

The Impact of Urbanization on Food Production and Residential Land Disputes (A Global Perspective)

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Urbanization is still widely perceived as a social and economic issue that needs to be tackled immediately yet the fact of the matter is that no country has made to the list of developed nation without experiencing rapid urbanization. The basic purpose of this research study is to measure the impact of urbanization on food production and the residential land disputes from a global perspective. This research study is based on primary research and for this purpose, the study uses a set of pertinent questions related to food production and residential land disputes. These specific questions are answered by 100 plus respondents through an online surveying method. This research study uses Smart PLS software for data analysis. The study employs various methods for data analysis purposes; these include the one-way ANOVA test analysis, the T-statistical analysis and the regression test analysis. Urbanization is identified as the main independent variable whereas food production and the residential land disputes are both used as dependent variables. The results from the above-mentioned analysis reveal that urbanization is negatively and significantly related to residential land disputes globally. However, the urbanization is found to be positively related with food production at the global level.

Key words: Urbanization (U), Food Production (F.P.), residential Land Disputes (RLD), Global Perspectives (G.P.).

1. INTRODUCTION

In the vast majority of countries, people migrate from rural to urban areas to avail various opportunities such as employment, education, healthcare etc. The migration of individuals and families helps them build their careers and improve their lifestyle (Kuddus et al., 2020). However, migration of rural populations from villages to cities also has some negative impacts, especially in the Asian region as the countries in the region have suffered considerably due to the movement of people in urban areas. Many skilled and low-skilled individuals move to cities because they want to earn more in order to effectively meet their individual and family needs. On the other hand, many people in the cities shift with their families because they want to provide them with quality educational, medical and recreational facilities.

Similarly, many people move to urban areas to establish their businesses and build successful careers. In short, we can say that the unequal distribution of health, employment, education, infrastructure, and recreational facilities is a major driver of urbanization (Jabeen et al., 2017). However, many scholars believe that the administration creates challenges for farmers by minimizing the cropland. The land in cities is widely used for residential and industrial purposes. To fulfill the needs of thousands of people in cities, governments in different countries has been extending the area of cities so that a maximum number of people can avail these opportunities. However, it is quite difficult to satisfy the basic needs of thousands of people residing in a city due to the limited availability of resources. For example, the soil is a critical

element for the production of food. The land in cities is widely used for residential and property purposes. Therefore, in essence, there is inadequate land available for the production of food. For this reason, the occupation of land around the cities has become a common practice these days. This explains why the global share of farmers has been decreasing very rapidly.

Several contenders are competing for land use. At the same time, climate change and other environmental problems have also contributed to decreased land production capacity. This represents an alarming situation because the world population is predicted to rise in the coming years, which means that it will become increasingly difficult to manage the demands for food for millions of people around the world. Extreme and unforeseeable events such as flooding, droughts, and breakouts are other factors influencing the production capacity of the land (Hussain et al., 2018). Apart from that, the movement of people from one area to another has helped them fulfill their needs. Nevertheless, substantial portion of the population in urban areas continues to experience poverty and the enduring lack of access to basic facilities. At the same time, it is particularly challenging for the government to create adequate opportunities for every individual living in urban areas (Jarrah et al., 2019).

The number of crop producers have been decreasing very rapidly. The global land production has also been decreasing because people are investing in the housing and industrial sectors. It is each country's government's responsibility to provide maximum opportunities to farmers and make effective policies with a view to increase

the cropland as food is the main requirement for the physical survival of human beings. The world's population has been increasing at an unprecedented rate, and the state needs to effectively fulfill the need or demand for food. The residential and industrial sector contribute to the development of economy, but the development of crop sector is essential for the survival of human beings on this planet. The occupation of surrounding city areas is not a good trend because, in this way, crop producers suffer a lot. Nevertheless, many countries around the world are involved in this practice. This practice is also not beneficial for food producers and local food share.

Furthermore, urbanization is expected to make use of agricultural lands to fulfill the market demand for housing. However, in Third World countries, the urban areas tend to develop without any strategic planning due to the absence of policies designed to provide the framework for an organized and purpose-built blueprint for urbanization. This unplanned expansion or urban sprawling of cities due to urbanization have several costs attached with it including an increase in street crime, illegal occupation of land etc.

Furthermore, the migration of people to cities has become a widespread problem worldwide, which needs to be addressed as soon as possible to avoid future challenges (Garcia-Ayllon, 2018; Li, 2017). The current research has been mainly conducted to determine the impact of urbanization on crop production and residential land disputes and practices. The study is beneficial because it highlights the impact of urbanization on the production capacity of cropland. There are also some other related studies conducted on this topic. Most of these researchers emphasize on the negative aspects of urbanization. Moreover, this research is practically useful because they provide several suggestions and recommendations to remove the problems due to urbanization.

The paper utilizes several analytical tools to test the relationship between urbanization, food production and land disputes by making use of primary data. The data is collected from online survey tools and the findings are made from a global perspective. The analysis is based on several methods from 100 global respondents and reveals the following two insights. First, urbanization is negatively and significantly related to the land disputes globally. In other words, increase in urbanization leads to more land disputes. These results are not surprising and are in line with the extant literature on urbanization and land disputes. Second, and more importantly, urbanization is positively and significantly related to food production. More precisely, increase in the urbanization is positively associated with the food production such that the food production increases with the increase in the level of urbanization in countries. These results are not surprising and are in line with the existing literature on the topic.

In the next section, a literature review is provided followed by an overview of the data collection process and

methodology in section 3. The section 4 presents the results of the analysis followed by an in-depth discussion of results in section 5. Finally, the authors provide the conclusion of the paper in section 6.

2. LITERATURE REVIEW

There are two key aspects of today's rapid expansion in the urbanization. First, there is a manyfold increase in the number of large cities globally. Second and more noteworthy is the increase in the size of these urbanized cities. Back in 1800, only London and Beijing were the two cities in the world with more than a million or more residents. As of 2018, there are now a whopping 467 cities in the world with more than a million people. In India alone, as per the last census that happened in 2011, there are 46 cities with more than a million residents.

In this section, we go through the literature on urbanization and identify the existing gaps to formulate the current research hypothesis.

M. Amin (2018) states that the population in urban areas has been gradually increasing. Most people are shifting to urban areas to improve their living style. Therefore, the population in urban areas will increase by 1.1 billion in the coming years. Urbanization has become a common issue in Western countries, Asia, and Africa since the 1950s. A research conducted by Yale University in 2016 also shows how cities are developed very rapidly during the period 3700- 2000 B.C. The main reason behind the development of urban areas is the availability of a range of facilities. These structured facilities characteristics of urban areas include residential, commercial, infrastructural, administrative, recreational, and industrial services.

