

# EXPLORATION OF SOCIO-ECONOMIC PROBLEMS OF THE INHABITANTS OF SLUM AREAS AND THEIR IMPACT ON VICINITY RESIDENTS: A CASE STUDY OF ARIFWALA PAKISTAN

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**ABSTRACT:** *The residents of slum areas of Pakistan are facing many socio-economic problems. This study has been done to identify the socio-economic problems like housing, health, education, sanitation, crimes and unemployment of slum areas of Arifwala. On the basis of Poverty of Opportunity Index (POPI), Socio-Economic Opportunity Index (SEOI) has been created that assessed the level of deprivation of those areas. Atkinson formula is applied to estimate the overall level of deprivation. Vicinity residents are also stakeholders of these areas because they get some benefits like cheap labor and more business activities as well as face some problems like criminal activities, disturbance in transportation and over population. Two questionnaires were redesigned to explore the objective of study: one is to assess the problems of inhabitants of slum areas and second is to identify the problems to vicinity residents due to slum areas. SEOI depict that 48.3 % people of slum areas of Arifwalado not have basic socio-economic facilities. On the other hand, vicinity resident are not facing much problems because of them, rather they are getting benefits from them. Government or any other organizations (NGOs) are not taking care of these areas to improve their living status.*

## INTRODUCTION

One of the important problems of developing as well as developed countries is fast urbanization. Facts depict that in each coming era, in last century; have faster urbanization than its former one. Due to this fast urbanization along with fast population growth, urban population is facing numerous problems like housing and lack of basic facilities. Employment opportunities and other facilities available in big cities attract rural population toward it. But there housing is much expensive for migrated people to afford, because they have very low income, so they start to live illegally near city areas on vacant piece of land. This process causes emergence of slum areas in the urban areas.

Slums are founded in the whole world but the situation in the developing countries as well as in Pakistan are more alarming than in the developed nation. There are a lot of facilities in urban areas like better employment, better sanitation, better housing and hospitals etc. Keeping in mind all these facilities, people start migration from rural to urban areas. But they are not well aware of the other elements, hurdles and many other problems that they have to face. Among these problems, shelter (housing) is at the top of the list. Poverty along with other facilities is also there behind their migration to urban areas.

Research and work regarding the slums Areas in major cities as Lahore, Karachi, Faisalabad, Rawalpindi and Islamabad has been done. But it is cleared from literature that neither any study has been conducted to identify the problems nor any program has been initiated for the improvement of the condition faced by the inhabitants of the slum areas in Arifwala. The emergence of slums is increasing day by day in this area. Due to which, the residents of adjacent areas as well as vicinity residents have to face some problems. As like previous studies there is a need to identify the problems of the inhabitants of the slum areas of Arifwala. So this study tries to identify many of the socio-economic problems of these areas. With the help of these problems, Socio-Economic

Opportunity Index (SEOI) has been established to check the deprivation level of the inhabitants of these areas.

Urban population's share in the world was 32 % in 1950, 39 % in 1980, and 48 % in 2000, 53 % in 2014 and it is estimated that this share will rise to 61 % by the year 2030 if the share will increase by the same rate. In 2030, 6 people out of 10 will live in the urban areas.

Share of urban population in Pakistan was 17.8 % (of total population) in 1951, 28.3 % in 1981, 32.5 % in 1998, 37 % in 2010 and 38.5 % in 2014 and 39.2 % in 2015. The share of population in rural areas has decreased from 61.4 % to 60.8 % from 2014 to 2015 and the share of the population in urban areas has increased from 38.5 to 39.2 during these two years.

### Definition of Slum Area (Katchi Abadi<sup>1</sup>)

The general definition about the slum areas is:

- "It is a group of people who live at the land of which they have no formal property or ownership right."

