



# **The Impact of Economic Freedom on Creating Happiness and Inequality: International Evidences**

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**Author's contribution**

*The sole author designed, analysed, interpreted and prepared the manuscript.*

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## **ABSTRACT**

It is remaining a big question in happiness economics, what is the common motto of human beings? What human beings want to achieve? Are these, money, good job, position, power, peace, good living condition, good health, good family, good environment and what others? All researchers from different disciplines are investigating to solve this economic problem and Most of the researchers agreed that happiness is the common aim of everyone in the world. The paper entitled "Does Economic Freedom Create Happiness or Inequality?" is estimated the effect of economic freedom on happiness by using other control variables like Gross Domestic Product growth, per capita and inequality. The paper analyzed the panel data covering 120 countries from 2008 to 2016. The fixed and random effect, the Generalized Least Squares, First in Difference and Linear Dynamic Panel Data/generalized method of moments estimation method are applied as the econometric strategies in this paper. The results found that the statistically significant and strong linear positive association between economic freedom and happiness in overall sampled countries and also found the positive linear association between income with happiness and a negative association between economic freedom and inequality and inequality and happiness.

**Keywords:** *Economic freedom; GDP per capita; inequality; happiness.*

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## 1. MOTIVATION

Greek Philosopher Aristotle avowed the quote in ancient times that "Happiness is the meaning and the purpose of life, the whole aim, and end of human existence". This quote is very applicable and relevant at present context too, which reflects the common aspirations and aims of everyone. If we reexamined the whole history of human civilization from Psychological, Philosophical, Sociological, Economic and many other perspectives, then we can be concluded that the present progress in the world is achieved due to pursuing the keen interest of human beings to accomplish the purpose of their lives i.e. happiness [1]. The 7.5 billion population in the world is categorized in the name of a different race, caste, ethnicity, gender, age, occupation, nationality, and whatever others. If someone asks any people about the main purpose of their lives, finally, anyone concludes, it is happiness and it is the ultimate purpose of all human beings. But, it is a difficult question for everyone, how do we achieve happiness? If the level of income and wealth is increased if we have enough money, can we achieve happiness? Now, almost all people in the world whatever they are Americans, Chinese, and Nepalese, white, black, male, female, doctor, professor, businessman, young and old, have a keen desire to increase their level of income and accumulation of the wealth. If we compare Eastern and Western societies, Westerners are richer than Easterners, but they are not so much happier and they believed that their lives aren't comfortable. If people have food, shelter, car, holidays and all things, still they are not happier, why? It is one of the serious problems in the pitch of happiness studies [2]. This statement corroborated that the increase in wealth and income or having enough money couldn't purchase happiness? The policies of every government in the present world are trying to relate the indicators of economic freedom to increase economic growth and per capita. Because they considered economic freedom is one of the major components of economic growth. The present research works in happiness are trying to focus the freedom aspects to relate the happiness. A vast amount of the works of literature has been produced on the variables affecting the subjective well-being measures. The research subject i.e. the relationship between economic freedom and subjective well being is not still young, it is infancy. Another potentially important mediator between economic freedom and life satisfaction and the relation

between inequality and happiness that has not yet been massively researched [3]. This statement itself raised a big gap of economic freedom related research work on happiness and inspired me to estimate the effects of economic freedom on happiness and its consequences on inequality.

## 2. INTRODUCTION

Economic freedom is known as the absence of government control on the production, distribution, or consumption of goods and services [4]. It includes the political and legal system, monetary related policies, freedom to international trade and earns foreign currency, private ownership in the banking system, capital market and exchange rate [5]. The Heritage Foundation and the Fraser Institute are the main institutes which measured nation wise economic freedom using different indicators. The Heritage Foundation is more focused their research work about the economic freedom which have developed ten and five indicators respectively to measure the economic freedom which included common five indicators fiscal freedom, legal system and property rights, access of sound money, freedom to trade internationally and freedom from regulation [6]. These indicators are used to measure especially economic growth, happiness, and inequality.

There are many different arguments about the association between economic freedom and economic growth but there were only a few empirical pieces of evidence on the impact of economic freedom on economic growth. de Haan and Siermann [7] mentioned that the positive relationship between economic growth, which was the findings of De Vanssay and Spindler (1994) studied the relationship between economic freedom and economic growth used the index of economic freedom for a sample of 100 countries. Sturm and De Haan [8] found the positive association between economic freedom and economic growth and they argued that it has gained momentum in the last decade, the role of economic freedom as an important determinant of economic growth. But, in contrast, the situation of China is different. The Chinese economy growth increased about 10 percent per year during the past 30 years, which has the highest economic growth in the world but the economic freedom rating of China was very low, for example, it was ranked only 124th in the 2008 Index of Economic Freedom [9]. From the above

literature, there is no guarantee the economic freedom lead positively to economic growth.

