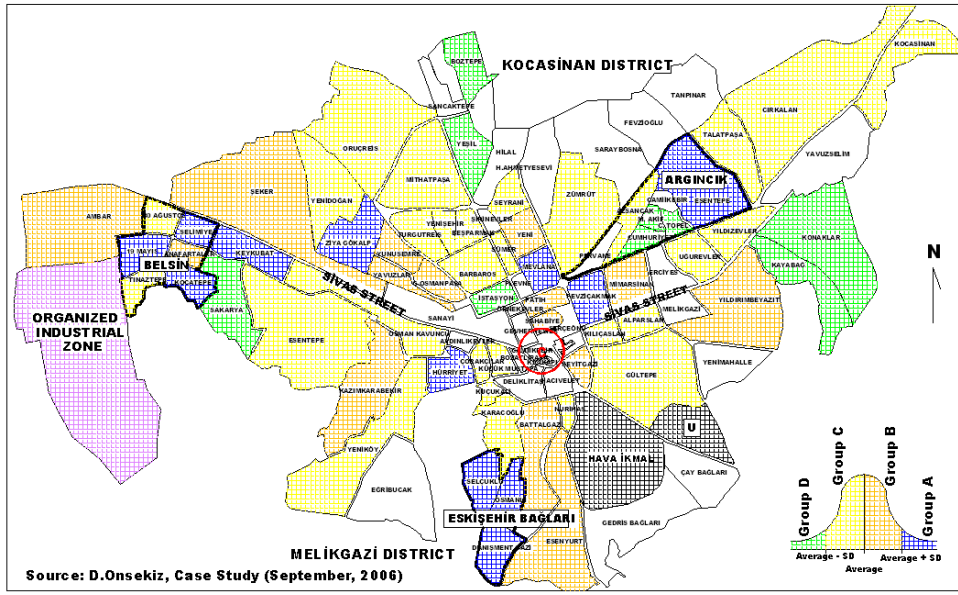
Map 6. The distribution of Workers according to the neighbourhoods

According to the resident number of **Workers** in each neighbourhood, the neighbourhoods of Fevziçakmak, Mevlana, Ziyagökalp, Esentepe, Kocatepe, 19 Mayıs, Selimiye, Keykubat, Hürriyet, Selçuklu, Osmanlı, Danışmentgazi are preferred mostly (Group A) by the Workers for residential purposes (Map 6). These neighbourhoods have the highest concentration level. The rate of the %42,94 of the Worker population is preferred living in these neighbourhoods. The main characteristics of these neighbourhoods are observed as the spatial concentration in the Eskişehir Bağları District and Belsin district (the nearest district to O.S.B.). Other neighbourhoods of the Group A -except these districts- are showed spatial distribution in the urban area.

Generally, industrial employees of the city are showed a homogenous distribution in the urban area. But spatial concentration differences are revealed according to the professional specialization levels in location. It is observed that, Workers and Foremen are located in the neighbourhoods of Belsin District and Eskişehir Bağları District. They are preferred the nearest housing areas to the

workplace. Administrative Staff and Managers are located in the periphery of the center and periphery of the univetsity area. So, they are prefered the nearest housing areas to the center. And Technicians are showed spatial distributitation in location.

4. ANALYSIS OF HOUSING/HOUSING AREA CHARACTERISTICS ACCORDING TO THE NEIGHBOURHOODS

Housing/housing area characteristics are analized with a developed model according to evaluations at the neighbourhood scale. In this model, main variables are evaluated according to their different criteria with the aid of a point system. Each variable is evaluated over 10 points or times to 10 points. Coefficients in the point system are determined in order to importance of each variable in the context of housing/housing area demand of industrial employees (Table 1). Main variables are:

- Housing Area Preference of Industrial Employees (10 Points)
- Housing (40 Points)
- Security (20 Points)
- Transportation (20 Points)
- Environment (40 Points)
- Culture (20 Points)
- Health (10 Points)
- Sports (10 Points)
- Infrastructure (30 Points)

Each neighbourhood is evaluated over total 200 points (Table 2). This model reveals the life quality characteristics of neighbourhoods (Table 3 and Map 7).

Table 1. Analizing Model of Housing/Housing Area Characteristics According to The Neighbourhoods

VARIABLES	CRITERIA	POINT EVALUATION SYSTEM	GroupA	GroupB	GroupC	GroupD	
HOUSING AREA PREFERENCE OF INDUSTRIAL EMPLOYEES 10 points	Number of resident in the neighbourhood	It is evaluated over 10 points. The SD groups are determined according to the number of resident in each neighbourhood.	10 points	7,5 points	5 points	2,5 points	
HOUSING 40 points — Physical characteristics of Housing 30 points	Housing size	It is evaluated over 10 points. The housing size (m2) is determined according to the neighbourhood's average value.	smaller than 100m2 — 2 points	100m2 — 4 points	101-150m2 — 6 points	151-200m2 — 8 points	200+m2 — 10 points
	Housing room number	It is evaluated over 10 points. The room number is determined according to the neighbourhood's average value.	1 room — 2 points	2 rooms — 4 points	3 rooms — 6 points	4 rooms — 8 points	5+ rooms — 10 points
	Building age	It is evaluated over 10 points. The SD groups are determined according to the average value of builing age in the neighbourhood. The points are distributed inversely portional according to the building age considering new-old situation.	GroupA — 2,5 points	GroupB — 5 points	GroupC — 7,5 points	GroupD — 10 points	
Infrastructure characteristics of Housing 10 points	Electricity	It is evaluated over 0,5 points. The SD groups are determined according to the existence of electricity use in the housing in the neighbourhood. The neighbourhoods without electricity use are evaluated with 0 points.	GroupA — 0,5 points	GroupB — 0,375 points	GroupC — 0,25 points	GroupD — 0,125 points	No usage — 0 points
	Water	It is evaluated over 0,5 points. The SD groups are determined according to the existence of water use in the housing in the neighbourhood. The neighbourhoods without water use are evaluated with 0 points.	GroupA — 0,5 points	GroupB — 0,375 points	GroupC — 0,25 points	GroupD — 0,125 points	No usage — 0 points

Table 1. (Continuation) Analizing Model of Housing/Housing Area Characteristics According to The Neighbourhoods

VARIABLES	CRITERIA	POINT EVALUATION SYSTEM	POINT CATEGORY				
			GroupA	GroupB	GroupC	GroupD	No usage
HOUSING 40 points — Infrastructure characteristics of Housing 10 points	Telephone	It is evaluated over 1 points.	1 points	0,75 points	0,5 points	0,25 points	0 points
		The SD groups are determined according to the existence of telephone use in the housing in the neighbourhood. The neighbourhoods without telephone use are evaluated with 0 points.					
	Natural Gas	It is evaluated over 2 points.	2 points	1,5 points	1 points	0,5 points	0 points
		The SD groups are determined according to the existence of natural gas use in the housing in the neighbourhood. The neighbourhoods without natural gas use are evaluated with 0 points.					
	Central Heating	It is evaluated over 2 points.	2 points	1,5 points	1 points	0,5 points	0 points
		The SD groups are determined according to the existence of central heating use in the housing in the neighbourhood. The neighbourhoods without central heating use are evaluated with 0 points.					
	Internet	It is evaluated over 1 points.	1 points	0,75 points	0,5 points	0,25 points	0 points
		The SD groups are determined according to the existence of internet use in the housing in the neighbourhood. The neighbourhoods without internet use are evaluated with 0 points.					
	Cable Television	It is evaluated over 1 points.	1 points	0,75 points	0,5 points	0,25 points	0 points
		The SD groups are determined according to the existence of cable tv use in the housing in the neighbourhood. The neighbourhoods without cable tv use are evaluated with 0 points.					

