Socio-Economic Determinants of Urbanization in the Perspective of Pakistan

Muhammad Arif[1], Abid Rashid Gill[2]

[1] Ph.D. Scholar, Department of Economics, The Islamia University Bahawalpur, Pakistan.
  Email: m.arif7837@gmail.com
[2] Associate Professor, Department of Economics, The Islamia University Bahawalpur, Pakistan.
  Email: abid.rashid@iub.edu.pk

ARTICLE INFO	ABSTRACT
Article History: Received: February 18, 2023 Revised: March 29, 2023 Accepted: March 30, 2023 Available Online: March 31, 2023 *Keywords:* Urbanization Industrialization Financial Development Education Population ARDL Pakistan *Funding:* This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.	This analysis examines the socioeconomic determinants of urbanization in Pakistan by using data from 1970 to 2020. For data estimation, an ARDL technique and error correction model is used. The main outcomes show that the variables gross domestic savings, inflation rate, industrialization, education, population growth rate, and GDP per capita are positively associated with urbanization, while the variables financial development and exports are negatively associated with urbanization in Pakistan. However, the impact of inflation rate, remittances, exports of goods and services and GDP per capita on urbanization is statistically insignificant. Considering the study outcomes, it is suggested that to control the increasing growth of urbanization in Pakistan, it is important to design policies to improve the basic necessities in rural areas and strengthen the agriculture sector to discourage rural-to-urban migration.

Corresponding Author's Email: m.arif7837@gmail.com

1. Introduction

Urbanization is a worldwide phenomenon developing at varying rates on various continents. Urban areas develop at different rates depending on the geographic area, development level, and size of the country (Nguyen, 2018). The urbanization rates vary from country to country (Bodo, 2019; Chen & Parish, 1996). Urbanization has caused various environmental and ecological issues in large cities, such as poor housing, inequality in income, pollution, crimes, and lack of social amenities (Burra, 2005; Chen, 1991; Nguyen, 2018). Urbanization also offers great cultural development, institutional innovation, and economic growth prospects. Urbanization lowers production costs by increasing specialization and bringing businesses and people together (Krugman, 1991; Kumar & Kober, 2012). Urbanization also facilitates easier access to financing, endorses organizational ideas, and offers a wider domestic market for conducting business (Glaeser, Rosenthal, & Strange, 2010). Urban growth has spillover benefits in rural areas, commonly referred to as positive externalities (Cali & Menon, 2013). Urbanization can benefit all facets of finance and human resources through remittances, migration, and active engagement between rural and urban areas (McKenzie & Sasin, 2007).

The two chief factors of urbanization are the natural increase in population and rural-to-urban migration (Chen & Parish, 1996; Chirisa, 2008). In developing countries, urbanization is mostly caused by unemployment. Numerous rural residents moved to the urban areas to seek employment (Bodo & Gimah, 2019). Pakistan is located in South Asia facing a rapid level of urbanization. The urban population percentage is 37 percent, and urban population growth was 2.7 percent in 2021. Urbanization in Pakistan creates issues such as environmental deterioration construction of residential societies that negatively impact the arable land and resultantly impact food production adversely (Afzal, Ahmed, & Nawaz, 2018; Rana & Bhatti, 2018). A rise in natural population growth primarily causes urban population increase, unemployment, quickly expanding urban areas brought on by the transformation of rural areas into urban areas, migration of people

to urban areas and a lack of infrastructure in rural areas (Afzal et al., 2018; Jabeen, Farwa, & Jadoon, 2017). Migration is another factor of urbanization in Pakistan; in previous decades, Afghans and Muslims from India came to Pakistani cities to escape conflict in their native countries. Pakistanis from the rural areas are moving to the city in pursuit of better employment opportunities and basic amenities, as well as to escape violence, insecurity, and natural disasters. The rise in the nation's urban population can also be attributed to this rise in total population (Kugelman, 2013). However, in the literature, studies on factors of urbanization are limited. It is therefore important to investigate the socioeconomic factors of urbanization in Pakistan. This study will significantly contribute to the literature by exploring socioeconomic factors of urbanization in Pakistan.

