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RESEARCH ARTICLE

The Mediator Role of Economic Freedom in the Effect of Corruption Perception on National Happiness: A Case of World Countries

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Abstract

The concept of economic freedom refers to the state of citizens in a nation to take economic action freely. Economic freedom determines the structure of an economic system. On the other hand, national happiness refers to the national happiness value based on the scores of citizens regarding their own lives. This happiness is also associated with various quality of life factors. Trust in the government, in other words, the perception of corruption, is one of the factors used in the measurement of national happiness as well as being effective on national happiness. In this study, the effect of corruption perception on national happiness was investigated and it was examined whether there was a mediating effect of economic freedom between these two variables. In this context, the mean scores of the Perceptions of Corruption Index presented by Transparency International, the World Happiness Index presented by the United Nations, and the Economic Freedom Index presented by the Heritage Foundation between 2012 and 2020 are discussed. According to the results obtained in this study, which was conducted on 150 countries by applying Linear Regression Analysis and Sobel Test, it was found that the perception of corruption is related to national happiness, and economic freedom has a mediating effect in this relationship.

Keywords: *National happiness, Corruption, Economic freedom, Mediation analysis*

Jel Codes: *A14, C13, F01*

Yolsuzluk Algısının Ulusal Mutluluğa Etkisinde Ekonomik Özgürlüğün Aracı Rolü: Dünya Ülkeleri Örneği

Özet

Ekonomik özgürlük kavramı, bir ulustaki vatandaşların özgürce ekonomik eylemde bulunma durumunu ifade etmektedir. Ekonomik özgürlük, ekonomik bir sistemin yapısını belirler. Ulusal mutluluk ise vatandaşların kendi yaşamlarına ilişkin puanlarına dayalı ulusal mutluluk halini ifade etmektedir. Bu mutluluk ise çeşitli yaşam kalitesi faktörleriyle de ilişkilendirilmektedir. Hükümete olan güven diğer bir deyişle yolsuzluk algısı ise ulusal mutluluğun üzerinde etkili olmakla beraber ulusal mutluluğun da ölçümünde kullanılan faktörlerden birisidir. Bu çalışmada yolsuzluk algısının ulusal mutluluğa etkisi incelenmiş, ekonomik özgürlüğün bu iki değişken arasında aracı bir etkisinin bulunup bulunmadığına bakılmıştır. Bu bağlamda Uluslararası Şeffaflık Örgütü tarafından sunulan Yolsuzluk Algısı İndeksi, Birleşmiş Milletler Sürdürülebilir Kalkınma Çözümleri Ağı tarafından sunulan Dünya Mutluluk İndeksi ve Heritage Foundation tarafından sunulan Ekonomik Özgürlük İndeksinin 2012 ve 2020 yılları arasındaki skorlarının ortalaması ele alınmıştır. Çok Değişkenli Regresyon Analizi ve Sobel Testi uygulanarak 150 ülke üzerinde yapılan bu çalışmada elde edilen sonuçlara göre yolsuzluk algısının ulusal mutlulukla ilişkili olduğu, bu ilişkide ise ekonomik özgürlüğün aracı bir etkisi olduğuna ulaşılmıştır.

Anahtar kelimeler: *Ulusal mutluluk, Yolsuzluk, Ekonomik özgürlük, Aracılık analizi*

Jel Kodu: *A14, C13, F01*

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1. INTRODUCTION

The concept of happiness, which was a more abstract concept in the early periods, is shaped under many concepts in many fields today (Güzel, 2018). In the socioeconomic field, happiness tries to determine the factors that make individuals happy and to determine to what extent and how socioeconomic factors are effective on these determining factors (Şeker, 2009). While examining the relationship between happiness and socioeconomic factors, in the first studies, the relationship between Gross Domestic Product (GDP) per capita and happiness was examined and it was determined that when the GDP increases, the level of happiness also increases. At the same time, it is seen that countries with higher GDP have higher life satisfaction (Veenhoven & Dumludağ, 2015). While associating the concept of happiness with socioeconomic factors, explaining this concept only with GDP cannot provide the measurement of subjective parts of happiness. In this context, to better measure happiness in socioeconomic terms, criteria such as life satisfaction, healthy life expectancy, duration of education, environmental quality, access to information, health, security, and political stability are also considered in addition to per capita income (Güneş, Taş, & Acar, 2019).

In this context, the World Happiness Report, which is frequently used in the analysis of national happiness scores in recent years and includes the happiness score measurements of countries, is published every year. Published annually by the United Nations since 2012, these reports have presented current global data on national happiness, demonstrating that citizens' quality of life can be assessed consistently and validly. The general framework of the World Happiness Report is determined by the socioeconomic factors that constitute the welfare level of the citizens of the country. There are 6 generalized factors in the report. These were defined as GDP per capita, purchasing power, healthy life expectancy, political trust environment, freedom to make a life choice, social support, and generosity factors, respectively. National thoughts about happiness are tried to be determined with a questionnaire called Cantril Ladder applied to the participants. Participants are asked to answer questions considering where they are on a ladder, with 0 representing the worst life and 10 representing the best. Thus, it is possible to compare happiness and inequalities with this survey applied in different parts of the world (Helliwell, Layard, & Sachs, 2019).

