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**THE PROFILE OF GARBAGE COLLECTORS AS AN IMPORTANT FACTORS IN  
RECYCLING: CASE OF DENİZLİ**

**ABSTRACT**

In the recent years, because of the economic, political and social crises, the rate of "poverty" has increased significantly in the world and especially in the developing countries like Turkey. Poverty which has grown more under the effect of the migration from the rural areas to the cities is reflected in the employment processes and human relations in the cities along its different dimensions. Especially in the big cities, it is seen that "garbage collection" has been added to the informal jobs which have appeared due to the rise of the unemployment rates. Garbage collection is noticeable for various reasons such as having unsanitary working and living conditions, being transitory, lacking social security and sometimes providing very little income. On the other hand, it is evident that the contribution of garbage collection, which is older than Turkish Republic in our country, to the increase in the rate of recyclable waste (12%) in Turkey can not be underestimated. In order to investigate the profile of garbage collectors who are described as the unseen side of recycling and who take several risks while working, 51 garbage collectors in Denizli were interviewed.

**Keywords:** Garbage Collectors, Informal Sector, Recycling

**GERİ KAZANIMDA ÖNEMLİ BİR ETMEN OLAN SOKAK TOPLAYICILARININ PROFİLİ:  
DENİZLİ ÖRNEĞİ**

**ÖZET**

Son yıllarda yaşanan ekonomik, siyasal ve toplumsal krizler nedeni ile dünyada özellikle de ülkemiz gibi gelişmekte olan ülkelerde "yoksulluk" oldukça fazla oranda artış göstermiştir. Kırdan kente olan göç etkisi ile daha da artan yoksulluk, kentlerde istihdam süreçlerine ve insan ilişkilerine farklı boyutları ile yansımaktadır. Özellikle büyük kentlerde, işsizlik oranlarındaki artış ile birlikte ortaya çıkan enformel işlere "çöp toplayıcılığının" da eklendiği görülmektedir. Çöp toplayıcılığı bir taraftan sağlıksız iş ve yaşam koşulları, sürekliliği olmayan bir iş, sosyal güvenceden yoksunluk ve zaman zaman çok düşük gelir getirmesi gibi pek çok nedenden dolayı dikkati çekmektedir. Ancak diğer taraftan bakıldığında Türkiye'de geri kazanılabilir atık oranının %12'ye ulaşmasında, ülkemizde Cumhuriyet tarihinden de eski olan çöp toplayıcılığının payının küçümsemeyecek durumda olduğu görülebilmektedir. Geri dönüşümün görünmeyen yüzü olarak nitelendirilebilen ve çalışırken pek çok riske maruz kalan, sokak toplayıcılıklarının profilini incelemek amacı ile Denizli'de 51 sokak toplayıcısı ile görüşülmüştür.

**Anahtar Kelimeler:** Sokak Toplayıcıları, Enformel Sektör,  
Geri Kazanım



## 1. INTRODUCTION (GİRİŞ)

Rapidly increasing environmental problems in our world have caused more attention to be directed on the issue and have raised more concerns about the issue. In this respect, reduction and recycling of the solid wastes, one of the most important factors increasing the environmental problems have become a must.

After 1950s, waste has not only been considered to be something to be got rid of and eliminated but also a material with economic value. Following these years, economic value associated with the recycling of the waste for the purpose of environmental protection has led to the emergence of a new area of employment. So, a new business, street collection, was born in developing countries. Garbage collectors are the people who make their living by selling the solid wastes such as plastic, glass, metal and paper they collect from the garbage to individual or institutional intermediaries. Garbage collectors also called "People of Rubbish" make great contributions to the economy of the country and protection of the environment while they are earning their livings. Although this group of people where mostly the people without any professions present show some similarities to the workers of other informal sectors such as working in unhealthy conditions, for irregular times depending on the weather climate conditions without any social securities and benefits, from time to time with their incomes two or three times more than the minimum wage they relatively differ from them. Factors such as not being able to utilize the facilities of the urban life, being excluded and being devoid of the common consumption patterns put them into other poor people and cause them to experience the deprivation dimension of the poverty (Tucker and Speirs 2003; Ergun, 2005). The sector of garbage collection is one of the unrecorded branches of business brought about by the neo liberal policies becoming dominant in 1980s. With the withdrawal of the state from agriculture sector and adverse conditions experienced by the people in East and South East Anatolia, destruction of the balances related to rural and urban lives, and leaving the problems of the people coming to cities due to compulsory migration unsolved are the main factors creating this sector.

When the studies investigating urbanization and processes of migration are examined, one of the most striking areas drawing attention is found to be relations of fellow citizenship. First staying with fellow citizenship and starting to work together with him have become one of the effective strategies used by the poor people of the suburbs emerged as a result of immigration in their struggle to enhance their status in the society (maybe in the long run, to be a member of high classes). When the issue is considered from the view point of the street collectors, fellow citizenship serves to the purpose of going up into a higher class but surviving.

Discriminatory feature of the urban poor, of which garbage collectors are viewed to be a part, is that these people have totally lost their hope of going up into a higher class. Here, together with economic poverty, social exclusion strongly felt on the side of these people should also be mentioned. The way out of the process leading these people to poverty/deprivation seems to be hardly present, and most of the street collectors usually state that they are convicted to stay at the lowest level of the social hierarchy. Some of them define their job as "falling into garbage". This definition can be interpreted, on the one side, as falling to the lowest level of the society and on the other hand as falling into "a dirty job". For the street collectors, falling into garbage may mean getting involved in a kind of indecent job but at the same time it may mean a last resort to



stay away from indecent jobs. It should be remembered that collection is the last option for a group of people to survive without stealing or committing crime (Tokur, 2006).

As in other business sectors accepted to be among the informal sectors, for the garbage collectors, short, middle and long-term policies that can be developed also exist. First thing to be done is to clearly figure out the processes related to wastes. There are not any effective policies in our country with regards to the recycling of wastes. And this cause important loses both for economy and ecology (Ergun, 2005).

