ISSN: 2582-4686 SJIF 2021-3.261,SJIF 2022-2.889, 2024-6.875 ResearchBib IF: 10.25 / 2025

THE MULTIDISCIPLINARY JOURNAL OF SCIENCE AND TECHNOLOGY

VOLUME-6, ISSUE-6

THE IMPACT OF ENVIRONMENTAL QUALITY ON LIFE SATISFACTION

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Abstract

The issue of living quality is multifaceted and difficult to solve. It affects those who work in a variety of fields, including planners, designers, architects, economists, attorneys, and designers. Although it is difficult to determine the most relevant indicators for measuring quality of life, acceptable definitions may be developed based on the researcher's objectives. For several decades, the link between quality of life and the environment has been a major topic of research. Academic circles create a large number of articles. Economists, notably environmental economists, are becoming increasingly interested in subjective well-being, or Life Satisfaction. There are various reasons to believe that environmental quality (EQ), defined as a high level of environmental good and a low level of environmental 'bad,' will be linked to Satisfaction of Life. However, there is a scarcity of quantitative evidence in this area. Some studies employ cross-sectional data aggregated at the country level, although whether these aggregated measures accurately reflect individuals' actual EQ exposures is debatable. Other articles employ individual-level data, but they usually include spatial data at a very coarse resolution and only analyze a few number of EQ factors, all of which are restricted to the area around people's residences. The aim of the research is to examine the levels of life satisfaction in industrialized and developing nations, as well as to see whether improved environmental quality correlates with higher levels of life enjoyment. The major goal of sustainable development is to enhance people's quality of life, which is measured using a variety of criteria and indicators. One of the most significant indicators on quality of life is the quality of environment. Other important indications include: Unemployment, GDP growth, and the Globalization Index are all factors to consider. According to recent study, the influence of environmental quality on life satisfaction is both positive and considerable. The following model was used to produce econometric regression analysis: Ordinary least squares pooled (Pooled OLS). Endogeneity, multicollinearity, heteroscedasticity, autocorrelation, and cross-sectional dependency of variables have all been addressed using a variety of diagnostic tests. According to the model, there are five variables, namely, one dependent t variable and four independent t variables. Two independent factors were found to be significant in a 95 percent confidence interval, whereas the other two independent variables were not. Two variables, epi and unemployment, have a positive relationship with the dependent variable, whereas the other two, kofgi and GDP per capita, have a negative relationship.

Keywords: **Life Satisfaction, EQ, Globalization Index, GDP Growth, Unemployment.**

Introduction

In today’s world, quality of life is very important as there are so many problems in people’s life. In other words, there are so many different factors that can affect life satisfaction. The purpose of this

ISSN: 2582-4686 SJIF 2021-3.261,SJIF 2022-2.889, 2024-6.875 ResearchBib IF: 10.25 / 2025

study is to examine the levels of life satisfaction between developed and developing countries and also to know does better quality of environment lead to greater life satisfaction. In many developing countries, environmental quality is being improved by implementing environmental policies and regulations in order to achieve better life satisfaction. The main important determinant of individual's well-being is environmental quality. In response to poor environmental conditions, many developed and developing countries try to solve problems linked with the quality of environment and to implement environmental policies and regulations. Environment is an independent factor which affects individual's quality of life, where studies have shown that one's quality of life is affected by health behaviors. In the present dissertation, the association between environmental conditions and quality of life will be examined. The environment and the quality of living are inextricably linked (Diener & Suh, 1997; UNECE, 2009). The health of people's physical environments has a significant impact on their lives. Pollutants and hazardous chemicals have a significant influence on people's health. Environmental quality is particularly important since most people enjoy the beauty and health of their surroundings and are concerned about the loss of natural resources (Braja-ganec, Merka, & Verko, 2011. The following six sections of this research are dedicated to determining if environmental quality and other characteristics have a substantial influence on life satisfaction in developing and developed nations. Section 2 contains formulated research questions that may be divided into general and specialized inquiries, whilst the goals section contains the paper's major emphasis and model analysis reflection. The dynamic link between Environmental Quality and Life Satisfaction is established in Section 3 using empirical data and other research arguments. The examination of important methods, data sources, and variable explanations are presented in the next section. The early data and model estimations in Section 5 are used to make a conclusion about the influence of Environmental Quality on Life Satisfaction. Section 6 is devoted with closing remarks, which contain economic analysis-based interpretations of the results. The last portion focuses on policy implications and suggestions, as well as constraints encountered during the project's completion and future study areas.

Research questions and objectives

Research questions

The main aim of this proposal is to notice the connection between environmental quality and life satisfaction and find whether there is dissimilarity in the effect of environmental quality between developed and developing countries. In this way, the study detects the influence of environmental quality among other features of life satisfaction in order to define the importance of results and find some possible solutions to the issue of environmental quality. Thus, this study tries to response in the following questions.

- ❖ How can environmental quality impact the life satisfaction?
- ❖ Does better quality of environment lead to greater life satisfaction?

