The Impact of Gender Inequality and Environmental Degradation on Human Well-being in the Case of Pakistan: A Time Series Analysis

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ABSTRACT

This study has investigated the impact of gender inequality and environmental degradation on human well-being in the case of Pakistan from 1980 to 2019. Augmented dickey-fuller unit root test is used for stationarity of the variables. The autoregressive distributed lag model (ARDL) is used for co-integration among the variables of the model. The results show that gender inequality has a negative and significant impact on human well-being in Pakistan, while gender equality encourages human well-being. The calculated results show that there is a positive, but insignificant relationship between environmental degradation and human well-being in the case of Pakistan. The estimated results show that economic misery has a negative and significant impact on human well-being in the case of Pakistan. The estimated results show that economic growth has a positive and significant relationship with human well-being in Pakistan. Based on estimated results, it is concluded that gender equality, economic misery, and economic growth are playing an important role in determining human well-being in Pakistan. Therefore, to improve human well-being, the government must reduce gender inequality and economic misery while enhancing in parallel economic growth.

Key words: Gender Inequality, Environmental Degradation, Human Well-being
JEL Classifications: J1, O10, Q0

1. INTRODUCTION

Nowadays the socioeconomic policies of developed and developing countries have given much concern to human well-being, as it has a very influential role in the socio-economic development process and it decides the level of investment in human capital and workforce. Conservative and traditional societies treat the human as a mean and not enough attention is given to human well-being or a better standard of living. Kant (1785) mentions that humans should be treated as an end not as means and therefore human well-being is considered the main goal of advanced societies. But the question lies here is: In what ways should human well-being be the central requirement of social scientists and policymakers? McGillivray (2007) points out that

well-being overviews the state of people's life. After the emergence of the millennium development goals (MDGs), human well-being became the subject of special attention among civil societies, international institutions, and national governments. The United Nations Millennium Development Program enables to raise the slogan "health for all and education for all" among all its member countries. Moreover, it became a common practice for the World Bank and the United Nations Development Program (UNDP) to publish reports and rank countries based on human well-being.

Following a long human history, the definitions and measurements of human well-being remain a topic of discussion. The general understanding of human well-being is unable to distinguish between individual well-being and social group well-being. The

reason behind it is that measuring human well-being has some technical issues covering subjective and objective aspects of human well-being like personal well-being and life satisfaction (McGillivray and Clarke, 2006). Therefore, it is necessary to choose the key indicators and attach different weights for measuring human well-being. The conventional social scientists used two measures for human well-being: aggregate income at the macro level and per capita income at the micro-level. Nordhaus and Tobin (1972) consider net economic welfare as a criterion of human well-being that's based on aggregate consumption. The other most important criteria for measuring human well-being are the basic needs approach of the international labor organization (ILO) (1976), the physical quality of life index (PQLI) of Morris (1979), and the human development index (HDI) by United Nations Development Program (UNDP, 1990). Sen (1992) mentions human well-being or better living standard is not related to household consumption, but to the ability to consume and the capability to participate in society. More simply, we can say that human well-being means better education, better health care, and a reasonable amount of resources that can improve the quality of human beings for achieving the desired level of economic development. Human Development Index (HDI) of UNDP (1990) is considered the most advanced and comprehensive approach to measure human well-being, covering three main aspects of human life: health, education, and access to resources.

