

Geographical Evaluation of Socio-economic Condition of Sargodha City to Measure Urban Poverty

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Abstract

The current study presents the socio economic conditions of people of Sargodha city to analyze the urban poverty level. Research was accomplished during the year of 2016-2018. Urban poverty is a burning social issue in world when a person do not succeeds to carry out his family needs and wants. A survey was conducted in eleven different colonies and 188 households were visited. Poverty level was scrutinized according to international poverty line less than 1 Dollar per day. During the field survey it was perceived that 17 percent of the households have income of less than 1 Dollar per day and they were real poor. Different parameters were examined like slums, dependency ratio, income, transportation, drinking water scheme, sewerage system and literacy rate. These parameters have compared with poverty to analyze the affordability and living condition of people. It was examined that there were several reasons for poverty in city like unemployment / low income, less education, high dependency ratio etc. Most of the people have large families but low income due to not as much of education and more dependent people in households. It was also suggested that Government should make better living conditions for people by providing technical skills to uneducated person to diminish unemployment and should advance the sanitation problems for better lifestyle.

Keywords: Poverty, Sargodha, Sanitation, GIS

Introduction

Growing population is a great threat for all developed and developing countries. It is affecting resources and management of countries which leads poverty. Poverty is major problem especially for developing countries. People are spinning from rural to urban areas for better living standard but they had failed to access all fundamental needs of life. According to world population prospect 2017, world population will grow from 7.6 billion to 8.6 billion in 2030 and expected to reach 9.8 billion in 2050 and 11.2 billion in 2100. Now this is turning to overpopulation. There would be many problems associated with high population growth rate including poverty. Almost 1.4 billion people living in extreme poverty all over the world. Most of the people which are living in urban areas, they have to faced extreme poor conditions due to less resources in urban areas. People shifts from rural to urban areas for better living but they do not have an access of adequate resource of life so that they have to live in extreme conditions. With the expansion of population it is difficult to provide all basic necessities to all people and this may create problems for city's Government. Poverty has amplified from 19.1 percent 1987-1988 to 30 percent in 2002 in Pakistan (Haughton & Khandker, 2009). Whitman, 2010 defines poverty as it is severe deprivation of basic human needs including food, shelter, sanitation and education. But due to less resources people firstly focused on their survival and they survived with few resources. When they cannot fulfill enough basic needs in

result early died. This is a severe condition of poverty. With the increase of population, the ratio of poverty is growing in urban areas as well as rural. The urban poverty is absolute standard on minimum resources when people are unable to get basic resources of life for better standard of living. When people start to raise their standard of living they were divided into three levels of economics, political and social. With the increase in fast growing of population and use of technology became the life of people more complicated. Inequality (income and consumptions) and vulnerability (droughts, falling the prices of farms, financial crisis, etc) effects on poverty badly. Poverty based on the personal's income and strength. There is a great difference in standard of livings, life expectancy, GDP, and demand of individuals from past to present. Now, absolute and relative both level of poverty are affecting the social life of every person. The population is increasing as well as we are becoming more modernized. The world has enough food as compare to past but it is not sufficient for human desire. Our needs have become more complicated that it is difficult to resolve the issues of growing population. In modern world, people who have access of all basic needs should assist those people who have not enough resources. People are also moving from rural to urban area to get higher standard of life and increasing population there. The augmentation in urban growth is due to natural population growth and migration from rural to urban. City's life attract the people but they have to faced others problems there due overburden on resources. People move there to gain better opportunities but they suffered severely due to lack of resources, unemployment, low standard, poor infrastructure and services.

Materials and Methods

Methods and techniques are key part of research through which data is assembled, analyzed and interpreted. Urban poverty in Sargodha was scrutinized through different economic, social and political factors. To achieve this goal sample of 188 households were collected through random sampling techniques. The collected results were interpreted through GIS.