The concept of corruption is explained as public power abuse for personal gain (Iliman & Tekeli, 2016). Corruption consists of two components: authority and morality. Corruption is a complex and multifaceted concept that can be associated with many factors (Aidt, 2003). The emergence of corruption activities can be caused by many economic, political, and social situations. Among the political factors associated with corruption are democracy, political competition, freedom of the press, stability, bureaucracy, human rights; among social and cultural factors; religion, education, gender, culture, and urbanization factors (Gerni, Emsen, Özdemir, & Buzdağlı, 2012). Thus, the concept of corruption is also associated with socioeconomic factors related to national happiness. The trust factor in the government in the measurement of national happiness represents the perception of corruption. At the same time, structural factors including the economy, which is related to the concept of corruption, can affect the phenomenon of corruption. In this context, factors such as the role of the state in the economy and the policies it has followed, economic freedoms, poverty and inequality in income distribution, trade restrictions, inflation, low wages and employment, the competitiveness of the economy, and the degree of openness can cause corruption (Adaman, Çarkoğlu, & Şenatalar, 2001).

For this reason, the concept of "economic freedom" is a phenomenon that needs to be examined in the relationship of corruption with national happiness. The concept of economic freedom is expressed as the absence of any restrictive or coercive public intervention in the production, distribution, or consumption of goods and services. In other words, the aim of the concept of

economic freedom is that individuals have the right to do whatever they want legally with their private earnings and assets.

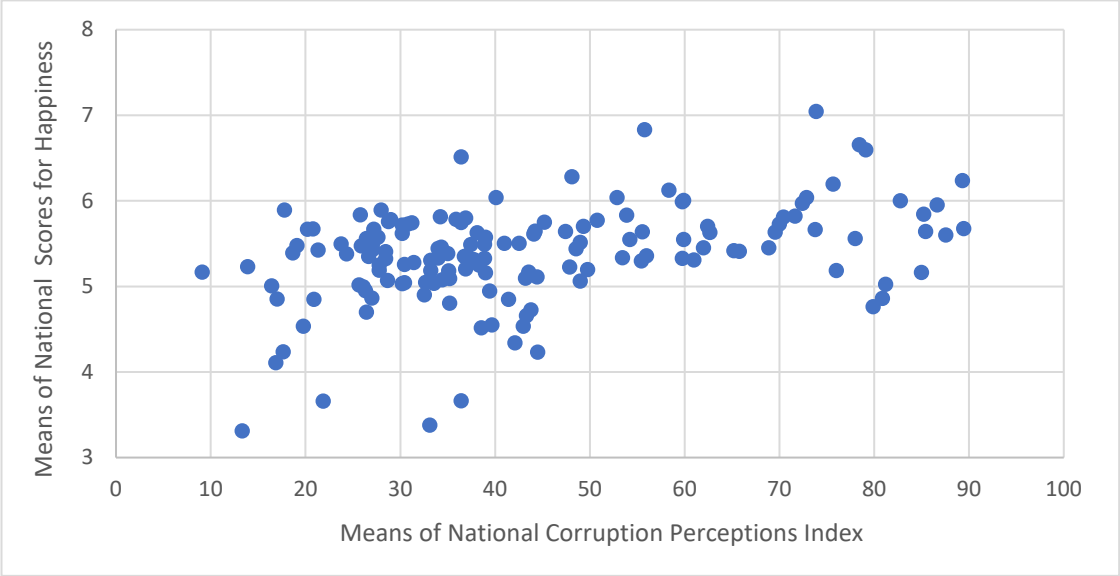
The main purpose of this study is to question whether economic freedom has a mediating effect on the relationship between national happiness and corruption after analysing the relationship between these two concepts. The relationship between corruption and happiness factors has been well established in studies in the literature, but the existence of intermediary factors affecting this relationship has not been studied much. For this reason, in addition to the inverse relationship between corruption and national happiness obtained in the studies, the mediating effect of economic freedom in this relationship was examined which distinguishes this study from other studies in the literature. In this context, 150 countries were discussed in the study and analysed between the 2012-2020 periods. National happiness, perception of corruption, and economic freedom scores were averaged from the reports submitted between the dates specified in the study. In the second part of the study, a literature review on the subject is included. After the data set is introduced in the third section, in the fourth section, the method of the study and the results of the analysis are given. Finally, the conclusion part is discussed.

2. RELATED WORKS

Until today, many researchers have tried to explain the factors affecting happiness. Oswald (1997), Tavits (2008) and Altindag & Xu (2017) examined the literature in their studies, and it was concluded that many economic factors such as gross domestic product (GDP) per capita, unemployment rate, and incomplete information transfer affect happiness in the findings of many studies. Frey and Stutzer (2020) stated in their study that the political system of citizens affects their happiness. At the same time, they concluded that corruption is an important factor affecting happiness in the context of the political system. In different studies, the reasons why corruption affects national happiness have been examined according to various factors. The first of these types of factors are the finding obtained in the studies of Rothstein (2010) and Tay et al. (2014) that corrupt institutions create distrust among citizens, and this affects national happiness. There are studies showing that trust among citizens is a factor that increases happiness (Ram, 2010; Growiec & Growiec, 2014; Graafand & Compen, 2015; Puntscher et al., 2015; Hommerich & Tiefenbach, 2018). Coggburn & Schneider (2003), Mauro (1995), and Mo (2001) concluded in their studies that corruption reduces economic growth by hindering investment. Thus, together with economic growth, the welfare of citizens is also affected (Sacks, Stevenson, & Wolfers, 2010). At the same time, in the scientific research conducted by Glaeser and Saks (2006), it was concluded that corruption increases income inequality. Alesina et al. (2004), Brockmann et al. (2009), Oishi et al. (2011), Schröder (2018), Graafand and Lous (2018), Tavor et al. (2018) concluded that this increase also affects the level of happiness. However, it has been concluded that in countries with a high perception of corruption, more investments are made in the military field (Gupta, de Mello, & Sharan, 2001) and less investment is made in the field of education, which affects national happiness by revealing the inequality of government expenditures (Mauro, 1998).