Human well-being is circled into three interrelated dimensions: agency, resources, and achievements. Women represent half of the world's population and have a significant share in the overall human well-being ranking of a country. Therefore, pushing them back means snatching the well-being of half the population. A large number of national and international organizations are working for the promotion of gender equality. Gender equality has contained dual arguments: first it promotes social justice and social justice has intrinsic value for human well-being (Kabeer, 2005). Second, gender equality is considered a means to other ends. Gender equality reduces the imbalanced power between males and females and works as a key root to human well-being. Moreover, gender equality provides new energy, leadership qualities, new visions, and a helping hand to women for improving the quality of life for their families. The relationship between gender inequality and human well-being is widely discussed in the existing literature. Gender equality may increase health outcomes because it enables the poor part of the population to get a larger share in profits leading to its consumption of food and health care (Preston, 1975; Deaton, 2003; Babones, 2008). Environmental quality is an important factor affecting the human well-being of present and forthcoming generations. The way people value the future is crucially affected by others. Moreover, the present human well-being encourages people to become sympathetic to forthcoming generations. Therefore, if people expect to live longer, they would care more for the environment. Environmental degradation increases morbidity through natural resource depletion, water, and air pollution, and soil deterioration (Elo and Preston, 1992; Pope et al., 2004). Ali and Ahmad (2014) and Ali and Audi (2016) conclude that environmental degradation hurts life expectancy. The findings of these studies also highlight the importance to study the link between environmental degradation and human

well-being. This study has investigated the impact of gender inequality and environmental degradation on human well-being in the case of Pakistan. This type of study is hardly available in the existing literature.

2. LITERATURE REVIEW

Nowadays a vast body of literature is available describing different methods, determinants, and consequences of human well-being. Some of the most relevant studies are presented here: Sen (1999) examines the determinants of life expectancy in the case of Indian State Kerala. The study explores the direct and indirect influence of education on health status. Sen (1999) mentions that higher education improves the productivity of labor and improved labor productivity has an increasing relationship with a child's health. Hence, education indirectly improves health status. The findings of this study reveal that education is positively related to the life expectancy of a female. Crémieux et al. (1999) investigate the relationship between health status and health spending in Canada. The results of the study show that health spending has a direct positive and significant relationship with the health status in Canada.

Kalediene and Petrauskiene (2000) investigate the socioeconomic determinants of life expectancy. The results reveal that there is a positive and significant relationship between urbanization and life expectancy, mentioning that urban people have better education and health care. The study concludes that socioeconomic factors have both a direct and indirect relationship with life expectancy. Macfarlane et al. (2000) examine the health status of some selected countries of Africa and Asia. The study shows that the availability of food and access to safe drinking water has a significant impact on life expectancy in both Asia and Africa. Veugelers et al. (2001) examine the determinants of life expectancy in Canada. For empirical analysis, they use multi-logistic regression analysis. The results of the study reveal that socioeconomic factors have a deep-rooted impact on life expectancy in Canada. Husain (2002) examines the determinants of life expectancy in 91 developing countries. Fertility rate, per capita calories, and adult literacy rate are taken as independent variables and multiple OLS regression analysis is used for empirical estimations. The results of the study reveal that the selected variables have a deep-rooted impact on life expectancy in the case of all the selected developing countries. Hence, for improving the living standard, the developing countries must provide the necessities to their massive population. Sathar and Kazi (2000) examine the main features on which the women's dependency has been based in rural Pakistan. The authors investigate that the Northern women have less self-dependency when it comes to economic matters, but have more power in the control over the household decision making compared to women in southern Punjab. Gender inequality is also an indicator showing women's autonomy on a rural level. Moreover, women aren't getting any separate reward for their engagement in household farms.

Mayoux and Hartl (2009) investigators that women empowerment plays an important role in enterprise development, gender equality, gender equity, and removing gender inequality. Women's

empowerment plays an important role not only when it comes to increases in earnings, but also in showing their qualities in the household decisions making and having good suggestions for their own country and international economies. Moreover, the targets of development and economic programs can be achieved through the elimination of gender inequality and women's empowerment. Amin and Thrift (1995) highlight the socioeconomic conditions of women having an impact on the poverty rate and gender inequality when it comes to the availing of resources. The result shows that the credit-based income-generating programs help women overcome poverty and gender inequality in the case of Bangladesh. Nongovernmental Organizations (NGOs) are providing sound resources to help poor women improve their earnings and overcome their economic problems. Through these projects, women will be able to face the traditional domestic atmosphere and will be able to demand their empowerment in household decisions and economic resources. It is being argued that, by these projects, not only the empowerment of poor women's status in society and reducing gender inequality will be achieved, but also, they will help in improving women's well-being. Sharma (2007) investigates the impact of micro-credit projects on women in Nepal. These projects are helpful when it comes to removing gender inequality in household decisions and in increasing the self-dependence of women. Through these projects, women will be having an important part in resolving their financial, economic, and social issues.

