

# Resident's Satisfaction to Evaluate Residential Environment before Urban Regeneration: Kizilay Neighborhood, Izmir

Yakup Egercioglu<sup>1\*</sup>, Salih Yilmaz<sup>2</sup>, Mehmet Cete<sup>3</sup>, Romjana Cupi<sup>4</sup>

<sup>1</sup>Department of City and Regional Planning, Engineering and Architecture Faculty, Izmir Katip Celebi University, Izmir, Turkey

<sup>2</sup>Department of Civil Engineering, Engineering and Architecture Faculty, Izmir Katip Celebi University, Izmir, Turkey

<sup>3</sup>Department of Geomatics Engineering, Engineering and Architecture Faculty, Izmir Katip Celebi University, Izmir, Turkey

<sup>4</sup>Department of Urban Regeneration, Institute of Science, Izmir Katip Celebi University, Izmir, Turkey

## Abstract

Izmir-Kizilay neighborhood is one of these areas with low building construction quality and illegal interventions that has attracted the attention of municipality officials and professionals for urban regeneration. In this study, quality of the residential environment of the Izmir-Kizilay neighborhood is evaluated from the residents' point of view. An occupant questionnaire survey is done to collect the data indwelling scale and neighborhood scale. Factors studied in building scale size are: (i) construction conditions and age of the building, (ii) architectural features, (iii) modifications done and the wish for repairs/renovation, (iv) physical condition and energy efficiency, (v) property condition.

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**Keywords:** Urban regeneration; resident satisfaction; residential environment quality; Izmir-Kizilay Neighborhood

## 1. Introduction

Urban transformation, began to emerge as a concept in the early nineteenth century when the city's social, cultural and economic needs brought on by physical factors and led the city to change. Today, residential transformation is seen widespread in European countries and in Turkey. In Europe, for 60 years, have been taken various precautions to reduce the bad impact of residential transformation. However, Turkey has considered this issue as important for only last 20 years and the concept of urban regeneration was first introduced in the early 2000s, under the concept of urban transformation. It was presented as an approach that could solve the urban problems of rapidly growing cities in Turkey. In many big Turkish cities the realized projects under the name of urban regeneration show diversity in terms of application forms. However, the central and local governments emphasize the impact of physical, economic, social and environmental problems, in most of the implemented UR projects seems

\* Corresponding author. Tel.: +90-232-329-3535; fax: +90-232-386-0888.

E-mail address: [yakup.egercioglu@ikc.edu.tr](mailto:yakup.egercioglu@ikc.edu.tr)

that is dealt only in the context of physical renewal. Actually, urban regeneration is used as a planning tool in order to raise living standards, not only the physical and economic dimensions, but also the social and environmental dimension. It is directly related with residents' quality of life.

Satisfaction level of the residents from their residential environments is a significant component in determination of the need for urban regeneration. In the western countries, the satisfaction from residential environments continues to be an important topic for researchers and the data found well preserved and integrated into real projects. In Turkey, yet, there is little research on residential satisfaction in many urban regeneration projects implemented. Izmir is the third biggest city in Turkey that has experienced rapid population growth due to the rural-urban migration. Squatter Housing or illegal settlements have been the typical reaction to the housing shortage that people faced because of this migration. This kind of response is even seen in those old neighborhoods once located on the outskirts of the city and nowadays holds an in-between position. In this study, to evaluate the quality of residential environment of the Izmir-Kizilay neighborhood from the residents' point of view there are selected some factors. Factors studied in building scale size are: (i) construction conditions and age of the building, (ii) architectural features, (iii) modifications done and the wish for repairs/renovation, (iv) physical condition and energy efficiency, (v) property condition. The factors for the neighborhood scale are; (i) social structure, (ii) amenities, (iii) economic structure, (vi) architectural features, (v) infrastructure status, (vi) public transportation and road quality, (vii) health and safety. One section of the survey is also dedicated to Urban Regeneration Project and public participation. Through the examination of questionnaire answers, we conclude that residents are not satisfied with their buildings' quality and they want interventions in neighborhood environment too.

In urban regeneration practices providing user satisfaction should be one of the most critical factors. To do this, the designing and planning criteria should take into consideration the users need in their overall individual and public life, in physical, psychological and socio-cultural environments. This study aims to determine the problems that new projected urban regeneration projects can avoid, through listening the voice of residents. All the collected data could be beneficial from the design phase to application phases and their use will decrease the probable problems and increase residents' satisfaction. The vision of the users for improving their neighborhood will give the professionals the needed traces to start with. Since the 1970s researchers have increasingly examined the relationship between resident satisfaction and physical and social aspects of the residential environments (Berköz and Türk, 2009).