Visually expressing the relationship between corruption and happiness will allow this relationship to be seen directly. For this reason, Figure 1 was created. In Figure 1, the 8-year averages of the Happiness index obtained from the World Happiness Report and the 8-year averages of the Corruption perception index are used. Figure 1 shows that the higher the corruption, the less happiness. From this point of view, it can be said that there is an inverse relationship between corruption and happiness because the higher corruption perceptions index means there is no corruption.

Figure 1: Means of national happiness scores and corruption perception between 2012-2020



While the figure reveals the inverse relationship between corruption perception and happiness, it is not sufficient to examine the causal relationship between these factors. Examining the studies investigating the causal relationship of corruption on national happiness, Inglehart (1999) stated that it is not known whether the perception of corruption stems from political power. Frey and Stutzer (2002) also stated that the atmosphere of democracy strengthens attitudes towards happiness. They also conclude that there is an inverse relationship between corruption and happiness. However, different studies have also concluded that corruption is negatively related to happiness (Welsch, 2008; Tavits, 2008; Ott, 2010). When the studies conducted in the national context are examined, Wu and Zhu's (2016) study in China and Sulemana et al.'s (2017) study in Africa found that high perceptions of corruption are associated with low happiness scores in these regions. The fact that corruption is very difficult to measure is another problem encountered in studies in the literature. The fact that definitions of corruption differ between countries can cause this problem. In this way, erroneous corruption measurements can be made. In the literature, only a few studies have considered measurement errors of corruption. Leon et al.'s (2013) study is one of them, and it has tried to deal with corruption and measurement error in happiness in Spain.

In summary, the relationship between corruption and happiness factors has been well established in studies, but the existence of mediating factors affecting this relationship has not been examined much. In this study, it has been examined whether economic freedom has a mediating effect on the relationship between corruption and happiness. When the studies examining the relationship between economic freedoms and corruption in the literature are examined, it is seen that Akçay (2000) analyzed the relationship between corruption, economic freedoms, and democracy for 78 developed and developing countries over 2 years. In the study, it was concluded that the level of corruption increases as the level of economic freedom decreases. In another study on the subject, Sha and Su (2012) investigated the effect of economic freedoms on corruption between certain periods for various countries. As a result, it has been seen that economic freedom plays an important role in controlling corruption. In another study, Zaouali (2014) analyzed the relationship between democracy, corruption, and economic growth in more than 40 countries over 10 years. As a result, corruption is not very common in democratic countries; In non-democratic countries, on the other hand, corruption has been found to negatively affect economic growth.

3. MATERIALS & METHOD

In the study, the mediating role of economic freedom in the relationship between corruption and national happiness is discussed between 2012 and 2020. In this context, 150 countries were considered, and these 150 countries were presented in the Appendix A. In the study, the mean of the world happiness index as the dependent variable, the mean of the corruption perception index as the independent variable, and the mean of the economic freedom index as the mediating variable were taken into consideration. Information on the data used in the study is given in Table 1.

Table 1: Datasets Used in the Study

Variable	Description	Source
WHI	World Happiness Index	UN-SDSN
CPI	Corruption Perception Index	Transparency International
EF	Economic Freedom Index	Heritage Foundation

The purpose of this study is to test the following hypotheses:

- H1: There is a negative and significant relationship between Corruption and National Happiness.
- H2: There is a negative and significant relationship between Corruption and Economic Freedom.
- H3: There is a positive and significant relationship between National Happiness and Economic Freedom.
- H4: Economic Freedom has a mediating effect in explaining the relationship between Corruption and National Happiness.

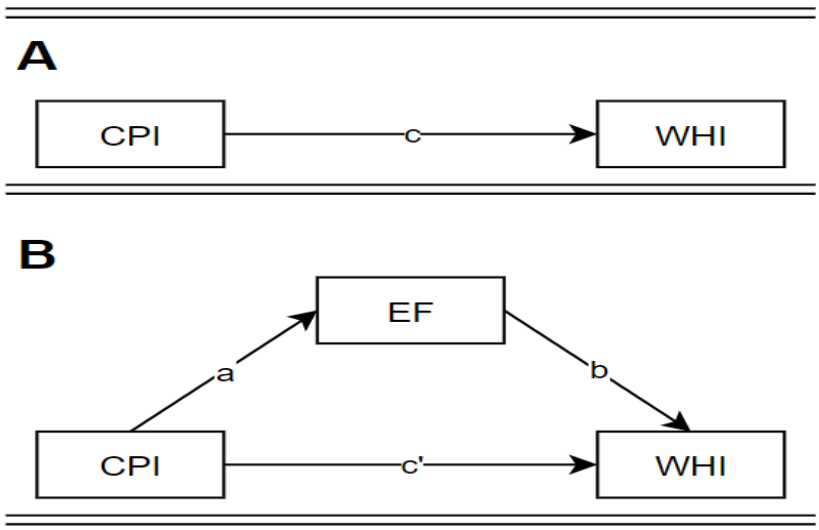
The index on national happiness was obtained from the reports presented by the United Nations Sustainable Development Solutions Network. The index on corruption was obtained from Transparency International. Transparency International was established in 1993 and since 1995 it publishes the results of its research on corruption in different countries of the world as an index. This index is obtained from the results of the surveys made with the executives of international companies, businessmen, political scientists, and the public. Variance differences are eliminated by conducting at least four separate surveys for each country. Findings from the surveys were made so that 0 represents the highest level of corruption and 10 represents the lowest level of corruption. In other words, the corruption index, which varies between 0 and 10, shows that corruption increases as it approaches 0 and decreases as it approaches 10. The economic freedom index was obtained from the data prepared by the Heritage Foundation. While 100 represents the maximum value for each category in the index, the scores of the countries range from 0 to 100. High scores indicate a high level of freedom. If the index value is between 80-100, free; Between 70-79.9, it is largely free; Between 60-69.9 is partially free, 50-59.9 is largely not free; 0-49.9 means suppressed.