## **2. RESEARCH SIGNIFICATION (ARAŞTIRMANIN ÖNEMİ)**

Garbage collection dating back to times before the declaration of Turkish Republic has become an informal business sector prevailing parallel to the increase in poverty. This prevailing especially in urban areas is due to lack or shortage of employment. Along with the processes of industrialization and urbanization, increase seen in the consumption has increased the amount, volume and components of wastes and this has added the "waste problem" among the most important problems in our cities where irregular urbanization and infrastructure problems are experienced. The increase seen in the number of the collectors in the collection sector which has become an important source of income heightens the importance of this study.

## **3. LITERATURE REVIEW (KAYNAK ARAŞTIRMASI)**

There are few studies instigating the issue of garbage collectors. This study was conducted on in a different way from the similar studies on the street collectors who are desired to be included within the solid waste management systems administered in Denizli city and who are accordingly trained, informed and special clothes are given and are recorded as workforce. Ergun (2005) conducted a study in Isparta and İzmir cities with 90 street collectors within the framework of waste-related processes becoming informal, and poverty variable. In the study, living conditions and problems of the street collectors were dealt with and some suggestions for solutions were made. In this study, the main purpose was to show living dynamics, poverty and exclusion processes seen among the street collectors living in two different cities from socio-economic perspective. In the study, data obtained from State Institute of Statistics (SIS), municipalities of the given cities, State Office of Planning (SOP) were used to determine the processes involved in the collection business and to define the street collectors. The field data in the study were obtained through questionnaire and observations. The participants were asked 50 open ended questions. The universe of the study is made up by all the garbage collectors working in the streets of İzmir and Isparta cities. The sample on the other hand consists of 90 garbage collectors, 50 from Isparta and 40 from İzmir. From the results of the study it was found that 98% of the participants from İzmir and 45% of the participants from Isparta do not get any poverty relief. When the collectors were asked how they want to this job; 24.4% of them stated that they want to do it independently, 45.6% of them stated that they want to work in association with the municipality and 20% of them stated that they want to do it in connection with an intermediary. When they were asked whether they have any health problems, 80% of the collectors from İzmir and 65% of the collectors from Isparta stated that they haven't got any health problems. The ratio of the collectors who stated that they are health care services through green cards given by the state is 26% in İzmir and 42.5% in Isparta. The ratio of the collectors



getting health care services via personal means is 32% in İzmir and 22% in Isparta. In her article published in a magazine *Aksiyon*, Karabat (2007) emphasized the living and working conditions of the garbage collectors. Here, she talks about the unhealthy conditions of the street collectors and how waste collection has become a hope for these people. Moreover, she gives some ideas about the associations of street collectors in Ankara city and their solidarity and social relations in the city.

Yardımcı and Saltan (2007) define the street waste collectors as people collecting recyclable wastes from the garbage such as plastic, glass, metal and paper and selling them to collection warehouses to earn their livings. In this study it is also mentioned that street collectors serve to a good purpose by bringing the wastes into the factories as input, in that way the materials which would otherwise remain to be unrecorded becomes recorded when brought to the factory, so it can be clearly seen that the street collectors have great contributions to recycling process but the profits from these contributions can not be exactly calculated. Moreover, it is stated that it is not possible to find the exact number of the people working in this sector. With their study conducted in Istanbul sample, they found that the collectors come from different social roots and groups and as a result they argued that because of the contributions made by the collectors to both economy and environment, their living conditions should immediately be enhanced and their income levels should be increased.

Vision 2003: Environmental dimensions of sustainable development are emphasized in Science and Technology Strategies Foresight Project, Environment and Sustainable Development Thematic Panel Vision and Foresight Report. Sustainable development is defined as "the development meeting the needs of today without compromising the capacity of meeting the needs of future generations". Within the context of this definition, it is emphasized that the sustainable development should be dealt with in three dimensions which are economic, social and environmental and all the economic and social policies of a country should be integrated with environmental policies and strategies. The importance of this issue and the things that should be done for Turkey are in the report. Here particularly the effects of technologic activities and environmental technologies on the environment are discussed. In the section of the control of solid wastes, conditions specific to Turkey and the role of the garbage collectors in recycling activities are discussed.

#### **4. MATERIALS AND METHODS (MATERYAL VE YÖNTEM)**

This study was planned and conducted for the purpose of investigating 51 garbage collectors who are desired to be included within the management and recycling system of solid wastes in Denizli and looking into the profile of these collectors and their place in the recycling process. For this purpose, first the demographic features (age, gender, social root etc.) were determined and then data related to immigration and job status were solicited.

##### **4.1. Determination of the Sample (Örneklemin Belirlenmesi)**

The place of the garbage collectors within the recycling process is consolidated by Denizli municipality. In order for the collectors to perform the tasks of sorting out and collecting in a more hygienic and healthy way and more regularly and neatly, the municipality granted collection licenses to the collectors at the end of a training program and in that way, the municipality started the attempt of involving the collectors in its own recycling system. The universe of



the study consists of the garbage collectors in Denizli city. According to data obtained from Denizli municipality, there are about 200 garbage collectors in the city. Out of the 60 garbage collectors who are recorded by granting an identity card, license and uniforms by the municipality, 51 were included in the study.

#### **4.2. Limitations of the Study (Araştırmanın Sınırlılıkları)**

The findings of this study aiming to determine the profile of the garbage collectors are limited to Denizli. Similar studies should be conducted in a coordinated way throughout the whole country in order to be able to make more comprehensive evaluations, and generalizations and to determine the problems and seek for solutions to the problems of garbage collectors who are subject to potential risks in every moment of their lives and believed to have a very important place in the chain of regaining the wastes to the economy through regular collection of household wastes, their storage and recycling

#### **4.3. Designing of the Questionnaire (Soru Formunun Hazırlanması)**

The data of the study were obtained through a questionnaire administered by the researcher herself in face to face interactions. The questionnaire includes items aiming to get descriptive information (gender, age, marital status, education level, type of the place of residence, whether they are the owners or tenants of the place of residence, immigration record, the place of birth, the reasons for immigration, how often they visit their home towns, and job-related information (the length of time spent in this job, the reason for doing the job, how they take up the job, their job satisfaction level, whether they need to do extra jobs, how long they work in a day, and which parts of the day they work)) to solicit the profile of the garbage collectors.