Squatter housing or illegal interventions are a general phenomenon in Turkey, it has been the common reaction to housing shortage that people faced because of migration during the 1960s. All this individual interventions, because of lack of experience, low economy income, has caused the decay of the overall life quality of neighbourhoods, showed in low satisfied residents. Despite the housing shortage, Turkey is a seismic zone and a case to remember is Marmara Earthquake. According to the loss assessment state, the 17 August 1999 Marmara Quake damaged 244,383 buildings in total, 213,843 of which were housing and 30,540 were Office buildings. The number of housing and office buildings that were collapsed, seriously and moderately damaged was 154,511 (Sengur, Atabeyoglu & Erdem, 2015). To make people forget what has happened, a lot of new constructions started and many foreign star architects were invited to participate in different architectural and urban competitions. Urban regeneration projects were generated and they were limited in time of completion, to shelter as fast as possible the residents that were affected by earthquake.

Physical environment, not being an independent variable, is the reflection of the sociocultural and socioeconomic structure of the society on the space (Tas and Cosgun, 2007). The best scenario given by the professionals can result to be an unsuccessful urban regeneration project if it does not strength the relationship user-built environment interaction. It is stated that users generally refuse a physical environment that is inconsistent with their own sociocultural and socioeconomic structures or transform them into a form suited to their own structure. For this reason, trying to form new physical environments disregarding the needs of the society and spending great amounts of money in the disaster area may not always turn out satisfactory (Dulgeroglu, Aydinli & Polat, 1997). This is the exact situation even for many implemented urban regeneration projects in Turkey, in disaster areas or in cases of urban decay. New physical environments disregarding the needs of residents, even spending a lot of money, have resulted unsatisfactory. An individual's sense of belonging to the neighbourhood s/he lives in, and feeling his own identity in it, directly increases the satisfaction with the built environment. The aim of this study is to emphasize the role of the residents in guiding designs and applications that will be implemented in an urban regeneration project.

## 2. Methodology and Materials

In this study the assessment of residents' satisfaction was used to find the needed traces that are crucial to lead an urban regeneration project before it starts in a specific area. Examination and face-to face questionnaire surveys were carried out for 50 persons in the selected area to measure the residential satisfaction. Short interviews and closed questions were used too. The study focused on people who experience the neighbourhood in an active way, the ones who use the urban space in everyday life and the housewives. The housewives were asked with the purpose to understand better the satisfaction from the building scale. The survey was done in March 2015, in the streets of the selected site on working days and weekend, morning and afternoon hours. The data obtained from the questionnaire survey were evaluated in Microsoft Excel Program and through maps, tables and charts, all the results are presented. The survey starts was formulated in four sections:

- General information about occupants-building relationship,
- Building,
- Neighbourhood,
- Urban Regeneration, UR.

Factors studied in building scale section are:

- Construction conditions and age of the building,
- Architectural features,
- Modifications done and the wish for repairs/renovation,
- Physical condition and energy efficiency,
- Property condition.

In neighbourhood scale,

- Social structure,
- Amenities,
- Economic structure,
- Architectural features,
- Infrastructure status,
- Public transportation and road quality,
- Health and safety.

In UR section factors studied (i) public participation (ii) financial help (iii) leader of URP. Evaluation of these results will make it easier to distinguish the new requirements, in building and neighbourhood scale, according to residents' satisfaction for the URP. Kızılay Neighbourhood was selected as the study area in this study.

## 3. Data and Study Area

Kızılay neighbourhood in Bornova Municipality district is one of the oldest neighbourhoods in Izmir, Turkey. In 2012, based on the Turkish Statistical Institute, the population of Bornova district was around 426.000 and known as a metropolitan district of Izmir with urbanization rate of 98, 6%.



on what they share with the public, exchanging views and support. Based on questionnaires results, is obvious that residents are aware of physical needs as well as economic, social and environmental condition, emphasizing that all of them are factors to decrease the overall happiness in this area.