Mumtaz and Salway (2009) examine that the non-dependence in household decisions making in developing countries is the main obstacle to women's reproductive health. For this purpose, the study considered the freedom of decision-making, gender inequality on the level of society, culture, politics, and economic obstacles that are being faced by the rural women in Punjab, Pakistan. This work also highlights the insufficiency of self-dependency for considering the gender inequality impact on women's reproductive health and the suggestions and recommendations of health projects in Pakistan and South Asia. Varghese (2011) concludes that women's empowerment can be obtained through household decision-making and participation in economic activities. However, women's empowerment in Oman is continuously under process because of the low domestic status of women. If the domestic status is improved in Oman, then women will be able to get more empowerment. Moreover, societal behavior plays an important role in gender inequality. Women's empowerment has to face many challenges because of societal behavior. Women become more capable to get their rights and more dependable upon their capabilities to clinch with the opportunities which end their under-level position through women's empowerment means. Women in Oman are in a strong position for making household and economic decisions but in a weaker position of social empowerment. Suguna (2011) highlights the high rate of illiteracy among Indian women and the problems they're facing. He believes that the Indian government and society are perfectly aware of the need for education to reach the empowerment of women in the Indian society, leading to the progress of the country. Therefore, he considers that education is the only key in the hands of Indian women through which they can face the challenges of their lives. In rural India, the rate of education among women is very low. Moreover, the author mentions that education for women is the only key for women through which we can open the empowerment for women and give them a strong position in the household and economic decisions.

3. THEORETICAL DISCUSSIONS AND MODEL FOR EMPIRICAL ANALYSIS

Human well-being is considered an important indicator of social progress as its main targets are required resources, health, and education for all. Rainwater and Smeeding (2004) claim that sound living standard is the central concern of all economies, while traditional economists use the income for well-being and they ignore health and education (Sumner, 2006, McGillivray and Clarke, 2006). Thus, for better representation of human well-being, this study has used the human development index (HDI) of the United Nations Development Program (UNDP) as a proxy of human well-being in Pakistan. Human well-being also focuses on the capability of participation and the ability of resource consumption (Sen, 1992). The ability to consume and the capability to participate decide on the level of human well-being since these activities allow the society to invest in education and health care (Coleman and Rainwater, 1978 and Rainwater, 1990). The living standard of well-being has a positive correlation with education, health care, preschool daycares, and housing subsidies, but a negative relation with poverty (Smeeding et al., 1993 and Smeeding et al., 2001). Kabeer (1999) mentions that resources like social, material, and human are largely affected by gender equality. When women have greater control over economic resources, better education, and social rights, they can easily derive the individual and overall well-being. As educated and empowered women give better education and health facilities to their families, it will further enhance the overall well-being of the nation. Batliwala (1994) uses the conscious raising approach and economic empowerment approach for measuring gender equality. Garikipati (2008) measures Indian women's empowerment in terms of household decision-making and ownership of assets and income. This study uses the UNPD index for measuring gender equality in the case of Pakistan. There is a negative link between environmental degradation and health outcome. CO_2 emissions are used for measuring environmental degradation.

Following the methodologies of Coleman and Rainwater (1978), Morris and McAlpin (1979), Rainwater (1990), Batliwala (1994), Garikipati (2008), Ali and Ahmad (2014), Ali (2015), Ali (2016), Ali and Audi (2016), Audi and Ali (2016), Ali and Bibi (2016), Audi and Ali (2017), Ali and Audi (2018), Ali and Senturk (2019), Ashraf and Ali (2018), Sajid and Ali (2018), Kassem et al. (2019), and Audi et al. (2021), the model of this study is presented as:

$$HDI_t = f\left(GII_t, \ CO2_t, \ MI_t, \ ECO_t\right) \qquad (1)$$

HDI=Human well-being.
GII=Gender inequality index.
CO2= Environmental degradation.
MI=Economic misery.
ECO=Economic growth.
t= Time period.