#### **4.5. Evaluation of the Data (Verilerin Değerlendirilmesi)**

The data of the study were evaluated through SPSS Statistical Program Package. By using this software, for each questionnaire item, tables showing absolute and percentage values were prepared. When the groupings are performed class number: 2.5 N and class gap: max-min/class formula was used. As an independent variable, the age groups of the collectors were taken and in the tables where this variable is used statistical interpretations were performed by using "chi square".

#### **5. Findings of the Study (Araştırma Bulguları)**

In this section, information related to demographic features and social roots, immigration records and job status of the collectors is given.



Table 1. General information about the collectors  
 (Tablo 1. Toplayıcılara ilişkin genel bilgiler)

| GENDER                                     | N  | %     | TYPE OF THE PLACE OF RESIDENCE   | N  | %     |
|--|----|-------|----------------------------------|----|-------|
| Woman                                      | 1  | 2.0   | Flat                             | 14 | 27.5  |
| Man  | 50 | 98.0  | Detached house                   | 25 | 49.0  |
| Total                                      | 51 | 100.0 | Shabby house                     | 7  | 13.7  |
| Age  | N  | %     | Janitor's flat                   | 5  | 9.8   |
| 19-31                                      | 10 | 19.6  | Total                            | 51 | 100.0 |
| 32-44                                      | 17 | 33.3  |                                  |    |       |
| 45-57                                      | 24 | 47.1  | STATUS OF THE PLACE OF RESIDENCE | N  | %     |
| Total                                      | 51 | 100.0 | House owner                      | 6  | 11.8  |
| MARITAL STATU                              | N  | %     | Tenant                           | 37 | 72.6  |
| Married                                    | 39 | 76.5  | Relative's house                 | 3  | 5.9   |
| Single                                     | 8  | 15.7  | Bachelor's house                 | 3  | 5.9   |
| Widow/er                                   | 4  | 7.8   | Janitor's flat                   | 2  | 3.9   |
| Total                                      | 51 | 100.0 | Total                            | 51 | 100.0 |
| EDUCATION LEVEL                            | N  | %     | NUMBER OF FAMILY MEMBERS         | N  | %     |
| Illiterate                                 | 2  | 3.9   | 1                                | 2  | 3.9   |
| Literate but not a primary school graduate | 1  | 2.0   | 2                                | 4  | 7.8   |
| Primary school graduate                    | 33 | 64.7  | 3                                | 12 | 24.5  |
| Secondary school graduate                  | 11 | 21.6  | 4                                | 17 | 34.3  |
| High school graduate                       | 3  | 5.9   | 5                                | 5  | 9.8   |
| University graduate                        | 1  | 2.0   | 6                                | 5  | 7.8   |
| Total                                      | 51 | 100.0 | 7+                               | 5  | 2.0   |
|  |    |       | Total                            | 51 | 100.0 |

As can be seen from the Table 1, almost all of the collectors are men (98.0%) only one of them is a woman (2.0%). The percentage of the collectors in the age group of 19-31 is 19.6%, the collectors in the age group of 32-44 constitute the one third of all the participants (33.3%) and the collectors in the age group of 45-57 constitute almost half of the all participants (47.1%). Majority of the participants (76.5%) are married, 64.7% of them are primary school graduates, 21.6% of them are secondary school graduates, 5.9% of them are high school graduates, 3.9% of them are illiterate, 2.0% of them are literate but not primary school graduate and only one of them (2.0%) is university graduate. When the type of the place of the residence of the collectors were examined, it was found that 43.1% of them live in a detached house, 27.5% of them live in flats, 13.7% of them live in shabby houses, 9.8% of them live in janitor's flat. When the status of their residency was investigated it was found that majority of the participants are tenants (72.6%), 11.8% of them are house owners, 5.9% of them live in their relatives' houses, 5.9% of them live in bachelor's houses and 3.9% of them live in janitor's flats. The collectors having 4 members in their families are more than one third of all the participants (34.3%), those having 3 members in their families are approximately a quarter of the participants (25.5%) and those having 5 members in their families are 9.8% of the participants. The percentages of the collectors having 2 or 6 members



in their families are the same (7.8%). 3.9% of the participants live alone and those who have 7 or more members in their families are 2.0%. When the demographic features of the participants were investigated, it was found that although the group belongs to low socio-economic class and it is of rural origin, they try to adapt urban conditions in which they live. This was observed during the administration of the questionnaires and understood from the indicators such as having fewer family members. Moreover, most of them have nice families while only some have split families. During the administration of the questionnaires it was learnt that some of them got involved in crimes and sentenced.

### 5.2. Social origin of the Garbage Collectors (Sokak Toplayıcılarının Toplumsal Kökeni)

More than half of the collectors (52.9%) were born in cities, 27.5% of them were born in towns and 19.6% of them were born in subdistricts or villages.

Table 2. The collectors' places of birth  
(Tablo 2. Toplayıcıların doğdukları yer)

| Places of birth        | N  | %     |
|------------------------|----|-------|
| City                   | 14 | 27.5  |
| Town                   | 27 | 52.9  |
| Subdistrict or village | 10 | 19.6  |
| TOTAL                  | 51 | 100.0 |

Table 3. The city borders of the places where the collectors were born  
(Tablo 3. Toplayıcıların doğdukları yerin il sınırı)

| City Borders of the Places Where They Were Born | N  | %     |
|---|----|-------|
| Denizli   | 31 | 60.8  |
| Sivas   | 2  | 3.9   |
| Konya   | 1  | 2.0   |
| Gaziantep                                       | 2  | 3.9   |
| Çorum   | 2  | 3.9   |
| Aydın   | 1  | 2.0   |
| Afyon   | 5  | 9.8   |
| Diyarbakır                                      | 1  | 2.0   |
| Bitlis  | 1  | 2.0   |
| Ağrı  | 1  | 2.0   |
| Ankara  | 1  | 2.0   |
| Siirt   | 1  | 2.0   |
| Isparta   | 2  | 3.9   |
| TOTAL   | 51 | 100.0 |

Most of the collectors (60.8%) were born in Denizli, 9.8% of them were born in Aydın (which is neighbour of Denizli) and the others were born in variety cities in Turkey.