The previous many pieces of literature communicated that there is a positive association between economic freedom and happiness. Ruut Veenhoven [10,11] mentioned that freedom in nations has both a positive and negative effect on the happiness of citizens. Hanson [12] examined the relationship between changes in economic freedom and happiness and indicated that economic freedom leads to an increase in the level of happiness. Nikolaev and Bennett [13] explored the relationship between economic freedom and emotional wellbeing by using the data from wave 2 of the world value survey of 12 countries. They declared that greater freedom and economic freedom more likely reporting excited feelings and noticed the positive association between economic freedom and life satisfaction. However, some of the previous studies created the opinion that zero and negative association between economic freedom and happiness. Nikolaev and Bennett [14] examined the relationship between economic freedom and happiness inequality by using the data from large sample countries and marked the opinion that economic freedom is negatively associated with happiness and inequality. From this literature, it could be concluded that there is not still anonymous certification that economic freedom has a positive or negative effect on happiness on the one hand and the other hand there are only a few exceptional studies about the relation between economic freedom and inequality. From the previous studies, it is difficult to conclude that does economic freedom create happiness or inequality. Therefore this study is designed to estimate the impact of economic freedom on happiness and inequality.

### 3. LITERATURE REVIEW

Berg and Veenhoven [15] described that happiness study has become a playground for hypothetical philosophy, in the beginning, means early ancient times. Then, the study of happiness has started from the consumption and utility perspectives, John Stuart Mill and Jeremy Bentham used consumption and utility perspective to study happiness. After the 1930s, happiness has been started to study as an alternative measure of GDP, it started the debate that GDP is not considered as a good measure of economy and wellbeing. The happiness has been studied massively and rapidly after the mid-1970s and it has become the main subject of

empirical research, which mainly focused the wealth, growth and income relation on happiness and established many paradoxes and puzzles in the field of happiness studies. Afterwards, happiness study has become the subject of empirical research from the capabilities approach i.e. human development and freedom perspectives after 1990.

Freedom, equality, and brotherhood were the contributions of the French Revolution and later it linked with happiness [10,111]. He further mentioned that freedom is the concept of chance, opportunity, and capabilities to choose. Opportunities to choose are related to the absence of restrictions to choose economic political and personal life and choose of capabilities are related to the information and inclination. For a long time, the concept of freedom, equality, and brotherhood was not tested empirically. But nowadays, there are massive concentrations among economists that does economic freedom achieve happiness? If yes, the policymakers need to facilitating government institutions to enhance economic freedom components to increase the level of happiness. Several pieces of research have found a positive association between economic freedom and happiness and some of them found insignificant results and some of the research found that there is no relationship between economic freedom and happiness.

Several studies have conducted in the United States about the relationship between economic freedom and happiness. Jackson [16] examined the relationship between the institutions of economic freedom and happiness and found that the level of economic freedom in the United States has a positive association with both individuals reported happiness and state average level of happiness. Ariel R Belasen and Hafer [17] used the cross-sectional econometric model and found that there is no relationship between economic freedom and well-being but overtimes if the economic freedom is changed then they found a positive association and statistically significant result between economic freedom and happiness. It means that if there is increased the levels of economic freedom the Well-Beings is highly correlated with the higher level of state well-being.

Gehring [18] estimated the effect of economic freedom on subjective Well-Beings using the panel data from 86 countries and the period 1990 to 2005 and found the economic freedom has a

statistically significant and positive effect on subjective Well-Beings. They highlighted that the explanatory variables legal security, property rights, sound money, and regulation are the strong variables to measure happiness. Nikolaev and Bennett [14] mentioned that the relationship between individuals' perception of control and economic freedom is important for several aspects. First, several studies suggested that the sense of control and freedom of people's perceptions is stronger determinants of subjective Well-Beings. There are several personal characteristics linked to happiness, which are determined by the freedom-control dimensions and concluded that the highest level of personal happiness is achieved when the person is fully involved in self-selected activities freely.

Nikolaev and Bennett [13] examined the relationship between economic freedom on happiness and inequality including large sample countries and found that economic freedom is negatively associated with happiness and inequality. Bennett and Nikolaev [19] explored the estimation between emotional Well-Beings and economic freedom by using the data from 12 sample countries from wave 2 of the World Value Survey and Economic Freedom Index. They found that people who lived in more economically free societies are more likely to report the presence of a positive effect on happiness. The people who lived in the higher economically freedom society, they have reported the exciting wellbeing and less likely to report feeling pride, restlessness, loneliness, boredom and being upset.

Cheng et al. [20] explored the relationship between homeownership and subjective well-being in urban China by using the theoretical model on housing property and subjective well-being and they found that not only the homeownership but also the property rights are the matter for subjective well-being and the home loan and its type plays the significant role of subjective well-being. Wolfe and Patel [21] estimated self-employment and life satisfaction and found that business freedom enhanced the moderating effect of shared property on the relationship between self-employment and life satisfaction and they concluded that self-employment is positively related to life satisfaction.

Memoli and Quaranta [22] estimated the relationship between democratic satisfaction and micro and macroeconomic factors in Africa and

this study has shown the result that an economic factor is one major factor of the democratic process. They used the data from 32 African countries from 2002 to 2013 and analyzed the link between citizens' evaluations of the economy and economic freedom with the satisfaction of democracy and found that openness of economic context and positive economic evaluation are related to increases in democratic satisfaction.