#### 4.1. Construction conditions and age of the building

The level of satisfaction with the building/house quality according to analysed criteria results to be low for building safety noise control in the housings is low. According to the survey results, around 42 % of people are living in houses 16 to 25 years old and only 18 % live in less than 15 years old buildings that are considered as secure structures, 20% of them are living in 26-40 years old buildings and 20% in buildings older than 40 years old. 32 % strongly disagree that their buildings are earthquake-resistant and safe in terms of building fire but only 14% of them strongly agree.

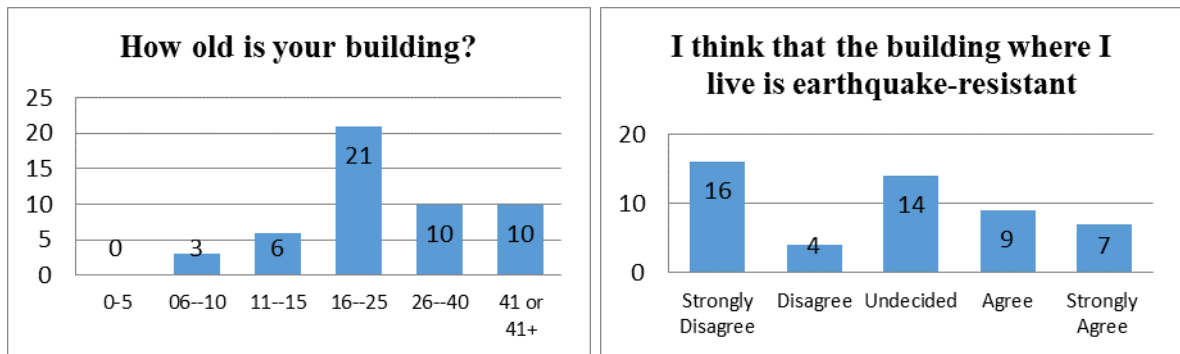


Fig.2. (a) building age; (b) earthquake-resistance

#### 4.2. Architectural features of building/house

The level of satisfaction with the aesthetic architectural features seems to be in the same levels with building safety where 32 % strongly disagree that their building satisfies them according to aesthetics but they are happier in terms of functionality.

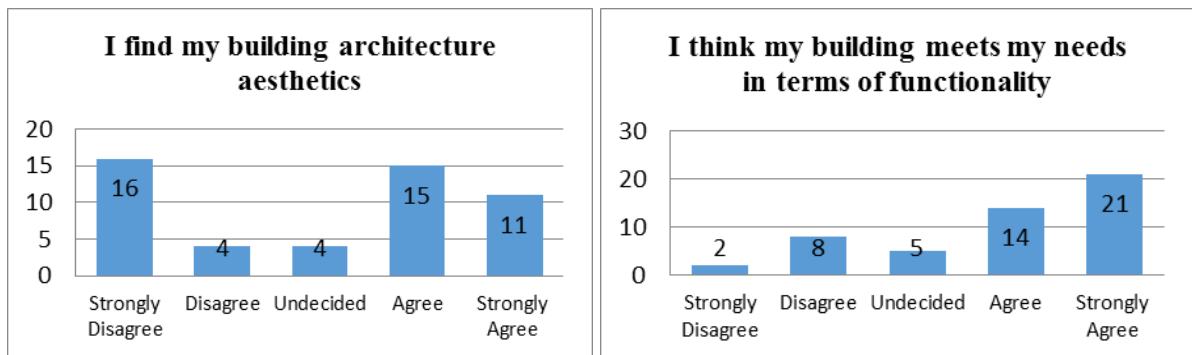


Fig. 3. (a) architecture; (b) functionality

Only 4% of them strongly disagree that inner spaces of the house are not proper for their way of living, but 42% strongly agree that they are happy with the solution of the house's plans. 54% of the people say that they live in a house where there are 2 bedrooms and 1 living room so the typology 2+1, and 40% say that they live in a 3+1 house typology.

#### 4.3. Modifications done and the wish for repairs/renovation

Modifications/ interventions that users think/ consider to be made or have been made by users' show that the user is not satisfied with what he has, it doesn't fulfil the day life needs. Structural interventions are the ones that attract the intention in Kızılay neighbourhood, enclosing balconies, vertical and horizontal extensions are a common solution founded by users to adapt the space they are in need for. Maintenance–repair work, materials used and the low quality of workmanship make 30 % of them to strongly agree and 22% to agree that their building needs simple repairs/ renovations but because of structural instability, visible cracks, fine works problems and lack of installing systems make 36 % of the people strongly agree that their building needs extensive repairs/ renovation. 28% strongly agree and 22% agree that to meet their needs they have done interventions in their building but 26% strongly disagree and this was generally because of low economic conditions.