According to the Government of Pakistan under the "Katchi Abadi Act 1992"

- "Any area or part thereof which was occupied unauthorizably before the [31<sup>st</sup> December 2006] and continues to be so occupied and has at least forty dwelling units on it to be a Katchi Abadi<sup>1</sup>"

### Major characteristics of Slum Areas

- **Social Status**

The inhabitants of the slum areas work in various private or informal sectors or on daily base wages. They have to work

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<sup>1</sup> Words in the literature used for slum Areas are Squatter settlement, Kachi Abadi, Informal settlements, Low-income settlements, Semi-permanent settlements, Shanty towns, Spontaneous settlements, unauthorized settlements, unplanned settlements and Uncontrolled settlements

part time to meet the minimum necessities of life. Most of them are illiterate and can work on daily base wages only. They have migrated from rural to urban or urban to urban areas.

- **Physical Status**

Because the people in the slum areas have no ownership rights and live there illegally, the services like electricity, roads, drainage, sanitation water supply, health centers and schools are not adequate. Along with these services, infrastructure is below the minimum level.

- **Legal Status**

The people in the slum areas are migrants from other areas and occupied a land illegally so they have no property rights. Hence they cannot build their houses. They start to live on any piece of land either vacant government or public place or the railways setback that is marginal piece of land.

### Development Process of Slum Areas

- **Organic Process**

In this process, everything is happened in a natural way and slowly. This process is continuous and the existing houses are upgraded. New houses are constructed in the adjacent open areas.

- **Induced Process**

This process is referred to inducement by organization or agencies that work behind this process with some proper goals and objectives. From private sector and NGOs, programs are started for training, education, and health and community development

### Types of Slum Areas in Arifwala

There are 2 types of slum areas in Arifwala:

- **Non-Transferred Areas**

These are the parts (areas) in which the inhabitants have no property right. This area is still disputed and under process.

- **Transferred Areas**

These are the areas in which the property or ownership rights have been given to their inhabitants.

### Introduction of Arifwala

Arifwala is a tehsil and an administrative sub division of its district Pakpattan. Arifwala was a famous village called 61/E.B in nineteenth century. It was called Arifwala due to a landlord named "Arif" who cultivated crops in this village. Arifwala town was inaugurated by Mrs. FB Wase in 1927. She was wife of then Registrar of Cooperative Societies, Punjab.

### Objectives

- To examine the socio-economic conditions of the inhabitants of slum areas adjacent to Arifwala.
- Identify the socio-economic profile of the inhabitants of slum areas on the basis of demographic features, income level, employment, education, health, housing status and community participation.
- To develop Socio-Economic Opportunity Index (SEOI) in order to check the level of deprivation of the residence of slums.
- To check the problems if there, of vicinity residents due to near slum areas.
- To recommend policies to minimize the intensity of the problems faced by the residents of slums in Arifwala.

### Hypothesis of the Study

**H<sub>0</sub>:** Areas with high population density has to face greater problems of income, education and housing as compared to the areas with low population density.

**H<sub>1</sub>:** People living in the transferred areas have to face fewer problems than the people in non-transferred areas.

**H<sub>2</sub>:** The areas that are far from the city have greater problems rather than the areas near to the city.

**H<sub>3</sub>:** The socio-economic condition of the inhabitants of small slums is different from those living in large slums.

### Literature Review

[5] discussed the factors causing emergence of slum areas that are "urban attractions of facilities, higher than normal wages, greater freedom, rural poverty and a sense of occupational aspirations. Socio-economic, demographic, political and environmental problems come due to this rapid urbanization.

[7] identified the factors behind the migration and natural growth. They estimated that the mortality rate had been decreased but on the other hand the fertility rate had not decreased. This widening gap caused the rapid population growth. They identified two major factors behind rural urban migration.

- Pull Factor (There are a lot of facilities that attract the people of rural areas)
- Push Factor (Population is also increasing in the rural areas and the land available for the increasing population is limited.)

[6] carried out a fieldwork to analyze socio-economic conditions of the inhabitants of unplanned settlements of Chandigarh from 1973 to 1975. He found that the people in non-planned areas were outstanding different in socio-economic characteristics as compared to the people who lived in planned settlements. Because non-planned settlement confront with lack of opportunities and powers were in the hands of few people.