Graafland and Compen [23] measured the relationship between economic freedom and happiness with the mediated variables by income and trust based on the sample of 120 countries and found that life satisfaction is positively related with the quality of the legal system and negatively related with the small size of government and income per capita has positively associated with the life satisfaction but they don't find the significant result. Tsai [24] examined the economic openness and subjective Wellbeing using the data of 76 countries and found that economic openness has a positive association with subjective well-being. Diener and Tov [25] discussed that Several research studies have found that economic freedom is positively related to life satisfaction, however, the economic freedom with mediators of the small size of government, quality of legal system, trade openness drive this relation. But no research has studied the mediators of income per capita or other mediators in the relationship between economic freedom and life satisfaction and found income per capita mediates the positive influence on life satisfaction Graafland and Compen [23].

Spruk and Kešeljević [26] explored the cross-country differences of economic freedom to estimate the link between the quality of institutions and subjective well-being by using the Veenhoven's happiness dataset. They suggested that countries with better economic institutions with a higher level of economic freedom to ensure the security of property rights, open market, and more limited government are more likely to greater subjective well being. Bjørnskov et al. [27] empirically analyzed that the relationship between government size and life satisfaction by using the cross-section data of 74 countries and found that life satisfaction decreases with higher government consumption.

### **3.1 Literature Gap, Research Question and Contribution**

This study is designed to estimate the relationship between economic freedom and happiness along with the other variables like

GDP growth, per capita and Gini index. Therefore the literature review of this study is more focus in these areas. The previous study concluded that economic freedom and freedom of life choices have found zero, positive and negative association with happiness. However, these studies were centralized within the limited sample countries. The previous studies indicated that economic freedom has only a positive association with happiness but also it has a negative association. Therefore, both negative and positive arguments relationship between economic freedom and happiness guided that it still gaps to research work in these areas. The literature indicated that there was not sufficient literature and studies about the relation between economic freedom and inequality and the relation between inequality and happiness.

Carlsson and Lundström [28] mentioned that most of the studies about the relation between economic freedom with GDP growth have found a positive effect, but they found that it does not mean is always good for economic growth, it may have a negative effect too. Likewise, the variable economic freedom with happiness has both positive and negative effects. And there are not sufficient studies about the relationship between economic freedom and happiness by using the mediator variables like economic growth, GDP per capita and Gini index. Therefore this study is related to estimate economic freedom and happiness by using macroeconomic variables based on the income status of the countries and different continents. Based on the gap of the literature, the main aim of this paper is to examine the actual impact of economic freedom on happiness and its relation to inequality. Likewise, this study is shown the relation between inequality and happiness. The main contribution of this paper is to provide the way out the state's policy and programs formulation in economic modelling related to economic freedom and happiness which will be to facilitate the economic freedom to increase the level of happiness in the courtiers through the mitigation strategies of inequality measures, in the one hand and on the other hand, the paper contributed the sufficient literature in the areas of economic freedom and happiness which will provide the basic foundation for the researchers and policymakers.

### 3.2 Data and Variables

The study used the secondary sources of data which covered 1080 observations from 120

countries. The major sources of data of this study are derived from the World Bank dataset, The Heritage Foundation, and The World Happiness Report. The study used panel data from 2008 to 2016 and the predicted variable (Y) is happiness and the main predictor is Economic Freedom. The study used other variables like GDP growth, GDP per capita, freedom of life choices and Gini index as the control variables. Similarly, country income status and continents are used in this study as binary ( $\delta$ ) variables.

### 3.3 Empirical Foundation and Construction of Research Hypothesis

There is a great debate among economists about the relationship between freedom and happiness that does economic freedom create happiness among the people? The previous pieces of literature noticed some positive and some negative association between freedom and happiness. Jackson [16] has found the positive association between economic freedoms with the individuals reported happiness and state average level of happiness in the USA. Ariel R Belasen and Hafer [17] found no relationship between economic freedom and well-being. Gehring [18] found that economic freedom has a statistically significant positive effect on subjective Well-Beings. He analyzed the panel data from 86 countries and the period 1990 to 2005. There is not only a positive association between economic freedom and happiness, but some studies also found a negative association between these two variables.

Based on the above literature we concluded that there is not still a common theoretical and empirical understanding about the relationship between economic freedom and happiness. Therefore, this study is designed based on the above theoretical understanding this paper designed the hypothesis that higher the score of economic freedom within the countries, there will be a higher level of happiness, a positive association between inequality and economic freedom and a negative association between inequality and happiness.