This empirical work is organized as follows: section one illustrates the introduction, section two provides the literature review, section three provides the data and methodology, section four provides the data analysis, and section five illustrates conclusions and recommendations.

2.   Literature Review

Different studies examined the determinants of urbanization (URB). In this section, the literature review of such studies is presented. Tripathi (2021) investigated the macroeconomic factors of urbanization in the BRICS countries using data from 1960 to 2015. It was found that FDI, GDP, trade, employment in industry and services, inflation, population between the ages of 15 and 64, and energy use were crucial factors in increasing the percentage of urbanization. HARYANTO, ERLANDO, and UTOMO (2021) observed the association between GDP per capita, urbanization, and education using data from 1990 to 2018. It was originated that there was a significant association between economic growth (EG), educational attainment and urbanization.

Sakib (2021) utilized annual data from 1973 to 2018 to research the factors influencing urbanization in Pakistan. According to the findings, urbanization was significantly influenced by GDP per capita growth, literacy rates, and energy consumption but negatively impacted urban unemployment. Yang, Lei, and Li (2019) identified the variables affecting China's urbanization. Administrative hierarchy and spatial agglomeration were discovered to be two factors of China's urbanization growth model. Urbanization was shown to be more influenced by real estate investment and per capita spending in coastal cities than in inland ones.

Afzal et al. (2018) investigated the macroeconomic factors that influence urbanization in Pakistan using data from 2001 to 2016. The findings exhibited that urbanization was significantly caused by rising unemployment and literacy rates. The variable per capita GDP growth positively but insignificantly influenced the urbanization. Nguyen (2018) explored the link between URB and EG in ASEAN countries from 1993 to 2014. The findings indicated a causal link between URB and EG. The findings demonstrated that URB directly influenced the EG in ASEAN countries.

Tripathi and Rani (2018) explored the factors influencing urbanization in India. The findings indicated that urbanization differs amongst India's various cities and towns. According to the outcomes, good weather encourages a city or town's population density to increase. For a city or town to be able to support urbanization, political power was more significant than its economic potential. Yuan and Guanghua (2015) used data from 1993 to 2010 to examine the association between trade and urbanization. The results demonstrated the relationship between cereal and non-cereal trade and urbanization.

Olorunfemi (2014) examined the factors that influence urbanization in Nigeria. The findings indicated that factors contributing to the growth of urbanization included export, unemployment, transportation and industries in urban areas. The causality test revealed no connection between GDP growth and the pace of migration to Nigeria's urban areas. Hofmann & Wan (2013) explored the effects of industrialization, education, and EG on the rate of urbanization. According to this study, urbanization and GDP growth were significantly related. It was found that education had a substantial positive causal relationship with the rate of urbanization.

It is observed in the literature that limited studies especially in case of Pakistan analyzed the factors of urbanization in Pakistan. So this analysis analyzes the socioeconomic factors of Pakistan by using several of variables such as gross domestic savings, inflation rate, industrialization, foreign remittances, financial development, education, population growth rate,

exports of goods and services, and GDP per capita. This study will be helpful for the policymakers in designing policies to control the unplanned urbanization in Pakistan.

3. Data and Methodology

This analysis utilizes annual time series data of Pakistan from 1970 to 2020 to investigate the socioeconomic factors of urbanization in Pakistan. The main sources of data collection was World Development Indicators and Pakistan Economic Surveys. The dependent variable used in a study is urbanization, while independent variables are gross domestic savings (percentage of GDP), inflation rate (INF), industrialization (IND), foreign remittances (REM), financial development (FD), education (EDU), population growth rate (PGR), exports of goods and services (EXP), GDP per capita (GDPPC). For model estimation, Autoregressive Distributed Lag Model (ARDL) is employed for model estimation. This technique is developed by Banerjee, Dolado, and Mestre (1998) and Pesaran and Shin (1995). This technique is used when variables are in a mixed order of integration. ARDL model also estimates short-run and long-run dynamics simultaneously. The following model is used to analyze the socio-economic factors of urbanization in Pakistan:

$$URB = f(GDS, INF, IND, REM, FD, EDU, PGR, EXP, GDPPC) \tag{1}$$

The econometric form of the long-run ARDL model is as follows:

$$URB_i = \beta_o + \beta_1(GDS)_i + \beta_2(INF)_i + \beta_3(IND)_i + \beta_4(REM)_i + \beta_5(FD)_i + \beta_6(EDU)_i +$$
$$\beta_7(PGR)_i + \beta_8(EXP)_i + \beta_9(GDPPC)_i + u_i \tag{2}$$