Since the datasets used in the study are periodical the existence of the trend for the dataset of each index was questioned by the Multivariate Mann-Kendall Trend test before the mediation analysis. Also known as Kendall's tau statistic, this test is a widely used method for determining the trends of time series (Zhang et al., 2001; Yue et al., 2002). After determining the statistic S of the Mann-Kendall test and the variance of this statistic, whether the Mann-Kendall test is important is determined by

calculating the standard normal variable z and comparing it with the critical z value. If $|z| \leq z_{\alpha}$, according to the significance level of α chosen, the H_0 hypothesis cannot be rejected. H_0 for this test is that there is no trend in the dataset. This test method is useful because it allows the existence of missing data and does not look for data to fit a certain distribution (Yu et al., 1993).

The criteria of Baron and Kenny (1986) were considered when examining the role of the variables put forward in the study. First, a significant relationship between the independent and dependent variables must be found. Afterward, a significant relationship should be found between the mediator variable and the independent variable. Third, the relationship between the independent variable and the mediating variable, and the dependent variable should be significant. Finally, when regression analysis is applied to the mediator variable and the independent variable at the same time, the previous significant relationship between the independent and dependent variable should lose its significance or the significance level of the previous relationship should decrease (Baron and Kenny, 1986). To determine whether the first three criteria of Baron and Kenny (1986) were met in terms of research variables, the correlation coefficients between the variables were examined. Regression Analysis was conducted among the variables meeting the transferred criteria. In the regression analysis, the significance of the difference in the beta values of the independent variable was examined. The significance level of the decrease in beta values was evaluated using the Sobel test (Kenny et al., 1998). While the linear regression method was applied in the discovery of relationships, the mediation effect was measured with the Sobel test. The model of the study is shown in Figure 2 below.

Figure 2: Models of The Study



Thus, as in every mediation analysis, 3 different models should be derived. The models obtained from Figure 2 are as follows.

Model A : $WHI = i1 + c(CPI) + \varepsilon 1$

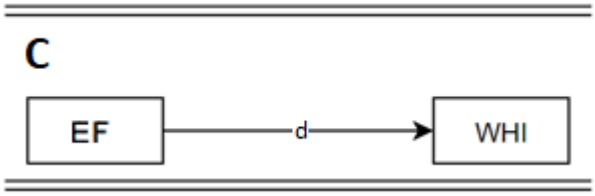
Model B.1.: $EF = i2 + a(CPI) + \varepsilon 2$

Model B.2.: $WHI = i3 + c'(CPI) + b(EF) + \varepsilon 3$

Therefore, 3 different models were derived for testing hypotheses and mediation analysis. In the models used in the study, WHI (World Happiness Index) was taken as the dependent variable, while CPI (Corruption Perceptions Index) was taken as the independent variable. The EF (Economic Freedom) variable was taken as a mediating variable to see the mediating effect. For each model, the intercepts are represented by i1, i2, and i3. The error terms for each equation are ε1, ε2, and ε3. While

c represents the relationship between the independent variable and the dependent variable in model A, c' represents the same relationship in Model B.2 after controlling for the effect of the mediator. a(CPI) and b(EF) represent the relationship between the independent variable and the dependent variable after controlling for the mediator, mediator, and independent variable, respectively. In addition, Model C has been derived to test Hypothesis 3 which is "there is a positive and significant relationship between National Happiness and Economic Freedom.". Model C can be seen in Figure 3.

Figure 3: Model of Hypothesis 3



The model obtained from Figure 3 is as follows.

Model C : $WHI = i4 + d(CPI) + \varepsilon 4$

For Model C, the intercept represented i4 and the error term for the model presented ε4. While d represents the relationship between the Economic Freedom (EF) variable and the dependent national happiness (WHI) in Model C.

4. RESULT

Before proceeding to the analysis phase, the corruption perception index (CPI) was multiplied by (-1) to interpret the results more accurately. The reason behind this is that the high corruption perception index value shows that the perception of corruption decreases. The descriptive statistics and correlation values between the variables obtained in the study are presented in Table 2.