### 3.4 Econometric Estimation Strategy

The above empirical studies are the main foundation to develop econometric estimation strategies, which implies the basic idea to design the econometrics model to estimate the relation between economic freedoms with happiness. The study designed the following econometric

strategy to estimate the effect of economic freedom on happiness.

$$\begin{aligned}
 Y_{it} &= \beta_{0it} + \beta_{1efit} + \beta_{2fofliecit} \\
 &+ \beta_{3gdpgrowthit} + \beta_{4gdpcapitait} + \beta_{5giniit} \\
 &+ \delta_{hiincomeit} + \delta_{uminocmeit} + \delta_{lomiincoemit} \\
 &+ \delta_{loincoemit} + \delta_{safricait} + \delta_{asiait} \\
 &+ \delta_{euopeit} + \delta_{ausoceit} + \delta_{namericait} \\
 &+ \delta_{samericait} \\
 &+ \varepsilon_{it}
 \end{aligned} \tag{1}$$

Where

$Y_{it}$  = Happiness of the  $i$ th Country in Year  $t$   
 $\beta_{0it}$  =  $Y$  Intercept  
 $\beta_{1efit}$  = Economic Freedom of the  $i$ th country in time  $t$   
 $\beta_{2fofliecit}$  = Freedom of life choices of the  $i$ th country in time  $t$   
 $\beta_{3gdpgrowthit}$  = GDP Growth Rate of  $I$ th Country in time  $t$   
 $\beta_{4gdpcapitait}$  = GDP per capita of the  $i$ th country in time  $t$   
 $\beta_{5giniit}$  = Household Based Gini Index of the  $I$ th Country in time  $t$   
 $\varepsilon_{it}$  = Errors, Disturbances

Based on the above mode, the study designed the following equation to estimate economic freedom to estimate the relationship with happiness.

$$\begin{aligned}
 Y_{it} &= \beta_{0it} + \beta_{1efit} + \beta_{2fofliecit} \\
 &+ \beta_{3gdpgrowthit} \\
 &+ \beta_{4gdpcapitait} + \beta_{5giniit} \\
 &+ \varepsilon_{it}
 \end{aligned} \tag{1}$$

$$\begin{aligned}
 Y_{it} &= \beta_{0it} + \beta_{1efit} + \beta_{2fofliecit} \\
 &+ \beta_{3gdpgrowthit} \\
 &+ \beta_{4gdpcapitait} + \beta_{5giniit} \\
 &+ \delta_{hiincomeit} + \delta_{uminocmeit} \\
 &+ \delta_{lomiincoemit} + \delta_{loincoemit} \\
 &+ \varepsilon_{it}
 \end{aligned} \tag{2}$$

$$\begin{aligned}
 Y_{it} &= \beta_{0it} + \beta_{1efit} + \beta_{2fofliecit} \\
 &+ \beta_{3gdpgrowthit} \\
 &+ \beta_{4gdpcapitait} + \beta_{5giniit} \\
 &+ \delta_{safricait} + \delta_{asiait} \\
 &+ \delta_{euopeit} + \delta_{ausoceit} \\
 &+ \delta_{namericait} + \delta_{samericait} \\
 &+ \varepsilon_{it}
 \end{aligned} \tag{3}$$

### 3.5 Estimation Techniques

To investigate the relationship between explained and explanatory variables, this paper investigated many estimation techniques to identify the proper estimation strategy. In the first initiation, the study tests the multicollinearity and

found the small mean Variance Inflation Factor (VIF) 1.49 which is less than 2.5 indicated the there is no collinearity. This study tested the Breusch-Pagan/Cook-Weisberg test for Heteroscedasticity estimated p-value (0.1256) and Chi2 (1) =2.35 has provided the significance result and proved that there is no heteroscedasticity. Similarly, the Hausman test also tested and estimated (p-value 0.0000) and chi2(5) 46.19 indicated to choose the fixed effect, but in this study, both random and fixed effect estimation method is used for comparative study. The estimation checked the endogeneity problem in the model and found the missing and omitted variables indicated that the endogeneity problem in the model. The endogeneity indicated that the OLS estimation method is inconsistent and incomplete in this model. Therefore, finally, this study selected fixed and random effects, and 2SLS (FD) and GMM estimation techniques by using the instrument variables to solve the endogeneity.

## 4. RESULTS AND DISCUSSION

Based on the research question, hypothesis, econometric strategies and estimation techniques, this study found the following results.

### 4.1 Economic Freedom and Happiness

This paragraph deals with the relationship between economic freedom and happiness. According to Abdur Rahman and Veenhoven [29] freedom is the possibility of choice of the people where people can be free and their condition can be free choice and other factors could not be instructed in their choice. Economic freedom is the fundamental right of every human being to use his or her labor and property. In an economically free society, every people are free to work, produce, trade, consume and invest in any area. Pattanaik and Nayak [30] mentioned that economic freedom implies that the market economy where the central components are a voluntary exchange, free competition and protection of person and property.

Economic freedom highlights the major six areas of study (1) security of property rights (2) freedom to engage in voluntary transactions (3) access to sound money (4) freedom to engage in transaction outside the borders (5) freedom to compete for (6) personal choice [31]. And according to Corbi [32] economic freedom is the protection of property rights, personal choice, and competition in the market.