The equation of the short-run error correction model (ECM) is as follows:

$$\Delta URB = \beta_0 + \sum_{I=1}^{n} \beta_1 \Delta GDS_{t-j} + \sum_{I=0}^{n} \beta_2 \Delta INF_{t-j} + \sum_{I=0}^{n} \beta_3 \Delta IND_{t-j} + \sum_{I=0}^{n} \beta_4 \Delta REM_{t-j} + \sum_{I=0}^{n} \beta_5 \Delta FD_{t-j}$$
$$+ \sum_{I=0}^{n} \beta_6 \Delta EDU_{t-j} + \sum_{I=0}^{n} \beta_7 \Delta PGR_{t-j} + \sum_{I=0}^{n} \beta_8 \Delta EXP_{t-j} + \sum_{I=0}^{n} \beta_9 \Delta GDPPC_{t-j} + \gamma_1 ECM_{t-1} + u_{1t} \tag{3}$$

Table 1: Explanation of Variables

Variables	Explanation of Variables	
Dependent Variable		
URB	Urbanization	Urban population as a percent of the total population
Independent Variables		
GDS	Gross Domestic Savings	Percentage of GDP
INF	Inflation Rate	GDP Deflator
IND	Industrialization	Percentage of GDP
REM	Foreign Remittances	Percentage of GDP
FD	Financial Development	Domestic credit to private sector as a percentage of GDP
EDU	Education	Secondary school enrollment
PGR	Population Growth Rate	Annual rate
EXP	Exports of Goods and Services	Percentage of GDP
GDPPC	GDP Per Capita	Current US Dollars

4. Analysis

Table 2 displays the descriptive statistics of variables. It is originated that the mean value of the urban population growth rate in Pakistan is 31.502, maximum value is 37.165, minimum value is 24.817, S.D. is 3.589, the skewness value is -0.226 designates the distribution is negatively skewed, and the kurtosis value is 1.910 specifies the distribution is platykurtic. Likewise, the descriptive statistics of other variables could be analyzed from Table 2.

Table 2: Descriptive Statistics

Variables	Mean	Max	Min	S.D.	Skew.	Kurt.	J.B.	Prob.
URB	31.502	37.165	24.817	3.589	-0.226	1.910	2.956	0.228

GDS	11.369	17.399	5.376	3.622	0.191	1.739	3.688	0.158
INF	9.829	38.512	3.259	6.343	2.331	10.095	153.165	0.000
IND	20.440	22.931	17.548	1.403	-0.289	2.345	1.621	0.445
REM	4.814	10.248	0.162	2.450	0.069	2.168	1.511	0.470
FD	22.759	29.786	14.682	4.128	-0.550	2.286	3.655	0.161
EDU	67.071	95.484	46.906	14.614	0.427	1.872	4.256	0.119
PGR	2.670	3.364	1.978	0.431	-0.049	1.715	3.527	0.171
EXP	12.647	17.271	7.175	2.703	-0.232	2.220	1.752	0.416
GDPPC	1.966	8.397	-3.262	2.241	0.176	3.481	0.755	0.685

Source: Author's Calculations

Correlation analysis observes the degree of correlation between two pairs of variables. Table 3 displays the correlation matrix. It is found that urbanization is positively correlated to remittances (0.196), education (0.945), and exports (0.141), while urbanization is negatively correlated to the gross domestic savings (-0.056), inflation rate (-0.069), industrialization (-0.388), financial development (-0.544), population growth rate (-0.788) and GDP per capita (-0.174).