For finding the responsiveness of the dependent variable to the independent variable, the equation can be written in the following form:

$$HDI_t = \alpha GII_t^{\beta_1} CO2_t^{\beta_2} MI_t^{\beta_3} ECO_t^{\beta_4} e^{t+u_t} \tag{2}$$

here

e is the base of the natural logarithm and u is the white noise error term taking the natural log of both sides of equation (2).

$$\ln HDI_t = \alpha + \beta_1 \ln GII_t + \beta_2 \ln CO2_t + \beta_3 \ln MI_t + \beta_4 \ln ECO_t + u_t \tag{3}$$

u=error term.

3.1. Definitions of Variables and Data Sources

The human development index is a composite index of per capita income, education, and life expectancy. This index is constructed by the United Nations Development Program (UNDP) for measuring the human well-being of all United Nations member countries. The data for HDI is taken from various reports of UNDP.

Gender inequality index (GII) is a composite index of the economic participation of females, political participation of females, decision-making of females, and social participation of females. The gender inequality index is estimated by using the methodology of UNDP (1995) through gender inequality measure (GII).

$$GII = [(EP_f/EP_m) \times (PP_f/PP_m) \times (SP_f/SP_m)]^{1/3} \tag{4}$$

Where EP_f and EP_m represent the Economic Participation of females and males respectively, PP_f and PP_m represent the Political Participation and Decision Making of females and males while SP_f and SP_m represent Social participation of females and males respectively. The data of these indicators are collected from 50 years of statistics of Pakistan, Economic Survey of Pakistan (various issues), PSLM (various issues), National Assembly of Pakistan database, and Pakistan civil services website. Geometric mean has been used to calculate the index.

Economic misery (MI) is a composite index of the inflation rate and unemployment rate with the help of Principle Component Analysis (PCA). The data of inflation rate and the unemployment rate is taken from various issues of the Economic Survey of Pakistan. The data of CO_2 emissions and economic growth (ECO) is taken from World Development Indicator (WDI) databases maintained by the World Bank.

3.2. Econometric Methodology

This study has investigated the impact of gender equality, CO_2 emissions, economic misery, and economic growth on human well-being over the period covering 1980-2014. Time series data have a unit root problem and the estimated regression line of this data gives spurious results (Nelson and Ploser, 1982). The well-known are Dickey and Fuller (DF) (1979), Augmented Dickey and Fuller (ADF) (1981), Perron (1989), and Phillips and Perron (PP) (1988). This study uses the ADF unit root test to remove the non-stationary data. After removing the unit root problem, co-integration among the variables of the model is examined. Engle and Granger (1987), Johansen (1991,1992), Johansen and Juselious (1990), Perron (1989, 1997), and Leybourne and Newbold (2003) are well-known co-integration tests. In this study, the Autoregressive Distributive Lag (ARDL) bounds testing approach developed by Pesaran and Pesaran (1997), Pesaran and Shin (1999), Pesaran et al., (2001) is used for empirical analysis. It is the most advanced method of co-integration and has several theoretical and technical advantages over the traditional methods.

4. EMPIRICAL RESULTS AND DISCUSSIONS

Descriptive statistics give Mean, Median, Maximum, Minimum, Standard Deviation, Skewness, Kurtosis, Jarque-Bera, and Probability values of the estimated model. Skewness and Kurtosis help analyze the volatilities of data. Descriptive statistics also help to check the normality of the selected data set. The results of the descriptive statistics are presented in Table 1. The study uses human well-being as a dependent variable, whereas gender inequality, environmental degradation, economic misery, and economic growth are selected as independent variables. The results show that human well-being, gender inequality, environmental degradation, and economic growth are positively skewed whereas economic misery is negatively skewed. All selected variables of the model have positive Kurtosis values. Skewness and Kurtosis are insignificant and different from zero, which shows that the data is normally distributed. The estimated Jarque-Bera shows that selected variables have finite covariance and zero means, this also confirms that selected data is normally distributed.