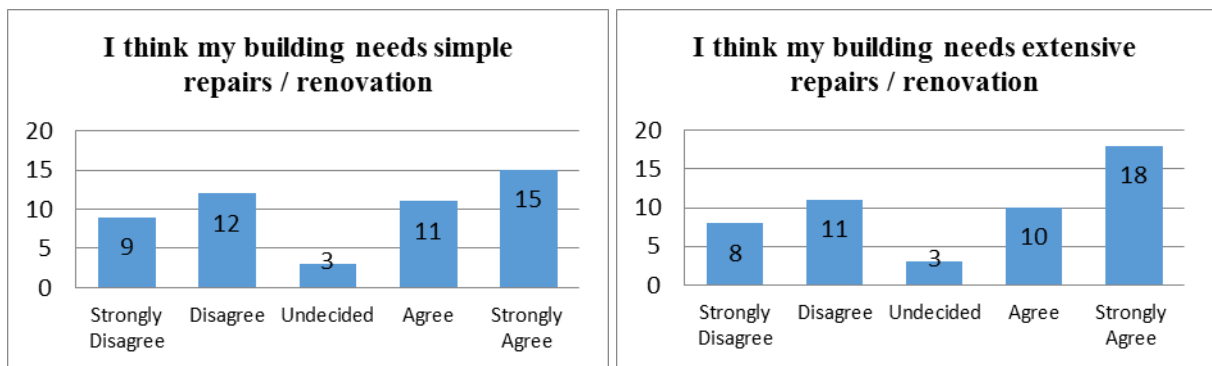


Fig. 4. (a) simple repairs/ renovation; (b) extensive repairs/ renovation

#### 4.4. Physical condition and energy efficiency of your building/house

Resident's satisfaction is low because of physical conditions of the buildings. They strongly agree in a 40% amount that there are moisture problems in their buildings and 28 % strongly disagree that there is sufficient sound insulation compared with 26% who strongly agree that there is enough sound insulation to control inner noise. The level of satisfaction with the daylight control is very high compared to other criteria. Around 58% strongly agree that they can benefit enough daylight in the building, 22% agree and only 4% strongly disagree. Energy efficiency questions show that 44% of the people do strongly disagree to have heating problems compared to 26% that strongly agree. Around 64% of them use wood-burning stove for heating and the others use air-conditioning 14%, natural gas 10%, natural gas 8%, and radiator 4%. 50% of them strongly disagree to not have cooling problems and only 22% are strongly satisfied.

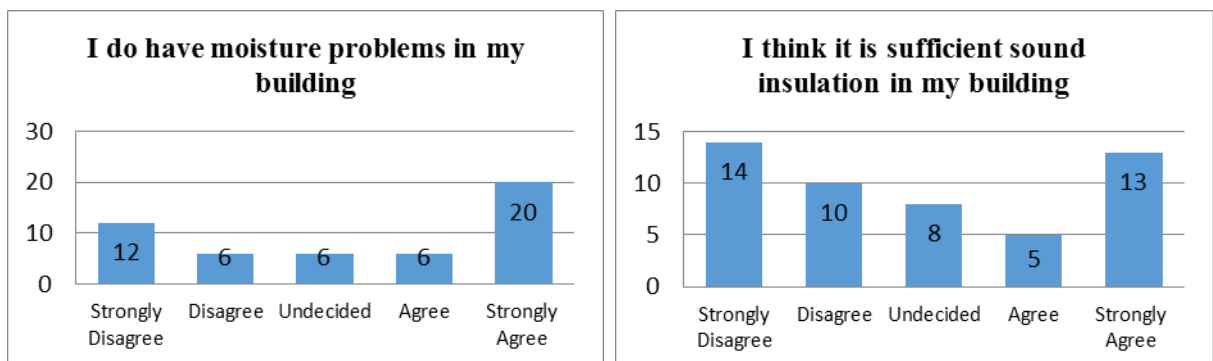


Fig. 5. a) moisture; (b) sound insulation

#### 4.5. Property condition

Kızılay neighbourhood with low raised houses from one to four floors has experienced illegal transformations in time, known as 'gecekondu' in Turkish. Even vertical and horizontal extensions are clues that clearly show the necessity for more space, and also, the information taken from Bornova Municipality Archive proves that 261 buildings from 594 in total are illegal constructions; only 18% of people strongly agree that there are property/license problems in their buildings. 60% strongly disagree. 10% of them strongly accept that have benefited from the development amnesty for illegal construction and 48% strongly disagree.