Table 1. (Continuation) Analizing Model of Housing/Housing Area Characteristics According to The Neighbourhoods

VARIABLES	CRITERIA		POINT EVALUATION SYSTEM	POINT CATEGORY				
				GroupA	GroupB	GroupC	GroupD	No usage
HOUSING 40 points	Infrastructure Characteristics	Setallite broadcasting	It is evaluated over 2 points. The SD groups are determined according to the existence of satellite broadcasting Use in the housing in the neighbourhood. The Neighbourhoods without satellite broadcasting use are evaluated with 0 points	2 points	1,5 points	1 points	0,5 points	0 points
				GroupA	GroupB	GroupC	GroupD	Safe area
SECURITY 20 points	Crime rate/security situation		It is evaluated over 20 points. The SD groups are determined according to the inversely portional rates of employees who stated High crime rates/inadequate security of their Neighbourhoods. Safe (no crime/adequate security) Neighbourhoods are evaluated over 20 points.	2,5 points	5 points	7,5 points	10 points	20 points
				GroupA	GroupB	GroupC	GroupD	Existence of problem
TRANS-PORTATION 20 points	Traffic and public transportation problems		It is evaluated over 10 points. The SD groups are determined according to the nonexistence rates of traffic and public Transportation problems in the neighbourhood. The neighbourhoods which have problems are evaluated with 0 points	10 points	7,5 points	5 points	2,5 points	0 points
				GroupA	GroupB	GroupC	GroupD	Existence of problem
	Car park/parking problems		It is evaluated over 10 points. The SD groups are determined according to the nonexistence rates of car park problems in the Neighbourhood. The neighbourhoods which have problems are evaluated with 0 points	10 points	7,5 points	5 points	2,5 points	0 points

Table 1. (Continuation) Analizing Model of Housing/Housing Area Characteristics According to The Neighbourhoods

VARIABLES	CRITERIA	POINT EVALUATION SYSTEM	POINT CATEGORY				
			GroupA	GroupB	GroupC	GroupD	
ENVIRONMENT 40 points	Environment pollution	It is evaluated over 10 points.	10 points	7,5 points	5 points	2,5 points	Existence of problem
		The SD groups are determined according to the nonexistence rates of environment pollution problems in the neighbourhood. The neighbourhoods which have problems are evaluated with 0 points.					0 points
	Arrangement/ designing deficiency of road and pavement	It is evaluated over 10 points.	GroupA 10 points	GroupB 7,5 points	GroupC 5 points	GroupD 2,5 points	Existence of problem
		The SD groups are determined according to the nonexistence rates of arrangement deficiency of road and pavement problems in the neighbourhood. The neighbourhoods which have problems are evaluated with 0 points.					0 points
	Children's park/playground area	It is evaluated over 10 points.	GroupA 10 points	GroupB 7,5 points	GroupC 5 points	GroupD 2,5 points	Inadequate area
		The SD groups are determined according to the sufficiency rates of children's park/playground area existence in the neighbourhood. The neighbourhoods which have inadequate usage/area existence are evaluated with 0 points.					0 points
	Park and sports area	It is evaluated over 10 points.	GroupA 10 points	GroupB 7,5 points	GroupC 5 points	GroupD 2,5 points	Inadequate area
		The SD groups are determined according to the sufficiency rates of park and sports area existence in the neighbourhood. The neighbourhoods which have inadequate usage/area existence are evaluated with 0 points.					0 points

53

Table 1. (Continuation) Analizing Model of Housing/Housing Area Characteristics According to The Neighbourhoods

VARIABLES	CRITERIA	POINT EVALUATION SYSTEM	POINT CATEGORY				
			GroupA	GroupB	GroupC	GroupD	Existence of problem
CULTURE 20 points	Deficiency of cultural building/foundation and activity	It is evaluated over 10 points. The SD groups are determined according to the nonexistence rates of deficiency of cultural building/foundation and activity problems in the neighbourhood. The neighbourhoods which have problems are evaluated with 0 points.	10 points	7,5 points	5 points	2,5 points	0 points
	Cinema, Theatre, Exhibition etc. uses	It is evaluated over 10 points. The SD groups are determined according to the sufficiency rates of cinema, theatre, exhibition etc. uses existence in the neighbourhood. The neighbourhoods which have inadequate usage/area are evaluated with 0 points.	10 points	7,5 points	5 points	2,5 points	Inadequate area 0 points
HEALTH 10 points	Village clinic, Out-patients' clinic, Hospital etc uses	It is evaluated over 10 points. The SD groups are determined according to the sufficiency rates of village clinic, out-patients' clinic, hospital etc uses existence in the neighbourhood. The neighbourhoods which have inadequate usage/area are evaluated with 0 points.	10 points	7,5 points	5 points	2,5 points	Inadequate area 0 points
SPORTS 10 points	Deficiency of sports area and activity	It is evaluated over 10 points. The SD groups are determined according to the non-living rates of deficiency of sports area and activity problems in the neighbourhood. The neighbourhoods which have problems are evaluated with 0 points.	10 points	7,5 points	5 points	2,5 points	Existence of problem 0 points

Table 1. (Continuation) Analizing Model of Housing/Housing Area Characteristics According to The Neighbourhoods

VARIABLES	CRITERIA	POINT EVALUATION SYSTEM	POINT CATEGORY				
			GroupA	GroupB	GroupC	GroupD	Existence of problem
INFRA-STRUCTURE 30 points	Infrastructure and sewerage system problem	It is evaluated over 10 points. The SD groups are determined according to the nonexistence rates of infrastructure and sewerage system problems in the neighbourhood. The neighbourhoods which have problems are evaluated with 0 points.	10 points	7,5 points	5 points	2,5 points	0 points
	Water problem	It is evaluated over 10 points. The SD groups are determined according to the nonexistence rates of water problems in the neighbourhood. The neighbourhoods which have problems are evaluated with 0 points.	10 points	7,5 points	5 points	2,5 points	0 points
	Rubbish and cleanliness problem	It is evaluated on/over 10 points. The SD groups are determined according to the nonexistence rates of rubbish and cleanliness problems in the neighbourhood. The neighbourhoods which have problems are evaluated with 0 points.	10 points	7,5 points	5 points	2,5 points	0 points