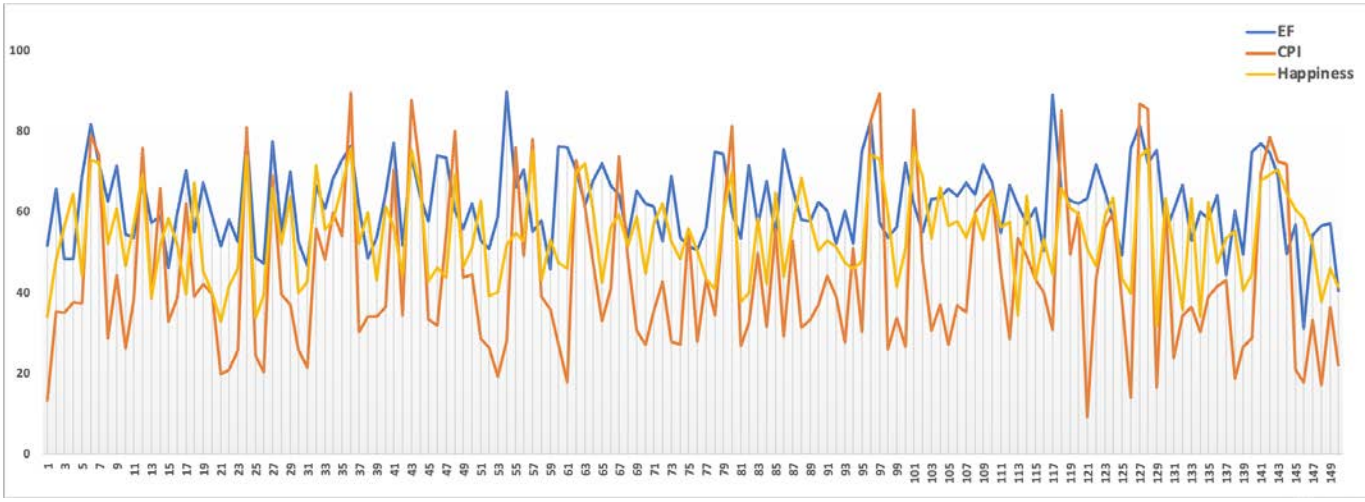
Table 2: Descriptive Statistics

Mean, Standard Deviation, and Correlation Values of Variables					
	Mean	Std. Dev.	(1)	(2)	(3)
(1) CPI	-43.8	-19.58	1		
(2) EF	61.6	8.88	-0.748**	1	
(3) WHI	5.37	0.57	-0.399**	0.444**	1

** presents the %1 significance level.

In Table 2, the mean of the Perception of Corruption (CPI) variable was found to be -43.86, and the standard deviation was -19.58. From this, it can be interpreted that corruption varies greatly between countries. In addition, the mean of the Economic Freedom (EF) variable was 61.63, and the standard deviation was 8.88. From this, it can be said that the economic freedom in the countries of the world is high, if not very high. Finally, if the National Happiness (WHI) variable is examined, it can be said that the countries of the world are neither happy nor unhappy.

Figure 4: Mean Index Scores of Countries



In Figure 4, the mean index scores of the countries are seen. In terms of the intelligibility of the figure, each country is numbered from 1 to 150 in order of name. At the same time, the happiness scores in the figure were multiplied by 10 for better visibility. From this figure, it can be said that the CPI scores differ the most among the countries. Also, it can be said that happiness scores have less differentiation than CPI and EF scores. Graphs of the trends of these scores for each year are presented in Appendix B.1., B.2. and in B.3.

When the correlation values between the variables in Table 2 are examined, it can be said that there is a strong (74%) and negative relationship between the Perception of Corruption (CPI) and Economic Freedom (EF). From this, it can be interpreted that when the perception of the citizens to think that there is corruption in the country increases, their economic freedoms decrease. It can be said that there is a moderate (40%) and negative relationship between Perception of Corruption (CPI) and National Happiness (WHI). From this, it can be interpreted that national happiness decreases when the perception of citizens that there is corruption in the country increases. Finally, it can be said that there is a moderate (44%) and positive relationship between Economic Freedom (EF) and National Happiness (WHI). From this, it can be interpreted that when the economic freedom of the citizens' increases, their national happiness increases. These results may prove that the first three hypotheses of the study are valid. However, the validity of the hypotheses in the study should be confirmed by the regression models created in the study and the Sobel test. But before the establishment of these models, the existence of the trend in the datasets should be questioned. The results of the Mann-Kendall Test performed to examine the presence of the trend are presented in Table 3.

Table 3: The Results Multivariate Mann-Kendall Trend Test

	tau	Kendall Score	Variance of Kendall Score	Z	sig.
CPI	-0.012	-1267	3405538.3	-0.686	**0.492**
EF	0.010	1017	3497737.6	0.550	**0.582**
WHI	0.031	3108	3408360.0	1.680	**0.092**

Table 3 contains the S statistic of Mann-Kendall Test and the variance of this S statistic for each dataset. The /z/ value is less than the z_α value (1.96) for each dataset. As can be interpreted from the

last column (sig.) of Table 3, the H_0 hypothesis cannot be rejected because all p-values are greater than 0.05. Thus, the existence of a trend cannot be mentioned in any dataset.

The correlation values obtained and interpreted in Table 2 may show that the first three hypotheses of the study are valid. However, since the correlation values do not include causality the validity of the hypotheses in the study should be confirmed by the regression models created in the study and the Sobel test. Results for these regression models and Sobel test are presented in Table 4.

Table 4: The Results of Regression and Mediation Analysis

	Ind.	Dep.		β	t	sig.	LLCI	ULCI
Model A	CPI	-> WHI		-0.399	5.292	0.000	-0.160	-0.073
	R^2/F			0.159/28.005				
Model B.1.	CPI	-> EF		-0.747	-13.7	0.000	-0.388	-0.290
	R^2/F			0.556/187.694				
Model B.2.	CPI	-> WHI	CPI	-0.152	-1.377	0.171	-0.108	0.019
	EF		EF	0.330	2.981	0.003	0.072	0.353
	R^2/F/VIFs			0.2071/19.163/2.268-2.268				
Model C	EF	-> WHI		0.444	6.022	0.000	0.072	0.353
	R^2/F			0.191/36.26				

When the results in Table 4 are examined in the context of each hypothesis:

For Hypothesis 1: When the results from Model A is examined, the relationship between the perception of corruption (CPI) and national happiness (WHI) was significant at the 99% confidence level since the p-value is lower than 0.01 (p=0.000) and the confidence interval values (LLCI-ULCI) did not include 0. Considering the value of the β coefficient, it can be interpreted that one unit increase in corruption will cause a 39.9% decrease in national happiness. This indicates that the H1 hypothesis cannot be rejected. Thus, there is a negative and significant relationship between National Happiness and Corruption at the 99% confidence level.