Gong et al. (2018) identifies three main perspectives to understand the causes or drivers of urbanization: Western liberal, Marxist capitalist, and ecological. The Western liberal believes that migration in urban areas is the significant cause of urbanization. People who belong to rural areas shift to urban areas because they find better jobs opportunities there. This so-called push and pull factors contribute to an increase in the population in urban areas. However, the modernization theory believes that industrial employment attracts people in urban areas. In Asian and African countries, employment is the main cause of rapid migration towards urban areas.

On the other hand, Marxist capitalists believe that capitalism is the main driver of urbanization. The capitalist always desires to increase their income, and for this purpose, they equipped multinational corporations. Furthermore, Ernest Burgess proposed the ecological theory in 1920. The theory communicated that a city is comprised of several sections. However, the space in cities is limited, and competition between different sectors becomes increasingly challenging with the passage of time.

Cui et al. (2019) argues that urbanization has several economic, health, and environmental effects. The

migration of people from one place to another also has number of social effects. Most skilled and low-skilled workers migrated to urban areas for economic opportunities. An increase in the number of individuals has raised a new set of urban problems. Besides, the temperature in urban areas is rising due to domestic and industrial heat. A report presented by the United Nations predicts that the population in cities will rise to 2.4 billion by 2050. An increasing number of individuals will directly contribute to changing environmental conditions across the globe.

Moreover, inequality in society and increased contagious diseases are other issues arising because of urbanization. Furthermore, the expansion of land and residential areas has reduced the cropland, which is alarming to satisfy the need for food. Therefore, the stakeholders in the government and private organizations should carefully notice the situation and provide great opportunities for farmers to produce more foods and satisfy the population's needs appropriately. In addition, better policies can help manage land disputes effectively and appropriately (Zulu et al., 2017).

Lin et al. (2018) demonstrates that urbanization has directly influenced the source of crop production. Healthy soil is the main source of the food production system. At the same time, healthy soil is also important for maintaining environmental quality and health of living creatures. However, an increase in population has reduced the number of global producers. Scholars believe that the urban population will rise two-third by 2050. This means an increase in the contenders that are competing for crop production. These include cattle feed, biofuels, and human beings. Apart from that, the clothing industry also requires fiber for its products. Moreover, the change in climate and loss of biodiversity has also contributed to increased crop production, which is an additional challenge for the next generation's continued survival (Gao et al., 2020).

Ha et al. (2021) highlights how food security has become a significant issue globally. The global cropland has reduced by 1.8 to 2.4 %. The Asian and African countries are the ones to predominantly suffer from this problem because people in these countries are migrating to rural areas in order to fulfill their social and financial needs. For this reason, policymakers and scholars are observing the situation very carefully because they understand the globe-wide problems resulting from a decrease in cropland. It is believed that governments of different countries should expand cities. Recent studies have discussed that by 2030, crop production in China will decrease by 8.7 % (Abdul et al., 2020; Peerzado et al., 2019). The main reason is that more land in cities is used for residential purposes. Many countries are also expanding their cities by occupying surrounding lands to allow several people to migrate to cities. This practice has been negatively influencing crop production and creating challenges for the population in the long run.

Barthel et al. (2019) shows that the overpopulation has

become a significant issue in urban regions worldwide. The way that population has been rising in urban areas means that additional land is required for each sector. The effective use of land is essential because land is the primary source of food, shelter, and fiber. Therefore, the role of land is indispensable in satisfying the basic needs of the population. For instance, Pakistan is recognized as an agricultural country. However, the country has also been facing the problem of urbanization. The cities are continuously spreading and sprawling, and agricultural land on the other hand, is decreasing very rapidly. This practice is potentially dangerous because reducing cropland can lead to food security globally (Kuddus et al., 2020).

(Peerzado et al., 2019) highlight how urbanization is closely linked with the food system. The migration of many people in cities has influenced the supply and demand for food. Several studies have been conducted to determine the role of urbanization in enhancing economic growth and the per capita income of people. While migrants are able to earn good money, they are forced to consume processed and preserve food. An increase in rural to urban migration reduces the amount of agricultural land and water availability and increases transportation costs. Some scholars believe that urbanization supports the accessibility and utility of food by raising the per capita income.

On the other hand, some scholars believe that urbanization and other factors significantly contribute to food insecurity. In this way, urbanization has been directly influencing the agricultural landscape. Therefore, it is suggested that governments in different countries should focus on enhancing farmers' performance and improving food security policies to manage the supply and demand for food effectively. At the same time, the urban society must also link food issues with residential issues so that people can get a variety of food. Moreover, the government should facilitate farmers in developing food diversification and generating good benefits from the food business (Wang et al., 2021).

Putra et al. (2020) state that urbanization has negatively influenced developing countries. These countries are suffering from a widespread problem of the degradation of natural habitats. At the same time, urbanization has disrupted the hydrological system in several developing countries. To fulfill the need of several people in urban areas, the government and private organizations have been investing in residential properties instead of increasing the amount of cropland. Apart from that, additional factors, such as climate catastrophes, also influence the production capacity of the land. This is why city areas are suffering from natural disasters which cause serious physical and economic losses (Barthel et al., 2019).

Colozza et al. (2019) believe that land shortage or scarcity is common in city areas. The growing population in city areas is the major cause of urban land conflicts. Due to the industrial sector revolution, many people are migrating to

cities because they must manage their household expenses. Urban centers provide better and more job opportunities to the population and facilitates in improving their lifestyle. Individual and/or families are attracted to city areas because of several basic facilities and life amenities they cannot get in rural areas.

Pribadi et al. (2017) state that many people migrate to urban areas for appropriate housing. It's particularly difficult for launch administration to manage the need for an increased number of people effectively and efficiently.

Informal and unplanned settlements in several Asian countries have intensified the challenges for the government. It has become challenging for the state to ensure provision of water, electricity, and sanitation

facilities to all citizens. Individuals in urban areas are also suffering from a critical shortage in housing. Abu Hatab et al. (2019) discuss how to provide maximum housing facilities to people, many countries have expanded cities so that more people can get adequate residence.

Moreover, farmers suffer immensely in city areas because they have limited skills, and urban areas are mostly dedicated to residential and industrial activities. On the other hand, city areas also provide higher income job opportunities so that farmers cannot survive in this setting. More interestingly, the rural areas are mainly allocated for farmers, and farmers can use different techniques to increase agricultural production.