Study area

Sargodha is the 11th largest city of Pakistan having population of 659,000 according to 2017 census (GOP). This is fertile area and famous for citrus fruits. It is important due to its geographical location in North West of river Jhelum and eastern side of river Chenab. It is hub for industrial and agricultural activities.

Current research involves both Primary data and Secondary data.

Primary data is also called the first hand data. A questionnaire was designed and door to door survey was conducted in 188 households from different areas of city (Fig: 1.2). This questionnaire covered most of social, economical and cultural aspects in different colonies of Sargodha. The language of questionnaire was English but questions were administered in Urdu and Punjabi for the better understanding of respondent.

Samples were collected from 11 different colonies of Sargodha. Data was based on personal as well as socio-economics of the respondent i.e age, sex, occupations, income and major expenses to check poverty level.

Secondary data

In addition to the primary source, secondary source i.e Population census report was consulted. After collection of different socio economic indicators in Sargodha city, the collected data was tabulated in MS Excel, charts and diagrams were prepared, while GIS was used to map the area. Different map were drawn i.e Slums, poverty, source of drinking water and sewerage system of Sargodha city by using 10.1 software of GIS.



Figure 1. Study Area

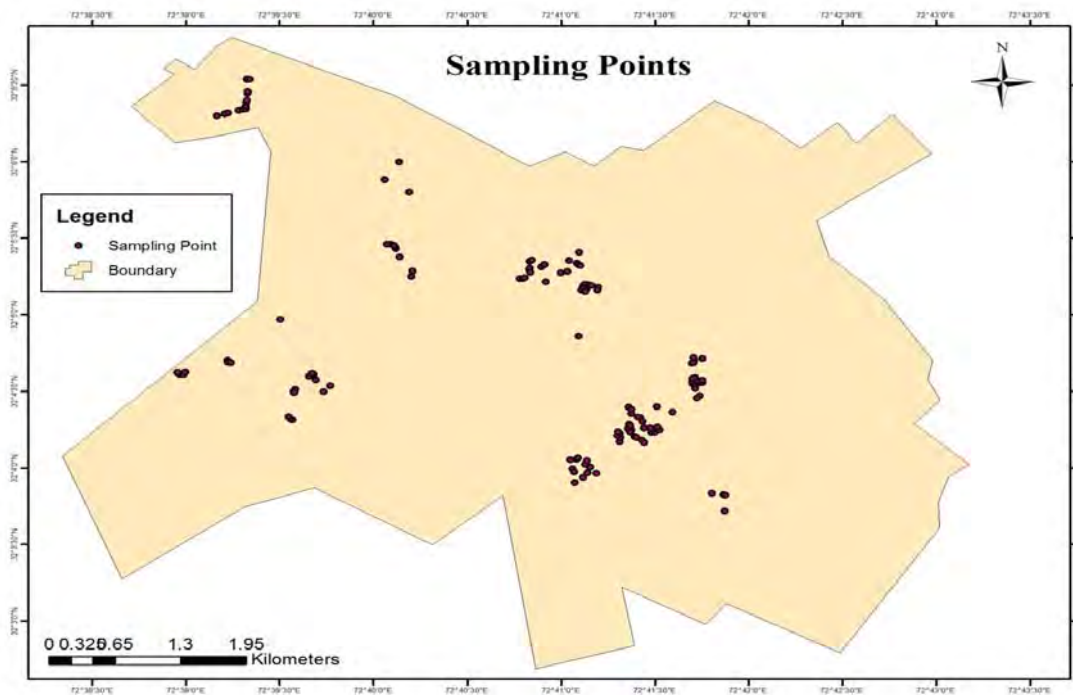


Figure 2. Different Sites of Sample Collection

Results and Discussion

Poverty always remained a big issue for all over the world with fast growing population. People who are unable to get basic needs of life are real poor. As the population is growing rapidly our needs and desire are also increasing. Our world has become more complicated with the increasing social interaction and poverty has different levels in modern world. According to international poverty line, less than one dollar per person per day is considered as real poor. To check the poverty level of Sargodha, data was assembled randomly.