Table 3: Correlation Matrix

Correlation	URB	GDS	INFD	IND	REM	FD	EDU	PGR	EXP	GDPPC
URB	1.000									
GDS	-0.056	1.000								
INF	-0.069	0.061	1.000							
IND	-0.388	0.159	-0.046	1.000						
REM	0.196	-0.693	-0.246	-0.143	1.000					
FD	-0.544	0.364	-0.139	0.463	-0.239	1.000				
EDU	0.945	-0.167	-0.009	-0.496	0.133	-0.603	1.000			
PGR	-0.788	0.065	-0.006	0.499	0.125	0.615	-0.903	1.000		
EXP	0.141	0.641	0.141	0.475	-0.278	0.268	-0.064	0.127	1.000	
GDPPC	-0.174	0.003	-0.180	-0.027	0.165	0.131	-0.200	0.206	-0.015	1.000

Source: Author's Calculations

To check the level of stationarity of variables, we conduct unit root analysis by using ADF test. The outcomes show that the variables urbanization, inflation, foreign remittances, and GDP per capita are stationarity at the level. In contrast, the variables gross domestic savings, industrialization, financial development, education, population growth rate, and exports of goods and services are stationarity at 1st difference. These outcomes advise that the ARDL method is suitable for model estimation.

Table 4: ADF Test Analysis

Variables	Level		1st Difference		Results
	t-test	Prob.	t-test	Prob.	
URB	-4.379	0.006	--	--	I(0)
GDS	--	--	-7.685	0.000	I(1)
INF	-6.090	0.000	--	--	I(0)
IND	--	--	-8.116	0.000	I(1)
REM	-3.060	0.036	--	--	I(0)
FD	--	--	-6.201	0.000	I(1)
EDU	--	--	-7.909	0.000	I(1)
PGR	--	--	-2.878	0.048	I(1)
EXP	--	--	-7.155	0.000	I(1)
GDPPC	-6.487	0.000	--	--	I(0)

Source: Author's Calculations

Before analyzing a long-run ARDL model, it is important to check the long-run cointegration of variables in a model. For this purpose, ARDL bound test is used. The outcomes are explored in Table 5. The estimates suggest that the value of the F-statistic (5.8055) is greater than all upper bound values, so it confirms the long-run cointegration of variables in a model.

Table 5: ARDL Bound Test

Test	Value	K
F-statistic	5.8055	9
Critical Value Bounds		
Significance	I0 Bound	I1 Bound
10%	1.88	2.99
5%	2.14	3.3

2.5%	2.37	3.6
1%	2.65	3.97

Source: Author's Calculations

ARDL long-run estimates of macroeconomic factors of urbanization in Pakistan are presented in Table 6. The outcomes show that the variables gross domestic savings, inflation rate, industrialization, education, population growth rate, and GDP per capita are positively associated with urbanization, while financial development and exports are negatively associated with urbanization in Pakistan. However, the impact of inflation rate, remittances, exports of goods and services and GDP per capita on urbanization is statistically insignificant. It is found that gross domestic savings are positively and significantly related with urbanization. The coefficient of GDS validates that as GDS enhances by one unit, it increases the level of urbanization by 0.4479 units. The results suggest that more savings mean more investment, generating more employment and income in a country. Because of increased employment and income, people can move towards urban areas for better health and education facilities and improve their quality of life. It is therefore concluded that gross domestic savings can positively affect urbanization in a country (Tripathi, 2021). Industrialization is one of the main factors that significantly promote urbanization. It is found that industrialization is positively and significantly related with urbanization. The coefficient of IND validates that as IND enhances by one unit, it increases the level of urbanization by 1.0736 units. Industrialization transforms the agricultural economy into manufacturing and replaces traditional labor with specialized and skilled laborers. So industrialization promotes rural-to-urban migration as most firms are located near urban areas (Hofmann & Wan, 2013). Financial development is found to be negatively and significantly related to urbanization in Pakistan. The coefficient of FD reveals that as FD enhances by one unit, it leads to a decline of urbanization by -0.2651 units. This suggests that better financial services in rural areas can negatively influence urbanization in Pakistan. The education level in a country also promotes positively and significantly influences urbanization. The coefficient of EDU exhibits that as it increases by one unit, it increases the level of urbanization by 0.3068 units. Education is a strong motive to move to urban areas. Parents relocate to give their children a better chance at education (Salas, 1970). Secondly, in urban areas, employment opportunities are more for educated people so they move to urban areas for employment seeking (Afzal et al., 2018; Hofmann & Wan, 2013). Population growth is also an encouraging factor of urbanization in Pakistan. The coefficient of PGR validates that as PGR increases by one unit, it increases urbanization by 6.2593 units. In Pakistan, the natural increase in population is a contributing factor to urbanization (Duan, Yuan, & Guo, 2013; Kugelman, 2013; Yuan & Guanghua, 2015; Zhang & Wan, 2017).