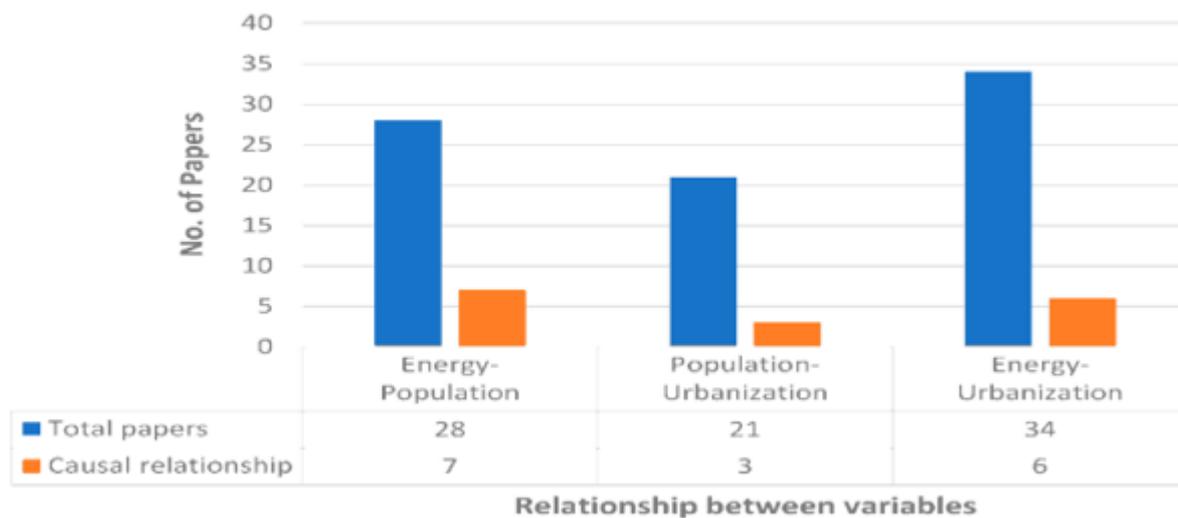


Figure 1: Overview of the literature on the related topic

The figure 1 describe that overview of literature related to research the total number of papers used related to the energy population, population urbanization, and energy urbanization. According to the figure 28 total paper and 7 is causal relationship related to the energy population. The 21 is total papers and 3 is causal relationship the 34 papers is energy urbanization and 6 is causal relationship. The figure 1 describes that relationship between the variables.

Given the gaps identified in the existing literature, this paper seeks to investigate the link between urbanization and the land disputes. Moreover, this paper also investigates the link between urbanization and food production. Both investigations are carried out at the global level with 100 respondents from several countries.

3. DATA AND METHODOLOGY

The research study studies the impact of urbanization on food production and residential land disputes from a

global perspective. The study based on primary data analysis aimed at measuring the effect of urbanization on food production related to land disputes. For this purpose, the study used different question related to the research topic and these questions are administered among 100 plus respondent participants. These questions were divided into five scales: Strongly agree, Agree, Neutral, Disagree, and Strongly Disagree 1,2,3,4,5. For measuring the data, smart PLS software generates one-way ANOVA test analysis, regression analysis, correlation coefficient analysis, the T-statistical analysis, Chi-square analysis, and descriptive statistical analysis. Table 1 presents list of variables.

Table 2 presents a one-way ANOVA test analysis between the dependent and independent variables with a view to measure the impact of urbanization on food production and residential land disputes (A global perspective). The results represent the between the group values, within the group values and the total values. The

results describe the sum of square values, the df values, the mean square values, the F-statistic, and the significant level of each variable. For example, the residential land disputes are dependent variables, its sum of square values is 3.169, 70.221, and 73.390, respectively. The mean square value is 1.056, its F-

statistical value is 1.444, and its significant level is 0.23, which means a 23% significance level. The growth rate of food production is another dependent variable according

to the results. Its sum of square values is 3.404, 86.596 and that 90.00 the mean square values is 1.135, its F-statistical value is 1.25, and its significant level is 0.293 which shows a 29% significance level. Food production is another dependent variable. Its sum of squared values is 2.74, 70.24, and 72.99, respectively. The results indicate that mean square values are 0.916, 0.732 shows 91% and 73% average values the F-statistical value is 1.251, and its significant level is 0.296, respectively shows a 29% significance level.

Table 1: Independent and dependent Variables

Sr. No	Descriptions	Notations
1	Independent Variables	IV
2	Urbanization	U
	Dependent Variable	DV
3	Food Production	UFP
5	Poultry meat	PM
6	Growth rate of food production	GRFP
8	Residential land disputes	RLD

3.1 Theoretical Model

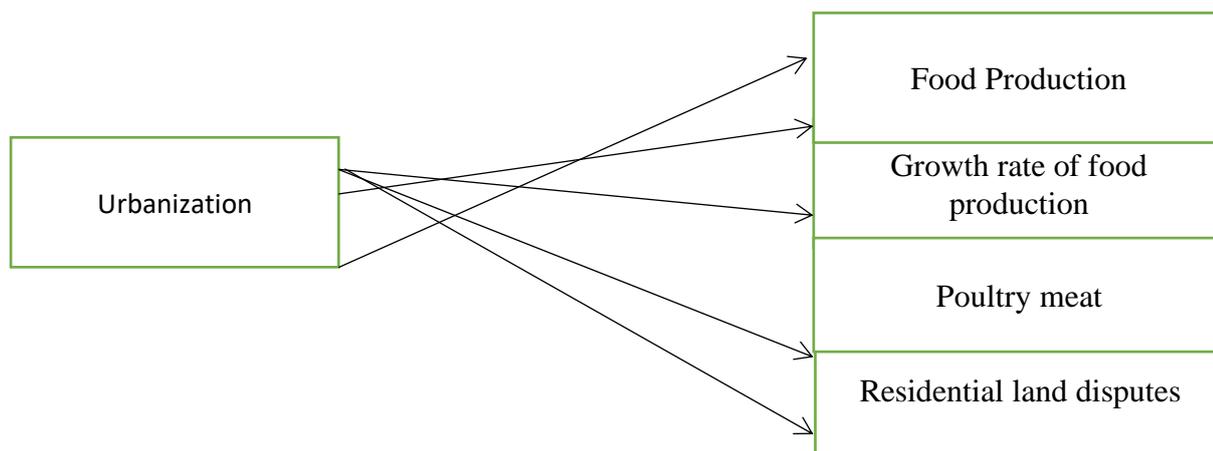


Table 2: One-way ANOVA

		ANOVA				
		Sum of Squares	Df	Mean Square	F	Sig.
Food Production	Between Groups	2.747	3	.916	1.251	.296
	Within Groups	70.243	96	.732		
	Total	72.990	99			
Poultry meat	Between Groups	1.217	3	.406	.650	.585
	Within Groups	59.943	96	.624		
	Total	61.160	99			
Growth rate of food production	Between Groups	3.404	3	1.135	1.258	.293
	Within Groups	86.596	96	.902		
	Total	90.000	99			
Residential land disputes	Between Groups	3.169	3	1.056	1.444	.235
	Within Groups	70.221	96	.731		
	Total	73.390	99			

3.2 Ratio Analysis

Table 3: Ratio Statistics for urbanization / Food Production

Ratio Statistics for urbanization / Food Production			
Group	Price Related Differential	Coefficient of Dispersion	Coefficient of Variation Median Centered
strongly agree	1.133	.367	78.5%
Agree	1.288	.693	98.1%
Neutral	1.153	.598	100.2%
Disagree	1.231	.564	65.1%
Overall	1.216	.586	92.7%

4. RESULTS AND DISCUSSIONS

Table 3 presents the ratio analysis between urbanization and food production with the help of price-related differences, the coefficient of dispersion, and the coefficient of variation. The results are divided into five groups. The price-related differential values are 1.133,

1.288, 1.153, 1.231, and 1.216, respectively. According to the results, the coefficient of dispersion values is 0.367, 0.693, 0.598, 0.564, and 0.586 shows that dispersion values. The coefficient of variation presents that 78.5%, 98.1%, 100.2%, 65.1%, and 92.7%, respectively, which shows median centered effect in between urbanization and food productions.