### 5.2. Immigration Records of the Garbage Collectors (Sokak Toplayıcılarının Göç Durumları)

When whether the street collectors participating in the study emigrated from their places of birth was investigated, it was found that majority of them (74.5%) immigrated from their places of birth and a quarter of them (25.5%) did not immigrate.



Table 4. Whether the collectors immigrated from their places of birth  
(Tablo 4. Toplayıcıların doğdukları yerden göç etme durumu)

| Whether you immigrated from your place of birth | N  | %     |
|---|----|-------|
| Immigrated                                      | 38 | 74.5  |
| Not immigrated                                  | 13 | 25.5  |
| TOTAL   | 51 | 100.0 |

Table 5. Reasons for the collectors to immigrate  
(Tablo 5. Toplayıcıların göç etme nedeni)

| Reason for immigration                           | N  | %     |
|--|----|-------|
| Family immigrated                                | 2  | 5.3   |
| Unemployed/Can not earn living                   | 34 | 89.4  |
| Security problems in the regions where they live | 2  | 5.3   |
| TOTAL  | 38 | 100.0 |

When the reasons for immigration were examined, it was found that high majority of the collectors (89.3%) took up this job as they were unemployed, 5.3% of them started as their families immigrated, 5.3% of them due to security problems in the regions where they lived. One of the most important reasons for immigrating from rural areas to cities, hope of finding a job, holds true for our participants.

Table 6. The time span of the collectors in which they live in the city  
(Tablo 6. Toplayıcıların bu kentte yaşama süreleri)

| Have many years have you been living in the city? | N  | %     |
|---|----|-------|
| Less than 1 year                                  | 1  | 2.6   |
| 1-5 years   | 4  | 10.5  |
| 6-10 years  | 5  | 13.1  |
| More than 10 years                                | 28 | 73.8  |
| TOTAL   | 38 | 100.0 |

When how many years the collectors have been living in the city was asked to the collectors, it was found that 73.8% of them have been living more than 10 years, 13.1% of them have been living for 6-10 years, 10.5% for 1-5 years, and 2.6% less than 1 year.

Table 7. The reason why they have chosen this city to immigrate to  
(Tablo 7. Toplayıcıların göç etmek için bu kenti seçme nedeni)

| The reason why they have chosen this city to immigrate to | N  | %     |
|---|----|-------|
| Job opportunities   | 33 | 86.8  |
| Moving to live with the family                            | 2  | 5.3   |
| Presence of the relatives                                 | 3  | 7.9   |
| TOTAL   | 38 | 100.0 |

When the collectors who immigrated were asked why they chose this city to immigrate to, it was found that most of them (86.6%) immigrated for job opportunities, 7.9% of them immigrated due to the presence of their relatives in this city, and 5.3% of them moved to be with their families.





Table 8. Whether the collectors visit their hometowns or not  
 (Tablo 8. Toplayıcıların memleketlerini ziyaret etme durumları)

| Whether the participants visit their hometowns or not | N  | %     |
|---|----|-------|
| They visit  | 33 | 86.9  |
| They do not visit                                     | 5  | 13.1  |
| TOTAL   | 38 | 100.0 |

Great majority of the participants (86.9%) stated that they visit their hometowns, 13.1% stated that they do not visit their hometowns. During the administration of the questionnaires, it was found that most of the collectors who do not visit their hometowns and their relatives there do so due to their economic problems and some do not visit as they have no relations any more in their hometowns.

Table 9. Frequency of the collectors' visiting their hometowns  
 (Tablo 9. Toplayıcıların memleketlerini ziyaret etme sıklıkları)

| Frequency of visiting their hometowns | N  | %     |
|---------------------------------------|----|-------|
| Once in a month                       | 3  | 8.8   |
| Twice or more in a year               | 4  | 11.7  |
| Once in a year                        | 19 | 55.8  |
| Fewer than once in a year             | 8  | 23.5  |
| TOTAL                                 | 34 | 100.0 |

More than half of the participants (55.8%) visit their hometowns once in a year; 23.5% of them fewer than once in a year, 11.7% of them twice or more in a year, 8.8% of them once in a month.

### 5.3. Job Status of the Garbage Collectors (Sokak Toplayıcılarının İş Durumları)

The garbage collectors were asked how long they have been doing this job, and their responses were evaluated according to age variable. According to this evaluation, 30.0% of the youngest group (19-31) was found to have been doing this job less than 6 months (30.0%) and 30.0% of them were also found to have been doing this job for 2-5 years. More than one third (35.3%) of the age group 32-44 were found to have been doing this job for less than 6 months and 23.5% of them for 6 months- 1 year. Almost half (45.8%) of the age group 45-57 were found to have been doing this job for 2-5 years. As a result of the statistical analyses, no significant relation was found between the age and the length of time spent in this job ( $p>0.05$ ).