Table 2. The Evaluation of Housing/Housing Area Characteristics According to Analizing Model

Table 3. The Evaluation of Housing/Housing Area According to Total Life Quality Criteria and Total Points

NO	DISTRICT NAME	NEIGHBOURHOOD NAME	NEIGHBOURHOOD PREFERENCE (10 POINTS)	HOUSING (40 POINTS)	SECURITY (20 POINTS)	TRANSPORTATION (20 POINTS)	ENVIRONMENT (40 POINTS)	CULTURE (20 POINTS)	HEALTH (10 POINTS)	SPORTS (10 POINTS)	INFRASTRUCTURE (30 POINTS)	TOTAL (200 POINTS)	GROUP
1	kocasinan	fevziçakmak	10	19,75	20	7,5	25	12,5	7,5	5	15	122,25	A
2	kocasinan	ziyagökalp	10	21,25	7,5	10	20	10	5	5	15	103,75	B
3	melikgazi	hürriyet	10	21	7,5	12,5	22,5	12,5	5	5	15	111	B
4	melikgazi	keykubat	10	20,5	7,5	12,5	22,5	10	5	5	22,5	115,5	B
5	melikgazi	kocatepe	10	17,5	7,5	7,5	17,5	10	5	5	12,5	92,5	C
6	melikgazi	ondokuzmayıs	10	19	7,5	7,5	17,5	0	5	5	15	81,5	C
7	melikgazi	osmanlı	10	21,25	7,5	12,5	17,5	10	5	7,5	17,5	108,75	B
8	melikgazi	selçuklu	10	13,25	7,5	12,5	20	7,5	5	7,5	15	98,25	C
9	melikgazi	selimiye	10	15,25	7,5	10	25	5	7,5	5	20	105,25	B
10	kocasinan	barbaros	7,5	14,5	20	2,5	15	5	7,5	5	10	87	C
11	kocasinan	esentepe	7,5	16,5	7,5	12,5	20	10	5	5	17,5	101,5	B
12	kocasinan	gaziosmanpaşa	7,5	16,75	7,5	7,5	17,5	2,5	5	5	10	79,25	C
13	kocasinan	mevlana	7,5	19	20	12,5	30	10	7,5	5	22,5	134	A
14	kocasinan	mimarsinan	7,5	16,75	7,5	10	25	12,5	10	5	17,5	111,75	B
15	kocasinan	sahabiye	7,5	25,25	20	10	22,5	12,5	5	5	22,5	130,25	A
16	kocasinan	şeker	7,5	17,75	7,5	2,5	10	5	5	5	12,5	70,25	D
17	kocasinan	yavuzlar	7,5	16	5	10	17,5	5	2,5	5	17,5	86	C
18	kocasinan	yenimahalle	7,5	16,25	7,5	2,5	20	5	7,5	5	12,5	83,75	C
19	melikgazi	anafartalar	7,5	15,75	7,5	15	30	10	5	5	22,5	118,25	B
20	melikgazi	anbar	7,5	27,5	5	12,5	15	12,5	5	7,5	15	107,5	B
21	melikgazi	battalgazi	7,5	15,75	7,5	10	5	5	2,5	5	10	73,25	C
22	melikgazi	danışmentgazi	7,5	15,25	7,5	10	12,5	10	5	5	10	82,75	C
23	melikgazi	esenyurt	7,5	18,75	7,5	10	20	2,5	5	5	17,5	93,75	C
24	melikgazi	gültepe	7,5	27	7,5	10	30	10	7,5	0	17,5	129,5	A
25	melikgazi	kazımkarabekir	7,5	17,5	7,5	10	20	10	2,5	5	12,5	92,5	C
26	melikgazi	yıldırımbeyazıt	7,5	22,75	7,5	12,5	20	12,5	5	7,5	10	105,25	B
27	kocasinan	alsancak	5	21	20	15	17,5	7,5	5	5	7,5	103,5	B
28	kocasinan	cirkalan	5	17,25	20	12,5	20	7,5	0	5	20	107,25	B
29	kocasinan	fatih	5	16	20	5	17,5	7,5	5	5	12,5	98,75	B
30	kocasinan	gevhernesibe	5	16,75	7,5	7,5	20	7,5	2,5	10	22,5	133	A
31	kocasinan	kocasinan	5	23	20	17,5	25	7,5	2,5	10	2,5	83,25	C
32	kocasinan	mithatpaşa	5	25,75	7,5	10	7,5	10	7,5	0	0	65,5	D
33	kocasinan	örnekevler	5	23	2,5	0	17,6	7,6	10	0	0	75	C
34	kocasinan	sancaktepe	5	25	20	0	15	0	10	0	0	75	C
35	kocasinan	serçeönü	5	20,25	20	15	30	17,5	7,5	5	22,5	142,75	A
36	kocasinan	seyrani	5	16,75	20	12,5	22,5	5	10	5	15	111,75	B
37	kocasinan	talatpaşa	5	21	20	0	0	0	0	0	20	95,75	B
38	kocasinan	turgutreis	5	20,75	20	15	15	0	0	0	2,5	83,25	C
39	kocasinan	ugurevler	5	23,25	7,5	7,5	15	12,5	5	5	10	91	C
40	kocasinan	yavuzselim	5	23,5	20	10	5	10	0	7,5	10	75	C
41	kocasinan	yenidogan	5	22,5	20	7,5	0	7,5	5	7,5	10	80,25	C
42	kocasinan	yenişehir	5	20,25	20	5	7,5	5	2,5	5	10	98	B
43	kocasinan	yıldızevler	5	18	20	12,5	15	7,5	2,5	7,5	15	103,75	B
44	kocasinan	yunusemre	5	18,75	20	10	20	5	5	5	17,5	110,75	B
45	kocasinan	zümrüt	5	18,25	20	10	25	32,5	15	7,5	20	148,75	A
46	melikgazi	alparslan	5	26,25	20	15	5	5	0	5	0	66	D
47	melikgazi	aydınlıkevler	5	21	20	5	0	0	10	0	0	54,5	D
48	melikgazi	camiikebir	5	19,5	20	10	0	0	0	10	0	54,5	D
49	melikgazi	çorakçılar	5	18	7,5	12,5	17,5	7,5	2,5	5	15	90,5	C
50	melikgazi	esentepe	5	20	20	10	5	7,5	2,5	7,5	17,5	92,5	C
51	melikgazi	karacaoglu	5	16	7,5	10	12,5	7,5	2,5	7,5	17,5	86	C
52	melikgazi	kayabag	5	22,25	20	20	35	5	7,5	0	30	149,75	A
53	melikgazi	kılıçarslan	5	16,5	2,5	2,5	20	5	5	0	12,5	54	D
54	melikgazi	kiçikapu	5	19,5	2,5	20	10	10	0	10	30	107	B
55	melikgazi	küçükali	5	25,5	20	12,5	17,5	5	5	5	15	125,5	A
56	melikgazi	küçükmustafa	5	18,25	20	15	15	7,5	0	7,5	15	103,25	B
57	melikgazi	nurihas	5	13,5	20	0	22,5	0	10	0	0	71	C
58	melikgazi	osmankavuncu	5	21	5	10	15	5	2,5	0	17,5	81	C
59	melikgazi	otuzagustos	5	17,25	20	17,5	32,5	5	7,5	0	25	129,75	A
60	melikgazi	seyitgazi	5	15,5	5	12,5	30	12,5	10	7,5	20	118	B
61	melikgazi	tınaztepe	5	18,5	20	10	20	2,5	5	0	15	96	B
62	melikgazi	yeniköy	5	17	20	0	22,5	0	2,5	0	7,5	74,5	C
63	kocasinan	boztepe	2,5	19,5	20	0	10	0	0	0	0	52	D
64	kocasinan	cengiztopel	2,5	11	20	10	10	0	10	0	30	93,5	C
65	kocasinan	cumhuriyet	2,5	17,5	20	0	0	0	0	0	0	40	D
66	kocasinan	erciyes	2,5	27,25	20	0	20	10	10	0	0	89,75	C
67	kocasinan	istasyon	2,5	17,75	20	7,5	15	0	0	0	0	67,75	D
68	kocasinan	mehmetakifersoy	2,5	15,75	20	0	30	0	5	0	22,5	110,75	C
69	kocasinan	oruçreis	2,5	20	20	0	15	0	10	0	10	82,5	C
70	kocasinan	plevne	2,5	17,5	20	0	0	0	0	0	10	50	D
71	kocasinan	sümer	2,5	17,5	20	10	20	10	10	10	20	120	B
72	kocasinan	yeşilmahalle	2,5	15,75	20	7,5	7,5	7,5	0	7,5	0	68,25	D
73	melikgazi	konaklar	2,5	17,75	20	10	20	10	10	10	30	130,25	A
74	melikgazi	melikgazi	2,5	27,25	20	10	30	10	10	0	30	139,75	A
75	melikgazi	sakarya	2,5	15,5	20	0	0	0	0	0	10	48	D