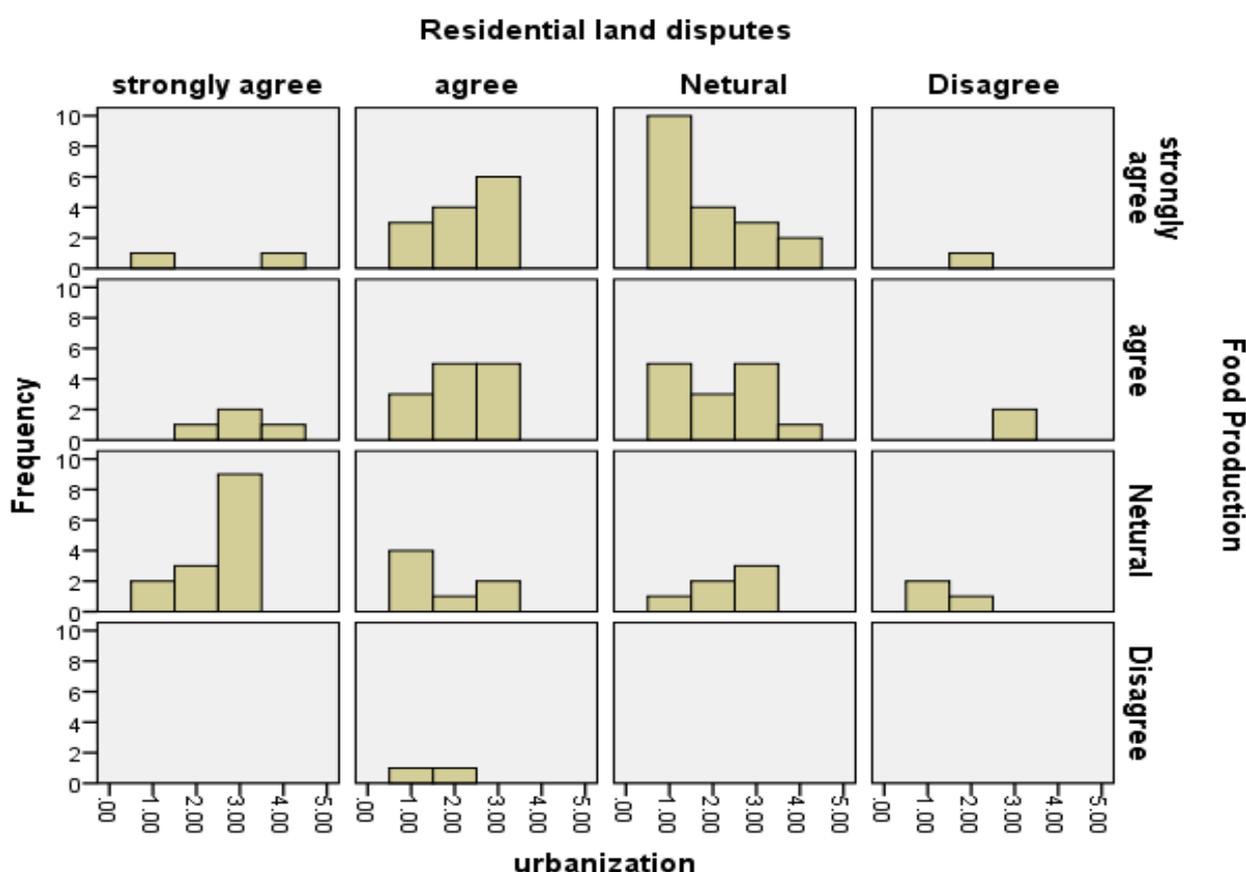


Figure-2 Residential land disputes

The figure 2 describes that residential land disputes related to the frequency, the food production and urbanization. The figure defined that strongly agree, agree, Neutral, and disagree regarding urbanization

performance of food production. The vertical side presents that frequency 0 to 10 in the horizontal side present the rates of urbanization 0.00 to 5.00 respectively.

Table 4

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.196 ^a	.038	.029	.84857

a. Predictors: (Constant), urbanization

Table 4 presents the model summary related to the regression model with the help of R values, the R square values, adjusted R square, and the standard error of the estimated values. The constant predictor is urbanization.

Its value of R is 0.196, and the R-square is 0.038, the adjusted R square value is 0.029, and the standard error of the estimated value is 0.8485, respectively, showing an 84% error of the estimated rate.

Table 5

ANOVA						
	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.823	1	2.823	3.921	.050 ^b
	Residual	70.567	98	.720		
	Total	73.390	99			

a. Dependent Variable: Residential land disputes
b. Predictors: (Constant), urbanization

Table 5 presents the ANOVA test analysis regarding the regression analysis. In this research study, the residential land disputes are considered a dependent variable, and urbanization is a predictor variable. Its sum of square values is 2.823, 70.567, and 73.390, respectively. Its mean

square values are 2.823, and that 0.720 shows 72% average mean values. The F-statistic value is 3.921, which means there is a positive relationship between residential land disputes and urbanization. Its significant level is 0.050, which means there is a 5% significant level between them.

Table 6: Coefficients of regression analysis

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.698	.213		12.638	.000
	urbanization	-.180	.091	-.196	-1.980	.050

a. Dependent Variable: Residential land disputes

5. REGRESSION ANALYSIS

Table 6 presents a regression analysis between residential land disputes and urbanization. The results show unstandardized coefficient values, the standardized coefficient with the beta, and standard error values. Furthermore, the results indicate the T statistical values and point to a significant level of urbanization and

residential land disputes. The value of beta is 2.698 and -0.180. The standard error values are 0.213 and 0.091, respectively; the T statistic value is -1.980 and its significant level is 0.050, which means an inverse relationship between urbanization and residential land disputes. However, there is still a significant relationship between them at a 5% significant level.