Research objectives

The following research's primary goals are outlined below:

- ❖ To compare the determinants of Life Satisfaction in developed and developing countries, as well as to investigate if better environmental quality corresponds with greater levels of life enjoyment;

ISSN: 2582-4686 SJIF 2021-3.261,SJIF 2022-2.889, 2024-6.875 ResearchBib IF: 10.25 / 2025

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❖ To investigate the relationship between environmental quality and life satisfaction, as well as if environmental quality has different effects in industrialized and developing nations;

Literature Review

Theoretical linkage between Environmental Quality and Life Satisfaction

Both directly and indirectly, environmental factors are likely to influence people's feelings of life satisfaction. The natural environment contributes to human well-being in a variety of ways, including providing opportunities for outdoor recreation and supporting cultural activities. However, it is rarely investigated if the diversity of human-nature experiences has a major impact on total subjective wellbeing. A growing body of research has examined the link between environmental quality and subjective well-being in recent years. Before 1990 many researchers argued that the quality of environment can affect the level of life satisfaction of individuals. Many research papers, empirical and theoretical analyses are made by researchers. Marans and Mohai's theoretical model, there may be a link between health and quality of life not only with leisure resources but also environmental conditions. According to the model people's satisfaction, physical health and their utility of such amenities will influenced by the perceptions of environmental and urban amenities. Environmental quality which consists of air, water, noise and hazardous waste and also the resources of natural recreation are included by environmental amenities. Urban amenities consist of cycling areas and walking trails and also cultural resources, health services and facilities, public space and public transport. In this model, opportunities are provided in order to explore the relationship between environmental conditions and quality of life. Nowadays, one of the top significant factors of the quality of life is environmental quality. The link between Life Satisfaction and Environmental variables has been investigated in a number of research. This includes studies on noise (van Praag and Baarsma, 2005; Weinhold, 2013; Lawton and Fujiwara, 2015), climate (Rehdanz and Maddison, 2005; Frijters and van Praag, 1998), air pollution (e.g. MacKerron and Mourato, 2009; Brereton et al., 2008; Ferreira and Moro, 2010; Rehdanz and Maddison, 2008; Drought (Caroll et al., 2009), natural capital (Engelbrecht, 2009; Vemuri and Costanza, 2006), closeness to nature (Skianis, 2012), nature views (Kaplan, 2001), and green spaces (Rehdanz, 2007). (Mourato et al., 2010). Pollution, noise, and harsh climates have a negative impact on LS, whereas green spaces, nature views and closeness to nature have a good impact. Sirgy et al. (2008), on the other hand, underlines that both physical characteristics and excellent relationships within a neighborhood can improve quality of life. In a similar vein, Kim et al. (2006) proposed that social capital (based on local relationships) can improve quality of life. Residential environmental satisfaction is projected to have a favorable impact on quality of life as a result of these elements. Satisfaction with the environment will improve quality of life. Environmental quality is an important aspect in people's well-being since the physical environment has a significant impact on their quality of life (Holman & Coan, 2008; Kahn, 2002). Natural catastrophes (earthquakes, cyclones, floods, droughts, and volcanic eruptions) and epidemics can produce higher rates of mortality, injury, and disease. In the long run, significant changes in the environment, such as climate change, may harm human health (Ahmad & Yamano, 2011). Apart from having an impact on people's health, the environment is important because many people value the beauty and health of their surroundings, and they are concerned about the destruction of the world and the loss of natural resources (Balestra & Dottori, 2011; Kahn & Matsusaka, 1997). People gain directly from environmental assets and

ISSN: 2582-4686 SJIF 2021-3.261,SJIF 2022-2.889, 2024-6.875 ResearchBib IF: 10.25 / 2025

services, such as clean water, land, forests, and access to green spaces, since they enable people to meet their fundamental requirements while also enjoying free time and the companionship of others (Balestra & Sultan, 2012; Pretty, Peacock, Sellens, & Griffin, 2005). Human health and well-being are directly influenced by the quality of the local living environment. An untouched environment provides a sense of fulfillment, increases mental well-being, and allows individuals to relax and engage in physical activities while recovering from the strains of regular life. The availability of resources such as green areas, woods, and rivers is critical to one's quality of life. Economies rely on natural resources such as water, lumber, fisheries, plants, and crops in addition to healthy and productive labor (Zheng, 2010). The use of environmental services and amenities has a direct influence on quality of life, and human conduct has an impact on the quality of these services. The fundamental driver of the quality of environmental services supplied is environmentally responsible behavior through actions such as energy conservation, use of renewable resources, and sustainable consumption (Osbaldiston &Sheldon, 2003; Thogersen, 2006). One of the most significant components in guaranteeing the long-term maintenance of well-being is environmental and natural resource protection (Van Liere & Dunlap, 1980). Environmental policies play a key role in addressing global health issues and promoting ecologically responsible behavior and lifestyles (Reto & Garcia-Vega, 2012).

Theoretical linkage between Unemployment and Life Satisfaction.