For Hypothesis 2: When the results from Model B.1. is examined, the relationship between the perception of corruption (CPI) and economic freedom (EF) was significant at the 99% confidence level since the p-value is lower than 0.01 (p=0.000) and the confidence interval values (LLCI-ULCI) did not include 0. Considering the value of the β coefficient, it can be interpreted that one unit increase in corruption will cause a 74.7% decrease in economic freedom. This indicates that the H2 hypothesis cannot be rejected. Thus, there is a negative and significant relationship between National Economic Freedom and Corruption at the 99% confidence level.

For Hypothesis 3: When the results from Model C is examined, the relationship between economic freedom (EF) and national happiness (WHI) was significant at the 99% confidence level since the p-value is lower than 0.01 (p=0.003) and the confidence interval values (LLCI-ULCI) did not include 0. Considering the value of the β coefficient, it can be interpreted that a one-unit increase in economic

freedom will cause a 44.4% increase in national happiness. This indicates that the H2 hypothesis cannot be rejected. Thus, there is a positive and significant relationship between National Happiness and Economic Freedom. at the 99% confidence level.

For Hypothesis 4: When the results from Model B.2. is examined, it is seen that when economic freedom (EF) is included in the relationship of corruption perception (CPI) and economic freedom (EF) with national happiness, the effect of corruption perception on national happiness decreases, in other words, its validity is reduced or even invalid because the p-value is greater than 0.01 (p=-0.108) and the confidence intervals are including 0. However, economic freedom (EF) seems to be significant in this multivariate regression analysis since the p-value is less than 0.01 (p=0.003) and the confidence intervals are not including 0. From this, it can be said that economic freedom (EF) has a mediating effect on the effect of corruption perception (CPI) on national happiness. To better prove the accuracy of this finding, the results of the Sobel Test should be examined. Looking at the result obtained from the Sobel Test, the value of the Sobel test statistic is (-4.587) and the p-value was found (0.000). As a result, H4 cannot be rejected. Thus, it can be said that economic freedom (EF) has a significant mediating effect at the 99% confidence level in the effect of the perception of corruption (CPI) on national happiness. When the coefficients obtained with all these findings are placed in the mathematical models the following equations are obtained:

Model A. : WHI = 48.65 - 0.399(CPI) + 1.88

Model B.1.: EF = 46.75 - 0.747(CPI) + 1.05

Model B.2.: WHI = 38.73 **- 0.152**(CPI) + 0.33(EF) + 3.48

Model C : WHI = 36.17 + 0.444(EF) + 2.95

The reason why corruption perception (CPI) is bold in Model B.2., is that this coefficient is not significant. From here, economic freedom has a full mediating effect on the relationship between corruption and national happiness. The results of the regression models for the mediator model are summarized in Table 5.

Table 5: Standardized Regression Coefficients (Effects) for the Mediation Model

	Direct Effect	Indirect Effect	Total Effect
CPI --> EF	-0.747*	0.000	-0.747*
EF --> WHI	0.330*	0.000	0.330*
CPI --> WHI	-0.152	-0.247*	-0.399*

* presents the %5 significance level.

The results of the regression models for the mediator model are shown in Table 4. According to the mediator model results, the statistically significant and negative relationship between perception of corruption (CPI) and national happiness (WHI), which was previously seen in the basic model, disappeared (Standardized regression coefficient=-0.152). The results show that the effect of perception of corruption (CPI) on national happiness (WHI) is indirect rather than direct. While the total effect of perception of corruption (CPI) on national happiness (WHI) is "Standardized regression coefficient=-0.399, p<0.01", some of this effect is an indirect effect. This result "Standardized regression coefficient=-0.247, p<0.01" shows that economic freedom (EF) is a

mediating variable in the relationship between CPI and WHI. Therefore, with this result from Table 4, Hypothesis 4 cannot be also rejected.

5. CONCLUSION

Researching National Happiness and the factors affecting this happiness from different aspects has become an important issue for many years. Various academic studies and national-international organizations have argued that happiness can be measured, and they have developed various parameters for this measurement, thus bringing the phenomenon of happiness to a position that can be measured rationally. Thus, various estimation and prediction possibilities related to the phenomenon of happiness have been provided, and analyses on the phenomenon of happiness have become possible. is happening. The United Nations, under the name of the World Happiness Report, has been publishing happiness reports in which the happiness levels of the countries of the world are measured since 2012. However, it is seen in most academic studies that one of the factors affecting the phenomenon of happiness is the perception of corruption. Corruption is a complex phenomenon that does not depend on a single cause. This phenomenon can be caused by different factors such as economic, political, legal, socio-cultural. However, as in this study, the corruption factor is effective on the happiness of citizens. On the corruption factor, the characteristics and structural status of the economic system that the citizens are in are important factors in whether the phenomenon of corruption occurs or not. In this context, it is possible to talk about the existence of a relationship between the concept of economic freedom, which reflects how monopolistic the economies are, and corruption. The purpose of this study is to question the existence of the mediating effect of economic freedom on the effect of corruption perception on national happiness.