Table 6: ARDL Long-Run Estimates

Dependent Variable: Urbanization
Selected Model: ARDL(3, 2, 1, 1, 2, 1, 3, 1, 2, 0)

Variables	Coefficient	S.E.	t-Statistic	Prob.
GDS	0.4479	0.1654	2.7068	0.0129
INF	0.0873	0.0672	1.2982	0.2076
IND	1.0736	0.4831	2.2219	0.0369
REM	0.0261	0.1267	0.2063	0.8384
FD	-0.2651	0.0765	-3.4647	0.0022
EDU	0.3068	0.0381	8.0454	0.0000
PGR	6.2593	1.8932	3.3061	0.0032
EXP	-0.6893	0.3863	-1.7842	0.0882
GDPPC	0.0716	0.0814	0.8799	0.3884
C	-3.7398	7.8101	-0.4788	0.6368

Source: Author's Calculations

In the short-run ECM model, the ECM term is vital to observe. Table 7 displays the ARDL short-run ECM model. The outcomes point out that the ECM term is negative (-0.0127) and statistically significant. It suggests that 1.27 percent error becomes corrected in case of disturbances

Table 7: ARDL Short-Run ECM Estimates

Dependent Variable: Urbanization
Selected Model: ARDL (3, 2, 1, 1, 2, 1, 3, 1, 2, 0)

Variable	Coefficient	S.E.	t-Statistic	Prob.

|				
D(GDS)	0.0022	0.0011	2.0126	0.0565
D(INF)	0.0006	0.0004	1.5119	0.1448
D(IND)	0.0042	0.0023	1.8380	0.0796
D(REM)	0.0047	0.0018	2.5495	0.0183
D(FD)	0.0011	0.0011	1.0000	0.3282
D(EDU)	0.0023	0.0008	2.6913	0.0133
D(PGR)	0.1985	0.0591	3.3566	0.0029
D(EXP)	0.0001	0.0018	0.0711	0.9439
D(GDPPC)	0.0009	0.0009	0.9879	0.3339
ECM(-1)	-0.0127	0.0046	-2.7695	0.0112

Source: Author's Calculations

Different model diagnostic tests are applied to check heteroskedasticity, serial correlation and residuals normality. For this purpose, Breusch-Pagan-Godfrey, Breusch-Godfrey, and Jarque-Bera tests are applied. The outcomes of these tests suggest that there is no issue of heteroskedasticity and serial correlation in a model, and residuals are also normally distributed.

Table 8: Model Diagnostic Tests

Problem	Test	T	Prob.	Outcomes
Heteroskedasticity Test	Breusch-Pagan-Godfrey	1.0896	0.4221	Not Exists
Serial Correlation	Breusch-Godfrey	1.1339	0.1314	Not Exists
Normality Test	Jarque-Bera	1.1214	0.5708	Normally Distributed