Over the last two decades, the volume of empirical literature in economics on the link between unemployment and happiness has exploded. Unemployment reduces subjective well-being, a fact that has been nearly typical in recent years. With the German Socio-Economic Panel, a lot of study has been done (GSOEP). A number of publications published in the recent decade were based on Winkelmann and Winkelmann's (1995, 1998) investigations and expanded on them in various ways. The non-pecuniary costs of unemployment for working-age males have a substantially higher negative impact on life satisfaction than the monetary costs, according to Winkelmann & Winkelmann. Gerlach and Stephan (1996) expand on their previous research by employing a broader sample period and data from both men and women. Furthermore, they account for various age groups. They also discovered that unemployment had a significant negative influence on happiness, with middle-aged males (30-49 years old) suffering the most and women 50 and older suffering the least. Kassenboehmer and Haisken-DeNew (2008) conducted a more current research that looked at the impact of unemployment over a longer time span. Furthermore, they include various reasons for unemployment in order to account for involuntary unemployment, which is a significant component in assessing the impact of unemployment on life satisfaction. They distinguish between three types of unemployment: "voluntary," "fired," and "plant closure." They discover that exogenous unemployment, which is almost always the case when a firm closes, is highly linked to non-monetary expenses. The impacts of voluntary unemployment are negligible, while the coefficients for "being fired" are always negative, although they are not significant for two of the six estimate techniques. Clark et al. (2001) look at the psychological effects of previous unemployment and find that present employees' satisfaction is worse when they had previously been unemployed. Clark and Oswald (1994), who used data from the British Household Panel Study, found that jobless persons residing in high-unemployment areas, as well as young people, feel less pain. Furthermore, they corroborate Easterlin's (1974) concept that individuals grow used to things

ISSN: 2582-4686 SJIF 2021-3.261,SJIF 2022-2.889, 2024-6.875 ResearchBib IF: 10.25 / 2025

in the long run by finding that the short-term jobless are less pleased than the long-term unemployed. In their study of the United States and the United Kingdom, Blanchflower and Oswald (2004) discovered a negative connection between unemployment and life satisfaction. There is also a research on Kyrgyzstan, which is a transition economy. Unemployment is one of the predictors of dissatisfaction, according to Namazie and Sanfey (1998), who utilize household data from 1993 to examine the determinants of subjective well-being. Di Tella et al. (2001) investigate the impact of macroeconomic factors such as unemployment and inflation on life satisfaction in numerous European nations and the United States. They discovered that life happiness is lowest when unemployment and inflation are both high (so-called "misery index" – combining the unemployment and inflation rates), and that unemployment lowers life satisfaction more than inflation. Life Satisfaction is negatively influenced by unemployment, commuting, ill health, divorce/separation, and widowhood, according to Dolan et al. (2008) and MacKerron (2011). Björklund (1985) examines the impact of unemployment on mental health using data from the Swedish Level of Living Survey. He discovers a negative effect using cross-section data. The unemployment coefficients are not substantially different from zero when using panel data. He finds that the estimations are imprecise, and so no firm statements can be made. Björklund and Eriksson (1998) provide a review of research utilizing Scandinavian data, concluding that cross-sectional studies demonstrate a negative effect for jobless people compared to working people. Panel studies reveal the same impact, although it's unclear how long this effect will last. According to a more recent work by Böckerman and Ilmakunnas (2005), using cross-sections for Finland, unemployment has a negative influence on subjective well-being at lower levels of happiness, but no effect at higher levels.

Theoretical linkage between Globalization Index and Life Satisfaction.

Globalization has the potential to shape life satisfaction by creating conditions that allow people to meet their requirements, gain resources, and progress to the next stage of development. Globalization may be one of the most essential aspects of the current world, and it necessitates particular attitudes on the part of the individual (Reese et al. 2019). Earlier study has shown no link between views about globalization and life happiness (Jasiski et al. 2019), but more recent research has found that the COVID-19 pandemic is adversely associated to life satisfaction (Jasiski et al. 2019). (Yang and Ma 2020). It's probable that the additional circumstances created by the worldwide danger of an infectious illness exacerbated the link between globalization appraisal and life satisfaction. Life satisfaction is the outcome of a cognitive assessment based on a comparison of one's own life circumstances to widely accepted norms. The degree to which these standards have been met determines the level of life satisfaction (Jeb et al. 2020). Accepting attitude, defined as a positive assessment of globalization's influence on one's own life, may rise in direct proportion to life satisfaction, whereas worried attitude, defined as a negative assessment of global life circumstances, may rise in reverse proportion. One of the key study concerns in modern psychology is to understand the link between globalization and cognition, as well as human behavior (Janssens et al. 2019). An important element of the difficulties offered to social sciences is the empirical examination of the relationship between attitudes about globalization and life satisfaction. Previous research has found a link between the experience of a pandemic and indicators of lower life satisfaction, such as psychological stress, anxiety, and sleeplessness (Casagrande et al. 2020). This