Data was collected from selected study area to check the economical, social and educational status of each household. Cities are important point for development of country but poor areas are worsening the situation of these areas. Economical, social and educational characteristics and their relationship were observed by different parameters of household i.e poverty, slums, dependent and independent members, income and major expenses, transportation, sanitation etc.

Poverty and Slums

Poor person has less resource for their survival according to their desire and needs. Data was calculated about income of each household to observe poverty. According to international poverty line, 17 percent houses were real poor who belongs less than one dollar per day. Half of the population from collected data were vulnerable to poor which below than 2 Dollar per day. Life has become more complicated with the increase of technology. People have imbalance between their resources and consumptions. Data was collected about level of occupation, income, expenses, total household's members, dependent and independent members of each house. These parameters were observed to calculate poverty. As well as, percentage of slums were calculated through this research which shows that 30.3 percent houses were under slums. Slums are integral part of cities and affect the development of country. Data was collected by authorized person directly which based on family size and number of rooms of household's. These areas spread poverty with the respect of time because of fewer resources. Internationally if more than 3 people are sharing one room they considered as poor. Poverty in different colonies of Sargodha has shown in below table 1.

Table 1. Poverty and Slum Ratio in Study Area

Sr no.	Colonies of Sargodha	above poverty line Percentages	Below poverty line Percentages	Develop households Percentage	Slums Percentages
1	Milatabad	89	11	61	39
2	Jenah Colony	60	40	68	32
3	Islam Pura	76	24	52	48
4	Zafar Colony	67	33	50	50
5	Aziz Bhatti town	93	7	93	7
6	Farooq Colony	94	6	78	22
7	Society Colony	71	29	71	29
8	Old Civil Line	83	17	56	44
9	Cheema Colony	94	6	87	13
10	Muradabad	100	0	100	0
11	Urban Blocks	83	17	67	33
	Total	83	17	69.7	30.3

Highest percentage of poverty has calculated in Jenah colony which is 40 percent of others colonies. People have less resource, low income job and large family size. The biggest reason of poverty was found to serve large family on minimum resources due to low paid jobs. Most of them were unable to feed large families properly and their children were also involved with different low income occupations. People who were earning less than 2 Dollar per day per person, in actual they were vulnerable to poor but they do not accept themselves as poor due to their social self respect. In reality they compelled to live as poor due to our social set up and other reason might be their will power to achieve something because they have fewer resources to fight their poverty. Randomly data of all colonies reveals that 30.3 percent household's are slums in which people have low resources and large numbers of families are living in small houses. They are over burden on resources with minimum sources of life. Muradabad and Aziz bhatti town were developed areas with large houses of people. Their occupations and income were also varied as compare to other people who have limited sources.