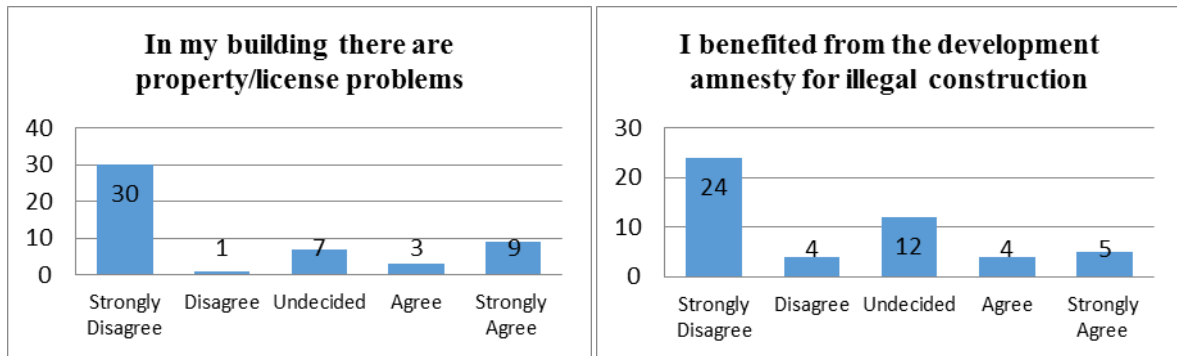


Fig. 6. (a) property/license problems; (b) amnesty for illegal construction

### 5. Resident's satisfaction through Neighbourhood quality assessment

#### 5.1. Social structure

Residents' satisfaction, despite building quality, it is highly dependent on physical, social and economic environment of the neighbourhood. 28% of people who took part in questionnaires strongly accept that buildings in their neighbourhood are not earthquake resistant and only 10% strongly accept; 38% are still undecided. Not only building structural safety does not satisfy them but 28% of them strongly disagree that their social structure is good, they mention hygiene problems, safety problems, and stray animal problems decrease the level of happiness in their neighbourhood. 34% of them accept that the population density is high and only 8% strongly disagree, while 26% are undecided. Because of migration and low rate of rantings the ones who are born and raised in the neighbourhood are not satisfied with the 'new comers'; they say that they miss the old neighbours. Even though, 38% strongly agree that there are good neighbourly relations in Kızılay and they can take common decisions with the other owners in their buildings.

#### 5.2. Amenities

Amenities play an important role in the overall satisfaction of the residents. According to the survey results, 22% strongly agree that there are enough greenspaces in Kızılay, 26% agree but the same percentage (26%) disagree; only 8% strongly disagree. 46% of them say that they need areas to come together, common spaces, playgrounds for children and sport areas for adults. As seen in graph 22% of people strongly agree and 18% agree that there are adequate education facilities in their neighbourhood but 28% of them disagree and 12% strongly disagree. They are satisfied with the number of education buildings but they are not satisfied with the quality of education. Shopping areas are accessed within a short time because of near location of neighbourhood near to Bornova old Bazaar and Bornova Organic market. 30% of people strongly agree to access shopping areas in few minutes compared with 8% of strongly dissatisfied people. Although the location offers opportunities for nearby shopping the residents of Kızılay mention that because of topography and to generate the economy they need to have markets inside neighbourhood. 54% of the people who answered the questionnaire strongly agree that they are satisfied with religion facilities in the neighbourhood; only 4% strongly disagree.



### 5.3. Neighborhood economic structure

Kızılay Neighborhood results to have unsatisfied residents because of their economy where 28% of them strongly agree that the majority of the families are of middle income class and 32% agree. 32% of them agree that there is a significant number of families receiving social assistance and 20% agree.

### 5.4. Architectural features of buildings in Kızılay Neighborhood

In Kızılay Neighborhood results that 46% of people are low-rise buildings and only 2% wish they had high rise buildings. Their satisfaction with the number of floors is not in the same level with their satisfaction about neighbourhood buildings quality. Only 4 % of them strongly say that the buildings have quality and look aesthetic, while 18% strongly disagree, 32% disagree and 26% chose to be undecided. When they are asked if the buildings in neighbourhood need simple repairs/ renovation 34% of them agree and 30% strongly agree, only 2% strongly disagree. 48% agree that extensive repairs/renovations are needed in Kızılay and 28% strongly agree, while 8% strongly disagree.