Spruk and Kešeljević [26] stated that there are vast numbers of research works and similarly found that economic freedom has a positive association to well being. Countries, which have higher economic freedom tend to higher economic growth. Several studies have conducted in the areas of, economic freedom and happiness studies but only rare studies have conducted including the variables of GDP growth, per capita and Gini index. Gehring [29] suggested that overall economic freedom has a significant positive effect on subjective well being with its dimensions of legal security, property rights, sound money, and regulation but the overall positive effect is not affected by the socio-demographic indicator. Ariel R. Belasen and Hafer [33] presented the evidence that well-being is positively related to economic freedom with happiness.

Nikolaev [34] investigated that economic freedom is strongly and positively correlated with most of this area of wellbeing even after control of the positive impact of the income. The strongest effect of economic freedom is associated with some of the nonmaterial dimensions of quality of life such as community; safety and life satisfaction, which is not, still conducted any research work in the areas of economic freedom. Kešeljević [35] examined the cross-country differences in economic freedom to link with the quality of the institution and subjective well being and found that better economic institutions and a higher level of economic freedom captured of the security of property rights, open market, and more limited government are significantly more likely to experiences greater wellbeing.

Pitlik and Rode [36] mentioned that the people who feel free, they are happier and in the life of nations if the country has more economic freedom and the people in this country to be happier. Yilmaz and Tag [37] investigated the linkage between economic freedom and happiness and attempt to understand the economic institutions (rule of law, limited government, regularity efficiency, and open market) have influenced the subjective well-being. They investigated that the three pillars of economic freedom (i.e. rule of law, the regularity of efficiency and open market) positively affect subjective well-being and found that negative relationships between limited government and subjective well-being.

Haller and Hadler [38] discussed in their paper that the happiness would be higher in these

societies where there are higher freedom and the terms happiness and freedom influenced each other, the happier societies have more freedom and more free societies have happier. They mentioned that happiness is higher in the free market economy, employed societies. They found that people who live in the circumstances of higher freedom of choice are happier.

This study designed an econometric model to estimate the effect of economic freedom on happiness including other variables like freedom of life choices, GDP growth rate, GDP per capita and Gini index. To test the validity of the model, the Hausman, Wald, Sargen tests have given strong validity in model 1. The Hausman test  $\chi^2(5)$  (46.19) and p-value 0.000 has given to choose the fixed effect estimation method. The Wald test  $\chi^2$  (223.27) and (p-value 0.0000) in random effect estimation method and F test (27.35) and (p-value 0.000) in fixed effect estimation method have given the result about the significance of the parameters. The F test 6.42 (0.000) has indicated that the best fit of the model and the Sargen test  $\chi^2$  (103) and (p-value 0.543) has given the result of the significance of the model.

Corresponding the previous studies, the model 1 has given a very positive association between economic freedom and happiness. The result estimated the positive association between economic freedom and happiness and it is statistically significant at 0.01% significance level in fixed and random effect and linear dynamic panel data (LDPD) estimation method. The result indicated a positive association between economic freedom and happiness and a statistically insignificant result in the first in differences method. The detail results are presented in the following Table 1.

## 4.2 Freedom of Life Choices and Happiness

The study found that the positive relationship between freedom of life choices and happiness. The result is found at 0.001 percent level of significance in all methods. The coefficient (0.541<sup>\*\*\*</sup>) in fixed effect estimation method, (0.688<sup>\*\*\*</sup>) in random effect estimation method, (0.385<sup>\*\*</sup>) in first indifference estimation method and (1.336<sup>\*\*\*</sup>) in linear dynamic panel data estimation method, found that the strong positive association between freedom of life choices and happiness at the 0.001 percent level of

significance. The detail results are presented in the following Table 1.

### 4.3 GDP Per Capita, Inequality and Happiness

This study found that the positive linear association between GDP per capita and happiness but an insignificant level. In contrast, the paper estimated the negative association between inequality and happiness at the 0.001 percent significance level in fixed effect, first indifferent and LDPD estimation method. The detailed result is presented in Table 1.

### 4.4 Effect of Freedom on Happiness by Income Status and Continents

This study developed the econometric strategies to estimate the freedom effects on happiness by using the binary variables income status of the country. The study found that very positive relationship between economic freedom and happiness in fixed and random estimation method at 0.001 percent level of significance. But in the LDPD estimation method, this paper estimated a positive linear association between economic freedom and happiness but an insignificant level.

Similarly, the other explanatory variables freedom of life choices on happiness has a very strong positive relationship with happiness and

statistically significance at 0.01% level in all estimation methods. The using dummy variables i.e. income status of the countries, the results show that economic freedom in all income status countries has a negative association with happiness. The model 2 also estimated the various tests, the F test 7.70 (p-value 0.000) has indicated the best fit of data into the model and The Hausman test i.e. Chi2 (33.94) and (p-value (0.0000) has indicated to choose fixed effect estimation method. The Wald test Chi2 (214.89) and (p-value 0.000) in the random effect estimation method and Chi2 (6615.01) and (p-value 0.00) in the LDPD estimation method indicated the significance of the parameters. Similarly, the Sargen statistics Chi2 (107.90) and (p-value 0.301) have given the result of the validity of the model and no autocorrelation of instruments with errors respectively.