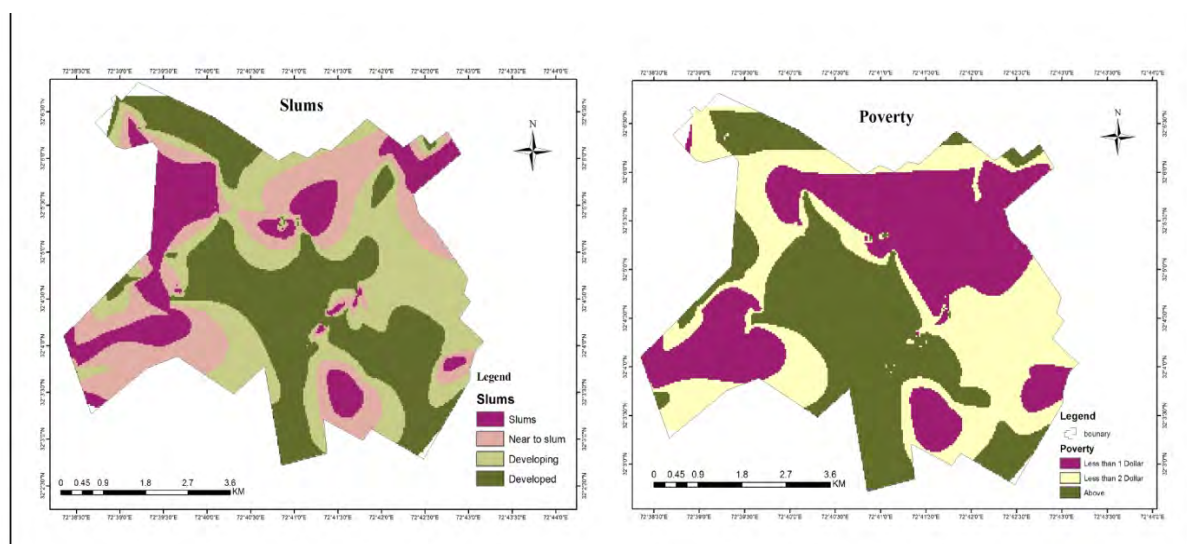


Figure 3. Concentration of different Slum Parameters

Source of Drinking water and Sewerage system

Water crisis is a big issue in colonies of Sargodha. Underground water level has become low and turned into toxic. This water is useless for cleaning, cooking and drinking. There is scarcity of drinking water and people have to buy it from different ways. Few people used ground water as a drinking source but its taste was quite different from actual taste but they were unable to afford on daily basis. They were suffering from bone diseases but they do not think it is a cause of contamination of water. There was another problem related to poor Sewerage system which needs proper disposal for sanitation. Bad sewerage system creates problems and diseases for people. Questions were asked from respondent about different sources of drinking water and sewerage system.

Data reveals that People 85 percent household purchased canned water from nearest source whilst Only 2 percent houses were able to afford and used mineral water as drinking water and canned water or ground water used for other households work. It was observed that 59 percent people were unsatisfied with their colonial sewerage system mostly in Islam Pura and Farooq colony which effects on their life style, occupations and health.

Table 2. Percentage of Different Parameters for Poverty Evaluation

Sr no.	colonies of Sargodha	Percentage of Canned water	Percentage of Ground water	Percentage of Mineral water	Percentage of Multiple sources	Percentage of poor sewerage system
1	Milatabad	100	0	0	0	0
2	Jenah Colony	96	0	4	0	32
3	Islam Pura	81	19	0	0	90
4	Zafar Colony	33	50	0	17	17
5	Aziz Bhatti town	93	0	0	7	60
6	Farooq Colony	88	0	3	9	97
7	Society Colony	79	7	0	14	64
8	Old Civil Line	56	11	0	33	72
9	Cheema Colony	81	0	13	6	62
10	Muradabad	80	0	0	20	0
11	Urban Blocks	100	0	0	0	56
	Total	85	5	2	8	59

**Figure 4. Sources of Drinking Water and Sewerage System*****Dependent and Independent people***

Unequal distribution of work and wealth along with dependency on one person caused poverty. On the other hand unemployment factors due to less knowledge makes a man poor. Dependent people are those who do not take part in earning. Independent members are involved in outdoor activities. Dependent groups mostly belong to children and women who do not take part mostly in

any source of income due to social set up. Members of each household were calculated to observe dependency ratio. This greatly affects the economic status of every household.

During the survey it was observed that Highest dependency ratio found in Society colony and Urban blocks. Data reveals that 71 percent members of household's are dependent. It greatly affects the standard of living of people. Dependency ratio is totally based on person's income and restricted the desire of people. Less income and minimum resources bound people to survive on little capital.