[3] carried out a field survey of Patiala House, Lahore to identify the socio-economic status of children and youth.

[1] carried out a study to examine the socio-economic conditions of the residents of Chaudhry Colony Lahore. He selected fifty % of the whole population of the abadi as sample. He collected data on activities of women, occupation, childcare, income, health and housing condition. He estimated that women were in poor socio-economic condition and proprietary right is an essential for betterment of housing. Community Development Program in Katchi Abadis/Slums of Lahore was started to improve the existing conditions of the inhabitants in (1981-1984). The program was approved again in 1985. A field survey was conducted by Pakistan Economic Research Institute (PERI) in eight slums for the evaluation of the project. Total population was distributed in four strata and two areas were selected as sample within each stratum. 240 five years old children from these areas were selected as sample in order to check different diseases like diarrhea, infection and malnutrition. It was concluded that the project had failed to achieve its objective and Living condition did not improve there.

[2] analyzed the changing situation of housing conditions in Pakistan for the period of 1960 to 1980. The population is increasing more than the numbers of the houses. According to

the two houses consensus, the population in the country grew by 3 % per year and the number of the housing units increased by 2.1 % only. They argued that there are two reasons behind the less numbers of the housing units. The first is the supply constraint and the second is from the demand side.

### Data and Methodology

Two questionnaires were designed to achieve the aim and objectives of the study. With the help of first questionnaire, problems of the inhabitants of slum areas have identified. Problems if any, faced by the vicinity residents have been identified in the second questionnaire. A pilot survey of 40 questionnaires was carried out in order to check the reliability of both questionnaires. The validity and reliability of questionnaires were tested by Cronbach's Alpha value which was 0.885 and 0.759 for both questionnaires respectively. Since Cronbach's Alpha > 0.7, it shows that Questionnaire has the trait of reliability.

### Target Population:

There are 39 slum areas in Arifwala. But information of 34 areas and their dwelling units was available from Tehsil Municipal Authority (TMA). So that is our targeted population.

### Sampling Frame

19 out of 34 slum areas are transferred and others 15 are non-transferred. As the list is very old, the numbers of the dwelling units are not accurate. So all the 34 slum areas are personally visited and the numbers of household within each area is counted again to achieve the exact number of the dwelling units within each slum area. The list of the 34 slum areas and the accurate number of the households is used for sampling frame for the selection of slum areas.

### Sampling Technique

Stratified random sampling was used for the selection of sample. Total population is divided in six groups (strata). It was assumed that these areas were homogenous group-wise (within each stratum) but these were not the same outside the stratum.

### Sample Selection for Slum Areas

Proportional allocation method was used to take sample of slum areas because the number of households varied within different areas and the sampling unit also varied within each stratum. We get  $n = 9$ , because we had a list of 19 transferred and 15 non-transferred areas, we distribute these 9 areas proportionately with the help of proportional formula and got the number of sample areas from each stratum. Simple random sampling was used to select these 9 areas from each stratum.

### Selection of Sample Respondents

After the selection of the sample slum areas, the sample of the main respondents were selected. Again with the help of proportional allocation method, the sample size of the respondents was determined by using proportionate formula. By putting values we get  $n = 291$ .

### Sampling Technique for Second Questionnaire

Purposive sampling technique was used to get the sample for second questionnaire. 5 areas were selected to check the effect of the rising slum areas on the vicinity residents. These 5 areas were selected on the basis of judgement to achieve the

objective of the study because these areas were surrounded by slum areas from each side. In order to get the sample respondent in these areas, the following formula was used.

$$ME = z \sqrt{\frac{\hat{p}(1 - \hat{p})}{n}}$$

Where,

ME = Margin of error that is 0.1 due to limitation of resources and time

z = Level of confidence (95%)

p = initial judgmental proportion

n = sample size

Because of having no idea about initial judgement, p was considered 0.5.

n = 96

After the sample size has been determined, the sample size was distributed equally among 5 areas that are surrounded by slum areas from each direction in the city.