Table 10. The length of time during which the participants do this job  
 (Tablo 10. Toplayıcıların bu işi yapma süreleri)

|                               | 19-31 |       | 32-44 |       | 45-57 |       | TOTAL |       |
|-------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
|                               | n     | %     | n     | %     | n     | %     | n     | %     |
| Less than 6 months            | 3     | 30.0  | 6     | 35.3  | 4     | 16.7  | 13    | 25.5  |
| 6 months- 1 year              | 1     | 10.0  | 4     | 23.5  | 2     | 8.3   | 7     | 13.7  |
| 2-5 years                     | 3     | 30.0  | 2     | 11.8  | 11    | 45.8  | 16    | 31.4  |
| 6-10 years                    | 2     | 20.0  | 3     | 17.6  | 2     | 8.3   | 7     | 13.7  |
| More than 10 years            | 1     | 10.0  | 2     | 11.8  | 5     | 20.8  | 8     | 15.7  |
| Total                         | 10    | 100.0 | 17    | 100.0 | 24    | 100.0 | 51    | 100.0 |
| $\chi^2=8.707$ sd: 8 $p>0.05$ |       |       |       |       |       |       |       |       |



Table 11. The reason why the collectors do this job  
 (Tablo 11. Toplayıcıların bu işi yapma nedeni)

|                                     | 19-31 |      | 32-44 |      | 45-57 |      | TOTAL |      |
|-------------------------------------|-------|------|-------|------|-------|------|-------|------|
|                                     | n     | %    | n     | %    | n     | %    | n     | %    |
| It brings good income               | 6     | 35.3 | 4     | 23.5 | 7     | 41.2 | 17    | 33.3 |
| There is no other job               | 1     | 5.3  | 7     | 36.8 | 11    | 57.9 | 19    | 37.2 |
| People around me are doing this job | 2     | 28.6 | 2     | 28.6 | 3     | 42.9 | 7     | 13.7 |
| I get extra income                  | 4     | 26.7 | 5     | 33.3 | 6     | 40.0 | 15    | 29.4 |
| I am doing it temporarily           | -     | -    | 1     | 5.8  | -     | -    | 1     | 1.9  |

The reasons for garbage collectors' doing this job were looked at and the results are presented in table 4.11. When the general sample was investigated, it was found that the collectors primarily do this job as they can not find another job (37.2%) and then as it brings good income (33.3%) and as it brings nice additional income (29.4%). When the collectors from the old age group 45-57 and middle aged group 32-44 were investigated, it was found that the primary reason for them to choose this job is not finding another job (45-57:57.9%, 32-44:28.6%) and the second one is its bringing a nice income. In the young age group, these reasons were sequenced as providing a nice income (35.3%), other people around doing this job (28.1%9 and providing additional income

Table 12. The presence of the members in the families of the collectors doing the same job  
 (Tablo 12. Toplayıcıların ailelerinde aynı işte çalışan bireylerin varlığı)

| The presence of the members in the families of the collectors doing the same job | N  | %     |
|--|----|-------|
| Yes  | 7  | 13.7  |
| No   | 44 | 86.3  |
| TOTAL  | 51 | 100.0 |

When whether there are other members in the families of the collectors were asked, high majority (86.3%) of the collectors gave the answer no.

Table 13. The members present in the families of the collectors doing the same job with them  
 (Tablo 13. Toplayıcıların ailelerinde aynı işi yapan bireyler)

|         | N | %     |
|---------|---|-------|
| Spouse  | 3 | 5.9   |
| Son     | 2 | 3.9   |
| Sibling | 2 | 3.9   |
| TOTAL   | 7 | 100.0 |

5.9% of the collectors stated that their spouses, 3.9 of them stated that their sons and 3.9% of them stated that their siblings do this job.

Table 14. The types of the wastes found valuable by the collectors  
 (Tablo 14. Toplayıcıların değerli buldukları atık türleri)

|               | N  | %    |
|---------------|----|------|
| Paper         | 38 | 74.5 |
| Metal         | 40 | 78.4 |
| Nylon-Plastic | 39 | 76.5 |
| Glass         | 15 | 29.4 |



When the collectors were asked what kinds of wastes they find valuable, they stated that they find the metal the most valuable (78.4%) and it is followed respectively by nylon-plastic (76.5%), paper (74.5%) and glass (29.4%). The value attached to the wastes is related to the preferences of wholesalers, ease to sell, and their return. In Turkey glass is collected and recycled under the control of "bottle glass" company. Therefore, the street collectors less prefer this valuable waste to collect to others.

Table 15. The patterns followed by collectors while collecting the wastes  
 (Tablo 15. Toplayıcıların atıkları toplarken gruplandırma konusunda izledikleri yollar)

|   | N  | %     |
|---|----|-------|
| Without sorting them out, I collect all the wastes in the same place        | 1  | 2.0   |
| I classify the wastes while collecting them                                 | 7  | 13.7  |
| After I collect them, I sort them out while delivering the wholesaler       | 26 | 51.0  |
| I only collect one type of waste; hence, they do not need to sort them out. | 17 | 33.3  |
| TOTAL   | 51 | 100.0 |

Table 16. How did they take up this job?  
 (Tablo 16. Toplayıcıların bu işe nasıl başladıklarına ilişkin durumları)

|                               | 19-31 |       | 32-44 |       | 45-57 |       | Total |       |
|-------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
|                               | n     | %     | n     | %     | n     | %     | n     | %     |
| Via a friend                  | 5     | 50.0  | 9     | 52.9  | 7     | 29.2  | 21    | 41.2  |
| Via a fellow countryman       | -     | -     | 2     | 11.8  | 1     | 4.2   | 3     | 5.9   |
| With his own personal efforts | 2     | 20.0  | 5     | 29.4  | 14    | 58.3  | 21    | 41.2  |
| Via a family member           | 3     | 30.0  | -     | -     | -     | -     | 3     | 5.9   |
| Others                        | -     | -     | 1     | 5.9   | 2     | 8.3   | 3     | 5.9   |
| Total                         | 10    | 100.0 | 17    | 100.0 | 24    | 100.0 | 51    | 100.0 |
| $\chi^2=19.819$ sd: 8 p<0.01  |       |       |       |       |       |       |       |       |

When the participants were asked what kind of patterns they follow while collecting the wastes, almost half of the participants (51.0%) stated that they sort them out while delivering the wholesaler, one third of them (33.3%) stated that they only collect one type of waste; hence, they do not need to sort them out, and 13.7% of them stated that they sort them out while collecting and only one participant stated that he collects all the wastes in the same place without sorting them out (Table 15).