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supports the investigation of whether the pandemic's circumstances are linked to various types of attitudes toward globalization and levels of life happiness, and if attitudes toward globalization during a pandemic may be used to forecast life contentment. Hessami (2011) investigates the influence of globalization (as defined by the KOF index) on individual life satisfaction in the EU-15 nations from 1975 to 2001. Individuals' life happiness is found to be positively related to the measure. People who reside in nations with less trade restrictions are more likely to be satisfied in several fields, according to Khun, Lahiri, and Lim (2015). Lin, Lahiri, and Hsu (2016) use the spatial econometrics technique to examine the influence of the KOF globalization index on the degree of subjective well-being determined from replies to the ladder of life question in 145 countries in 2012. The findings suggest that globalization improves subjective well-being. The global life index has a positive and substantial influence on Japan's overall quality of life, whereas the number of foreign contacts has a positive and big impact on Hong Kong's overall quality of life. Aside from these factors, the globalization index isn't a significant factor in determining quality of life. Pekkurnaz (2017) investigates how individuals' opinions of globalization affect their overall life happiness. Individuals who have positive views about globalization in general are more likely to have a high degree of life satisfaction, according to the findings. This study builds on Pekkurnaz (2017) by looking at the influence of people's subjective views on globalization on several aspects of their lives. The link between well-being and globalization is described as a "double-bladed" phenomena (Sirgy et al. 2004), with positive and negative influences offsetting one other, making the aggregate effect difficult to measure. According to the 2001 Euro barometer poll of the EU-15, Hessami (2011), who utilizes the synthetic globalization index established at the KOFSwiss Economic Institute, globalization as assessed boosts life satisfaction. Tsai et al. (2011) argue that individual globalization is a positive component in an individual's welfare, as it is an increased capability that boosts one's prospects in a globalizing world, based on their examination of micro-level globalization across a sample of 14 Asian nations. Globalization's influence on quality of life is mostly determined by human actions (Shultz et al. 2004; Sanzet al. 2008).

Theoretical linkage between GDP and Life Satisfaction.

The examination of the relationship between subjective well-being indicators and macroeconomic statistics such as GDP, unemployment, and so on, and the analysis of individual attributes influencing subjective well-being, are two main topics of happiness research. Dolan et al. conducted a detailed assessment of several aspects linked with subjective well-being as well as its metrics (2008). According to several researches, there is a link between happiness and economic variables. Heady et al. (2004) examine household panel data from five countries and suggest that wealth and consumer spending are related to happiness. These contradictory findings have sparked a heated debate about whether macroeconomic considerations have a role in boosting life happiness. Easterlin (2005) argued that average income does not matter, in contrast to Hagerty and Veenhoven's (Hagerty, Veenhoven, 2003; Veenhoven, Hagerty, 2005) views of positive happiness trends being linked to income increase. In their research of life satisfaction statistics from 1973 to 2002 in 15 EU nations, Bjornskov et al. (2008) backed up Easterlin's claims. They discover that whereas GDP growth does not cause positive trends in life satisfaction in 15 European nations, accelerating GDP growth does (Bjornskov et al., 2008, 328). They also come to the conclusion that nations adjust to gradual progress by boosting their expectations, and that people may compare their condition to that

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of their neighbors (Bjornskov et al., 2008, 329). Other researchers who looked at the same data came to somewhat different results, claiming that GDP has an impact on a country's happiness: "People's happiness replies are substantially connected with fluctuations in present and lagged GDP per capita" (Di Tella et al., 2003: 823). However, it should be emphasized that the aforementioned research came to different findings based on the same data by analyzing it in different ways: Bjornskov et al. analyzed macroeconomic data at the country level, whereas Di Tella et al. projected macroeconomic data at the person level (Di Tella et al., 2003, 815). The concept of satiation point was created in an attempt to explain why rising GDP has lost its influence on life satisfaction. "Once a country has above $15,000 per capita, its degree of happiness appears to be independent of its income per head," it states, quoting Layard (Layard, 2003: 17). Clark et al. (2008), Frey and Stutzer (2002: 90), and others support the satiation point theory. Stevenson and Wolfers (2008) stoked the discussion over Easterlin's paradox by analyzing numerous rich data sets from the United States, the European Union, and developing nations, some of which spanned decades. They claimed to have discovered a definite positive relationship between average well-being and GDP per capita in nations throughout the world. They also say that there is no indication of a satiation point in the data. In both wealthy and poor countries, the relationship between increasing money and increasing life happiness is favorable (Stevenson, Wolfers, 2008: 23). Easterlin's response to support the paradox's validity is a research including 37 countries: 17 developed, 9 developing, and 11 transitional (Easterlin, Angelescu, 2009). Easterlin contends that there is no evidence of a link between GDP 11 and life happiness. His argument is divided into two parts: 1) Others frequently mix up cross-country study, which reveals a positive relationship between wealth and well-being, with within-country analysis, which shows no evidence of such a relationship; 2) Stevenson and Wolfers mix up data from long-time series with data from relatively short-time series. Easterlin contends that excluding short-time series from transition nations from analysis would result in different outcomes (Easterlin, Angelescu, 2009: 11). Easterlin and Angelescu, on the other hand, do not prevent some potential misunderstanding and misinterpretation by presenting a regression analysis of growth rates but not absolute statistics for both GDP per capita and life satisfaction variables (Easterlin, Angelescu, 2009: 8–9). Within each country, a regression of GDP per capita and life satisfaction as a whole during the same time period might provide different findings. In the years 1991–1995, Hayo and Seifert (2003) examined data on subjective well-being in many Eastern European nations. They discovered a weak link between GDP and subjective well-being in 1991–1994 data and a substantial correlation in 1995 data after analyzing data at the nation level. "Macro information, like as GDP per capita, may not be a particularly exact estimate of subjective living circumstances in early phases of change," the reasoning goes, "while more recent statistics appear to be of greater quality" (Hayo, Seifert, 2003: 346).