According to the evaluations of total life quality and each criterion -one by one- (housing, security etc), 30 Ağustos, Küçükali, Serçeönü, Mimarsinan, Erciyes, Alparslan, Melikgazi, Kayabağ and Gültepe are determined as the neighbourhoods which have the highest urban life quality level (Group A) (Map 7). These neighbourhoods constitute the rate of %13,3 of total 75 neighbourhoods preferred by industrial employees. They are also the low concentration areas and demand rate of these neighbourhoods is low among the industrial employees. They are preferred by the %11,3 of the sample employee population. These neighbourhoods are showed spatial concentration in the east of the center around the university area and surroindings area of Sivas Street (most busy street of the city). The main cause of the spatial concentration in these regions is the possibilities obtaining from the

city center. It is obvious that the neighbourhoods which take place in the east of the city center have high life quality level relatively the other neighbourhoods. These neighbourhoods are demanded by the high specialization levels (Manager, Administrative Staff) and high income groups (upper-income, upper-middle income groups).
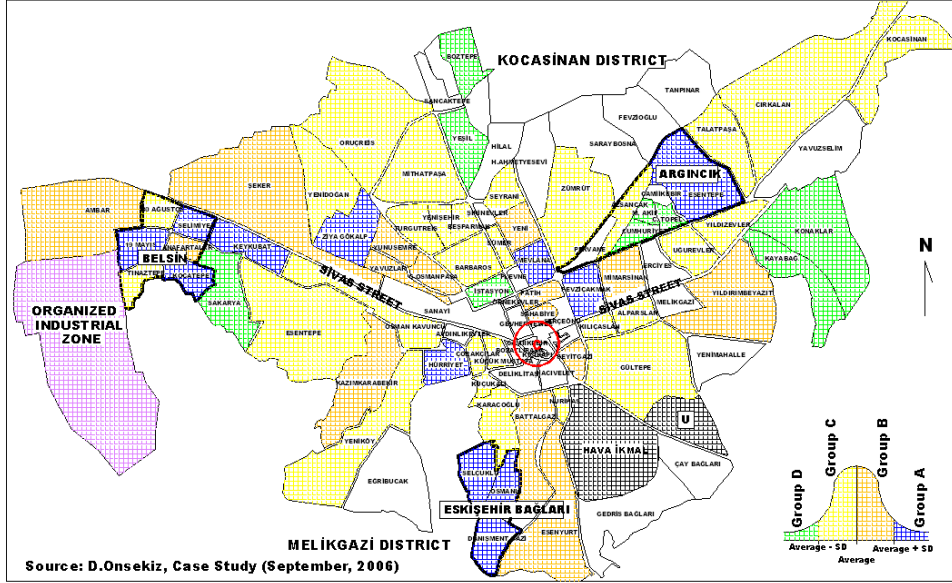
Map 7. The evaluation of neighbourhoods according to the total life quality

According to the total point evaluations, the life quality level is low at the neighbourhoods which preferred mostly by the total industrial employee (Esentepe (Argıncık District), Mevlana, Fevziçakmak, Ziyagökalp, Hürriyet, Selçuklu-Osmanlı-Danışmentgazi (Eskişehirbağları District), Keykubat-Selimiye-19 Mayıs-Kocatepe (Belsin District) neighbourhoods). But, housing and transportation values are relatively high to the other characteristics in the evaluation of life quality of these neighbourhoods. For this reason, it is inferred that, the quality values of housing and transportation are determinative factors in the demand of housing/housing area for the industrial employees.

5. HOUSING/HOUSING AREA DEMAND INDICATORS AND DEMAND DIFFERENCES OF INDUSTRIAL EMPLOYEES

"A second model" is developed and used to put forward the preference causes of the 75 neighbourhoods and to determine the demand indicators of housing/housing area. Each neighbourhood is evaluated with a letter according to the level of demand/preference/rate in the model. By way of the model, effective

demand determinants and characteristics are examined and evaluated. With user groups, differences on demand levels are stated according to the determination of preferences on the housing/housing area (Table 4).

The letters used in the model are;

A: Highest demand/preference/rate/value
B: High demand/preference/rate/value
C: Low demand/preference/rate/value
D: Lowest demand/preference/rate/value
E: Not demanded / Not preferred

The income levels of the industrial employees show differences according to the professional specialization level (Manager, Administrative Staff, Technician, Foreman, Worker) and number of working people in the family. "These differences at income level" directly impress the housing/housing area preference.