The Table 16 shows how the garbage collectors working in Denizli took up this job in connection with the age variable. According to the data presented in the table, it is seen that 41.2% of the participants started this job via a friend and 41.2% of them with their own personal efforts. However, very few participants stated that they started this job with the help of a fellow countryman (5.9%) and a family member (5.9%). When the age variable was considered, it was found that half of the collectors (50%) in the age group (19-31) started this job with the help of a friend, nearly one third of them (30%) with the help of a family member, and one fifth of them (20%) with his own personal efforts. As in the young age groups, those who are in the middle age group (32-44) started the job primarily with the help of a friend (52.9%). But then the sequence differ from that of



the young age group as 29.4% of them started the job with their own personal efforts, 11.8% of them via a fellow countryman. The collectors in the old age group (45-57) stated different sequence from the previous two age groups. In this age group, 58.3 of the collectors started this job with their own personal efforts, 29.2 of them with the help of a friend. Moreover, the results of the analysis shows a significant relation between the age variable and how the collectors in Denizli started this job ( $p < 0.01$ ). As can be seen from the results of the study, the effects of the fellow countryman relationships are mostly seen in the middle age group (32-44). While there is no one choosing the job due to fellow countryman relations, in the old age group the effects of the fellow countryman relations decrease.

Table 17. Whether the garbage collectors are pleased with their job  
 (Tablo 17. Sokak toplayıcılarının yaptıkları işten memnun olma durumları)

|                                      | 19-31 |       | 32-44 |       | 45-57 |       | Total |       |
|--------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
|                                      | n     | %     | n     | %     | n     | %     | n     | %     |
| Pleased                              | 7     | 70.0  | 8     | 47.1  | 13    | 54.2  | 28    | 54.9  |
| Not pleased                          | 1     | 10.0  | 2     | 11.8  | 4     | 16.7  | 7     | 13.7  |
| There is no alternative job          | 2     | 20.0  | 7     | 41.2  | 7     | 29.2  | 16    | 31.4  |
| Total                                | 10    | 100.0 | 17    | 100.0 | 24    | 100.0 | 51    | 100.0 |
| $\chi^2 = 1.878$ $sd : 4$ $p > 0.05$ |       |       |       |       |       |       |       |       |

Whether the collectors are pleased with their job was examined in connection with the age variable in Table 4.17. Here it is seen that more than half (54.9%) of them are pleased with their job, nearly one third (31.4%) of them do not find an alternative job and 13.7% of them are not pleased with the job. When the age groups were taken into consideration, majority (70,0%) of the age group 19-31, nearly half (47.1%) of the collectors in the 32-44 age group and more than half (54.2%) of the collectors in 45-57 age group stated that they are pleased with their job. The results of the study show that among the age groups involved the one which is the most pleased with their job is the young age group. And this can be explained by the fact that the people in the young group have better and more optimistic perception of life. The results of the statistical analysis show that there is no significant relation between the age group membership and the level of satisfaction with the job ( $p > 0.05$ ).

Table 18. Whether the garbage collectors do other jobs to make their living apart from this job  
 (Tablo 18. Sokak toplayıcılarının, geçimlerini sağlamak için bu iş dışında başka bir iş yapma durumları)

|                                     | 19-31 |       | 32-44 |       | 45-57 |       | Total |       |
|-------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
|                                     | n     | %     | n     | %     | n     | %     | n     | %     |
| Yes                                 | 5     | 50.0  | 10    | 58.8  | 6     | 25.0  | 21    | 41.2  |
| No                                  | 5     | 50.0  | 7     | 41.2  | 18    | 75.0  | 30    | 58.8  |
| Total                               | 10    | 100.0 | 17    | 100.0 | 24    | 100.0 | 51    | 100.0 |
| $\chi^2 = 6.800$ $sd: 2$ $p < 0.05$ |       |       |       |       |       |       |       |       |

Whether the collectors participating in the study do other jobs apart from this job is presented in Table 18. More than half (58.8%) of the collectors stated that they do not do another job, 41.2% of them stated that they do another extra job. When the age variable was considered, it was found that half (50.0%) of the collectors in 19-31 age group, more than half (58.8%) of the collectors in 32-44 age group



and a quarter of the collectors in 45-57 age group do another job to get by. The number of the collectors doing extra job decreases in the old age group. It is seen that because of the backbreaking working and accordingly living conditions of the street collectors, even though the people in 45-57 age group are not normally considered to be too old to do a second job, most of the street collectors in this age group can not do a second job. According to the results of the statistical analysis, there is a significant relation between the age variable and doing a second job ( $p < 0.05$ ).

Tablo 19. What types of other jobs do the garbage collectors do apart from collecting?

(Tablo 19. Sokak toplayıcılarının geçimlerini sağlamak için bu iş dışında ne tür bir iş yaptıklarına ilişkin durumları)

|                     | 19-31 |       | 32-44 |       | 45-57 |       | Toplam |       |
|---------------------|-------|-------|-------|-------|-------|-------|--------|-------|
|                     | n     | %     | n     | %     | n     | %     | n      | %     |
| Janitor             | 1     | 20.0  | 1     | 10.0  | -     | -     | 2      | 9.5   |
| Towel seller        | -     | -     | -     | -     | 1     | 16.7  | 1      | 4.8   |
| Weaver              | -     | -     | 1     | 10.0  | -     | -     | 1      | 4.8   |
| Transportation      | -     | -     | -     | -     | 1     | 16.7  | 1      | 4.8   |
| Painter             | -     | -     | 1     | 10.0  | -     | -     | 1      | 4.8   |
| Newspaper collector | -     | -     | -     | -     | 1     | 16.7  | 1      | 4.8   |
| Waste collector     | 3     | 60.0  | 1     | 10.0  | -     | -     | 5      | 23.8  |
| Driver              | -     | -     | 3     | 30.0  | 2     | 33.3  | 5      | 23.8  |
| Worker              | -     | -     | 3     | 30.0  | 1     | 16.7  | 4      | 19.0  |
| Stall holder        | 1     | 20.0  | -     | -     | -     | -     | 1      | 4.8   |
| Total               | 5     | 100.0 | 10    | 100.0 | 6     | 100.0 | 21     | 100.0 |