### Analysis and Findings

The list of the transferred areas had been prepared in 1985 and now every head of the household has been granted the ownership right. The non-transferred areas are there after 1985 but their list has been prepared in 1912. These two sides of slum areas differ in different perspective from one another. The areas within each of the two categories also differ among one another. Here are some findings that have been estimated in this study and are following.

### Demographic Characteristics:

There are nine slum areas that have been selected as sample for the study. Total population size in all areas is 2080 persons that comprising 1409 (50.17 %) of male and 1399 (49.83 %) of female. These nine areas differ in population size. The lowest number of people among these areas is 265 in GhareebMohalla and the highest number is 352 in Lot Bashir

### 1. Health

Situation of health in Arifwala is that 100 % of the total people has said that their children has secured against polio and 99 % against fatal disease by vaccination but situation in case of dengue is bad that 91.75 % peoples said that no measures have been taken yet. Similarly lady health worker's role in these areas is stated satisfactory only by 25 % peoples. 2.84 % of the total population has been suffering with some protected diseases in which T.B, Asthma, liver, lungs, kidneys and heart diseases are at the top. Total fertility rate in these slum is recorded 15.2 % which is quite greater than in Pakistan (3.2). Infant mortality rate is calculated 57 %.

### 2. Education

The percentage of literate members till matric and the percentage of literate till master level is counted separately in this study. 81 % of the literate members have education till matric level and 19 % of the total literate has education till master level. But Net enrolment for the slum areas in Arifwala is 87.7 % which is not 100.

### 3. Income

Majority of the households i.e. 44.6 % has income level of 10001-20000. Overall monthly income in all these areas is 6.06 million per month. Per capita income per month is Rs.2159.95 and per capita income per year in US dollar is

104.33\$. Highest per capita income Rs.2594 in E Block and has an average level of household income Rs.10615 per month. Average saving rate per person in all areas is only Rs.42.92 per month.

#### 4. Economic Activity

Out of 2808 total number of males and females more than age of 10 years, 2262 members engaged in some kind of economic activity. There are total 510 members are working which is 22.54 % of the total active members. 6.94 % of people are looking for work, 0.97 % are unpaid family helpers, 0.13 % are laid off worker, 40 % are student, and 29 % doing domestic work. Out of total 510 working members, 483 are males which are 94.7 % and only 27 are females which are 4.3 %.

#### 5. Unemployment

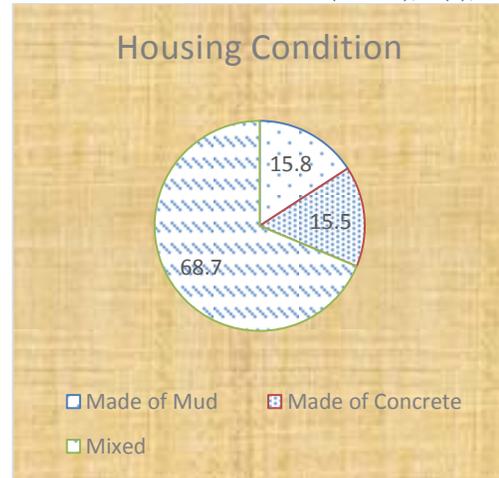
Unemployment rate is 23.12 % in these slum areas. Unemployment rate varies from 11.66 to 32.71 % in the selected areas. Highest unemployment rate is in Javed Poultry Farm which is non transferred area. 35 members out of 295 members are those who are looking for work and laid off in this area.

#### 6. Housing Status and Facilities

There are total 659 rooms in nine slum areas. The number of rooms varies from 1 to 7.35 % of the households has only one room to live, 15 % have two rooms, and 44 % have three. There are total 1017 marla (6.35 acre or 50.85 canal) of all the households within these selected slum areas. The total area in each of the slum areas differ from 89 to 138 marla. 3.09 % of the people have their households in one marla, 16.49 in two, and 39.51 in three. There are total 291 houses in all the selected areas. Total population in these nine areas is 2808 persons. The average situation as number of household per marla, per person is 9.64 (round about 10) persons. 75.6 % of the household have migrated at the current place. As 18.9 % of the people stated that their income was very low and they are unable to support their families with their low income.