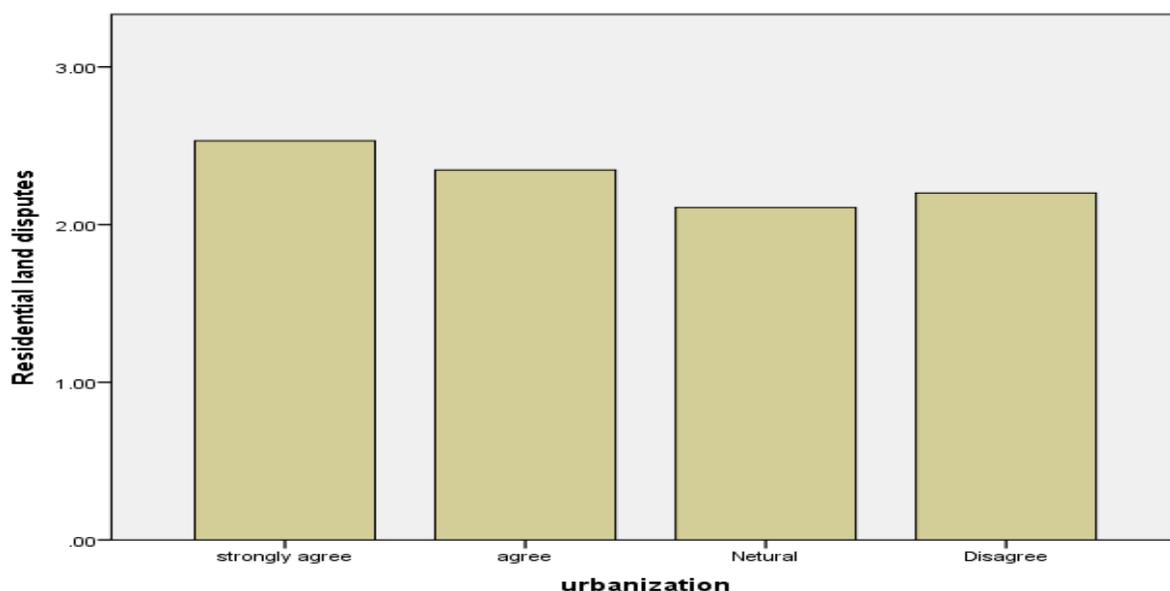


Figure-3 Histogram Analysis of residential disputed and urbanization

The above figure 3 present that bar graphs related to the residential land disputes and urbanization with the values

the strongly agree, Neutral, and disagree related to the food production. Table 7 presents the correlation coefficient analysis amongst all the variables understudies including independent and the dependent variables. The results indicate the Pearson correlation

5.1 Correlation Coefficient

Table 7: Correlations

		urbanization	Food Production	Poultry meat	The growth rate of food production	Residential land disputes
Urbanization	Pearson Correlation	1	.027	.051	.102	-.196
	Sig. (2-tailed)		.790	.616	.313	.050
	N	100	100	100	100	100
Food Production	Pearson Correlation	.027	1	.078	-.091	-.283**
	Sig. (2-tailed)	.790		.440	.366	.004
	N	100	100	100	100	100
Poultry meat	Pearson Correlation	.051	.078	1	.065	-.087
	Sig. (2-tailed)	.616	.440		.522	.390
	N	100	100	100	100	100
Growth rate of food production	Pearson Correlation	.102	-.091	.065	1	-.057
	Sig. (2-tailed)	.313	.366	.522		.576
	N	100	100	100	100	100
Residential land disputes	Pearson Correlation	-.196	-.283**	-.087	-.057	1
	Sig. (2-tailed)	.050	.004	.390	.576	
	N	100	100	100	100	100

** . Correlation is significant at the 0.01 level (2-tailed).

value, the significant level, and the number of observations. The residential land disputes is a dependent variable and there is a negative relation with the urbanization, food production, poultry meat, and the growth rate of food production.

Its values are -0.196, -0.283, -0.087, and -0.057, respectively. The growth rate of food production is another dependent variable and there is a positive relationship with urbanization at the rate of 0.102. Its significance level is

0.313. Finally, poultry meat is considered a sub-variable of food production; it also shows a positive relationship with urbanization at a rate of 0.051.

Table 8: Descriptive Statistics Analysis

	N	Minimum	Maximum	Mean	Std. Deviation
Urbanization	100	1.00	4.00	2.1500	.93609
Food Production	100	1.00	4.00	1.9900	.85865
Poultry meat	100	1.00	5.00	2.2200	.78599
Growth rate of food production	100	1.00	5.00	2.6000	.95346
Residential land disputes	100	1.00	4.00	2.3100	.86100
Valid N (list-wise)	100				

Table 8 presents the descriptive statistics analysis of all variables including urbanization, food production, residential land disputes, etc., for measuring the impact of urbanization on food production and residential land disputes (from a global perspective). The number of observations is 100, its overall minimum value is 1, and the maximum value is five. The mean value of urbanization is 2.1500. Its standard deviation value is 0.936 which means that 93% of the values deviate from the mean. The average value of food production is 1.9900 and

its standard deviation value is 0.8586, respectively. The growth rate of food production shows 2.600 average values, and the standard deviation value is 0.9534, respectively. Residential land disputes show 2.31 values of mean, and their standard deviation is 0.86100 respectively, shows that 86% deviate from the mean. The figure 4 represents the residential land disputes the dot point present that observed linear values. The horizontal side shows the urbanization level in the global perspectives.

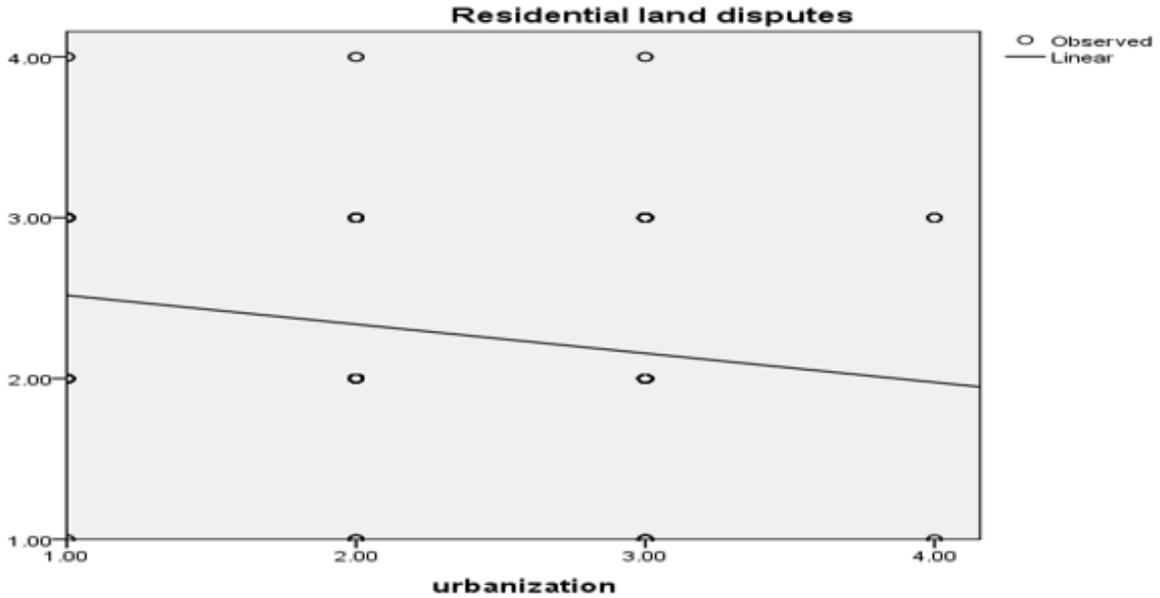


Figure-4 Residential land disputes at dot point:



Figure-5 Tree Analysis

The Figure 5 present that urbanization node 0 the category regarding strongly agree, agree, Neutral,

disagree its percentage are 32%, 26%, 37%, 5% respectively.