What other types of jobs are done by the garbage collectors apart from collecting are presented in Table 8. The highest percentage of the participants does the driving job (23.8%) and waste collection as a second job (23.8%). This is then followed by working as seasonal agriculture workers (19.0%), working as a janitor (9.5%), very few of them sell towels (4.8), work as a weaver (4.8), work in the transportation sector (4.8), and work as a painter (4.8) and as a stall holder (4.8) and collect newspaper (4.8%). When the age variable was considered, it was found that most (60%) of the collectors in 19-31 age group get by by collecting wastes, and one fifth of them (20.0%) work also as a janitor and also as a stall holder (20.0%). 30% of the collectors in 32-44 middle age group work as a driver and seasonal agriculture workers (30%) and the rest of them at the equal proportions do the following jobs: work as a janitor (10%), as a weaver (10%), as a painter (10%), and as a waste collector (10%). One third (33.3%) of the collectors in 45-57 old age group work as a driver, 16.7% of them sell towels, and 16.7% work in the transportation sector, 16.7% collect newspaper and 16.7% work as a seasonal agriculture worker.

The collectors were asked how many hours they work in a day, and the responses are presented in relation to the age variable in Table 9. Among the collectors general tendency seems to be work between the noon and evening (52.9%) and between evening and night (29.4%). When the age groups were examined with regards the working hours, it was found that all the age groups show similar tendencies and statistical analyses show no significant relation between the working hours and the age variable ( $p > 0.05$ ).



Table 20. How many hours do the garbage collectors work in a day?  
 (Tablo 20. Sokak toplayıcılarının günde kaç saat çalıştıklarına ilişkin durumları)

|                                   | 19-31 |       | 32-44 |       | 45-57 |       | Total |       |
|-----------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
|                                   | n     | %     | n     | %     | n     | %     | n     | %     |
| Less than 1 hour                  | -     | -     | 2     | 11.8  | -     | -     | 2     | 3.9   |
| 1-3 hours                         | 1     | 10.0  | 4     | 23.5  | 5     | 20.8  | 10    | 19.6  |
| 4-5 hours                         | 3     | 30.0  | 3     | 17.6  | 4     | 16.7  | 10    | 19.6  |
| 6-8 hours                         | 2     | 20.0  | 4     | 23.5  | 7     | 29.2  | 13    | 25.5  |
| More than 8 hours                 | 4     | 40.0  | 4     | 23.5  | 8     | 33.3  | 16    | 31.4  |
| Total                             | 10    | 100.0 | 17    | 100.0 | 24    | 100.0 | 51    | 100.0 |
| $\chi^2 = 6.184$ sd: 8 $p > 0.05$ |       |       |       |       |       |       |       |       |

Table 21. In which hours of the day do the garbage collectors work?  
 (Tablo 21. Sokak toplayıcılarının gün içerisinde hangi saatler arasında çalıştıklarına ilişkin durumları)

|                                   | 19-31 |       | 32-44 |       | 45-57 |       | Total |       |
|-----------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
|                                   | n     | %     | n     | %     | n     | %     | n     | %     |
| Morning-noon                      | 1     | 10.0  | 1     | 5.9   | 3     | 12.5  | 5     | 9.8   |
| Noon-evening                      | 5     | 50.0  | 9     | 52.9  | 13    | 54.2  | 27    | 52.9  |
| Evening-night                     | 4     | 40.0  | 4     | 23.5  | 7     | 29.2  | 15    | 29.4  |
| Whole day                         | -     | -     | 3     | 17.6  | 1     | 4.2   | 4     | 7.8   |
| Total                             | 10    | 100.0 | 17    | 100.0 | 24    | 100.0 | 51    | 100.0 |
| $\chi^2 = 4.331$ sd: 6 $p > 0.05$ |       |       |       |       |       |       |       |       |

The collectors were asked which hours of the day they work and the responses in relation to the age variable are presented in Table 9. Here it is seen that half (50%) of the collectors in age group 19-31 work in noon-evening period, 40% of them work in evening-night period, more than half (52.9%) of the collectors in 32-44 middle age group work in noon-evening period, 23.5% of them work in evening-night period, 17.6% of them work whole day and 5.9% of them work in morning-noon period, and finally more than half (54.2%) of the collectors in 45-57 old age group work in noon-evening period, 29.2% of them work in evening-night period, 12.5% in morning-noon period and 4.2% whole day. The results of the statistical analyses show that there is no significant relation between the parts of the day in which the collectors prefer to work and their ages ( $p > 0.05$ ).

## 6. RESULTS AND SUGGESTION (SONUÇ VE TARTIŞMA)

Almost all of the garbage collectors participating in our study are male (98.0%), nearly half of them are in 32-44 age group (47.1%), most of them are married (76.5%), most of them have primary school or lower level of education (71.6%), almost half of them (49.0%) live in a one storey houses which can be considered shabby houses without adequate utilities and most of them are tenants (72.6%). More than half of them (58.8%) live in families with 3-4 members. When the demographic features of the collectors were examined, a quite different profile from that of the studies of Özgen (2001), Ergun (2005) and Yardımcı and Saltan (2007) emerges for the participants. In their studies, the socio-demographic features of the collectors were found to be worse. For example, the number of the collectors married is less and also they live farther than their families (usually they are apart from their families to earn money in other cities). These people live in groups in warehouses or in shabby houses without adequate utilities. Most of them have criminal records so they can not find a job and they are suspected of the crimes committed around.