Source: Author's Calculations

Recursive residuals of CUSUM and CUSUM of squares are used to observe the model stability. Figure 1 displays that recursive residuals of CUSUM and CUSUM of squares lie between the critical region lines at 5 percent significance, so it is suggested that the model is dynamically stable.
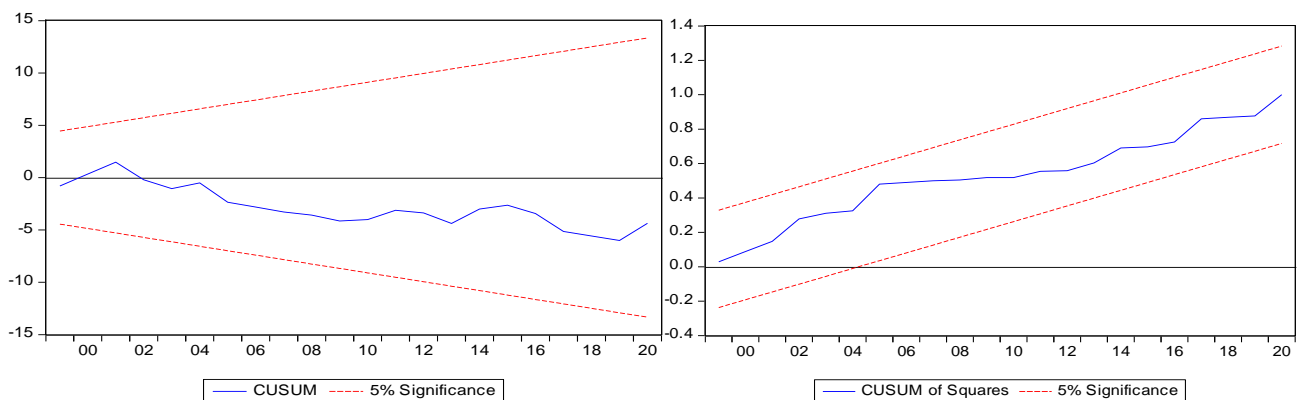
Figure 1: Model Stability
Source: Author's Calculations

5.   Conclusions and Recommendations

Urbanization is a growing concern of all countries in the world. Many factors cause urbanization and create both positive and negative effects in society. The aim of this study is to explore the socio-economic determinants of urbanization in Pakistan. For this purpose, a study uses the yearly data of Pakistan from 1970 to 2020. For data analysis, an ARDL technique and error correction model is used. The outcomes show that the variables gross domestic savings, inflation rate, industrialization, education, population growth rate, and GDP per capita are positively associated with urbanization, while financial development and exports are negatively associated with urbanization in Pakistan. However, the impact of inflation rate, remittances, exports of goods and services and GDP per capita on urbanization is statistically insignificant. It is suggested that to control the increasing growth of urbanization in Pakistan, it is crucial to strengthen the agriculture sector to increase employment opportunities in rural areas, improve the level of infrastructure and other basic necessities such as health, education, safe water and food this can discourage the rural to urban migration.

This study has some limitations. First, it analyzes the socioeconomic determinants of urbanization in Pakistan but future studies can also use wider panel dataset of developing countries to analyze socioeconomic determinants of urbanization as these countries are facing unplanned urbanization. Secondly, in developing countries urbanization is mostly takes place on

agriculture land and also has environmental effects so the influence of urbanization on agriculture land and environment need to be investigated especially in developing countries.

References

Afzal, M., Ahmed, S. S., & Nawaz, M. (2018). Macroeconomic determinants of urbanization in Pakistan. *Growth, 5*(1), 6-12.

Banerjee, A., Dolado, J., & Mestre, R. (1998). Error-correction mechanism tests for cointegration in a single-equation framework. *Journal of time series analysis, 19*(3), 267-283. doi:https://doi.org/10.1111/1467-9892.00091

Bodo, T. (2019). Rapid urbanisation: theories, causes, consequences and coping strategies. *Annals of Geographical Studies, 2*(3), 32-45.

Bodo, T., & Gimah, B. G. (2019). Petroleum pollution and decrease neuroplasticity in brain development of the Ogoni children in Rivers State, Nigeria. *Journal of Advances in Medicine and Medical Research, 29*(11), 1-13. doi:https://doi.org/10.9734/jammr/2019/v29i1130141

Burra, S. (2005). Towards a pro-poor framework for slum upgrading in Mumbai, India. *Environment and urbanization, 17*(1), 67-88. doi:https://doi.org/10.1177/095624780501700106

Cali, M., & Menon, C. (2013). Does urbanization affect rural poverty? Evidence from Indian districts. *The World Bank Economic Review, 27*(2), 171-201. doi:https://doi.org/10.1093/wber/lhs019

Chen, X. (1991). China's city hierarchy, urban policy and spatial development in the 1980s. *Urban Studies, 28*(3), 341-367. doi:https://doi.org/10.1080/00420989120080391

Chen, X., & Parish, W. L. (1996). Urbanization in China: Reassessing an evolving model. *The Urban Transformation of the Developing World*, 61-90.

