Does quality of governance contribute to the heterogeneity in happiness levels across MENA countries?

Jamile Youssef

Lebanese International University, Beirut, Lebanon and
European Center for Economics Studies of the Arab Orient, Sundsvall, Sweden, and

Sara Diab

European Center for Economics Studies of the Arab Orient, Sundsvall, Sweden

Abstract

Purpose – Happiness levels differ among the Middle East and North African (MENA) countries and follow a downtrend, making such heterogeneity a popular topic to investigate. The paper aims to study the contribution of governance quality on the heterogeneity in happiness levels across MENA countries while controlling for demographic and socioeconomic variables.

Design/methodology/approach – The paper applies panel random-effects regression analysis on three samples: full sample, rich and poor subsamples, using data from 20 MENA countries over the 2007–2017 period.

Findings – The empirical results for the full sample conclude that better technical quality of governance increases happiness in the region. Furthermore, findings suggest that political stability and absence of violence matters for people's happiness only in rich countries. Whereas, control of corruption is positively associated with happiness level in the full sample and poor subsample. Across all three samples, voice and accountability has no impact on happiness.

Research limitations/implications – A possible limitation of the paper is using an index for happiness based on a subjective weight distribution. Therefore, researchers are encouraged to implement a novel method using data envelopment analysis.

Practical implications – This paper includes implications for policymakers in the MENA region. Governments should strengthen existing laws and create a comprehensive database of laws, fight corruption and prioritize raising income.

Originality/value – This paper is the first to categorize MENA countries into rich and poor to analyze how governance quality contributes to the heterogeneity in happiness levels.

Keywords Happiness, MENA countries, Governance quality, Technical quality, Democratic quality, Panel data

Paper type Research paper

Introduction

Numerous researchers from different fields have gained interest in studying happiness as a topic since it has become the priority of people globally. Happiness was first studied from a psychological view and extended to include sociological and afterward economic perspectives to explore the reasons behind the heterogeneity in happiness levels across countries (Sgroi *et al.*, 2017). Happiness had also expanded from a micro perspective to be reflected at the macro-level, leading researchers and policymakers to study its determinants in depth. Several significant empirical studies examined the influence of demographic and

socioeconomic variables on the levels of happiness using cross-sectional and panel analysis (Gerdtham and Johannesson, 2001; Fereidouni *et al.*, 2013; Lin *et al.*, 2014; Clark *et al.*, 2016).

Economists refocused their venture to determine the relationship between happiness, governance, and several demographic and socioeconomic variables, such as unemployment rate, income, education, and age. Some theorists propose that a better economic situation in a country stimulates happiness levels (Deaton, 2008). It is worth noting that according to the World Happiness Report 2019, Benin illustrates valuable proof that a correlation between economic variables and happiness does exist. Benin has witnessed a definite expansion in happiness scores by nearly 1.4 points, accompanied by development and a 5.15% economic growth from 2005 to 2018 (Helliwell *et al.*, 2019). On the other hand, happiness level in the Middle East and North Africa (MENA) region follows a long-term downtrend and is among the lowest worldwide, making happiness a popular topic to investigate (Helliwell *et al.*, 2020). Moreover, governance quality in the MENA region also ranks the lowest compared to other countries, with no or slight improvement throughout the years (Abdelbaky, 2012).

Among the existing studies to inspect the determinants behind different levels of happiness, most focus on developed countries. Only few studies investigated this topic in the MENA region, such as Fereidouni *et al.* (2013) and recently Arampatzi *et al.* (2018). However, MENA countries experience different levels of happiness, as shown in Figure 1, where Israel has the highest happiness level, and Yemen has the lowest, with an average score of 68.9 and 34.7, respectively. The MENA region is known for its political instability caused by conflict, terrorism, and geopolitical interference, preventing the emergence of good governance institutions (World Bank, 2003). Thus, it represents the perfect case to investigate the heterogeneity in happiness levels through analyzing the impact of governance components on it.

Previous studies faced the issue of data unavailability for happiness. This problem did not allow such papers to investigate the long-run effect of several economic variables on happiness. The most recent study by Arampatzi *et al.* (2018) uses data on subjective well-being based on individuals' perceptions of it up to 2010 for 11 MENA countries, particularly the Arab Spring countries. However, Fereidouni *et al.* (2013) utilize the Prosperity Index, which reflects economic and social well-being, as a proxy for happiness. The authors use a panel random-effects model to determine the individual effect of the six governance factors on happiness by controlling for income, education, unemployment rate, and age for the 2009–2011 period in 14 MENA countries.