Data and Methodology

Data description.

In order to inspect how environmental quality affects the life satisfaction they were detected in developed and developing countries. The data was collected from various data sources including The World Bank Database, OECD Better Life Index, and EPI Environmental Performance Index. Overall data used for this research consist of political and social indicators such as:

- Life Satisfaction in 2019

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- ❖ Environmental Quality in 2018
- ❖ Unemployment in 2018
- ❖ GDP Growth in 2018
- ❖ Globalization Index in 2018

In this research Life Satisfaction is response variable. As the main independent variable in this model is quality of environment, the study used the EPI Environmental Performance Index according to some literature studied and the data for EPI. According to this study, the total number of observations is 94. The data set used in this study is cross-sectional and was collected from The World Bank Database. For this study, I used only one year, 2018, for independent variables, namely, Environmental Performance Index, Unemployment, Globalization Index, and GDPP in order to contrast the dependent variable which is Life Satisfaction Index in 2019.

- ❖ According to this research, the dependent variable is Life Satisfaction, which shows assessing contentment with one's past, current and future lives may be used to determine life satisfaction. The data for Life Satisfaction was collected from The World Bank Database.
- ❖ The main independent variable is Environmental Performance Index. The Environmental Performance Index (EPI) is a data-driven assessment of the global condition of sustainability. The data for Environmental Quality was gathered from EPI, Environmental Performance Index.
- ❖ The next main independent variable is Unemployment. The unemployment rate is derived by dividing the total number of people in the labor force by the number of people who are jobless. The data for Unemployment rate was collected from The World Bank Database.
- ❖ GDP Growth is the next independent variable. The nominal GDP growth rate, which is the growth rate estimated at current prices, is subtracted from the GDP growth rate to get the derived amount. The data for GDP Growth was collected from The World Bank Database.
- ❖ Globalization Index is the last independent variable that was used for this research. The actual flows of trade, foreign direct investment, and portfolio investment, as well as the constraints that apply to these movements, are used to quantify economic globalization. The data for Globalization Index was collected from The World Bank Database.

Model.

Model of Ordinary Least Squares regression

As Romer, D. et al. (1992) pointed out; applying current growth theory through the OLS regression model has a high probability of yielding an econometric model, validating the Solow Growth model's reasoning (1956). The Ordinary least squares (OLS) model is used to demonstrate the causal relationship between the response variable (Life Satisfaction) and the explanatory variables (Environmental Quality), with the goal of demonstrating the relationship in the line of best fit, in which Y can be projected to the proportional degree by X. Because endogenous and exogenous variables have a linear connection, the following equation can be used in our research:

$$LifeLadder = \alpha 0 + \beta 1 * EPI + \beta 2 * lnGDPpercap + \beta 3 * KOFGI + \beta 4 * UNEMP + \varepsilon 0$$

Where,

LifeLadder= Life Satisfaction, which is dependent variable;

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EPI= Environmental Performance Index, which is the main independent variable;
GDPpercap= Gross Domestic Product (GDP) Per Capita growth;
KOFGI= Globalization Index, which is the next independent variable;
UNEMP=Unemployment Rate, which is the last independent variable;
α_0— the constant; if all independent variables are equal to zero, the outcome of the dependent variable is equal to the constant.
ε_0—the error term; when an endogenous variable cannot fully explain the exogenous variable, a residual variable is produced in the equation that measures the precision of the experimental value.

Discussion of Results.
OLS Assumptions

According to earlier research on the subject, there is a link between Life Satisfaction and Environmental Quality, which contributed to the usage of the Ordinary Least Square (OLS) approach. The key benefit of the OLS estimation is that it has the lowest potential variance among all linear unbiased estimates. Furthermore, because this study uses cross-sectional data, the OLS is the optimal method for examining the relationship between endogenous and exogenous factors.
Assumptions #1
The regressand and regressors must be linearly connected, according to this assumption. Because the parameters of our econometric model are linear, this assumption is met:

$$LifeLadder = \alpha 0 + \beta 1 EPI + \beta 2 lnGDPpercap + \beta 3 KOFGI + \beta 4 UNEMP + \varepsilon 0$$

Assumptions #2
The population mean of the error term is zero. The error term accounts for variation in the dependent variable that is not explained by the independent variables. The values of the error term should be determined by random.
Assumptions #3
Predictor variables must not have a perfect linear connection with each other, according to the present assumption, or else a multicollinearity problem will arise. I confirmed whether this assumption is correct using the 'VIF' command.

```
. vif
```

Variable	VIF	1/VIF
LogGDPp~2018	3.57	0.280213
epi2018	3.14	0.318380
kofgi2018	1.65	0.606042
unemplo~2018	1.04	0.966148
Mean VIF	2.35	

As seen in the STATA result, the quantities are less than 10, indicating that there is no perfect collinearity among the described variables.

Assumptions #4
This assumption indicates that in order to produce an unbiased estimate, unobserved components and explanatory variables must not have any link.