It is seen that generally Managers and Administrative Staff are living in the neighbourhoods preferred by the **upper income groups** (upper income and upper-middle income). Upper income groups are defined with the characteristics of high wages, high education levels and number of working people in the family. Household size of the upper income groups are smaller than average value (4,5), so they showed no-clear family characteristics. Host rate (level) is high among these households. The upper-income group is preferred to live in big flats (bigger than 150m2) on high-rise apartment houses. Housing size and building quality characterstics (no need of maintenance/restoration) are determinative factors in housing preferences for upper income groups.

Table 4. Housing/Housing Area Demand Indicators According to The Neighbourhoods

NEIGHBOURHOOD PREFERENCE/ CONDENSATION LEVEL	DISTRICTS	NEIGHBOURHOODS	Manager	Technician	Administrative Staff	Foreman	Worker	Upper-income Group	Upper-middle income Group	Lower-middle income Group	Lower-income Group	household-size	number of working people in the family	education level	host	tenant	not host and not pay hire	monthly hire cost	high-rise apartment	3-5 floored apartment	detached housing	squatter housing	wide housing	good heating	light condition	nearness to workplace	building newness and comfort conditions sufficiency	maintenance/restoration need	infrastructure services in	cheap housing	safe environment	urban environment-infrastructure quality	nearness to social accessories and services	nearness to workplace	transportation/public transportation possibilities	relatives/friends/below-citizens existence	silent-noiseness living area	neighbourhood life quality	familiar environment	developing urban distinct
HIGHEST PREFERENCE	melikgazi	kocatepe	E	E	C	A	A		X			C	B	B	A	A	C	C	A	B	A	E	C	B	B	A	B	A	A	A	B	D	B	A	A	C	A	C	E	D
	kocasinan	fevziçakmak	B	B	A	C	A		X			C	B	C	A	A	A	B	A	A	C	E	A	A	A	E	A	A	C	A	C	A	E	A	A	A	B	B	B	A
	melikgazi	keykubat	B	E	A	A	A		X			C	B	B	A	A	C	C	A	A	B	C	A	A	A	A	A	A	A	A	C	B	A	A	C	A	C	C	C	B
	kocasinan	ziyagökalp	E	B	B	A	A			X		B	B	C	A	A	C	C	A	B	A	B	A	A	A	B	A	B	A	B	A	C	B	B	A	B	A	B	A	D
	melikgazi	hürriyet	A	C	B	E	A		X			B	B	B	A	A	C	A	A	C	E	A	A	B	A	B	B	A	A	A	B	B	B	A	A	A	B	A	A	A
	melikgazi	osmanlı	E	B	C	A	A			X		C	B	C	A	A	C	C	C	B	A	B	B	C	C	C	C	B	A	B	B	B	C	C	B	B	B	B	C	E
	melikgazi	selimiye	E	C	B	C	A			X		C	B	B	A	A	C	A	A	B	C	E	A	A	A	A	A	B	A	B	A	C	B	A	A	C	A	C	A	E
	melikgazi	selçuklu	E	E	A	A	E	A			X	B	A	C	D	C	C	A	E	B	A	A	C	B	A	B	A	A	B	C	C	A	B	C	A	B	E	D
	melikgazi	ondokuzmayıs	B	E	C	C	A		X			C	B	B	B	A	C	C	A	C	E	E	B	B	B	A	C	B	A	A	B	C	B	A	B	C	B	C	E	E
	kocasinan	esentepe	E	E	B	C	A			X		B	B	C	A	B	B	D	C	C	A	E	A	C	B	E	B	B	A	B	B	C	B	E	B	A	C	A	B	C
	melikgazi	mevlana	E	C	B	C	A		X			B	B	B	A	A	B	C	B	B	A	C	E	A	A	A	A	E	B	B	A	C	C	C	C	B	B	A	C	C
	melikgazi	danışmentgazi	E	E	E	B	A			X		C	B	D	B	B	C	D	C	C	A	A	E	C	C	C	C	C	B	B	A	C	C	C	C	E	C	C	C	C
HIGH PREFERENCE	melikgazi	esenyurt	E	E	B	E	B		X			C	B	B	C	B	B	C	B	C	C	B	B	B	C	B	B	A	C	A	C	C	C	B	A	A	C	C	C
	kocasinan	barbaros	E	A	B	B	C			X		C	B	B	C	B	C	C	B	C	C	E	B	B	B	C	B	B	B	B	C	B	C	B	B	C	C	E
	kocasinan	mimarsinan	E	E	C	C	B		X			C	B	B	B	B	C	C	A	C	E	B	B	B	E	E	A	B	C	A	A	A	E	B	C	B	A	C	B
	kocasinan	yenimahalle	E	E	C	E	B		X			B	B	B	A	B	C	C	B	B	E	C	E	E	C	B	C	E	C	E	C	B	C	C	E	B	C	C	E
	kocasinan	yavuzlar	E	C	C	C	B			X		C	B	C	C	B	E	D	C	B	C	A	C	C	B	C	E	B	C	B	C	C	C	C	B	C	C	C	E
	melikgazi	kazımkarabekir	E	E	C	B	E			X		C	C	C	B	C	A	E	C	A	C	C	C	C	D	B	C	E	B	C	C	C	C	B	C	B	C	E
	kocasinan	gaziosmanpaşa	E	E	C	A	B			X		B	B	C	B	C	D	C	C	C	B	E	C	C	E	B	B	B	C	C	C	C	C	B	C	C	E	E
	melikgazi	anafartalar	E	E	B	E	B			X		C	B	C	C	B	C	C	E	C	C	B	B	B	B	C	E	B	B	C	B	C	E	B	B	B	B	B
	melikgazi	yıldırımbeyazıt	B	C	E	B	B		X			C	C	C	A	C	C	D	C	E	A	E	A	A	A	A	E	B	C	B	A	C	C	A	B	B	A	B
	kocasinan	sahabiye	B	E	E	E	B			X		C	B	B	C	B	E	D	B	C	C	E	C	A	B	C	E	C	B	B	C	D	C	B	C	C	B	D
	kocasinan	şeker	E	E	E	E	B		X			B	B	A	C	E	D	E	C	B	E	C	C	B	E	B	B	B	C	C	C	B	C	C	C	B	C	E
	melikgazi	anbar	C	E	E	E	B			X		B	B	B	C	C	C	D	C	C	B	E	C	C	B	B	C	B	B	B	C	C	C	B	C	B	C	E
	melikgazi	battalgazi	E	E	E	B	B			X		B	B	D	B	C	C	D	C	E	B	C	B	C	C	C	C	B	C	E	C	D	C	C	D	C	D	D
	melikgazi	gültepe	B	E	A	E	C		X			C	B	A	B	E	E	D	B	E	E	A	A	A	E	A	C	A	C	A	A	C	C	C	A	A	E	A