Our contribution to the literature is twofold. First, we check the robustness of the impact of governance determinants on happiness by replicating the analysis of Fereidouni *et al.* (2013)
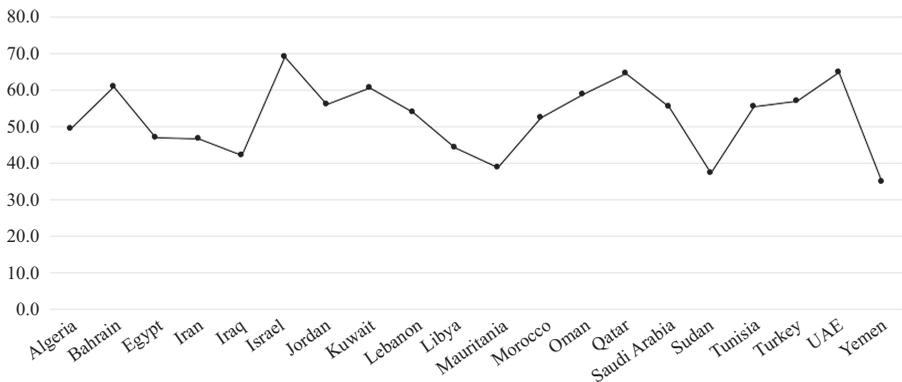
Figure 1.
Average
prosperity index

Source(s): Legatum Institute

for 20 MENA countries over the 2007–2017 period. Prior studies showed a universal relation between the technical quality of governance and happiness in rich and poor countries, where technical quality is relatively more important than democratic ones [1]. However, none of the previous studies implemented such sample categorization in the MENA region. Thus, our second contribution is to analyze governance quality contribution on happiness in the MENA region by splitting the countries understudy into rich and poor.

The remainder of the paper evolves as follows. Section 1 presents a brief literature review. Section 2 describes the data and variables used for the empirical analysis. In section 3, we present the econometric methodology first on the full sample, and then on the split samples (rich and poor countries). Results are presented and discussed in section 4. Section 5 concludes and presents policy implications.

Literature review

There are many studies in the literature on the main determinants of happiness. Particularly in the MENA region, it's found that education, age, income, and unemployment rate are the main factors of happiness.

A conflict in the education-happiness nexus exists in terms of its direction and strength. Using life satisfaction as a synonym for happiness, Castriota (2006) applies a study on 118,000 individuals living in 81 different countries to link educational level with life satisfaction for the years of 1995 and 2000, while controlling for gender, age, marital status, employment, and GDP per capita. He concludes that education negatively affects well-being. Nevertheless, Frey and Stutzer (2018) find a positive linear relation between education and level of satisfaction, when controlling for income. Knowledge and education raise self-estimation, confidence, hope, and opportunities; therefore, it leads to higher happiness (Striessnig, 2015). On the contrary, Fereidouni *et al.* (2013) and Eren and Aşıcı (2017) find that education has no significant effect on happiness. Although MENA countries are experiencing academic growth, poor higher education is reported in the region, and students' achievement lags compared to other countries. This increases unemployment and emigration among skilled youth (Romani, 2009).

Likewise, there has been much debate concerning the linkage between age and happiness. Theoretically, as a person gets older, social and physical activities decline, causing happiness levels to deteriorate (Witt *et al.*, 1980). Using a linear regression model, Graham and Pozuelo (2017) find that age and happiness follow a U-shaped pattern in 44 out of 46 countries. However, the U-curve turning point varies across countries. Gerdtham and Johannesson (2001) argue that the minimum happiness vertex ranges from 45 to 64 years, compared to other studies that claim to range between 35 and 50 years (see, e.g. Helliwell, 2003). However, the U curve does not hold in all papers. Frijters and Beatton (2012) deduce a wave-like shape relationship, where happiness declines during the mid-ages and increases at 60 to decrease again at 75 years.