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```
. ovtest

Ramsey RESET test using powers of the fitted values of LifeLadder2019
       Ho:  model has no omitted variables
                   F(3, 86) =      1.36
                   Prob > F =      0.2604
```

p-value (0.2604) is higher than significance level (0.05), so null-hypothesis cannot be rejected and I conclude that the model does not have omitted variables. Therefore, zero conditional mean assumption is satisfied in our model.

Assumptions #5

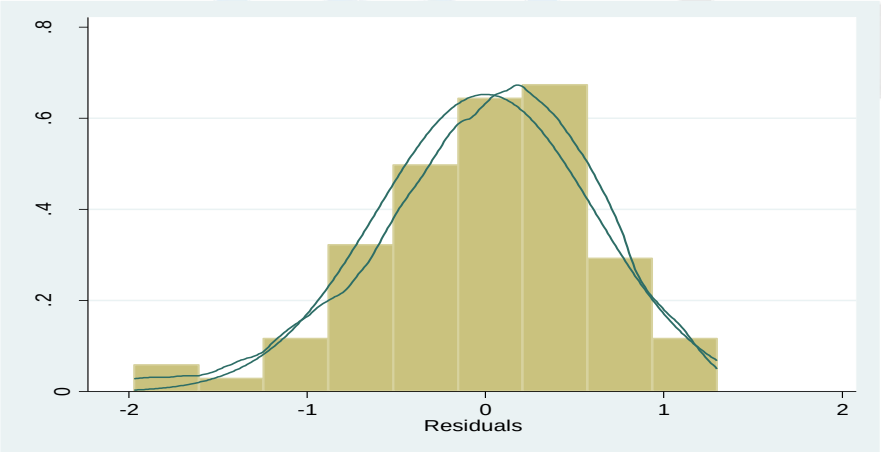
The model must be free of the heteroscedasticity problem, which means that error terms must be evenly distributed among regressors, according to this assumption.

```
. hettest

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
         Ho: Constant variance
         Variables: fitted values of LifeLadder2019

         chi2(1)      =     4.11
         Prob > chi2  =   0.0427
```

The result shows that the chi-square p-value is 0.0427, which is less than the 0.05 significance limit. As a result, we can rule out the null hypothesis and infer that the error components in the model have a constant variance.

Assumptions #6

The normality assumption must be met in order to get precise sample distributions of t and F statistics. It implies that the error term must be normally distributed, with E(ui | X1,X2, X3, X4)=0 and Var(ui | X1,X2, X3, X4)= σ^2.



The graph shows that the error term distribution follows normality, demonstrating that this assumption is likewise not broken.

ISSN: 2582-4686 SJIF 2021-3.261,SJIF 2022-2.889, 2024-6.875 ResearchBib IF: 10.25 / 2025

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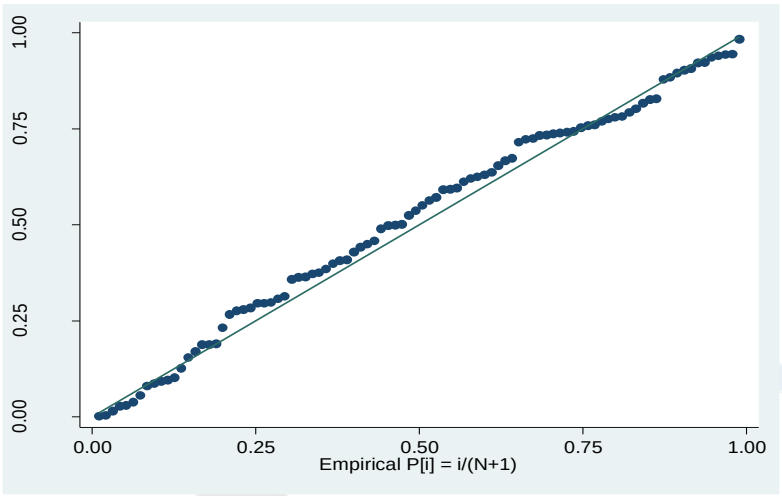

Results

The model has five variables: one dependent and four independent variables. At 0.10 significance level, three independent factors were determined to be significant, whereas the one was not. According to beta coefficients, two variables, epi and unemployment, are favorably linked with the dependent variable, whereas the other two, kofgi and GDP per capita, are negatively connected.