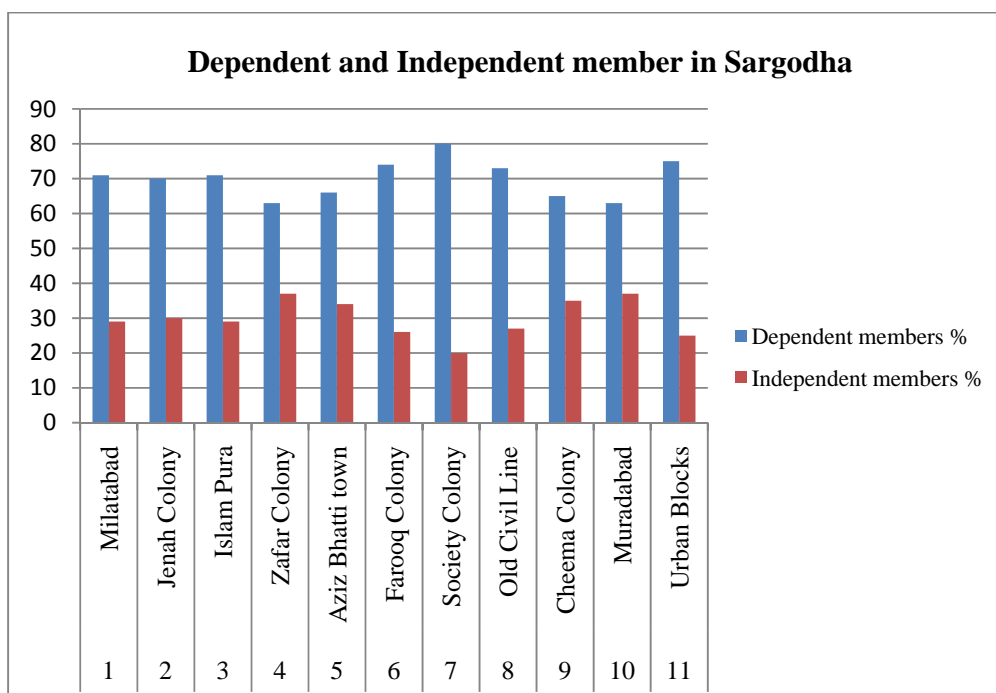


Figure 5. Dependent and Independent Population ratio

Educational status in Sargodha city

Education plays important role for successful life. It gives confidence and awareness to people to succeed in their life by overcoming on difficulties of life with struggle. It is necessary to reduce poverty level from country. It has different categories for basic knowledge, learning, skills and to move ahead in future. Most of the people are poor due to less education because they do not get good jobs according to their family needs and satisfaction. People become hopeless, rude and have low self esteem when they have large families and fewer resources. Our future is totally dependent on education in present world. It decides good or bad for a person to move in society.

It was observed that the people who have limited source of income they do not encourage their children to go to school. They preferred their children to do any job in young age due to unequal distribution of work along with high dependency on one person. So that percentage of illiteracy level is high in Milatabad, Zafar colony and Jannah colony is 21 percent, 20 percent and 18 percent respectively. The percentage of post graduate and doctorate degree is low in all colonies of Sargodha. Education standard affects economic status of each household so that poverty grows when people do not have jobs according to their needs.