Table 2 presents the correlation matrix among variables. The estimated results show that human well-being has a positive and significant correlation with economic misery and environmental degradation in the case of Pakistan. But human well-being has a negative and significant correction with gender inequality and economic growth in Pakistan. Gender inequality has a negative and significant correlation with environmental degradation and economic misery. There is a positive and significant correlation between gender inequality and economic growth. Economic growth has a negative and significant correlation with environmental degradation and economic misery in Pakistan. Environmental degradation has a positive and significant correlation with economic misery. The overall results show that independent variables have a strong correlation with human well-being in the case of Pakistan.

Table 3 presents ADF unit root test results. The results show that human well-being, gender inequality, and economic misery are not stationary at the level. The results show that environmental degradation and economic growth are stationary at a level. The estimated results show that, at the first difference, all variables of the model become stationary. The overall results show that the selected variables of the model have a mixed order of integration which is a suitable condition for applying the ARDL co-integration approach.

The calculated ARDL results are reported in Table 4. W-statistic and F-statistic are used for testing the null hypothesis of the no co-

Table 1: Descriptive statistics

Variables	HDI	GII	CO2	MI	GDPG
Mean	0.411678	0.664690	98894.90	0.391951	5.000630
Median	0.389491	0.671845	94711.28	0.445834	4.959769
Maximum	0.517833	0.854855	165433.0	0.730843	10.21570
Minimum	0.319307	0.534409	32067.92	0.050860	1.014396
Std. Dev.	0.066314	0.099499	45514.63	0.176702	2.092043
Skewness	0.345600	0.236027	0.164289	−0.413284	0.208209
Kurtosis	1.693795	1.784686	1.672377	2.109636	2.721288
Jarque-Bera	3.184897	2.478907	2.727880	2.152446	0.366165
Probability	0.203427	0.289542	0.255651	0.340881	0.832700
Sum	14.40871	23.26416	3461322.	13.71830	175.0221
Sum Sq. Dev.	0.149518	0.336605	7.04E+10	1.061603	148.8059
Observations	40	40	40	40	40

Table 2: Correlation matrix

Variables	HDI	GII	CO_2	MI	GDPG
HDI	1.000000				

GII	−0.961645	1.000000			
	0.0000	-----			
CO_2	0.987622	−0.981223	1.000000		
	0.0000	0.0000	-----		
MI	0.716162	−0.768769	0.747438	1.000000	
	0.0000	0.0000	0.0000	-----	
GDPG	−0.351459	0.499709	−0.435661	−0.384802	1.000000
	0.0384	0.0022	0.0089	0.0225	-----

Table 3: Augmented Dickey-Fuller test

	I (0)		I (1)	
Variables	T-Statistic	Prob.	T-Statistic	Prob.
LHDI	0.099853	0.9611	−7.976576	0.0000
LGII	−1.359778	0.5901	−5.493197	0.0001
LCO2	−3.640479	0.0100	−5.361642	0.0001
LMI	−1.528868	0.5068	−6.257469	0.0000
LGDPP	−3.302260	0.0229	−6.144516	0.0000

Table 4: ARDL bound testing

	Dependent variable is LHDI (1,1,0,1,1)			
	95% Lower bound	95% Upper bound	90% Lower bound	90% Upper bound
F-statistic 7.5972	3.3388	4.7035	2.7397	3.9425
W-statistic 37.9860	16.6941	23.5175	13.6986	19.7126

integration among the variables of the model. F-statistic (7.5972) is greater than the upper bound (4.7035) value of Pesaran et al. (2001) at 5 percent and the calculated W-statistic (37.9860) is greater than the upper bound (23.5175) value of Pesaran et al. (2001) at 5 percent. So the null hypothesis of no co-integration is rejected and the alternative hypothesis is accepted which confirms the co-integration among the variables of the model.