A nation's financial state is a vital determinant of an individual's happiness. Income impacts well-being only through the requirement to meet basic wants and needs such as food and shelter to fight absolute poverty. Then, any additional income will not cause any change in happiness level. Thus, income has no long-run effect on life satisfaction. High-income countries report greater levels of life satisfaction than low-income countries. Among both categories, income and happiness follow a positive linear relationship; nonetheless, this relationship is steeper for low-income countries (Deaton, 2008). Easterlin (1974) analyzes the relationship between real GDP per capita and happiness using cross-sectional and time-series data for several countries. Results declare little correlation between the two variables in a cross-sectional setting. However, using time-series data, the author concludes that "money does not buy happiness in developed countries." In other words, as income increases, average

well-being remains constant. In 2018, Qatar and the United Arab Emirates (UAE) were considered among the wealthiest Arab countries and nations worldwide with a gross domestic product (GDP) per capita of 65,908.1 and 43,839.4 U.S. dollars, respectively (World Bank, 2018). Based on the Legatum Prosperity Index, 2019, UAE ranks in the 40th and Qatar in the 43rd position out of 167 countries. These two countries have the highest prosperity levels among the MENA countries studied in this paper. Hence, we may predict greater income yields a higher happiness level.

The MENA region contains the highest youth unemployment rate. The labor market is negatively affected by political changes such as political instability, war, and refugees' consequences. Additionally, corruption highly impacts job opportunities (Fakih *et al.*, 2020). Many studies document a negative impact of unemployment rate on happiness (Winkelmann, 2014; Frey and Stutzer, 2018). Unemployment might deplete mental and psychological resources, leading to bad decisions and unhappiness. Using life satisfaction as a proxy for happiness, Winkelmann (2014) emphasizes that a one percent increase in the unemployment rate is related to a 0.6% decrease in average life satisfaction among employed workers in industrialized countries, such as Germany. Frey and Stutzer (2018) find that even if the unemployed person kept receiving income equal to that when he/she was employed, happiness level still falls. Results suggest that when unemployment rate of the country rises, employed people will also be unhappy. Whereas, Fereidouni *et al.* (2013) conclude that the unemployment rate does not affect the happiness level in the MENA region. Among the MENA countries, Libya has the highest unemployment rate, where it ranks 147th out of 167 countries in the Legatum Prosperity Index, 2019.

Good governance may positively impact happiness directly or indirectly. Good governance in itself increases happiness level. People prefer to participate in the decision-making process, regardless of the political outcome where they feel respected, and their voices are heard. Indirectly, good governance permits people to attain higher levels of other factors directly linked to happiness levels (Woo, 2018). For instance, control of corruption generates better job opportunities, increases economic gains, and affects people's happiness level by increasing the level of social trust.

Many researchers empirically examined the effect of governance determinants such as corruption and democracy on happiness (Lin *et al.*, 2014; Clark *et al.*, 2016; Arampatzi *et al.*, 2018; Frey and Stutzer, 2018; Satrovic *et al.*, 2018). Satrovic *et al.* (2018) examine during the 2007–2016 period the impact of corruption on happiness for 59 countries. Results show that control of corruption and happiness are positively related. Furthermore, Lin *et al.* (2014) study happiness by considering 116 countries in 2006, where nations are divided based on three characteristics: communist history, income level, and income inequality using the GINI index. The study emphasizes that a country's political system, such as democracy and the right to participate in decisions through elections and votes, is a significant contributor to happiness. Arampatzi *et al.* (2018) test the relationship between dissatisfaction of standard of living, poor labor market conditions, corruption, and the subjective well-being in the MENA region, particularly the Arab Spring countries, for the years of 2009–2010. A negative relationship between the variables is found, where the dissatisfaction with the standard of living causes a steeper decline in happiness level.

A limited number of researches have studied the effects of all governance determinants on happiness (Helliwell and Huang, 2008; Fereidouni *et al.*, 2013). Fereidouni *et al.* (2013) analyze the impact of all six governance factors on happiness in the MENA region. The six factors include voice and accountability, political stability and absence of violence, control of corruption, government effectiveness, regulatory quality of private sector development, and rule of law. Results indicate that all governance factors are directly related to happiness, except for voice and accountability, control of corruption, and regulatory quality. Good governance has become popular among policymakers and scientists. It results in creating

employment opportunities, rising income, providing efficient education, and lowering happiness inequality in a country (Ott, 2011).

Papers that studied the association between governance and happiness mainly emphasize the significance of technical quality or democratic quality of governance. For instance, Helliwell and Huang (2008) utilize life satisfaction and happiness to evaluate different forms of governments in large international samples. Results suggest a statistically significant positive relation between technical quality along with life satisfaction and happiness. The authors found that technical quality dominates democratic ones. Woo's (2018) study split countries into a total of 29 high-income and 68 low-income countries to analyze whether the importance of governance determinants in terms of technical quality varies across countries. In high-income countries, technical quality and age are found to have a positive impact on happiness. However, in low-income countries, GDP per capita and technical quality do not affect happiness levels.