LOW PREFERENCE	melikgazi	fatih	E	E	C	E	B		X			C	B	B	C	C	B	C	B	C	C	B	C	E	C	B	C	B	C	C	C	C	E	B	B	B	C	E
	kocasinan	yenişehir	E	E	A	E	C		X			B	B	C	B	B	B	C	E	B	C	C	C	C	B	E	C	B	C	C	C	E	B	B	B	C	C	E
	kocasinan	yunusemre	E	E	C	E	B			X		B	B	C	C	C	D	C	C	B	C	C	C	C	B	C	E	C	B	C	C	E	B	C	C	B	C	E
	melikgazi	alparslan	A	E	A	E	C	X				C	B	A	E	C	E	E	B	C	E	A	B	A	E	A	B	A	C	B	A	A	A	B	A	C	B	A
	melikgazi	esentepe	E	E	C	C	C		X			C	B	C	C	E	C	C	C	C	C	B	C	C	B	C	B	C	B	B	E	B	B	B	B
	melikgazi	karacaoglu	E	E	B	E	C			X		A	D	C	C	C	D	C	C	C	A	C	B	C	C	B	D	C	E	A	D	C	E	C	C	C	B	E
	melikgazi	seyitgazi	E	E	C	E	B			X		C	B	C	B	C	E	C	E	C	B	B	B	E	C	B	C	C	A	B	B	B	E	C	E	E
	melikgazi	tinaztepe	E	E	C	C	C	X				C	B	B	C	C	E	B	E	E	C	C	C	C	B	B	C	B	C	B	C	B	B	B	E	C	C	E	E
	kocasinan	serçeönü	B	E	E	E	C	X				C	B	B	D	B	E	C	C	E	C	C	C	C	C	C	B	C	D	C	C	C	A	A	E	C	C	A	E
	kocasinan	cirkalan	E	E	E	E	C	X				C	C	C	C	C	C	C	E	C	C	C	C	C	C	D	C	C	C	C	C	C	C	E	E	C	C	C
	kocasinan	mithatpaşa	E	C	C	B	C	X				C	B	C	B	C	C	B	D	E	C	C	E	C	E	B	B	C	C	C	C	C	B	C	B	C	E	C
	melikgazi	çorakçılar	E	E	E	E	C	X				C	B	C	E	C	A	E	C	E	C	B	C	B	E	A	B	C	B	A	A	B	B	A	C	A	A	E	E
	melikgazi	kayabag	E	E	E	E	C	X				C	B	C	E	C	A	E	C	E	C	B	C	C	C	B	E	A	E	B	C	B	A	A	E	B	C	B	E	C
	kocasinan	kocasinan	E	E	C	E	C	X				C	B	B	C	C	E	E	C	E	E	B	E	C	E	E	B	C	B	C	B	B	E	C	C	C	B	C	E
	kocasinan	ugurevler	E	E	C	E	B			X		C	B	C	D	C	E	B	E	E	C	E	E	B	C	B	C	B	B	B	E	C	C	E	B	C	E
	melikgazi	küçükmustafa	E	E	E	C	C			X		C	C	D	D	C	C	E	D	C	C	E	C	C	C	E	C	C	E	C	E	C	C	E	C	C	E	E
	melikgazi	osmankavuncu	E	E	E	B	C			X		C	B	C	E	E	C	E	E	C	C	C	C	E	C	C	B	E	B	C	C	C	E	C	C	C	E	E
	kocasinan	zümrüt	E	A	E	E	C	X				B	B	A	C	C	C	C	C	C	C	C	C	E	C	C	C	B	C	C	C	B	B	C	E	C	B	E
	melikgazi	yeniköy	E	E	E	E	C			X	D	C	B	C	C	C	C	C	C	E	E	D	C	C	C	C	D	C	C	C	C	E	C	C	B	E	E
	kocasinan	alsancak	E	E	E	E	C			X		C	B	C	C	C	D	C	C	E	C	C	C	C	C	C	C	C	C	C	E	C	C	C	E	E
	kocasinan	gevhernesibe	E	E	E	C	C			X		A	B	E	E	E	E	E	C	E	C	C	C	E	C	C	C	C	A	C	C	C	A	C	C	B	E
	kocasinan	yenidogan	E	E	A	A	D			X		A	A	D	E	A	E	E	B	E	E	E	B	E	E	B	E	C	C	E	C	C	E	C	C	A	E
	melikgazi	küçükali	E	E	E	B	C			X		C	B	C	E	C	E	C	C	C	C	E	D	C	C	C	C	A	C	C	C	C	A	E	E
	melikgazi	otuzagustos	E	E	E	E	C			X		C	C	C	E	E	C	C	C	C	C	C	D	C	E	B	C	C	C	C	C	C	C	C	E
	melikgazi	aydınlıkevler	E	E	B	E	C	X				C	B	C	D	C	E	E	E	C	C	C	C	C	C	E	E	D	C	C	C	C	C	C	E
	melikgazi	kılıçarslan	E	E	E	E	C			X		C	B	C	D	E	E	B	E	E	E	E	E	C	C	C	B	E	E	C	C	D	E	C
	kocasinan	seyrani	E	E	E	E	C			X		B	C	C	E	E	E	E	C	E	E	E	E	C	C	C	C	C	A	C	C	C	C	A	C
	kocasinan	turgutreis	E	C	E	E	C			X		C	C	E	E	E	E	E	C	E	C	C	D	E	D	C	E	B	C	C	C	C	C	B	C	E
	kocasinan	yıldızevler	E	E	E	E	C				X	C	B	D	D	C	E	B	E	C	C	C	D	E	D	C	E	B	C	E	C	C	C	B	C	E
	melikgazi	nurihas	E	E	E	E	C				X	C	C	B	C	C	E	E	E	C	E	E	E	E	D	C	E	C	C	C	E	E	C	C	C	E
	kocasinan	sancaktepe	E	E	E	E	C			X		C	C	C	E	C	C	E	C	E	C	C	C	C	C	C	C	C	C	E	E	E	C	C	C
	kocasinan	talatpaşa	E	E	E	C	C	X				A	B	D	C	D	E	E	C	C	C	E	C	C	C	E	E	A	E	E	A	E	C	D	E	E
	kocasinan	yavuzselim	E	E	C	E	D			X		C	B	B	E	E	C	C	C	C	C	A	C	C	A	C	E	E	A	C	E	C	D	E	E
	kocasinan	istasyon	E	E	E	C	D	X				C	A	C	E	B	C	C	E	C	C	B	C	C	C	E	E	C	E	E	E	E	E	E
	kocasinan	mehmetakifersoy	E	E	E	C	D			X		C	A	D	E	C	E	C	C	C	D	C	C	C	C	C	E	C	E	C	C	C	E
	kocasinan	oruçreis	E	E	E	C					X	A	C	D	E	E	C	E	C	E	C	E	C	C	C	C	E	E	C	E	C	C	E
	kocasinan	örnekevler	C	C	E	E	E	X				C	B	B	D	D	E	A	E	E	C	E	C	C	C	D	A	E	E	C	D	E	E
	kocasinan	plevne	E	E	E	E	C		X			A	B	A	C	E	E	E	C	E	C	C	C	C	E	C	E	D	E	E	C	D	E	E
	kocasinan	sümer	E	E	E	E	C				X	C	B	B	D	E	E	E	C	E	E	C	C	E	C	E	E	E	E	E	C	C	C	E
	kocasinan	yeşilmahalle	E	E	E	C	D			X		D	C	D	D	E	E	E	C	C	C	C	C	C	B	E	D	E	E	E	E	C	C	C	E
	melikgazi	camikebir	E	E	E	E	C				X	C	C	B	D	E	E	A	D	C	E	C	C	C	E	B	E	B	E	E
	melikgazi	kiçikapu	E	E	E	E	C				X	C	C	B	E	C	A	E	D	E	A	C	E	C	E	E	C	B	E	E
LOWEST PREFERENCE	kocasinan	boztepe	E	E	E	E	D	X				D	C	A	D	E	E	E	C	C	C	D	E	D	E	C	D	E	B	C	E	D
	kocasinan	cengiztopel	E	E	E	D		X				D	C	A	D	E	E	E	C	C	C	E	E	D	C	E	C	C	C	E	E
	kocasinan	cumhuriyet	E	E	E	D				X		B	C	D	D	E	E	E	E	E	C	D	C	E	D	D	C	C	C	D	E
	kocasinan	erciyes	E	E	C	E		X				C	C	A	E	C	E	E	C	C	E	E	C	E	E	A	E	E	C	A	E	E
	melikgazi	konaklar	E	E	E	E	D		X			B	B	D	D	E	E	E	C	E	E	E	D	C	C	A	E	E	C	B	E	E
	melikgazi	melikgazi	C	E	E	E	E	X				D	E	E	E	E	E	E	C	E	E	E	E	D	C	E	C	A	C	A	E	E
	melikgazi	sakarya	E	E	E	D		X				A	B	A	D	E	E	E	C	E	E	E	E	D	C	E	C	A	E	C	E	E