The long-run results of the model are presented in Table 5. The results show that gender inequality has a negative and significant impact on human well-being in Pakistan. The results show a 1% increase in gender inequality. A (−1.0064%) decrease is occurring in human well-being. This shows that gender equality encourages human well-being. The calculated results show that there is a positive, but insignificant relationship between environmental degradation and human well-being in the case of Pakistan. The estimated results show that economic misery has a negative and significant impact on human well-being in the case of Pakistan. The results show that a 1% increase in economic misery brings a (−0.038577%) decrease in human well-being in Pakistan. The estimated results show that economic growth has a positive and significant relationship with human well-being in Pakistan. The results reveal that a 1% increase in economic growth brings a

(0.036122%) increase in human well-being in Pakistan. Overall estimated long-run results reveal that the selected variables play a significant role in determining human well-being in Pakistan.

Vector error-correction model (VECM) is used to examine the short-run relationship among the variables of the model. The short-run dynamics are given in Table 6. The results show that gender inequality has a negative and significant impact on human well-being in Pakistan. This shows that gender equality encourages human well-being. The calculated results show that there is a positive, but insignificant relationship between environmental degradation and human well-being in the case of Pakistan. The estimated results show that economic misery has a negative and significant impact on human well-being in the case of Pakistan. The estimated results show that economic growth has a positive and significant relationship with human well-being in Pakistan. All independent variables have the same type of relationship with the dependent variable in the long run. The negative and significant value of ECM shows the speed of adjustment from short-run to long-run equilibrium. The estimates of ECM reveal that the short run needs 1 year and more than 7 months to converge in the long-run equilibrium. Moreover, short-run deviations in the present period are corrected by (67.258) percent in the future in the case of Pakistan.

Table 5: Estimated long run coefficients using the ARDL approach

Dependent variable is LHDI			
ARDL (1,1,0,1,1) 1981-2019			
Regressor	Coefficient	Standard error	T-Ratio[Prob]
LGII	−1.0064	0.25247	−3.9863 [0.001]
LCO	0.081323	0.081716	0.995 18 [0.329]
LMI	−0.038577	0.016320	−2.3638 [0.026]
LGDPG	0.036122	0.015280	2.3640 [0.026]
C	−2.3434	0.84526	−2.7724 [0.010]

Table 6: Error correction representation for the selected ARDL model

ARDL (1,1,0,1,1)			
Dependent variable is dLHDI			
Regressor	Coefficient	Standard error	T-ratio [Prob]
dLGII	−0.77812	0.21548	−3.6111 [0.001]
dLCO	0.045572	0.042470	1.0730 [0.292]
dLMI	−0.018374	0.0086241	−2.1305 [0.042]
dLGDPG	0.013674	0.0068921	1.9840 [0.057]
ecm(-1)	−0.56038	0.12182	−4.6000 [0.000]

R-Squared 0.65297 R-Bar-Squared 0.54192 S.E. of Regression 0.016449 F-Stat. F (5,28) 9.4080 [0.000] Mean of Dependent Variable 0.012634 S.D. of Dependent Variable 0.024303 Residual Sum of Squares 0.0067641 Equation Log-likelihood 96.6385 Akaike Info. Criterion 87.6385 Schwarz Bayesian Criterion 80.7698 DW-statistic 2.2832

In the diagnostic tests, we check the serial correlation, functional form, normality, and Heteroscedasticity among the variables of the model. The results of diagnostic tests are reported in Table 7. The results of the Lagrange multiplier test of residual serial correlation show that there is no serial correlation between the variables of the model. Ramsey's RESET test using the square of the fitted values shows that the model has a correct functional form. Normality based on Skewness and Kurtosis explains that the time series data of all variables are normally distributed. The results show that there is no heteroscedasticity in the data.

The stability of the model is very important. The stability tests enable us to see whether the estimated model shifts or not, over the selected period. Hansen (1996) argued that misspecification of the model may provide biased results that influence the explanatory power of the results. The Cumulative Sum (CUSUM) and the Cumulative Sum of the Squares (CUSUM sq) tests are used to examine the stability of short-run and long-run coefficients of the model (Brown et al., 1975). The results of cumulative sum (CUSUM) and the cumulative sum of the squares (CUSUM sq) tests are reported in Figures 1 and 2. The figures show that cumulative sum (CUSUM) and the cumulative sum of the squares (CUSUM sq) are between the two critical lines and do not go outside the critical boundaries. The figures of cumulative sum (CUSUM) and the Cumulative sum of the squares (CUSUM sq) confirm that our model is correctly specified.