```
. reg LifeLadder2019 epi2018 LogGDPpercapita2018 kofgi2018 unemployment2018
```

Source	SS	df	MS	Number of obs	=	94
				F(4, 89)	=	37.28
Model	58.229867	4	14.5574667	Prob > F	=	0.0000
Residual	34.7521965	89	.390474118	R-squared	=	0.6262
				Adj R-squared	=	0.6095
Total	92.9820635	93	.999807134	Root MSE	=	.62488

LifeLadder2019	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
epi2018	.046256	.0094731	4.88	0.000	.0274332	.0650789
LogGDPpercapita2018	.2257902	.1283548	1.76	0.082	-.029248	.4808284
kofgi2018	-.0009465	.0050738	-0.19	0.852	-.0110281	.0091351
unemployment2018	-.043763	.0123346	-3.55	0.001	-.0682716	-.0192543
_cons	1.218623	.8007861	1.52	0.132	-.3725219	2.809768

As can be seen from the table above, there are significant findings for epi and unemployment factors, with P values less than 0.05. For kofgi and GDP per capita, there are insignificant findings with P values greater than 0.05. Most notably, my research variable yielded a statistically significant result: P value=0.000.

F-test

To begin, I use an F-test to examine if the factors are jointly significant in predicting the variation in life satisfaction.

H_0: $\beta_1, \beta_2, \beta_3, \beta_4 = 0$

H_a: $\beta_1, \beta_2, \beta_3, \beta_4 \neq 0$

The null hypothesis is rejected by the F-value of 37.28, which is greater than the F-critical value at degrees of freedom on numerator 4 and denominator 89, as well as a lesser quantity of p-value compared to the significance level of 0.05, and I conclude that the model is jointly significant. The number shows that the model can explain about 62.6 percent of the regressand variance.

ISSN: 2582-4686 SJIF 2021-3.261,SJIF 2022-2.889, 2024-6.875 ResearchBib IF: 10.25 / 2025

t-test

Epi2018

H_0: $\beta_1=0$

H_a: $\beta_1\neq0$

Epi is a significant factor that can effect life happiness, as evidenced by a larger t-value than t-critical and a lower p-value than the significance level (0.00<0.05). The beta value indicates that the epi and response variables are positively connected, implying that a higher level of environmental quality will lead to a higher degree of life satisfaction.

LogGDPpercapita2018

H_0: $\beta_2=0$

H_a: $\beta_2\neq0$

LogGDPpercapita is an unimportant factor that cannot effect life happiness, as evidenced by a lower p-value than the significance threshold (0.0820<0.10). The beta value indicates that LogGDPpercapita and the response variable are positively related, implying that LogGDPpercapita will boost life satisfaction.

Kofgi2018

H_0: $\beta_3=0$

H_a: $\beta_3\neq0$

In terms of this variable, the p-value (0.852) is higher than the significance threshold (0.05), as shown in the preceding explanatory variable examples. As a result, I am unable to reject the null hypothesis of a zero beta value and declare that the globalization index has no impact on life happiness.

Unemployment2018

H_0: $\beta_4=0$

H_a: $\beta_4\neq0$

With a t-value of (-3.55) and a p-value of 0.001, this variable was similarly found to be significant even at 0.01 significance level. I find unemployment to be a significant variable and reject the null hypothesis. The coefficient denotes a negative link between this variable and the regressand.

Three of the regressors included for the model were significant at the 0.10 significance level, while the one was insignificant at the significance level. Finally, I created the fitted model shown below after dropping the insignificant variable:

LifeLadder2019=1.218623+0.046*epi2018+0.23*LogGDPpercapita2018-043763*unemployment2018

Additionally, descriptive statistics were used to visualize and explain the acquired data in a straightforward manner. The descriptive statistics were used since this empirical investigation depended on comparison analysis.

Descriptive statistics

ISSN: 2582-4686 SJIF 2021-3.261,SJIF 2022-2.889, 2024-6.875 ResearchBib IF: 10.25 / 2025

THE MULTIDISCIPLINARY JOURNAL OF SCIENCE AND TECHNOLOGY

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```
. summarize LifeLadder2019 epi2018 LogGDPpercapita2018 kofgi2018 unemployment201
> 8, separator(7)
```

Variable	Obs	Mean	Std. Dev.	Min	Max
LifeLad~2019	96	5.894526	.9950842	3.24877	7.780348
epi2018	99	61.59667	12.29203	30.57	87.42
LogGDPp~2018	100	9.689478	.9533325	7.05719	11.44822
kofgi2018	99	68.91772	16.28591	5.003693	90.69555
unemplo~2018	99	7.093114	5.772982	0	30.38

It's easy to tell which table contains data from industrialized nations and which has data from developing countries by looking at the results, particularly the mean value.

The gathered data were then evaluated and tested using various statistics in order to see whether there were any issues with the data that may lead to abuse and erroneous estimations. To produce proper findings in OLS, several assumptions or guidelines are applied. No multicollinearity is one of them, which specifies that independent variables should not be fully connected with one another. As a result, the correlation analysis was performed and the problem of multicollinearity between independent variables was investigated.

Correlation Matrix

```
. correlate LifeLadder2019 epi2018 LogGDPpercapita2018 kofgi2018 unemployment201
> 8
(obs=94)
```

	Lif~2019	epi2018	Log~2018	kof~2018	une~2018
LifeLad~2019	1.0000				
epi2018	0.7404	1.0000			
LogGDPp~2018	0.6968	0.8212	1.0000		
kofgi2018	0.4331	0.5595	0.6176	1.0000	
unemplo~2018	-0.2894	-0.0491	-0.1303	-0.0078	1.0000

A correlation matrix is essentially a table that shows the relationship between two variables. It works well with variables that have a linear connection with one another coefficients for a variety of variables the correlation between all possible pairings of values in a table is represented by the matrix. Despite the fact that EPI and Life Ladder have a significant correlation with other factors, the study found that multicollinearity issues exist in all three scenarios.