The existence of housing infrastructure services, nearness to urban social accessories and services, life quality of neighborhood are determinative factors in housing area location preferences for upper income groups. It is observed that the neighbourhoods which take place around the city center and the university area, and which have urban social and technical services at high level are preferred by the upper income groups and they showed spatial concentration in these neighbourhoods. The existence and/or accessibility of urban services, in other words, the characteristics related to the living environment are the main housing/housing area demand indicators for upper income groups in the preference.

It is seen that generally Technicians, Foremen and Workers are living in the neighbourhoods preferred by the **lower income groups** (lower-middle income and lower income). Lower income groups are defined with the characteristics of low wages, low education levels and number of working people in the family. Household size of the lower income groups are bigger than average value (4,5) so they showed traditional family characteristics. Tenant rate (level) is high among these households. The lower-income group is preferred to stay at small detached housings (100-120m2). Cheap housing and existence of housing infrastructure services are determinative factors in housing preference.

Cheap housing, nearness to workplace and characteristics related to public transportation possibilities are determinative factors in housing area location preference for lower income groups. It is observed that the nearest neighbourhoods (Belsin District) to the Organized Industrial Zone and cheap housing areas (Eskişe-hir Bağları District) are preferred by the lower income groups and they showed spatial concentration in these neighbourhoods. The accessibility to working area and housing costs are the main housing/housing area demand indicators for lower income groups in the preference.

The demand indicators of different specialization groups/levels showed differences according to the characteristics of preferred areas (Table 5). It is an important data for location in the context of planning.

5.1. The Differentiation of Demand Indicators According to The Professional Specialization Levels

For **Managers,** housing size and light condition characteristics are the main indicators determined the "housing demand". As well as infrastructure characteristics of housing, urban environment and infrastructure quality, nearness to social accessories and services, familiar environment, the existence of relatives/friends/fellow citizens and developing urban district characteristics are the main indicators determined the "housing area demand". It is observed that, living environment characteristics are more effective on the formation of housing/housing area demand than housing characteristics for Managers. Urban environment quality, social and technical infrastructure possibilities and social environment

61

characteristics are "the main distinctive indicators" determined the housing/housing area demand for Managers.

For **Administrative Staff,** building newness and sufficiency of comfort conditions, heating situation, light condition characteristics are the main indicators determined the "housing demand". As well as infrastructure characteristics of housing, safe environment characteristics are the main indicators; nearness to social accessories and services, silent-noiseless living environment and developing urban district characteristics are the secondary determinative indicators determined the "housing area demand". As Managers, it is observed that, living environment characteristics are more effective on the formation of housing/housing area demand than housing characteristics for Administrative Staff. Safe environment, silent-noiseless living environment, nearness to social accessories and services and developing urban district characteristics are "the main distinctive indicators" determined the housin/housing area demand for Administrative Staff.

For **Technicians,** housing size, heating situation, light condition characteristics are the main indicators determined the "housing demand". Infrastructure characteristics of housing, transportation/public transportation possibilities, silent-noiseless living environment characteristics are the main indicators determined the "housing area demand".

Table 5. The Difference of Demand Indicators According to the Professional Specialization Levels

SPECIALIZATION/ DEMAND INDICATORS		MANAGER	A.STAFF	TECHNICIAN	FOREMAN	WORKER
HOUSING CHARACTERISTICS	Housing size	●		●		●
	Heating situation		●	●		●
	Light condition	●	●	●		●
	Building newness, comfort conditions		●		●	●
	Maintenance/ restoration situation					
	Cheap housing				●	●
	The existence of housing infrastructure	●	●	●	●	●
TRANS-PORTATION	Transportation/ Public transportation		●	●	●	
	Nearness to workplace				●	●
SECURITY	Low crime rates and safe environment		●			
TECNICAL INFRA-STRUCTURE	The quality of urban environment and infrastructure	●				
SOCIAL INFRA-STRUCTURE	Nearness to social accessories and services	●	●			
	Life quality in the neighbourhood	●	●			
SOCIAL ENVIRONMENT	The existence of relatives, friends, fellow citizens	●				
	Silent-noiseless living environment		●	●	●	
	Familiar environment-long time dwelling	●				

For **Foremen,** nearness to workplace, building newness and sufficiency of comfort conditions characteristics are the main indicators determined the "housing demand". Nearness to workplace, cheap housing, transportation/public transportation possibilities, the existence of infrastructure services in housing, silent-noiseless living environment characteristics are the main indicators determined the "housing area demand". The accessibility characteristics between housing area and working area and housing costs are "the main distinctive indicators" determined the housing/housing area demand for Foremen.

For **Workers,** as well as housing size, heating situation, light condition characteristics, nearness to workplace, building newness and sufficiency of comfort conditions characteristics are the main indicators determined the "housing demand". Nearness to workplace, cheap housing and the infrastructure services characteristics are the main indicators determined the "housing area demand". As Foremen, the accessibility characteristics between housing area and working area and housing costs are "the main distinctive indicators" determined the housing/housing area demand for Workers.