### 5.5. Infrastructure status in Kızılay Neighborhood

From the residents point of view it looks like there are no so much problems about drinking water services. 8% strongly disagree to be satisfied with water services, 16% disagree, 14% are undecided, but 28% agree that water services are satisfactory and 34% strongly agree. Differently from water services satisfaction, residents strongly disagree to say that rain water collection system is sufficient in their neighbourhood at 50% and only 10% strongly agree. It seems that even positioned in topography does not help to a better rain water carriage. The sanitary sewer system looks to satisfy the residents and dissatisfy them in same percentage, 26% strongly agree and 26% strongly disagree that sewer system is sufficient for them. 14 % disagree, 16% are undecided and 18% agree.

### 5.6. Public transportation and road quality in Kızılay Neighborhood

Accessibility to work place, school/university, hospital, recreation areas and shopping are the factors that significantly increase the satisfaction of residents. The selected site looks to have a good connection with Bornova district centre, Aşık Veysel Recreation Area, İce Sport Centre, Peterson Mansion, Big Park, Military area, Cultural center, other neighbourhoods, but also based on standard walking distances to the bus stops it shows a general access within 500 walking distance but there are some areas that need to walk more than 700 m. Figure 7 illustrates the walking distance from different points to bus station.

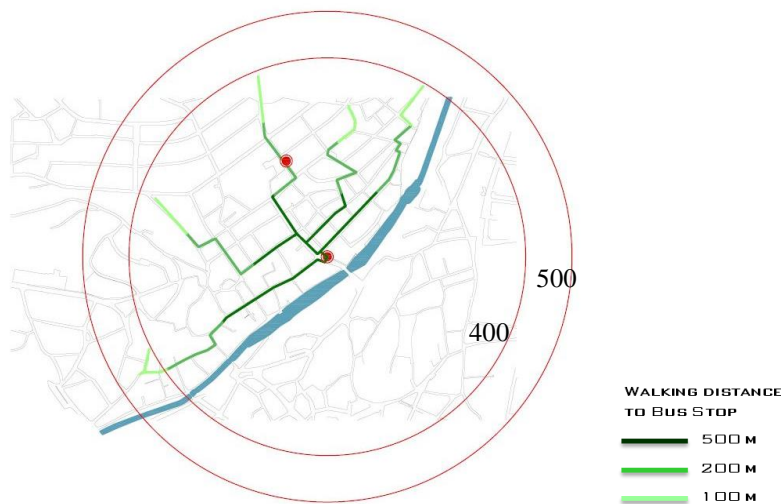


Fig. 7. Walking distance to bus stop in meters



According to questionnaire results, 12% of people strongly disagree that public transportation is adequate in Kizilay and 34% disagree. 20% are undecided, 24 agree that it is adequate and 10% strongly agree. While there are satisfied and not satisfied residents about public transportation, when it comes to road quality 30% strongly disagree and 32% disagree to be satisfied. 16% are undecided, another 16% agree and only 6% strongly agree that they are satisfied about quality of roads. Figure 7 illustrates that 34% and 40% of residents strongly disagree and disagree respectively to be satisfied with pedestrian paths/sidewalks in their neighbourhood and only 2% of them strongly agree. There are no walking paths in Kizilay and pavements are not wide. This low percentage comes because of narrow streets and the lack of proper parking places. Everyone parks his/her car in front of the house or where there is an empty space. 60% of the residents strongly disagree to say that there are enough parking places in Kizilay and only 10% of them strongly agree. Not only the roads are so narrow and their quality is bad but also people are not satisfied with traffic signs and road lighting. 80% of them strongly disagree to say that traffic signs and lights are sufficient in Kizilay.

### 5.7. Health and safety

To have a healthy life for themselves and their children Kizilay residents complain about hygiene problems and stray animals' presence in their neighbourhood. 34% of them disagree to say that there are sufficient cleaning services and 12% strongly disagree, while, 24% agree and only 10 strongly agree. 20% are undecided to agree or disagree with the statement. Health facilities such as hospitals and emergency centres should provide their service to the residents and should be easily accessed by them. Residents in Kizilay strongly disagree to say that health facilities are adequate for their neighbourhood at 60%, 16% disagree, 8% undecided, 6% agree and 10% strongly agree. 34% of people strongly disagree that accessibility of emergency vehicles, such as fire, ambulance or police is good and 40% disagree. Only 2% strongly agree and 16% agree. 8% are undecided. The easy access of police in the neighbourhood makes people believe that their life in that site is secure and so their level of satisfaction increases, but in Kizilay 80% of people strongly disagree to think their neighbourhood is safe, and 10% disagree.