Table 9

Risk	
Estimate	Std. Error
.630	.048
Growing Method: CHAID	
Dependent Variable: urbanization	

Table 9 describes the risk factor in the research study with the help of estimated values and standard error.

The estimated value is 0.630, and its standard error value is 0.048

5.2 Chi-Square Test

Table 10

Test Statistics					
	urbanization	Food Production	Poultry meat	The growth rate of food production	Residential land disputes
Chi-Square	23.760 ^a	28.720 ^a	81.100 ^b	47.200 ^b	27.280 ^a
df	3	3	4	4	3
Asymp. Sig.	.000	.000	.000	.000	.000
a. 0 cells (0.0%) have expected frequencies less than 5. Therefore, the minimum expected cell frequency is 25.0.					
b. 0 cells (0.0%) have expected frequencies less than 5. Therefore, the minimum expected cell frequency is 20.0.					

Table 10 presents the Chi-square test analysis of all variables included urbanization, food production, poultry meat, the growth rate of food production, and residential

land disputes. The chi-square values are 23.760, 28.720, 81.100, 47.200, and 27.280, shows positive rates, the Asymp significant level is 0.000, which shows a 100% significant level.

Table 11
One-Sample Test

	Test Value = 0		Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
	t	df			Lower	Upper
	Urbanization	22.968			99	.000
Food Production	23.176	99	.000	1.99000	1.8196	2.1604
Poultry meat	28.245	99	.000	2.22000	2.0640	2.3760
Growth rate of food production	27.269	99	.000	2.60000	2.4108	2.7892
Residential land disputes	26.829	99	.000	2.31000	2.1392	2.4808

Table 11 describes the one-sample test analysis of all variables. The results indicate the value of t statistics, the significant level, the mean difference values and results presented at the 95% confidence interval of the difference

at lower and upper level. The values of urbanization are its t-statistical value is 22.968, its significant level is 0.000, its mean difference value is 2.15 its lower interval is 1.96 and its upper interval is 2.33 respectively.

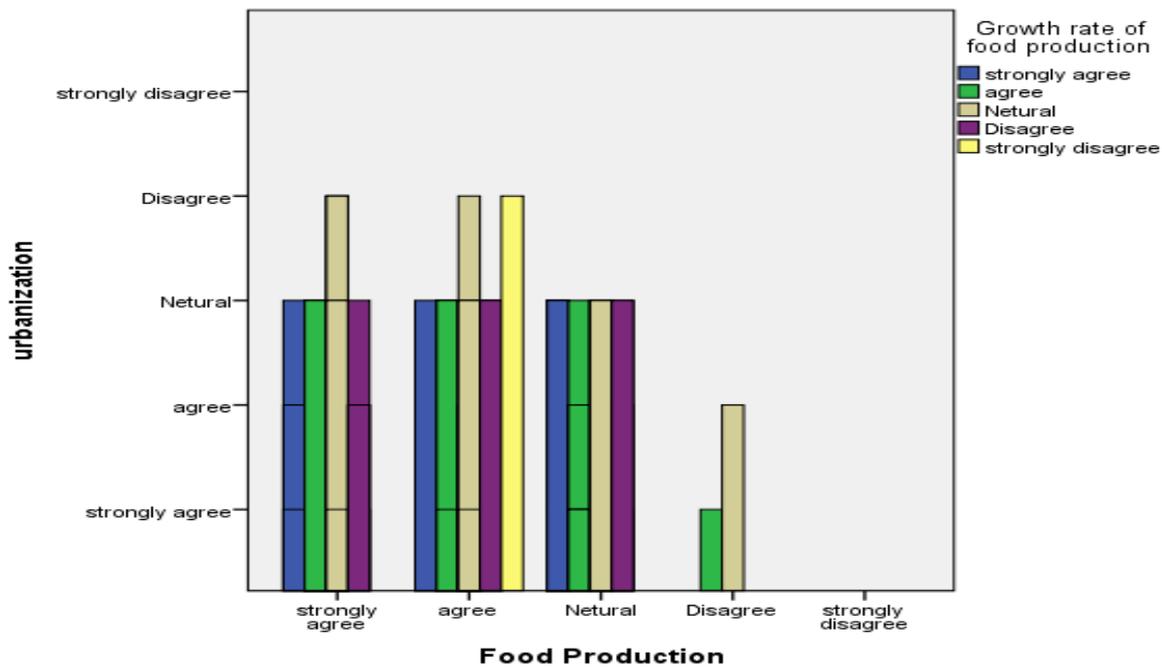


Figure-6 Growth rate of food production

Similarly, the food production is the other indicator, its t statistic value is 2.176, the mean difference value is 1.99 its lower interval is 1.8196 and its upper interval is 2.16. the residential land disputes consider as dependent variable its t-statistical value is 26.82 its mean difference value is 2.31 its lower interval is 2.13 and upper interval values is 2.48 shows positive 95% confidence interval of

the difference level. The above Figure presents that growth rate of food production and urbanization in the form of bar lines. The bar lines present that strongly agree, agree, Neutral, disagree, and strongly disagree. According to the figure the highest bar lines of strongly agree.

Table 12

Model Summary and Parameter Estimates								
Dependent Variable: Residential land disputes								
Equation	Model Summary					Parameter Estimates		
	R Square	F	df1	df2	Sig.	Constant	b1	
Linear	.038	3.921	1	98	.050	2.698	-.180	
The independent variable is urbanization.								

The above table describes the model summary related to the parameter estimates and its R-square value is 0.038. Its F-statistic value is 3.921, its significant level is 0.050

which indicates a 5% significance level. The parameter estimates values shows 2.698 and -0.180 respectively present that constant value and b1.