5. CONCLUSIONS AND POLICY SUGGESTIONS

This study has investigated the impact of gender equality and environmental degradation on human well-being in the case

Table 7: Diagnostic test

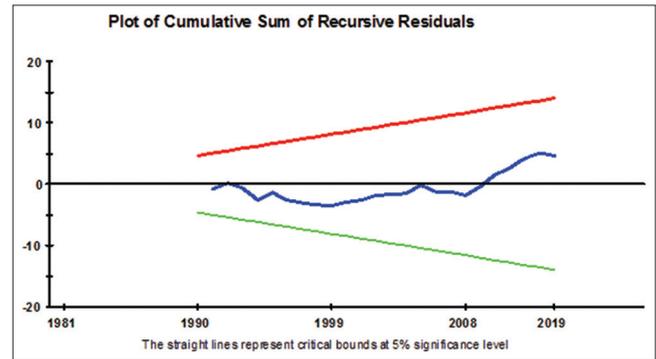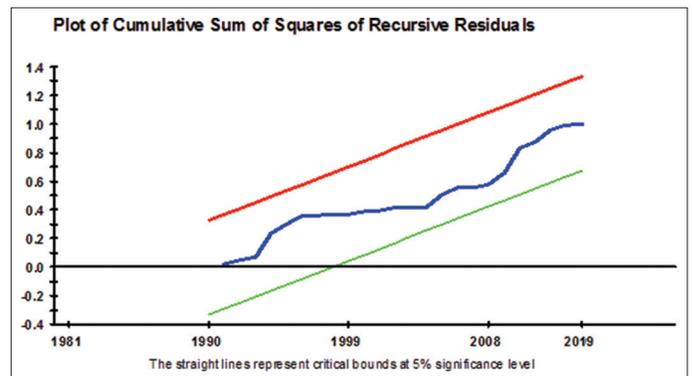| Test statistics	LM version	F version
A: Serial Correlation*CHSQ (1)=1.0904 [0.296]*F (1,24)=0.79516 [0.381]*		
B: Functional form*CHSQ (1)=2.4743 [0.116]*F (1,24)=1.8836 [0.183]		
C: Normality*CHSQ (2)=2.5537 [0.279]*Not applicable*		
D: Heteroscedasticity*CHSQ (1)=1.1217 [0.290]*F (1,32=1.0918 [0.304]*		

Figure 1: CUSUM sq

Figure 2: CUSUM

of Pakistan. Time series data from 1980 to 2019 is used for empirical analysis. Augmented dickey-fuller unit root test is used for stationary of the variables. The autoregressive distributed lag model (ARDL) is used for co-integration among the variables of the model. The results of unit root tests show that there is a mixed order of integration among the selected variables of the model. The results show that gender inequality has a negative and significant impact on human well-being in Pakistan. This shows that gender equality encourages human well-being. The calculated results show that there is a positive, but insignificant relationship between environmental degradation and human well-being in the case of Pakistan. The estimated results show that economic misery has a negative and significant impact on human well-being in the case of Pakistan. The estimated results show that economic growth has a positive and significant relationship with human well-being in Pakistan. Based on the estimated results, it is concluded that gender equality, economic misery, and economic growth are playing an important role in determining human well-being in Pakistan. Although following previous literature, environmental degradation hurts human well-being. But the results show that environmental

degradation is not playing a significant role in determining human well-being in Pakistan. Based on these conclusions there are some policy suggestions. If the government of Pakistan wants to increase human well-being, it has to give equal rights to women as ignoring half part of the population means lower human well-being. Gender equality encourages better health, education, and sufficient resources for better living standards. On one hand, the government takes serious steps for reducing economic misery, and on the other hand, higher economic growth is necessary for better human well-being in Pakistan.

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