Using the dummy variables i.e. continents developed the econometric strategies in model-3 also estimated the very strong positive and negative both association between economic freedom and happiness. In model 3, the LDPD estimation method found the negative association between economic freedom and happiness and statistically significant result and found a positive association between economic freedom and happiness in 0.001 percent level of significance. This model has given the result that the Australian and Oceania countries have highly positive associated with economic freedom and

**Table 1. Effect of freedom on happiness**

Variables	Model 1			
	FE	RE	FD	LDPD
Economic Freedom	0.0157*** -0.00583	0.0208*** -0.00456	0.00520 (0.00797)	0.0173*** -0.00302
Freedom life Choice	0.541*** -0.16	0.688*** -0.156	0.385** (0.156)	1.336*** -0.239
GDP Growth Rate	0.00647* -0.00363	0.00335 -0.00365	0.00102 (0.00294)	-0.00734** -0.00306
GDP Per Capita	4.35E-06 -4.38E-06	2.34e-05*** -2.65E-06	2.34e-06 (5.30e-06)	2.89e-05*** -1.15E-06
Gini	-0.899*** -0.212	-1.077*** -0.206	-0.247 (0.208)	-2.500*** -0.177
Constant	4.472*** -0.378	3.840*** -0.293	0.00052 -0.0125	4.145*** -0.194
Observations	1,078	1,078	958	1,078
R-Squared	0.5102 (overall)	0.5760 (overall)	0.0081	Sargen Test (chi2(103) p=0.543
Number of Country	120	120	120	120

Standard errors in parentheses; \*\*\* p<0.01, \*\* p<0.05, \* p<0.1; (Note: The Author created the table)

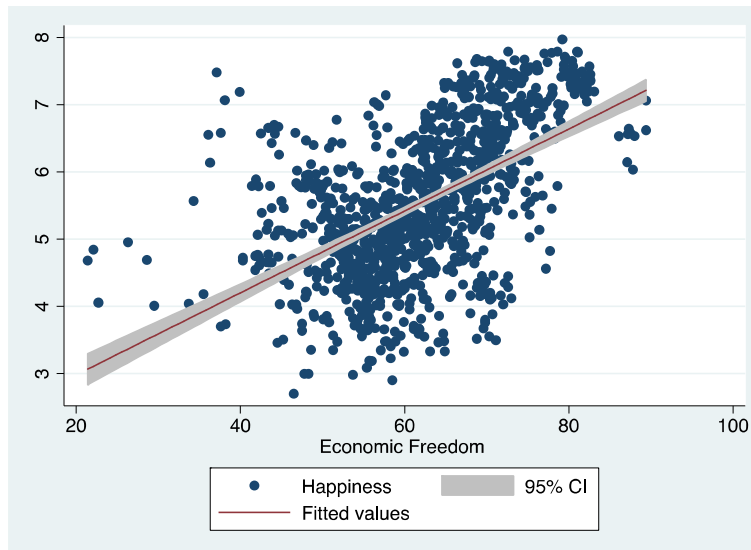


Table 2. Effect of freedom on happiness by connectivity and continents

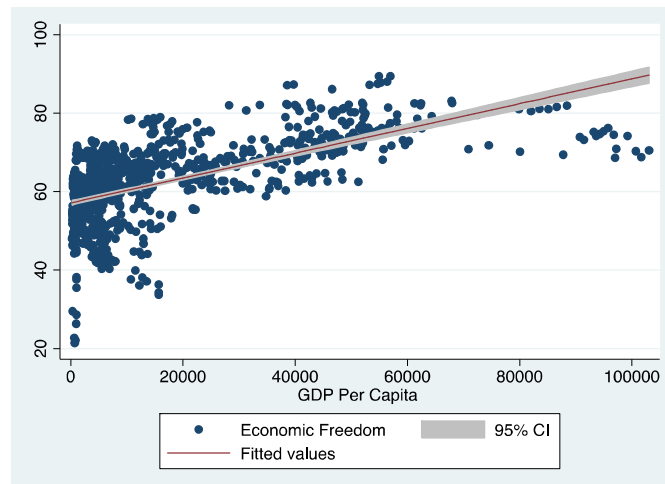
Variables	Model 2			Model 3		
	FE	RE	LDPD	FE	RE	LDPD
Economic Freedom	0.0157***	0.0122***	-0.00352	0.0157***	0.0152***	-0.0128***
Freedom life	-0.00583	-0.00454	-0.00336	-0.00583	-0.00419	-0.00342
Choice	0.542***	0.735***	2.041***	0.541***	0.682***	1.968***
GDP Growth Rate	-0.16	-0.153	-0.245	-0.16	-0.152	-0.252
GDP Per Capita	0.00646*	0.0046	0.00242	0.00647*	0.00419	-0.00647**
	-0.00364	-0.00363	-0.0031	-0.00363	-0.00362	-0.00311
	4.34E-06	1.64e-05***	1.71e-05***	4.35E-06	2.32e-05***	2.47e-05***
	-4.38E-06	-3.07E-06	-1.84E-06	-4.38E-06	-2.49E-06	-1.39E-06
Gini	-0.899***	-0.898***	-1.039***	-0.899***	-0.991***	0.114
LIC	-0.212	-0.204	-0.204	-0.212	-0.205	-0.234
	-	-	-	-	-	-
LMIC	-0.0663	-1.297***	-1.177***	-	-	-
	-0.382	-0.2	-0.115	-	-	-
UMIC		-0.722***	-1.255***	-	-	-
		-0.176	-0.122	-	-	-
HIC		-0.283*	-0.166**	-	-	-
		-0.16	-0.0798	-	-	-
Africa	-	-	-	-	-	-
Asia	-	-	-	-	0.560***	0.531***
	-	-	-	-	-0.134	-0.11
Aus and Oceania	-	-	-	-	1.251***	3.255***
	-	-	-	-	-0.379	-0.254
Europe	-	-	-	-	0.749***	1.378***
	-	-	-	-	-0.143	-0.0933
N. America	-	-	-	-	1.264***	1.097***
	-	-	-	-	-0.179	-0.131
S. America	-	-	-	-	1.576***	1.692***
	-	-	-	-	-0.184	-0.116
Constant	4.482***	4.796***	4.948***	4.472***	3.487***	3.586***