Conclusion

Since there are so many challenges in people's lives nowadays, quality of life is extremely essential. To put it another way, there are a plethora of elements that might influence life satisfaction. Environmental quality is being enhanced in many developing nations by enacting environmental laws and regulations in order to promote life satisfaction. This study aimed to look at how people feel about their lives in developed and developing countries, as well as to investigate if better environmental quality corresponds with higher levels of happiness. Sustainable development's main purpose is to improve people's quality of life, which is assessed using a number of criteria and indicators. The quality of the environment is one of the most important measures of quality of life. Other significant indicators are: The Globalization Index, unemployment, and GDP growth are all issues to consider. According to a recent study, environmental quality has a favorable and significant impact on life satisfaction. There are five variables in the model, including one dependent variable and four independent variables. In a 95 percent confidence interval, two independent factors were determined to be significant, whereas the other two independent variables were not. The dependent

variable has a positive association with two variables: epi and unemployment, whereas the other two, kofgi and GDP per capita, have a negative relationship.

To summarize, two of the model's regressors were judged to be significant at a 95 percent confidence interval. According to my findings, EPI has a positive association with Life Satisfaction, and researchers Sirgy et al. (2008), (Holman & Coan, 2008; Kahn, 2002), (Balestra & Dottori, 2011; Kahn & Matsusaka, 1997) found the same thing (Van Liere & Dunlap, 1980). In terms of unemployment, I've discovered a favorable correlation as well. Some studies, such as Kassenboehmer and Haisken-DeNew (2008), Clark and Oswald (1994), and Easterlin (1974), have discovered that unemployment has a positive effect on Life Satisfaction. Blanchflower and Oswald (2004), Namazie and Sanfey (1998), Dolan et al. (2008), MacKerron (2011), Björklund (1985), Björklund and Eriksson (1998), according to the literature evaluation, concluded that unemployment has a negative impact on life satisfaction. If we look at the other variables, in terms of globalization, I've discovered that there is a negative correlation. (Janssens et al. 2019), (Casagrande et al. 2020), Hessami (2011), Khun, Lahiri, and Lim are some of the researchers (2015). Tsai et al. (2011), Lin, Lahiri, and Hsu (2016), Lin, Lahiri, and Hsu (2016), Lin, Lahiri, and Hsu (2016), Lin, Lahiri, and Hsu (2016), Lin, Lahiri, and Hsu (2016), Lin, Lahiri, and Hsu (2016), Lin, Lahir According to certain academics, such as (Jasiski et al. 2019) and (Sirgy et al. 2004), globalization has a detrimental impact on life satisfaction. Last, but not least, I discovered a negative correlation in terms of GDP per capita. Some researches, such as Heady et al. (2004), Hagerty and Veenhoven's (Hagerty, Veenhoven, 2003; Veenhoven, Hagerty, 2005), (Di Tella et al., 2003: 823), and Stevenson and Wolfers' (Stevenson, Wolfers, 2008: 23), have discovered that GDP per capita has a positive impact on Life Satisfaction. According to certain researchers, such as Bjornskov et al. (2008) and Easterlin's, Hayo and Seifert (2003), discovered that GDP per capita had a negative impact on Life Satisfaction.

References

- 2021. [E-book] Available at: https://www.researchgate.net/publication/284318649_Life_satisfaction
- 2021. [E-book] Available at: https://www.researchgate.net/publication/284318649_Life_satisfaction
- 2021. [E-book] Available at: https://www.cncbi.nlm.nih.gov/pmc/articles/PMC7698595/
- 2021. [E-book] Available at: http://www.jstor.org/stable/resrep25851.4
- 2021. [E-book] Available at: https://www.sciencedirect.com/science/article/abs/pii/S092180090700273X
- Epi.yale.edu. 2022. *EPI INDEX FOR 2018*. [Online] Available at: https://epi.yale.edu/downloads/epi2018policymakerssummaryv01.pdf
- Healthypeople.gov. 2022. *Environmental Quality | Healthy People 2020*. [Online] Available at: https://www.healthypeople.gov/2020/leading-health-indicators/2020-lhi-topics/Environmental-Quality
- 2022. [Online] Available at: https://www.researchgate.net/publication/231879126_Unemployment_and_life_satisfaction_A_cross-cultural_comparison

ISSN: 2582-4686 SJIF 2021-3.261,SJIF 2022-2.889, 2024-6.875 ResearchBib IF: 10.25 / 2025

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- Conference.iza.org. 2022. [Online] Available at: https://conference.iza.org/conference_files/ReDisWeBe2010/krause_a5647.pdf
- 2022. [Online] Available at: https://www.jstor.org/stable/pdf/41107870.pdf
- 2022. [online] Available at: https://www.researchgate.net/publication/348633964_Globalization_and_Life_Satisfaction_of_the_Polish_Population_Before_and_during_the_COVID-19_Pandemic/link/601568cb
- Dergipark.org.tr. 2022. [Online] Available at: https://dergipark.org.tr/tr/download/article-file/1159819
- 2022. [Online] Available at: https://www.researchgate.net/publication/303922320_Relation_between_GDP_and_life_satisfaction_in_the_European_Union
- Christoph Hanck, a., 2022. *6.4 OLS Assumptions in Multiple Regression | Introduction to Econometrics with R*. [online] Econometrics-with-r.org. Available at: https://www.econometrics-with-r.org/6-4-ols-assumptions-in-multiple-regression.html