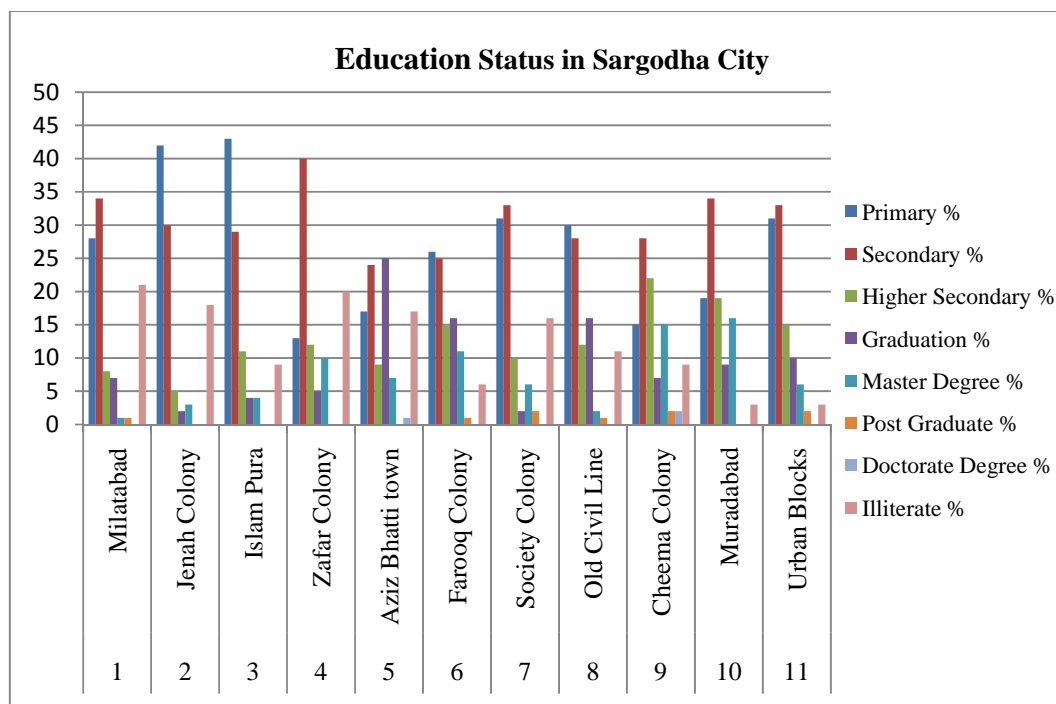


Figure 6. Education Status in Study Area

Conclusion

Current study reveals that data about poverty, slums, source of drinking water, sewerage system and education was collected to find poverty in Sargodha city. Data was assembled through door to door survey from different 11 colonies of Sargodha city. It was observed that overall 17 percent households were below poverty line. Most of the people spend their life on low income occupation due to less education and skills which results imbalance of expenses and consumption.

Data was assembled from 188 households from different 11 colonies of Sargodha. The technique adopted in this study proved very helpful for the current research. Due to time constraint data could be collected from only 188 households. Results could have been better if larger sample size was taken into consideration. It was noticed that different parameters like income, education, dependent and independent members of household's shows positive or negative relationship on poverty, slums, affordability of resources etc. When people have no education, they cannot get good job and are only dependent on low income job. On the other hand dependency ratios of these families are high. Poor people suffered badly by low income and less opportunities of jobs. They don't have proper sewerage system and cannot afford luxuries of life. Government is not paying attention to accessible the situation of these people. They suffered from miserable condition and have no future. Current research reveals that Questionnaire for data collection and GIS for mapping is best tool for results. Different research could be conducted in future by using these tools in best ways.

References

Awan, M. S., & Iqbal, N. (2010). *Determinants of Urban Poverty: The Case of Medium Sized City in Pakistan* (No. 2010:60). Pakistan Institute of Development Economics. Retrieved from <https://ideas.repec.org/p/pid/wpaper/201060.html>