MENA countries have the lowest levels of happiness worldwide due to particular reasons. First is the unhealthy international political relations. Second is the poorly drafted legislation and inability to sustain the rule of law (e.g. fairness of the judicial process, the enforceability of government and private contracts, private property protection, confidence in the police force, and protection of financial assets). The third is the lack of government commitment credibility, reflecting government ineffectiveness (Fereidouni *et al.*, 2013). Since early 2011, middle eastern countries such as Egypt, Libya, Lebanon, Syria, Tunisia and Yemen have set off a revolution requesting better governance performance and political transformation (Youssef, 2021). Nonetheless, there are countries in the Middle East that are developing and reaching global standards of developed and happy countries, the political circumstances of their neighboring countries lower their nation's happiness ranking.

Data and variables
In this paper, we use annual data for a sample of 20 Middle East and North African (MENA) countries spanning the 2007–2017 period and investigate the impact of demographic, socio-economic, and governance determinants on subjective well-being [2]. The dependent variable is the Prosperity index, derived from the Legatum Institute. Prosperity Index annually ranks 167 countries, which represent 99.4% of the world's population. The overall Prosperity Index country's score equals the mean of 12 pillars (safety and security, personal freedom, governance pillar, social capital, investment environment, enterprise conditions, market access and infrastructure, economic quality, living conditions, health, education, and natural environment) for each country.

The control variables include the real Gross Domestic Product per Capita (GDPc) using Purchasing Power Parity (PPP), setting 2011 as the base year, unemployment rate, and working-age population. Data on these variables are all retrieved from the Worldwide Development Indicators (WDI) database of the World Bank. We also include expected years of schooling, which is obtained from the Human Development Report. Elements on the six governance factors are obtained from the Worldwide Governance Indicators (WGI) database of the World Bank.

As a measure for the country's happiness level, we follow Fereidouni *et al.* (2013) and use the Prosperity index that assesses the country's success based on economic, institutional, and social well-being. Previous studies found income, unemployment rate, education, and age to be the main determinants for happiness (Helliwell, 2003; Winkelmann, 2014; Eren and Aşıcı, 2017). As a proxy for the national income, we apply the natural logarithmic function to the real GDPc to account for the principle of diminishing marginal utility. We use the expected years of schooling to represent education due to its significant role in determining the countries development level (Garces *et al.*, 2019). Following Li and An (2020), we include the

working-age population to account for nations' age structures due to data unavailability on the mean population age. Based on Helliwell and Huang (2008) emphasis on the importance of government's quality in determining happiness, we retrieve governance data on six components: Control of Corruption (CoC), Government Effectiveness (GE), Political Stability and absence of violence (PS), Regulatory Quality (RQ), Rule of Law (RL), and Voice and Accountability (VA). These six variables symbolize the operation of the democratic process and the provision of government facilities [3].

Table 1 presents the summary statistics of the variables used in our model. These descriptive statistics include the minimum, maximum, mean, and standard deviation values. Table 1 suggests that political stability and absence of violence has the highest dispersion with 1.04 points among the governance factors. Note that in our sample, the country's governance factors range between −2.94 and 1.57. Among all the variables, the six governance components have negative means, which indicate an inefficient governance act in our sample.

Based on previous literature, there are no specific criteria to classify rich and poor countries. Helliwell and Huang (2008) split the understudy sample of 161 countries based on GDP per capita, where poor countries are considered to have a GDPc less than half of that of the United States. Whereas, Woo (2018) considered low-income countries with GDP per capita less than 10,000 U.S. dollars in the year 2005 and high-income countries with GDP per capita greater than 10,000 U.S. dollars. The author selected the year 2005 to base the country division since his sample centers on this year. In our study, we cluster the MENA countries on basis of the 2017 Gross National Income (GNI) per capita calculated using the World Bank Atlas Method. The country division is based on year 2017, representing the latest year in our study. We classify 7 among 20 countries as poor, with GNI per capita less than 3,955 U.S. dollars, and rich countries with GNI per capita exceeding the level [4].