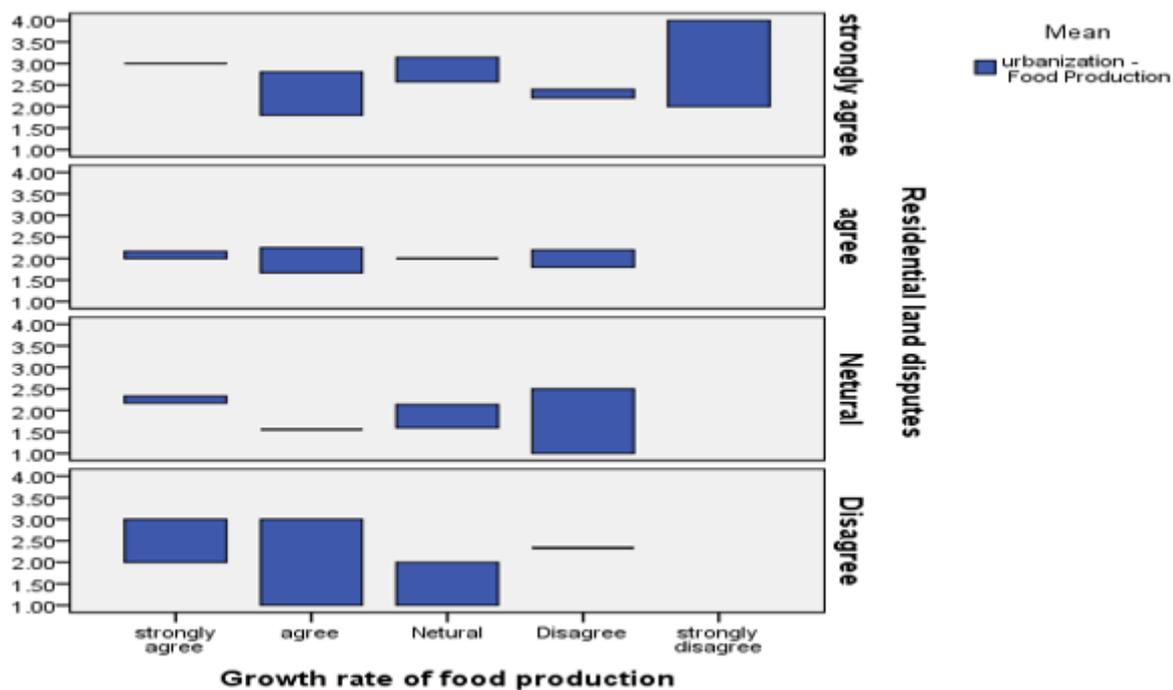


Figure-7 Growth Rate of Food production related to Residential disputes

The above figure represents the growth rate of food production in the form of graphs wherein the residential land disputes are shown on the vertical side and the growth rate of the food productions is shown on the horizontal axis.

6. DISCUSSIONS

A number of economists and policymakers are of the view that rapid urbanization is a key issue that needs to be tackled immediately before it starts negatively affecting the sustainable economic growth of a country. This is despite the fact that no single nation has progressed without undergoing urbanization. In fact, there is no single developed country in the globe today that would have made to the current list of developed nations without experiencing urbanization. Over the course of more than past 50 years, there seems to be strong link between

urbanization and the level of economic development. Not being able to incentivize urbanization, the current list of poor nations remains stuck in the lower and the middle income for ages. In other words, many policies and academic articles have highlighted urbanization as the key differentiator between rich and the poor countries. Urban regions are equipped with several advantages that can improve the living conditions of a society, be it employment opportunities, access to education, access to healthcare etc.

At a global level, more than 55% of the world population lives in urban areas and the numbers are going at a rapid pace. There are distinct changes in several urbanization aspects today as compared to last decade or so. For instance, now there is a rapid increase in the urbanization rate and many cities are even double in size now of what they used to be a decade ago. However, these urbanization figures do not reflect much on the large disparities when it

comes to social, economic and the political changes that are responsible for it.

The term urbanization is also utilized for the expansion of metropolitan land uses. In this paper, the definition of urbanization implies a change in settlement designs from scattered to thick settlements. In contrast, a significant part of the expansion of metropolitan land use is the consequence of a shift from thick to more scattered settlements. In actuality, the term urbanization is being utilized to allude to two restricting spatial changes in settlement patterns. These settlement patterns will most likely have conflicting effects, for instance, on the availability of land for agricultural purposes.

In 1900, there were 6.7 country occupants for every metropolitan inhabitant; today, the ratio is less than one, and projections suggest that by 2025, the ratio will be close to three metropolitan tenants to two provincial occupants. In a global setting, the agricultural sector has contributed to meeting the wants of a rapidly expanding labor force which is not in the food sector. Rapid changes in food demands more energy and leads to greenhouse gas emission-intensive food. This research indicates the significant effect of urbanization on food production and residential land disputes from a global perspective. The results show a significant and inverse impact of urbanization on residential land disputes. Moreover, the findings also indicate a positive and significant impact of urbanization on food production in the global setting. In this research, various data analysis methods are used including descriptive statistics, correlation coefficient analysis, the one-way ANOVA test analysis, and the T-statistical analysis.

7. CONCLUSION

Less than ten decades ago, most of the slums in North American and the European regions reported a mortality rate amongst the infants and the children as poor as the some of the poor countries in the world today. The problems were notably like what is experienced by poor nations today such as malnutrition, lack of medical facilities, and the education infrastructure. There was widespread discrimination and the continuous exploitation of the blacks, labor class, women, and marginalized sections of the society. However, these scenarios have changed with the focus on improving the key institutions with special focus on social, economic, and political institutions.

The rural to urban migration flows that cause urbanization are generally a reaction to the limited source or options of generating incomes. However, some relocation streams may be viewed as special cases—for example, development in places where retirees decide to live or in vacationer resorts. More precisely, the migration from rural to city areas reflects the willingness to grab employment opportunities created because of potential tourist influx and the retirees leaving the cities.

A close relationship exists between urbanization, political strength, and financial well-being. Monetary accomplishment for most urban areas might rely more upon achievement in worldwide business sectors than 50 years prior to today. Although it bears to note that city rivalry for business sectors past public limits has impacted most urban communities for a long time. This explains why responsible metropolitan governments have impressive significance for monetary achievement. Research concludes that there are inverse relations in between urbanization and residential land disputes but there is a significant relationship between them. The results show that there are positive impacts in between urbanization and food production from the global perspectives.

How urbanization is viewed has a big impact on how it is likely impact on food and agriculture in the future. As a driver of progress, it is generally acknowledged that extrapolating historical patterns provides us with a plausible depiction of the world's future metropolitan populace. This is supported by forecasts for all countries' metropolitan populations and degrees of urbanization up to 2025. Apart from the countries that have been designated as 100 per cent metropolitan, these suggest that almost all countries continue to urbanize. Within this suspicion of nearly all-inclusive urbanization expansions, there are usually comments to urbanization being counter-intuitive since it appears to pay little attention to monetary conditions. There is also uncertainty about how to incorporate models of de-urbanization into this broad picture of a world in which nearly all countries are becoming increasingly urban.

At the global level, the urbanization level is expected to keep on increasing at a rapid pace. Most of the urbanization is expected to happen in low and the middle-income countries and this migration can be attributed to the relatively low level of income generation opportunities available in rural areas.

Urbanization is frequently considered to adversely affect horticulture, such as the deficiency of rural land to metropolitan extension and a metropolitan inclination in broad daylight subsidizing for framework, administrations, and endowments. Low- and middle-income countries that do not achieve financial prosperity will experience little urbanization. In an emergency, however, they may de-urbanize by increasing the amount of people working in gardening, ranger service, and fishing. This is only fair in countries where elements of the urban population retain linkages to rural areas, allowing people to reintegrate into rural jobs.