6. CONCLUSION

At the end of the study, professional specialization level (Manager, Administrative Staff, Technician, Foreman, Worker); income level and social status (total family income and comfort conditions); family profile and household characteristics (household size, number of the working people in the family, education level); ownership characteristics (host, tenant); the physical characteristics of housing (size, heating situation, light condition, building newness, sufficiency of comfort conditions (maintenance/ restoration/reparation needs); housing costs; accessibility to working area (nearness to workplace, transportation and public transportation possibilities); accessibility to urban services (park, children park, the existence of culture, health, sports services); social environment (existence of relatives, friends, fellow citizens) characteristics/factors are stated as the main determinative indicators of housing/housing area demand.

Another invention that obtained from the study is, "the professional specialization level differences" are determinative in the housing/housing area demand of industrial employees.

Managers are preferred housing size independent from economic values/costs. Light conditions and technical infrastructure are preference reasons which complete these characteristics. Managers are used their preferences according to the places which reflect their status, independent from the distance of the working area. Demand of dweeling with a relative in the same neighbourhood put forward the importance of social communication in the view of the relation point.

Administrative Staff is considered the existence of comfort conditions and infrastructure possibilities disregarding the housing cost. The light condition is evaluated in this context, depending on comfort conditions. The distance to workplace is not important, but in the meaning of accessibility, nearness to public transportaion stops gains importance for Administrative Staff. Attributing importance to the location in the neighbourhoods which have low crime rate characteristics, is put forward for the family security as a factor. The life quality of the neighbourhood directly effects the preference of location. Social accessories and nearness to areas which show basic characteristics are both preference factors. Silent and quiet environments are preferred depending on the choice of comfortable and safe living areas.

Technicians have preferences according to housing quality and the comfort level in the housing. The size is not very important among high comfort level but high quality and high infrastructure level characteristics are determinative in the preference of housing. The housing cost is a secondary important factor. Attributing importance to living environment, Technicians are preferred to be near to the transportation possibilities. Nearness to central areas and social accessories and services are not preference factors. But silent and quiet living areas are firstly important factors in the preference.

Foremen show differences from the other specialization levels -those explained before- in the preference of housing considering low costs. As well as low costs, new and quality building and adequate infrastructure possibilities are the preference factors of housing. Today, the cooperative housing finance model in the city of Kayseri can supply adequate and appropriate housing to meet these needs. Silent and stationary living environment is the main factor and living environment and urban service needs are the secondary determinative factors for the preference. Depending on cheap housing preference, not housing characteristics but some of the other positive values of the living environment are ignored.

Workers are firstly preferred cheap housing which are near to workplaces. In addition to this, they are used their preference according to the buildings which have physical quality and infrastructure possibilities among the cheap ones. Living environment, social possibilities, technical infrastructure and social infrastructure characteristics are secondary determinative factors -have less effect- in the preference according to the cost-utility calculation. The low income level and the low cost production of labour/work structure are supplied to obtain cheap and quality housing. Housing production processes are enabled the appropriate/suitable production of housing devoted to the needs of Workers.

As the result, housing area-working area accessibility, urban life quality, income and status differences are determined the housing/housing area demand in the urban area. Also, the differences at the professional specialization level reveal the distinction of the urban region in the preference of housing area. In the context of life quality, culture and income characteristics, behaviour styles of industrial

employees show differences according to the their status. In the planning process, both the spatial tendencies/preferences of industrial employees and their different behaviours related to the professional specialization levels are revealed determinative attributes in the formation of living environment. For this reason, the consideration of these attributes is necessary and important.

REFERENCES

Amerigo, M., Aragones, J.I., "A Theorical And Methodological Approach To The Study of Residential Satisfaction", *Journal of.Environmental Psychology,* 17: 47- 57 (1997).

Amerigo, M., "A Psychological Approach To The Study of Residential Satisfaction". In: Residential Environments: Choice, Satisfaction, and Behavior, *Bergin&Garvey*, Westport, Connecticut, London, 81-100 (2002).

Arifin, L.S., Dale, R., "Housing Needs of Migrant Women Industrial Workers in Surabaya: Insight from a Life Story Approach", *Habitat International,* 29: 215- 226 (2005).

Blau, F., Beller,A., "Black-white Earnings Over the 1970s and 1980s: Gender Differences in Trends", *Review of Economics and Statistics LXXIV*, 276-286 (1992).

Gabriel, S.A., Rosenthal, S.S., "Location and the Effect of Demographic Traits on Earnings", *Regional Science and Urban Economics,* 29: 445-461 (1999).

Glaeser, E., Hanushek, E.A., Quigley, J.M., "Opportunities, Race and Urban Location: the Influence of John Kain", *Journal of Urban Economics,* 56: 70-79 (2004).

Katz, L., Murphy, K., "Changes in Relative Wages, 1963-1987: Supply and Demand Factors", *Quarterly Journal of Economics,* 35-78 (1992).

Kayseri Organize Sanayi Bölgesi Müdürlüğü, "Brifing Raporu", *Kayseri Organize Sanayi Bölgesi Müdürlüğü*, Kayseri, 1-9 (2006).

Megbolugbe, I.F., "Hedonic Prices and Housing Programme Benefits", *Urban Stuies,* 28: 773-781 (1991).

Montgomery, H., Johnson, U.S., "Life Values: Their Structure and Relation to Life Conditions", *Applied Behavioral Economics,* Wheatsheaf Booles, Brington, U.K, 1:420-437 (1988).

Murphy, K., Welch, F., "The structure of Wages", *Quarterly Journal of Economics, 12:* 285-326 (1992).

Palmquist, R., "Estimating the Demand for Characteristics of Housing", ***Review of Economics and Statistics,*** 64: 394-404 (1984).

Rosen, S., "Hedonic Prices and Implicit Markets; Product Differentiation in Perfect Competition", ***Journal of Political Economy,*** 82: 34-55 (1974).

Sheppard, E., "A Marxian Model of the Geography of Production and Transportation in Urban and Regional Systems", ***Urban Systems***, Ed: Bertuglia, C.S. and v.d., London, Newyork, Sydney, 12-40 (1987).

Smith, B.E., "A Review of Monocentric Urban Density Analysis", ***Journal of Planning Literarute,*** 12: 115-136 (1997).

Sheppard, S., "Hedonic Analysis of Housing Market, Handbook of Regional and Urban Economics, ***In Elsevier Science B.V***., Ed: Mills, E.S.and Cheshire, P., North Holland, 1595-1635 (1999).

Sheng, Y.K., Shrestha, M., "The Development of Housing for Women Factoy Workers in Bangkok: A Case Study of Klong Luang District", ***Habitat International,*** 22(3): 313-326 (1998).