Variables	Model 2			Model 3		
	FE	RE	LDPD	FE	RE	LDPD
Observation	-0.382	-0.344	-0.216	-0.378	-0.273	-0.245
Overall R-Squared	1,078	1,078	1,078	1,078	1,078	1,078
Sargen Test	0.5102	0.5760		0.5102	0.7171	
Countries	120	120	120	120	120	120

Chi2(99)=97.08 ,  
 p=0.536  
*Standard errors in parentheses*  
 \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$



**Fig. 1. Relation between economic freedom and happiness**  
 Note: Author creates the figure



**Fig. 2. Effect of economic freedom on GDP per capita income**  
 (Note: The Author created the figure)

happiness then South American countries are in the second. The least associated continent is Africa where there is less economic freedom and less associated with happiness.

There are also estimated the different tests in model 3. The Wald test Chi2 (457.43) and (p-value 0.0000) in the random effect estimation method and Chi2 (8158) and (p-value (0.00) in the LDPD estimation method. The Sargen statistics found Chi2 (108.09) and (p-value 0.207). These tests proved that the best fit of data, significance of the parameters, and validity of the model and no autocorrelation of the

instruments with disturbances. The detail is presented in the following Table 2.

#### 4.5 Economic Freedom and Happiness

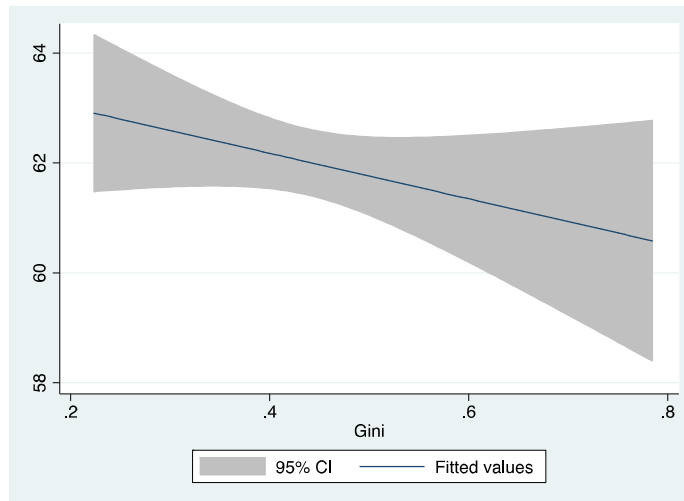
This study estimated the relationship between economic freedom and happiness by scatter plot. In the following Fig. 1 economic freedom is presented in a horizontal line (X-axis) and happiness is presented in a vertical line (Y-axis). The fitted regression line indicated the positive linear relationship between X and Y variables. It means the result indicated that there is a positive linear relationship between economic freedom

and happiness. The following Fig. 1 presented the details about the relationship between economic freedom and happiness.