#### 7. Housing Condition

88.7 % of the households has their own meter. 9.6 % has sub-meter and 1.7 % use electricity through a connected wire with some other households. 12.4 % of the households has concrete (pukka) sewerage system, 28.2 % has sewerage system made of mud and 59.5 % of mix sewerage system made of mud and concrete. Frequency of drug activities is very high as 32 % of the households said that it is very high and 46.7 % stated that it is high. People are addicted to drugs. Figure 1:



Source: Authors' Graphing

### Statistical Analyses

#### 1. Correlation

In order to test the correlations between different variables, Pearson correlation coefficient was used to assess the relationship between different variables. The following variables are used to find correlations between each other.

##### 1.1. Educational Attainment and Income

Correlation between educational attainment of all members in a household and the households' income earned from all sources  $r = 0.537$ ,  $n = 291$  and  $p = 0.000$  that shows a positive relationship. The correlation is found to be statistically significant at 0.01 level. As the total income of household increases, educational attainment will also increase but at a slow rate because the relationship is poor.

##### 1.2. Education of the Household Head and Educational Attainment of the Households

Correlation coefficient shows very poor but positive relationship as  $r = 0.194$ ,  $n = 291$  and  $p = 0.001$ . As educational level of household increase, educational attainment of the households also increases slightly.

##### 1.3. Income of the Households and Housing Status

Income of the household and housing status evaluate poor relationship between income of the households and housing status. Coefficient of correlation  $r = 0.288$ ,  $N = 291$  and  $p = 0.000$  which states a positive relationship. Households with higher level of income want to improve their housing status but with little attention.

##### 1.4. Housing Status and Health

As housing status improve, health of the households will also become better. But here in this study the value of  $r = 0.064$ ,  $p = 0.274$  and  $N = 291$  shows weak relationship between housing status and health of the households. As the housing status improve, the health of the households will not become good.

## 2. Testing of Hypothesis:

In order to check the difference between socio-economic condition; income, housing and education of the inhabitants of slum area(s), following hypothesis are tested.

### 1. As Population Density in Slum Area become High, Level of Socio-Economic Problems also become severe and high.

Three variables; income, housing and educational attainment are considered to test this hypothesis. Two slum areas are taken GhareebMuhalla which has lowest population density and EidGah which has highest population density among the other slum areas.

#### a. Housing

The result shows that there was no significance difference of housing status in GhareebMuhalla ( $M = 2.7778$ ,  $SD = 0.50637$ ) and EidGah ( $M = 2.8421$ ,  $SD = 0.43659$ );  $t(63) = 0.548$ ,  $p = 0.586$ . The results suggest that housing status is insignificant and negative signs with difference in mean and t-statistics showed bad housing status in these two areas.

#### b. Income

Income of the households from all sources was not significantly different between GhareebMuhalla ( $M = 3.0370$ ,  $SD = 0.93978$ ) and EidGah ( $M = 2.8684$ ,  $SD = 0.81111$ );  $t(63) = 0.773$  and  $p = 0.442$ . The results are also insignificant in case of income as there is no significant difference in incomes of the households in these two areas.

#### c. Educational Attainment

Test showed that educational attainment was significantly different in GhareebMuhalla ( $M = 7.5556$ ,  $SD = 2.39122$ ) and EidGah ( $M = 6.0789$ ,  $SD = 2.11023$ );  $t(63) = 2.630$  and  $p = 0.011$ . The results suggested that educational attainment was significantly different between these two areas.

### 2. The Inhabitants of Non-Transferred Areas Live in Worse Condition than the Residents of Transferred Areas.

Another two slum areas were selected to test this hypothesis. Javed Poultry Farm a non-transferred area and E-block a transferred slum area. Again three variables; housing, educational attainment and income were used to evaluate socio-economic conditions in these two areas.

#### a. Housing

The result showed a significant difference of housing status between Javed Poultry Farm ( $M = 1.7500$ ,  $SD = 0.98374$ ) and E-Block ( $M = 2.700$ ,  $SD = 0.53498$ );  $t(48.486) = -0.4763$  and  $p = 0.000$ .