Urbanization is expected to make use of agricultural lands to fulfill the market demand for housing. However, in Third World countries, urban areas have developed without any strategic planning due to the absence of policies designed to provide a proper framework for an organized way of urbanization. This unplanned expansion of cities due to the urbanization has several costs attached

with it as it can potentially lead to a rise in street crimes and illegal settling, among other negative impacts.

As for environmental change, it is hard to anticipate likely effects because these largely rely upon whether worldwide arrangements can decrease the drivers of ozone harming substance outflows in a timely and efficient manner. Environmental change relief presents many difficulties to horticulture to decrease ozone harming substance emanations and lucky to be metropolitan inhabitants to move to less carbon-concentrated eating regimens and ways of life. On the other hand, an inability to diminish ozone-depleting substance outflows will probably mean expanding quantities of debacles with intense effects on rural and metropolitan populaces. A considerable portion of urban areas in low-pay countries is especially in danger and at least for now, fall short of the ability to adjust.

REFERENCES

- Abdul, L., & Yu, T.-f. (2020). Resilient Urbanization: A Systematic Review on Urban Discourse in Pakistan. *Urban Science*, 4(4), 76. Retrieved from <https://www.mdpi.com/2413-8851/4/4/76>
- Abu Hatab, A., Cavinato, M. E. R., Lindemer, A., & Lagerkvist, C.-J. (2019). Urban sprawl, food security and agricultural systems in developing countries: A systematic review of the literature. *Cities*, 94, 129-142. doi:<https://doi.org/10.1016/j.cities.2019.06.001>
- Barthel, S., Isendahl, C., Vis, B. N., Drescher, A., Evans, D. L., & van Timmeren, A. (2019). Global urbanization and food production in direct competition for land: Leverage places to mitigate impacts on SDG2 and on the Earth System. *The Anthropocene Review*, 6(1-2), 71-97. doi:<https://doi.org/10.1177%2F2053019619856672>
- Colozza, D., & Avendano, M. (2019). Urbanisation, dietary change and traditional food practices in Indonesia: A longitudinal analysis. *Social Science & Medicine*, 233, 103-112. doi:<https://doi.org/10.1016/j.socscimed.2019.06.007>
- Cui, N., Feng, C.-C., Han, R., & Guo, L. (2019). Impact of Urbanization on Ecosystem Health: A Case Study in Zhuhai, China. *International Journal of Environmental Research and Public Health*, 16(23), 4717. doi:<https://doi.org/10.3390/ijerph16234717>
- Gao, J., & O'Neill, B. C. (2020). Mapping global urban land for the 21st century with data-driven simulations and Shared Socioeconomic Pathways. *Nature Communications*, 11(1), 2302. doi:<https://doi.org/10.1038/s41467-020-15788-7>
- Garcia-Ayllon, S. (2018). Urban transformations as indicators of economic change in post-communist Eastern Europe: Territorial diagnosis through five case studies. *Habitat International*, 71, 29-37. doi:<https://doi.org/10.1016/j.habitatint.2017.11.004>
- Gong, J., Hu, Z., Chen, W., Liu, Y., & Wang, J. (2018). Urban expansion dynamics and modes in metropolitan Guangzhou, China. *Land Use Policy*, 72, 100-109. doi:<https://doi.org/10.1016/j.landusepol.2017.12.025>
- Ha, N. M., Dang Le, N., & Trung-Kien, P. (2021). The impact of urbanization on poverty reduction: An evidence from Vietnam. *Cogent Economics & Finance*, 9(1), 1918838. doi:<https://doi.org/10.1080/23322039.2021.1918838>
- Hussain, M., & Imityaz, I. (2018). Urbanization concepts, dimensions and factors. *Int J Recent Sci Res*, 9(1), 23513-23523. doi:<http://dx.doi.org/10.24327/ijrsr.2018.0901.1483>
- Jabeen, N., Farwa, U., & Jadoon, M. (2017). Urbanization in Pakistan: a governance perspective. *Journal of the Research Society of Pakistan*, 54(1), 127-136.
- Jarah, S. H. A., Zhou, B., Abdullah, R. J., Lu, Y., & Yu, W. (2019). Urbanization and Urban Sprawl Issues in City Structure: A Case of the Sulaymaniah Iraqi Kurdistan Region. *Sustainability*, 11(2), 485. doi:<https://doi.org/10.3390/su11020485>
- Kuddus, M. A., Tynan, E., & McBryde, E. (2020). Urbanization: a problem for the rich and the poor? *Public Health Reviews*, 41(1), 1. doi:<https://doi.org/10.1186/s40985-019-0116-0>
- Li, L.-H. (2017). Balancing Rural and Urban Development: Applying Coordinated Urban–Rural Development (CURD) Strategy to Achieve Sustainable Urbanisation in China. *Sustainability*, 9(11), 1948. doi:<https://doi.org/10.3390/su9111948>
- Lin, B., & Zhu, J. (2018). Changes in urban air quality during urbanization in China. *Journal of Cleaner Production*, 188, 312-321. doi:<https://doi.org/10.1016/j.jclepro.2018.03.293>
- M. Amin, H. M. T. (2018). The impact of heritage decline on urban social life. *Journal of Environmental Psychology*, 55, 34-47. doi:<https://doi.org/10.1016/j.jenvp.2017.12.002>
- Peerzado, M. B., Magsi, H., & Sheikh, M. J. (2019). Land use conflicts and urban sprawl: Conversion of agriculture lands into urbanization in Hyderabad, Pakistan. *Journal of the Saudi Society of Agricultural Sciences*, 18(4), 423-428. doi:<https://doi.org/10.1016/j.jssas.2018.02.002>
- Pribadi, D., Zasada, I., Müller, K., & Pauleit, S. (2017).

- Multifunctional adaption of farmers as response to urban growth in the Jabodetabek Metropolitan Area, Indonesia. *Journal of Rural Studies*, 55, 100-111.
doi:<http://dx.doi.org/10.1016/j.jrurstud.2017.08.001>
- Putra, A. S., Tong, G., & Pribadi, D. O. (2020). Food Security Challenges in Rapidly Urbanizing Developing Countries: Insight from Indonesia. *Sustainability*, 12(22), 9550.
doi:<https://doi.org/10.3390/su12229550>
- Wang, S., Bai, X., Zhang, X., Reis, S., Chen, D., Xu, J., & Gu, B. (2021). Urbanization can benefit agricultural production with large-scale farming in China. *Nature Food*, 2(3), 183-191.
doi:<https://doi.org/10.1038/s43016-021-00228-6>
- Zulu, R., & Oyama, S. (2017). Urbanization, housing problems and land conflicts in Zambia. *Human Geography*, 69(1), 73-86.
doi:https://doi.org/10.4200/jhgg.69.01_073