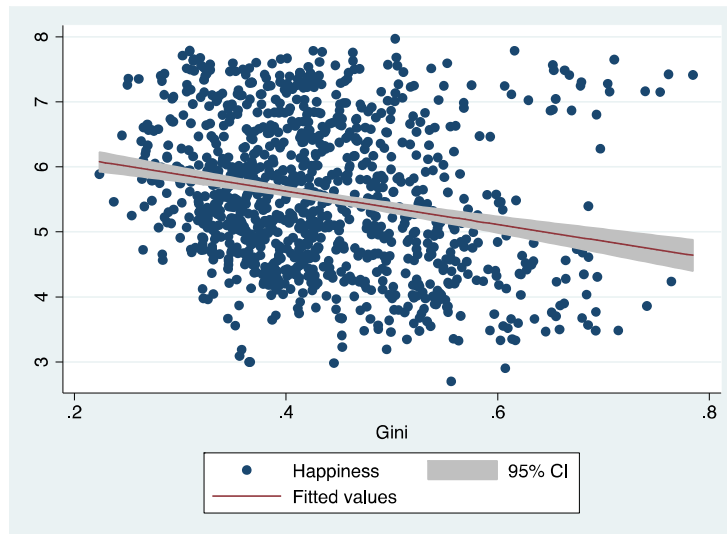
#### 4.6 Economic Freedom and Per Capita Income

Several studies have investigated that there is a positive association between economic freedom and GDP growth rate and per capita income. Scully [39] estimated that economic freedom promotes economic growth and positive association. Xu and Li [40] examined economic

freedom has strong support and greater positive effects on income convergence in the OECD countries. Ashby and Sobel [41] estimated that economic freedom has positively associated with higher income and a higher rate of income growth. This study also estimated the economic freedom effect on GDP per capita, which is presented in the X-axis and found that the slope of the fitted regression line indicated the linear positive relationship between economic freedom and happiness. The following Fig. 2 provides the relationship between economic freedom and income.



**Fig. 3. Relations between economic freedom and inequality**  
 (Note: The Author created the figure)



**Fig. 4. Relations between inequality and happiness**  
 Note: Author Creates the Figure

#### 4.7 Economic Freedom and Inequality

The previous research found that economic freedom has both positive and negative associations with inequality. Carter [42] found that economic freedom has a positive association with inequality and statistically significant but relatively inelastic. Bennett and Nikolaev [43] mentioned that the relationship between economic freedom and income inequality is theoretically ambiguous and they mentioned that the previous cross-country studies have reached mixed conclusions and suggest this issue for further research areas. This study also investigated the relationship between economic freedom and inequality. The inequality, which is represented by the Gini coefficient, presented in the horizontal line in the following figure and found the weak negative association between economic freedom and inequality. The following Fig. 3 presents the relationship between economic freedom and inequality.

#### 4.8 Inequality and Happiness

The paper estimated the relation between inequality and happiness by using the scatter plot and found that the negative association between inequality and happiness. In the following Fig. 4, there is presented the inequality in the horizontal axis and happiness in the vertical axis. The details are presented the following Fig. 4.

### 5. CONCLUSION AND POLICY IMPLICATIONS

Freedom especially economic freedom is very important indicator not only for the economic health of any nations, it is important for the individuals lives too. The aim of the every nation is to focus the economic freedom indicator to increase the country level prosperity and happiness. But the policy makers are not consult about the impact of economic freedom on inequality during the time of policy formulaiton.

As the previous studies, this study also found a very positive association between economic freedom and freedom of life choices on happiness and statistically significant result at 0.001 percent level. Similarly, the study estimated the positive association between economic freedom and GDP per capita with happiness but a negative association between economic freedom and inequality which represented the unequal distribution of the

wealth and income which ultimately negative association with happiness. It means that if any nation has only focus the economic freedom components to increase the country level prosperity and happiness, it is not only cause of happiess, it has become the main reason to increase the level of inequality too.

This study estimated the freedom of life choices on happiness and investigated the very positive relationship between economic freedom and happiness in all estimation methods. The economic freedom based on the income status of the country is not a very important matter to estimate happiness; the result indicated that there is all negative association between economic freedom and happiness based on the income status of the country. But in contrast, the paper discovered the very strong positive association between economic freedom and freedom of life choices on happiness and has given the result that the Australian and Oceania countries have highly positive associated with economic freedom and happiness then South American countries. The least continent is Africa where there is less economic freedom and less associated with happiness.

#### 5.1 Policy Implications

Based on the above findings and conclusions this paper has strongly recommended that every government needs to promote economic freedom policies to increase the economic growth and income which ultimately leads to increase the country level happiness. A higher level of economic freedom and freedom of public choices have a positive effect on happiness, therefore, the government needs to more focus and adopt the economic freedom and freedom of live choices indicators in their policy issues to create the country level happiness. In addition to this economic freedom is responsible to fuel the unequal distribution of wealth and income (inequality) within the country. Because economic policies adopting the economic freedom promotes the gap between rich and poor. Such kinds of policies promotes rich people to become rich and poor people become poor. The huge gap between the poor and rich people may be the causes of political instability and unhappiness for any country in the long run. Therefore, every government should incorporate the inequality mitigation strategies for their economic policies if they incorporate the economic freedom indicator by developing the progressive tax policies, socially and

economically empowering the poor people through providing the subsidies, access, and opportunities in education and employment which will be helpful to reduction, the gap between poor and rich. If the government doesn't adopt the inequality mitigation strategy, if they only the economic freedom to increase the economic growth and income, it can't create the happiness in long run, therefore every government should adopt the inequality mitigation strategies to increase the level of happiness in the long run.

### COMPETING INTERESTS

Author has declared that no competing interests exist.

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