### 5.8. Urban Regeneration Project in Kizilay

People living happily should love the identity and characteristics of their neighbourhood. In Kizilay 32% of people strongly disagree to protect characteristics and identity of Kizilay, 6% disagree, 16% are undecided, 16% agree and 28% strongly agree. It is a low level of satisfied residents and mostly it is because the houses construction quality. 46% of them strongly agree that they can live in a different typology of housing, and only 20% strongly disagree. Public participation is very important in all phases of urban regeneration projects. Meetings should be done between all stakeholders of the project, including municipality representatives, organizations, private firms and public members. In Kizilay 30% of people strongly disagree to say that enough meetings are done about Urban Regeneration Project, 26% disagree, 22% are undecided, 8% agree and 12% strongly agree. According to their economic conditions there are the answers of them about the need for housing rents, provided by the actors who will direct the UR. 74% of them strongly agree that the housing rents should be provided for the time period that the project will be under implementation. 12% agree, 4% are undecided, 6% disagree and 4% strongly disagree.

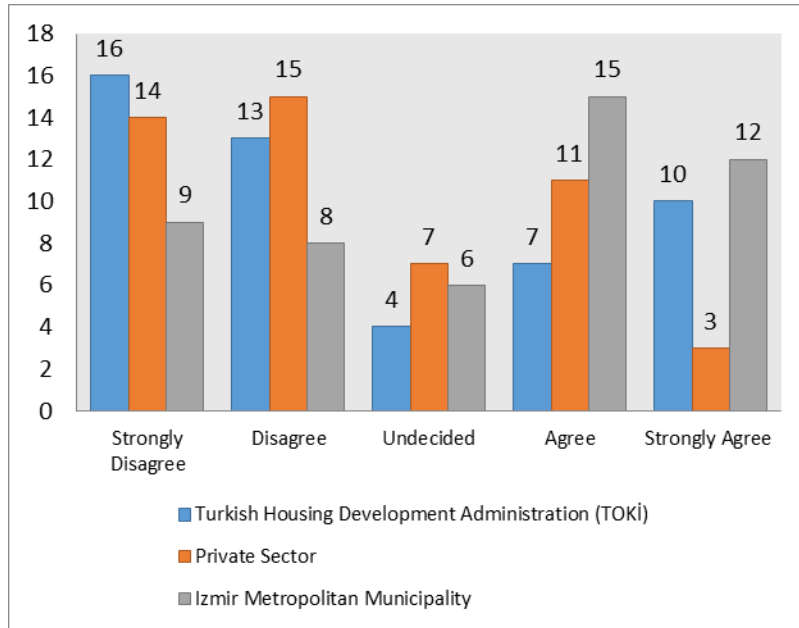


Fig. 8. Directing URP

Residents based on their experiences or what they have heard, expressed their opinions about who should direct urban regeneration project in Kızılay. URP should be done by Turkish Housing Development Administration (TOKI), by increasing the Development Rights for Private Sector or under the leadership of Izmir Metropolitan Municipality were the three options that they could select. In the figure 8 above it is shown that 32% of residents strongly disagree that TOKI directs the URP and so they are against private sector with 30%. 30% of them agree that Izmir Metropolitan Municipality directs URP and 24% agree.

## 6. Conclusion

In Izmir-Kızılay Neighbourhood the overall satisfaction level is low mostly because of the low quality of construction and a lot of property problems. The facades of the buildings show signs of structural instability and the mix used materials, illegal interventions by the owners show a poor level of architectural values and poor levels of physical conditions and energy efficiency. All these problems directly indicate the happiness of the residents. In neighbourhood scale the level of satisfaction is higher because of good proximity to amenities that are provided, like schools, religious assets and green areas and the overall quietness that characterize the Kızılay. Despite this, in some aspects such as problems in infrastructure, transportation, health and safety, and low economy condition are main factors to decrease the overall happiness in this area. All the results are important to be taken in consideration and further studied for an effective urban regeneration project in Kızılay led by the voice and satisfaction of residents.

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