#### b. Income

The result showed that mean value of income of the households was also significantly different between Javed Poultry Farm ( $M = 2.000$ ,  $SD = 0.67202$ ) and E-Block ( $M = 2.8000$ ,  $SD = 0.71438$ );  $t(60) = -4.544$  and  $p = 0.000$ . These result suggested that income of the households was significantly different in transferred and non-transferred areas.

#### c. Educational Attainment

Educational attainment was also significantly different in transferred and non-transferred areas as Javed Poultry Farm ( $M = 4.1875$ ,  $SD = 1.92501$ ) and E-Block ( $M = 6.5333$ ,  $SD = 1.96053$ );  $t(60) = -4.753$  and  $p = 0.000$ . The situation of

educational attainment is better in transferred areas than the educational attainment in non-transferred areas.

### 3. Residents of Slum Areas That Are Near the City Face less Socio-Economic Problems As Compared To the Residents of Slum Areas of Suburbs.

Two another areas were selected to test this third hypothesis of the study. Lot Bahir which is situated far from the city and Fazil Colony which is situated near the main city. The independent T-test is again used to check the difference.

#### a. Housing

The result for housing showed that inhabitants of slum areas which are far from city (suburb areas) faced more problems than the residents of slum areas close to the city (Primate City areas). There was a significant difference between the residents of Fazil Colony ( $M = 2.8000$ ,  $SD = 0.40684$ ) and the residents of Lot Bashir ( $M = 2.3429$ ,  $SD = 0.990563$ );  $t(48.728) = 2.687$  and  $p = 0.010$ . Mean values showed that residents of Fazil Colony faced few problems.

#### b. Income

Difference in means of income of the households was insignificant between Fazil Colony ( $M = 2.3637$ ,  $SD = 0.55605$ ) and Lot Bshir ( $M = 2.4286$ ,  $SD = 0.81478$ );  $t(63) = -0.352$  and  $p = 0.726$ . Difference between incomes of the households was insignificant.

#### c. Educational Attainment

Difference in educational attainment between Fazil Colony ( $M = 3.900$ ,  $SD = 2.20266$ ) and Lot Bashir ( $M = 5.7143$ ,  $SD = 2.61861$ );  $t(63) = -2.993$  and  $p = 0.004$  was significant. Educational attainment in slum areas near the city and slum areas that are not close to the city, differ significantly.

### 4. Socio-Economic Condition of the Inhabitants of Small Slum Areas is Different from the Inhabitants of Large Slum Areas.

GhreebMuhalla a small slum area and EidGah a large one, were again selected to estimate this hypothesis. The results showed that housing status in GhreebMuhalla ( $M = 2.7778$ ,  $SD = 0.50637$ ) was different significantly from that in EidGah ( $M = 2.8421$ ,  $SD = 0.43659$ ) with  $t(63) = -0.548$  and  $p = 0.586$ . The result also showed that income of the households was insignificant in GhareebMuhalla ( $M = 3.0370$ ,  $SD = 0.93978$ ) and EidGah ( $M = 2.8684$ ,  $SD = 0.81111$ ) with  $t(63) = 0.773$  and  $p = 0.442$ . There was no difference in socio-economic conditions in small and large slum areas.

### 3. Socio-Economic Opportunity Index (SEOI)

Socio-Economic Opportunity Index (SEOI) is based on four variables that are Housing, Education, Income and Health. All the four variables are defined as below:

#### 3.1. Calculations of Deprivation:

##### a. Housing Deprivation

Housing status is the most important variable while measuring the socio-economic conditions in slum areas. There are total 659 rooms and total population is 2808. On average 4.26 persons are living in a room. If three persons live per room, total of 1977 members can live in room. It means there is no room for 831 persons. These persons are living in rooms and are considered as additional members in the rooms. They have no room if there is a limit of 3 persons per room. They accounted for 29.59 % of total population.