In this context, the average of the scores of the Perception of Corruption Index presented by Transparency International, the World Happiness Index presented by the United Nations Sustainable Development Solutions Network, and the Economic Freedom Index presented by the Heritage Foundation between 2012 and 2020, and regression analysis and Sobel test was applied on these data. In this study, which was conducted in 150 countries, 4 different hypotheses were formed and the relations between the variables were examined. When the findings are examined, the first finding is that a one-unit increase in corruption will cause a 39.9% decrease in national happiness. However, the second finding is that a one-unit increase in corruption will cause a 74.7% decrease in economic freedom. Another finding of the research is that a unit increase in economic freedom will cause an increase of 44.4% in national happiness. Finally, the mediating effect of economic freedom on the relationship between corruption perception and national happiness was questioned. The finding obtained here is that economic freedom has a mediating effect on the relationship between the perception of corruption and national happiness.

As a result, the improvement of economic freedoms will also reduce the citizens' perception of corruption, and thus the national happiness will increase with the improvement of economic freedom, which has an intermediary effect. However, as countries restrict monopoly power and discretion in their economic structures, as well as increase accountability, in a sense, as they contain economic freedoms more intensely, the problem of corruption in societies will be better combated and thus national happiness will increase. The mediating effect of various factors can also be examined to further explore the relationship between corruption and happiness for future research. However, time-dependent changes can be seen better by using panel data analysis in future studies.

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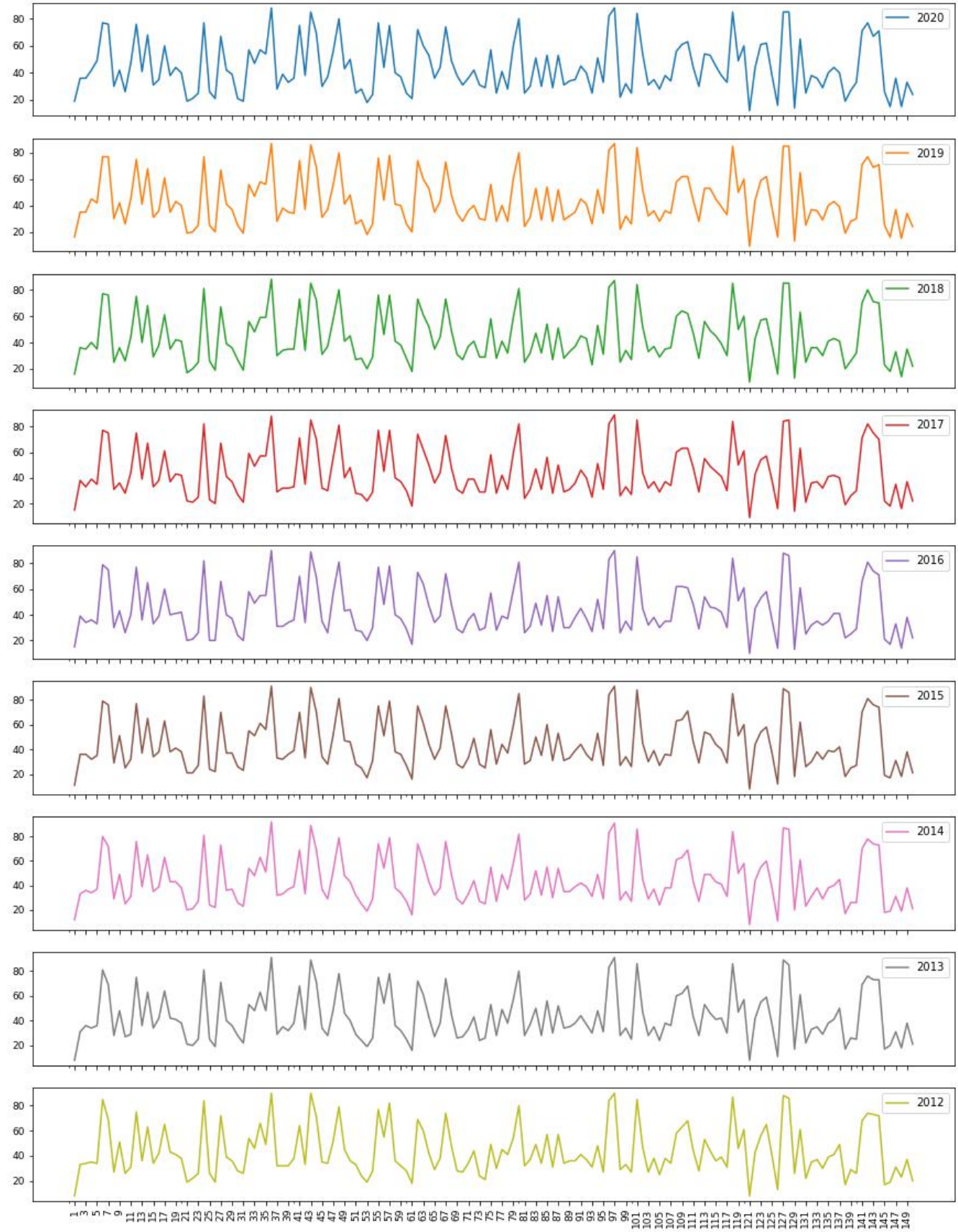
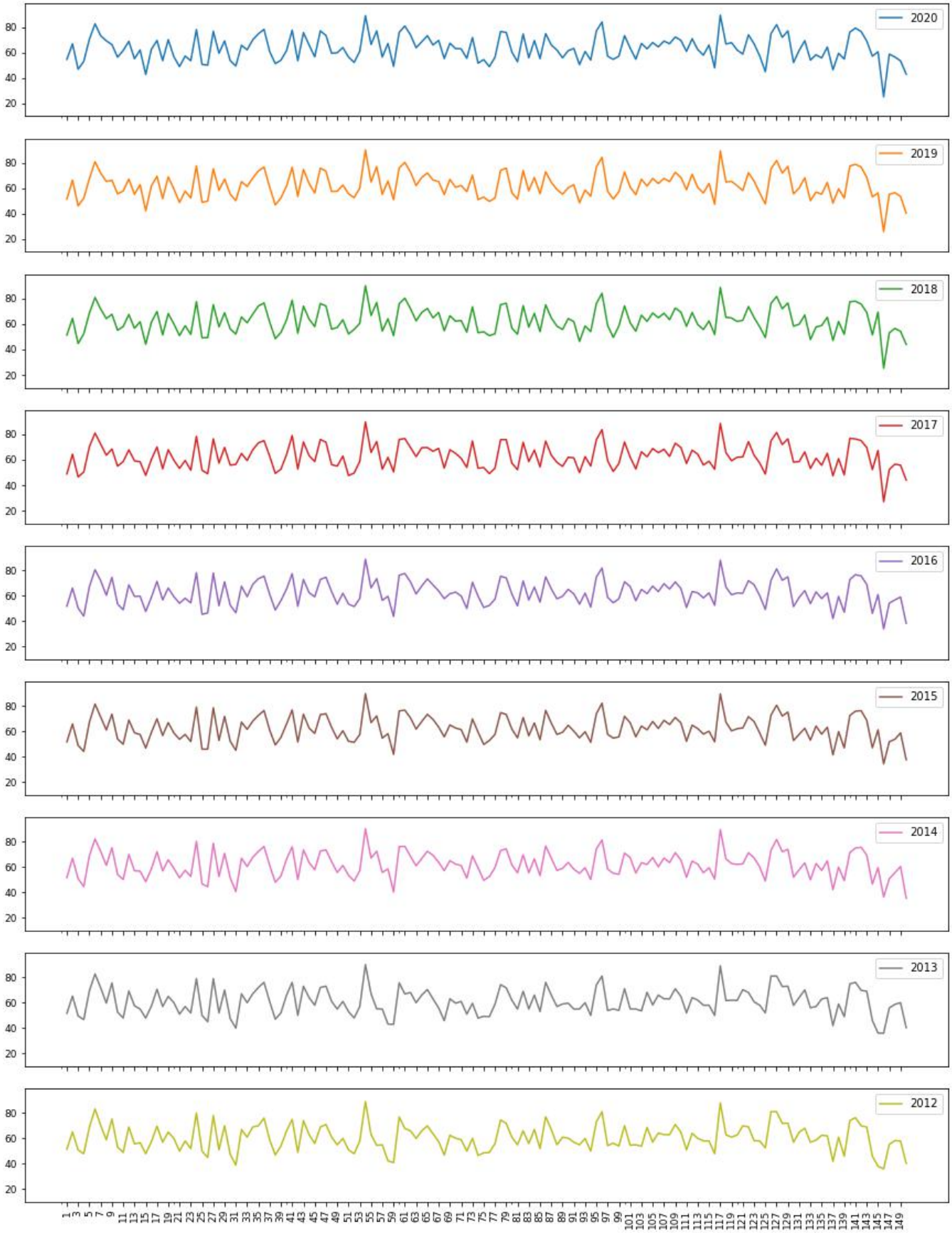
Appendix A. Countries Included in the Analysis