- Baharoglu, D., & Kessides, C. (2001). Urban poverty. *Poverty Reduction Strategy Paper (PRSP) Sourcebook*.
- Baker, J. L. (2008). *Urban poverty : a global view* (No. 43028) (pp. 1–37). The World Bank. Retrieved from <http://documents.worldbank.org/curated/en/954511468315832363/Urban-poverty-a-global-view>
- Baker, J., & Schuler, N. (2004). *Analyzing Urban Poverty: A Summary of Methods and Approaches* (SSRN Scholarly Paper No. ID 625276). Rochester, NY: Social Science Research Network. Retrieved from <https://papers.ssrn.com/abstract=625276>
- Bobo, L. D. (2009). Crime, Urban Poverty, and Social Science. Retrieved from <https://dash.harvard.edu/handle/1/4724024>
- Buhne, N. (2016, April 26). Urban poverty. *DAWN.COM*. Retrieved January 29, 2018, from <http://www.dawn.com/news/1254363>
- Chilosi, A. (2010). *Poverty, Population, Inequality, and Development: The Historical Perspective* (SSRN Scholarly Paper No. ID 1732255). Rochester, NY: Social Science Research Network. Retrieved from <https://papers.ssrn.com/abstract=1732255>
- Dadras, M., Shafri, H. Z. M., Ahmad, N., Pradhan, B., & Safarpour, S. (2015). Spatio-temporal analysis of urban growth from remote sensing data in Bandar Abbas city, Iran. *The Egyptian Journal of Remote Sensing and Space Science*, 18(1), 35–52. doi:10.1016/j.ejrs.2015.03.005
- Dessus, S., Herrera, S., & De Hoyos, R. (2008). The impact of food inflation on urban poverty and its monetary cost: some back-of-the-envelope calculations. *Agricultural Economics*, 39, 417–429. doi:10.1111/j.1574-0862.2008.00348.x
- Graif, C., Gladfelter, A. S., & Matthews, S. A. (2014). Urban Poverty and Neighborhood Effects on Crime: Incorporating Spatial and Network Perspectives. *Sociology Compass*, 8(9), 1140–1155. doi:10.1111/soc4.12199
- Government of Pakistan. (2017). Ministry of Statistics. Statistics Division. Pakistan.
- Haughton, J., & Khandker, S. R. (2009). *Handbook on poverty and inequality* (No. 48338) (pp. 1–446). The World Bank. Retrieved from <http://documents.worldbank.org/curated/en/488081468157174849/Handbook-on-poverty-and-inequality>
- Hulme, D. (2010). *Global Poverty: How Global Governance is Failing the Poor*. Routledge.
- Ivanic, M., & Martin, W. (2008). Implications of higher global food prices for poverty in low-income countries¹. *Agricultural Economics*, 39, 405–416. doi:10.1111/j.1574-0862.2008.00347.x
- Jamal, H. (2005). In Search of Poverty Predictors: The Case of Urban and Rural Pakistan. *The Pakistan Development Review*, 44(1), 37–55.
- Ludwig, J., Duncan, G. J., & Hirschfield, P. (2001). Urban Poverty and Juvenile Crime: Evidence from a Randomized Housing-Mobility Experiment. *The Quarterly Journal of Economics*, 116(2), 655–679. doi:10.1162/00335530151144122
- Macionis, J. J., & Parrillo, V. N. (2013). *Cities and Urban Life*. Pearson.
- Multidimensional Poverty in Pakistan. (n.d.). *UNDP in Pakistan*. Retrieved February 12, 2018, from http://www.pk.undp.org/content/pakistan/en/home/library/hiv_aids/Multidimensional-Poverty-in-Pakistan.html
- Ravallion, M. (2007). Urban Poverty (Vol 44, number 03). Finance and Development: A Quarterly Magazine of the IMF.
- Roser, M., & Ortiz, E. (2013). Global Extreme Poverty. *Our World in Data*. Retrieved January 16, 2018, from <https://ourworldindata.org/extreme-poverty>

- Urban Poverty and Geographically Concentrated Low-Income Communities « Urban Economics. (n.d.). Retrieved from <https://sites.duke.edu/urbaneconomics/?p=719>
- United Nation. (2017). World Population Prospect. Department of Economic and Social Affairs. New York.
- United Nation. (2000). General Assembly The Millennium Declaration 55/2. New York.
- Whitman, S. (2010). *World Poverty*. Viva Books.
- Wratten, E. (1995). Conceptualizing urban poverty. *Environment and Urbanization*, 7(1), 11–38. doi:10.1177/095624789500700118
- World Bank. (2016). Annual Report (<http://www.worldbank.org/en/about/annual-report>)