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- a. percentage of people living more than three in a room ( here, we takepercentage with respect to number of people who live in rooms with the constraint of three person per room,  $n = (831/1977 \times 100)=42\%$
- b. percentage of people who have houses made of mud = 15.8 %
- c. Average of thepercentage of people who use open area for kitchen in their houses and also use open area for bathroom  $= (60.1 + 1.4)/2=30.75$
- d. Average of thepercentage of people who have no pipeline of sui-gas in their area and have no connection for sui-gas if the pipeline is available $= (56.4+21.3)/2=38.85$

Housing deprivation =  $(42+15.8+30.75+38.85) = 31.85\%$

**b. Education Deprivation**

- a. percentage of illiterate members of age 10 years and above = 41%
- b. percentage of non-school going children of age 5 and above but less than 10 years= 12.34 %
- c. percentage of children of age 5 years and above but less than 10 years who have neither government nor private school in their areas = 46.80 %

Total population of age ten years and above = 2269

Total number of children of age 5 years and above

but less than 10 years = 235

Weight = total population of ten years and above/children of five and above but less than 10 years =  $2269/235 = 9.65$

Education deprivation =  $(41 \times 9.65 + 12.34 \times 1 + 46.80 \times 1) / (9.65 + 1 + 1) = 39\%$

**c. Income Deprivation**

Percentage of people below poverty line= 91 %. All employed members in all areas earn daily income which is below Rs.530 and are unable to meet their daily expenditure on only food items. The situation is very bad in Bhatta No 2, Lot Bahir and Javed Poultry Farm where people earn Rs.252 per day, Rs.133 per day and Rs.285 per day respectively.

**d. Health Deprivation**

- a. Average of thepercentage of households who have sewerage system made of mud, who have no lady doctor in their area and who obtained water from sources other than government pipeline =  $(28.2+44.44+18.2)/3=30.26$

- b. Infant mortality rate=57 %
- c. Total population=2808
- d. Children under one year=122  
Weight = Total population/ number of children under one year =  $2808/122 = 23.01$   
Health Deprivation =  $(30.26 \times 23.01 + 57 \times 1) / (23.01 + 1) = 31.37\%$

All the results of deprivation show that income has the highest deprivation level as 91 % of the residents of slum areas are deprived of the basic income level with which they can meet the minimum facilities for their families. Education has the second highest level of deprivation where 39 % of the people are deprived of educational facilities. Housing and health have almost the same degrees of deprivation (31 %).

**3.2. Socio-Economic Opportunity Index**

Atkinson formula of deprivation is used to develop the Socio-Economic Opportunity Index (SEOI).

$$X_A = (P_1 X_1^\mu + P_2 X_2^\mu + P_3 X_3^\mu + P_4 X_4^\mu)^{1/\mu}$$

Where  $X_A$  is the average required

$X_1$  = Housing Deprivation

$X_2$  = Educational Deprivation

$X_3$  = Income Deprivation

$X_4$  = Health Deprivation

$P_1, P_2, P_3$  and  $P_4$  are equal weight that is 0.25 and  $\mu = 4$ .

$$X_A = (0.25 \times 31.85^4 + 0.25 \times 39^4 + 0.25 \times 91^4 + 0.25 \times 31.37^4)^{1/4} = 48.3\%$$

The result shows that 48.3 % of the inhabitants of slum areas is deprived of basic social-economic opportunities.

**Impact of Slum Areas on Vicinity Residents**

A second survey was conducted to know whether the people in Arifwala (vicinity residents) have to face any problems due to near slum areas. The questionnaire included questions on cheap and easily available labor, transportation, value of property, business activities and some other types of questions. It was tried to link some of the variables with the results in the first survey of socio-economic problems of slum areas.