Chirisa, I. (2008). A population growth and rapid urbanization in Africa: Implications for sustainability.

Duan, C., Yuan, Y., & Guo, J. (2013). The latest features of China's floating population. *Northwest Population, 34*(6), 1-12.

Glaeser, E. L., Rosenthal, S. S., & Strange, W. C. (2010). Urban economics and entrepreneurship. *Journal of urban economics, 67*(1), 1-14. doi:https://doi.org/10.1016/j.jue.2009.10.005

HARYANTO, T., ERLANDO, A., & UTOMO, Y. (2021). The relationship between urbanization, education, and GDP per capita in Indonesia. *The Journal of Asian Finance, Economics and Business, 8*(5), 561-572.

Hofmann, A., & Wan, G. (2013). *Determinants of urbanization*. Retrieved from http://hdl.handle.net/10419/109461

Jabeen, N., Farwa, U., & Jadoon, M. (2017). Urbanization in Pakistan: a governance perspective. *Journal of the Research Society of Pakistan, 54*(1), 127-136.

Krugman, P. (1991). Increasing returns and economic geography. *Journal of political economy, 99*(3), 483-499.

Kugelman, M. (2013). Urbanization in Pakistan causes and consequences. NOREF Expert Analysis. In: Norwegian Pace Building Resource Center, NOREF.

Kumar, A., & Kober, B. (2012). Urbanization, human capital, and cross-country productivity differences. *Economics Letters, 117*(1), 14-17. doi:https://doi.org/10.1016/j.econlet.2012.04.072

McKenzie, D., & Sasin, M. J. (2007). Migration, remittances, poverty, and human capital: conceptual and empirical challenges.

Nguyen, H. M. (2018). The relationship between urbanization and economic growth: An empirical study on ASEAN countries. *International Journal of Social Economics, 45*(2), 316-339. doi:https://doi.org/10.1108/IJSE-12-2016-0358

Olorunfemi, S. (2014). Determinants of urbanization in Nigeria: Implication for sustainable development. *International Journal of Technical Research and Applications, 2*(4), 50-57.

Pesaran, M. H., & Shin, Y. (1995). *An autoregressive distributed lag modelling approach to cointegration analysis* (Vol. 9514): Department of Applied Economics, University of Cambridge Cambridge, UK.

Rana, I. A., & Bhatti, S. S. (2018). Lahore, Pakistan—Urbanization challenges and opportunities. *Cities, 72*, 348-355. doi:https://doi.org/10.1016/j.cities.2017.09.014

Sakib, S. (2021). *Determinants of Urbanization in Pakistan: Empirical evidence from ARDL model*. Retrieved from

Salas, R. M. (1970). Population and Urbanizatio n. *World, 1980*(1985), 1990.

Tripathi, S. (2021). Do macroeconomic factors promote urbanization? Evidence from BRICS countries. *Asia-Pacific Journal of Regional Science, 5*(2), 397-426. doi:https://doi.org/10.1007/s41685-020-00179-z

Tripathi, S., & Rani, C. (2018). Determinants of Urbanisation in Different Classes of Cities and Towns in India. *Review of Development and Change, 23*(1), 122-150. doi:https://doi.org/10.1177/0972266120180106

Wan, G. (2013). Determinants of Urbanization.

Yang, Z., Lei, J., & Li, J.-G. (2019). Identifying the determinants of urbanization in prefecture-level cities in China: A quantitative analysis based on spatial production theory. *Sustainability, 11*(4), 1204. doi:https://doi.org/10.3390/su11041204

Yuan, Z., & Guanghua, W. (2015). International trade and the urbanization of developing countries: Evidence from Asia. *Social Sciences in China, 36*(2), 186-204. doi:https://doi.org/10.1080/02529203.2015.1029679

Zhang, Y., & Wan, G. (2017). Exploring the Trade–Urbanization Nexus in Developing Economies: Evidence and Implications.