When the social roots of the collectors were examined, it was found that more than half (52%) of them were born in city center and most of them (60.8%) were born within the borders of Denizli. Other collectors were born in Afyon (9.8%), Sivas (3.9%) and Konya, Aydın; Diyarbakır, Bitlis, Ağrı, Ankara, Siirt and immigrated to Denizli. As can be seen the collectors are not from a specific social or ethnic group. In the same token, Yardımçı and Saltan (2007) investigated whether the collection job is done by some particular groups and found that in some districts of İstanbul gypsies are dominant in this sector and most of them do this job, but in some other district it is dominated by the immigrants from Niğde and Akşehir. In some districts, they found some people immigrating from the eastern cities of Turkey but no specific ethnic origin seems to be dominant in the business of collecting. For example, people from different countries of Africa having come to Turkey illegally were found be involved in this sector.

The high majority of the collectors included in the study (89.4%) showed being unemployed and accordingly being not able to get by as one of the reasons for the immigration. Again, majority of them (89.0%) stated that they have been living in Denizli for more than 10 years.

Most of the collectors involved in the study (86.8%) stated that they preferred Denizli for its job opportunities. High majority of the collectors having financial problems (86.8%) stated that they visit their hometowns. The reason why they can visit their home towns is mainly that they came to Denizli from its towns or villages (Şahin 2005).

Nearly one third of the collectors started this job 2-5 years ago. The primary reason why they chose this job is that there is no other job (37.2%). On the other hand, 33.3% of them stated that they started this job as it provides good income.

High majority of the collectors (86.3%) have no other member in their families doing the same job. If there are other members, they are spouses, sons or siblings.

When the most commonly preferred type of waste was searched, it was found that first place is taken by metal (78.4%) and this is followed by nylon-plastic (76.5%) and paper (74.5%). Yardımçı and Saltan found that the most commonly collected wastes in Beyoğlu are paper, aluminum, cans and plastic bottles. More than half of the collectors (51.0%) sort out wastes after collecting and while delivering the wholesalers. They stated that primarily they started this job via a friend (41.2%) and with their own personal efforts (41.2%).

More than half of the collectors (54.8%) stated that they are satisfied with the job they are doing because of the human capital and conditions they have. In younger age groups, the level of satisfaction seems to be higher (70.0%), and more than half of them (58.8%) stated that they do not look for extra job to earn their living; they can make their living only through collection. The reason for this is believed to be because of the license given them by Denizli municipality. During the administration of the questionnaires, it was found out that the collectors approximately earn 600-650 YTL per month according to the data of 2006 and this wage is nearly two times more than the minimum wage in Turkey. Similar finding was obtained by Özgen (2001). In the study, Özgen found that the collectors in Denizli and Samsun earn two or three times more than the minimum wage. If the collectors do a second job, most frequently preferred one is working as a driver (23.8%) and this is followed by working as a seasonal agriculture worker (19.0%). 31.4% of the collectors work more than 8 hours in a day and more than half of them work in noon-evening period.



Parallel to the increase seen in the consumption, collection, storage and elimination of wastes have turned into the most important problem of urban life. At that point, the issue of waste recycling is of a great importance. A great increase has been observed in the amount, volume and components of recyclable household wastes in the recent years in Turkey. According to the data provided by State Institute of Statistics, the amount of solid waste per person is 0.9kg in summer months and 1kg in winter months. When this amount is multiplied with the total population, every day approximately 65-79 thousand tons of solid wastes are produced. Nearly 12% of these solid wastes are made up by the package wastes that can be classified as recyclable. The portion of the area covered by the recyclable wastes constitutes 35% of the areas where the wastes are collected (Ceylan 2004, Pepe 2005; Özkan 2006). The term of recycling means regaining the wastes to economy after they are underwent different processes (physical or chemical). In this respect it is necessary to store the recyclable wastes (metal, plastic, glass, paper) separately, to classify them and deliver them to be recycled. So, the family members, municipalities and industrial organizations have great responsibility.

Today, one of the most effective methods of waste elimination is recycling of packaging materials. In our country "Solid Waste Control Regulation" issued on 14.03.1991 lays the legal basis of collection and recycling of wastes of packaging materials.

Throughout Turkey recycling of such materials are usually rendered possible through the works of street collectors and sorting out attempts made in the areas where wastes are stored. In many countries where the recycling-related attempts are not restricted to the works of some certain institutions specific institutions or the responsible institutions are not adequate for the effective recycling of wastes, street collection emerges as an important business sector (Özgen 2001, Yardımçı and Saltan 2007).

In fact, in Turkey among the activities started within the adaptation processes to the European Union, there are policies of recycling. The ratio of recycling required for 2006 by Packaging Wastes Management Plan designed the coming 10 years for the member countries of European Union is 32%. In 2010, this ratio is expected to be 45% and 60% in 2015. In line with this plan, today sorting out the wastes of packaging materials in houses and their collection and recycling by licensed organization is being considered (Yardımçı and Saltan 2007).

At that point, without preventing the collectors from doing their job, required efforts should be put forth to integrate them into the system. Suggestions made to solve the problems of the collectors and to raise their living standards should be in compliance with the efforts made to overcome poverty and struggle with it in the long run. On the other hand, the collectors should become organized by; for example, establishing cooperatives and they should be provided with licenses and do the same thing they are doing now but under the control of municipalities. Another alternative is collectors' being employed in collecting plants. Denizli municipality is supporting collection activities of the collectors. In line with this support, some of the collectors were provided with training and licenses. It is believed that for this people to maintain their activities the best way as in other countries is to come together under the roof a cooperative and so to improve their working conditions. The works for the establishment of cooperatives is still going on. By means of the cooperative to be established, the collectors will be recorded and the public perception of the collectors will change so social exclusion





will be prevented and household wastes will be able to be delivered to the collectors.

The hopelessness of the garbage collectors will be overcome with the support of the municipality and neighbors. Street waste collection, an heterogeneous business sector, needs to be organized under a unity in the long run.

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