Afghanistan	Congo	Ireland	Morocco	South Africa
Albania	Costa Rica	Israel	Mozambique	South Korea
Algeria	Croatia	Italy	Namibia	Spain
Argentina	Cyprus	Jamaica	Nepal	Sri Lanka
Armenia	Czech Republic	Japan	Netherlands	Sudan
Australia	Denmark	Jordan	New Zealand	Sweden
Austria	Dominican Republic	Kazakhstan	Nicaragua	Switzerland
Azerbaijan	Ecuador	Kenya	Niger	Syria
Bahrain	Egypt	Kosovo	Nigeria	Taiwan
Bangladesh	El Salvador	Kuwait	Norway	Tajikistan
Belarus	Estonia	Kyrgyzstan	Oman	Tanzania
Belgium	Ethiopia	Laos	Pakistan	Thailand
Benin	Finland	Latvia	Panama	Togo
Bhutan	France	Lebanon	Paraguay	Trinidad and Tobago
Bolivia	Gabon	Lesotho	Peru	Tunisia
Bosnia and Herzegovina	Georgia	Liberia	Philippines	Turkey
Botswana	Germany	Libya	Poland	Turkmenistan
Brazil	Ghana	Lithuania	Portugal	Uganda
Bulgaria	Greece	Luxembourg	Qatar	Ukraine
Burkina Faso	Guatemala	Madagascar	Romania	United Arab Emirates
Burundi	Guinea	Malawi	Russia	United Kingdom
Cambodia	Haiti	Malaysia	Rwanda	United States of America
Cameroon	Honduras	Mali	Saudi Arabia	Uruguay
Canada	Hong Kong	Malta	Senegal	Uzbekistan
Central African Republic	Hungary	Mauritania	Serbia	Vanuatu
Chad	Iceland	Mauritius	Sierra Leone	Venezuela
Chile	India	Mexico	Singapore	Vietnam
China	Indonesia	Moldova	Slovakia	Yemen
Colombia	Iran	Mongolia	Slovenia	Zambia
Comoros	Iraq	Montenegro	Somalia	Zimbabwe

Appendix B.1. CPI Scores of Countries by Year



Appendix B.2. EF Scores of Countries by Year



Appendix B.3. Happiness Scores of Countries by Year