Table 1. Impact of Slum Areas on Vicinity Residents (96 Observations)					
Name of Area	SD	A	N	D	SD
Labor Available for Domestic Use (inpercentage of Respondents)	36.46	53.13	3.13	7.29	0
Value of Property has been decreased	0	18.75	3.13	41.67	36.46
Disturbance in Transportation	9.38	121.88	28.13	32.29	8.33
Social Dispute has increased	14.58	33.33	15.63	21.88	14.58
Effects on Children of the Vicinity	2.083	16.67	28.13	26.04	27.08
Business Activities has increased	37.50	43.75	8.33	7.29	3.13
Crimes Activities has increased	8.33	38.54	16.67	30.21	6.25
Inhabitants of slum areas are involved in Crimes Activities	4.17	20.83	11.46	32.29	31.25
Number of Drug Addicted people has increased	11.46	39.58	7.29	27.08	14.58
Drugs are supplied from Slum Areas	0	11.46	20.83	43.75	23.96
It is Dangerous for spreading disease	6.25	21.88	22.92	39.58	9.38

Source: Authors' Estimation

5 areas (O Block, M Block, D Block, Gulshan Iqbal Colony and Al Badar Colony) of vicinity residents were selected through purposive sampling technique to achieve the objective. 96 questionnaires were filled from these areas. Equal number of questionnaires was distributed among these. The overall impact of slum areas on vicinity residents in the light of these calculations is not bad. There was cheap and easily available labor for domestic and other works. Slum areas did not worsen the level of cleanliness. Value of property had also been increased due to near slum areas. Nearer slum areas have not affected the children rather it was good for children as the children in the vicinity areas study more with the children from slum areas. Business activities had also increased and nearer slum areas were profitable for vicinity residents.

On the other hand, nearer slum areas created disturbance in transportation. The reason for it has been described earlier that the condition of roads is already bad so people feel disturbance. Criminal activities and the number of drug addicted people were increased due to near slum areas. But most of the respondent also said neither drugs are supplied from slum areas nor the inhabitants of slum areas were involved in crimes activities. So it can be concluded that the slum areas have more advantage than disadvantage for vicinity residents. They are not harmful for vicinity residents in this study. But neither the government nor any other organization or vicinity residents are helping the people in slum areas to solve their problems.

### CONCLUSION

Rapid urbanization and natural growth in population cause the emergence of slum areas in urban areas. There are a lot of facilities like better employment health and education in the cities attracting the people from rural areas. People start migration to access these facilities. Income of the migrated people is very low. So when they migrate, they are not able to build a house. There is no choice for them to live but slum. The people living in slum areas are the most deprived people. Nine areas are selected to identify the problems of the people living in slum areas. Socio-Economic Opportunities Index (SEOI) is developed to check the level of deprivation. The result of index show that 48.3 % people of the total population are deprived of basic necessities of life. Most of the people are uneducated. Literacy rate is counted as 59 % which is 56 % of male and 46 % of female. Most of the literate members have education till matric level. Unemployment rate is counted 23.12 % which is very high. Unemployment rate among male is 22.84 % and 25.75 % for female.

Income of the people is very low as 91 % of the adult live below the poverty line. Rs.525 is taken for poverty line after asking the people about their daily expenditure on food item. Per capita income is also very low. Saving level is near to nothing. On average, a person saves only Rs.414 per month. Crime rates and drug addicted people are increasing in these slum areas. Majority of the people have no dispute among each other. The housing condition is also very poor. Most of the houses are made of mud. Sewerage system is in bad condition. Most of the people use open area for kitchen.

There is no sui-gas pipeline available in most of the areas. Woods are used for heat for cooking.

Advantage and disadvantage of slum areas to vicinity residents has also been identified. There are two views about it. Slum areas cause some problems for vicinity residents as high crime rates, increasing number of drug addicted people and increasing threat of diseases due to near slum areas. On the other hand, slum areas have many advantages for vicinity residents. Business activities have been increased due to near slum areas. Value of property has also increased.

### RECOMMENDATIONS

1. Government should increase expenditure in education sector and should open more schools and colleges
2. Government should open institutes for formal education and vocational training for women in these areas.
3. Government should ban on emergence of new slum areas.
4. Low cost housing schemes should be introduced in cities.
5. Proprietary rights should be provided.
6. Government and other organization should provide employment opportunities.
7. Community participation activities should be done by government.

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