Empirical methodology

Several studies have implemented either cross-section or panel regression models when studying the factors that affect happiness (Deaton, 2008; Fereidouni *et al.*, 2013; Eren and Aşıcı, 2017). However, we use the panel model as it is the preferable choice when performing cross-national analysis due to several reasons. First is its ability to reduce sampling error since it includes a higher number of observations. Second, it allows us to study the dynamic behavior of entities across time. The third is its ability to control for unobservable characteristics that are individual-specific and time-invariant. Panel data refers to cross-sectional data observed over time; hence, our variables involve two dimensions, an entity

Variable	Minimum	Maximum	Mean	SD
HAPP	31.8	70.00	52.41	9.50
lnGDPc	7.79	11.73	9.78	1.00
UNEMP	0.14	19.05	8.86	5.19
EDUC	6.50	17.10	12.58	2.44
AGE	52.63	86.40	67.02	8.89
CoC	−1.66	1.57	−0.29	0.77
GE	−1.92	1.51	−0.19	0.81
PS	−2.94	1.22	−0.82	1.04
RQ	−2.27	1.32	−0.26	0.83
RL	−1.84	1.16	−0.26	0.77
VA	−1.95	0.79	−0.94	0.59
Observations	220			

Table 1.
Summary statistics

dimension indicated by subscript i ($i = 1, 2, \ldots, N$), and a time dimension indicated by subscript t ($t = 1, 2, \ldots, T$).

To study the determinants behind the heterogeneity in happiness levels across the MENA region and the role of governance determinants, we estimate a panel regression model first on the full sample and subsequently on the divided one as follows:

$$\text{HAPP}_{i,t} = \beta_0 + \beta_1 \ln \text{GDPc}_{i,t} + \beta_2 \text{UNEMP}_{i,t} + \beta_3 \text{EDUC}_{i,t} + \beta_4 \text{AGE}_{i,t} + \beta_5 \text{GOV}_{i,t} + \varepsilon_{i,t}$$

where $\text{HAPP}_{i,t}$ represents the happiness level of country i across time t. $\text{GDPc}_{i,t}$ is the gross domestic product per capita for country i across period t. $\text{UNEMP}_{i,t}$ stands for the population unemployment rate for country i across time t. $\text{EDUC}_{i,t}$ represents the expected years of schooling for country i across time t. $\text{AGE}_{i,t}$ symbolizes the working-age population for country i across time t. $\text{GOV}_{i,t}$ stands for the six factors of governance for country i across time t, and $\varepsilon_{i,t}$ is the stochastic error term.

Table 2 represents the correlation matrix among all variables based on the full sample. There is a high correlation between several governance variables; for instance, the correlation between GE and CoC is 0.95. Applying the multi-collinearity test indicates that the variance inflation factor (VIF) for several governance variables is greater than 10. The presence of such high correlations and high VIF values causes a multi-collinearity issue in our analysis. Therefore, we add the governance variables in the model one at a time to avoid the multi-collinearity problem. Note that we have seven models in our estimation analysis. In Model 1, we regress happiness on income, unemployment rate, education, and age. Models 2–7 include all the previous control variables along with the six governance determinants. We also implement the same models on the divided sample (rich and poor countries).

There are two well-known estimations used in panel models: fixed-effects and random-effects. We implement a Hausman test to check for any correlation between the individual-specific error component and the control variables to specify which estimation method to use. According to Hausman test results, we should use fixed effects in all models since we reject the null hypothesis at a 5% significance level. Nevertheless, the Hausman test may provide conflicting results (Baum and Baum, 2006) and is known to have low statistical reliability; thus, one should not base his decision on it (Clark and Linzer, 2015). We follow Fereidouni *et al.* (2013) and estimate the models using the panel random-effects approach since some governance variables are constant over time for some nations. To test for serial correlation, we implement the Woolridge test and reject the null hypothesis at a 5% significance level; thus, we have a first-order correlation. To control for arbitrary autocorrelation, we use the cluster-robust standard errors to obtain efficient estimates (Hoechle, 2007).

	HAPP	lnGDPc	UNEMP	EDUC	AGE	CoC	GE	PS	RQ	RL	VA
HAPP	1.00										
lnGDPc	0.79	1.00									
UNEMP	−0.68	−0.73	1.00								
EDUC	0.70	0.62	−0.27	1.00							
AGE	0.72	0.84	−0.68	0.50	1.00						
CoC	0.90	0.70	−0.69	0.51	0.67	1.00					
GE	0.94	0.68	−0.68	0.59	0.65	0.95	1.00				
PS	0.67	0.67	−0.59	0.36	0.74	0.75	0.67	1.00			
RQ	0.86	0.58	−0.71	0.45	0.50	0.88	0.91	0.61	1.00		
RL	0.91	0.68	−0.67	0.56	0.62	0.95	0.94	0.75	0.92	1.00	
VA	0.51	0.10	−0.17	0.32	0.00	0.42	0.49	0.05	0.51	0.44	1.00

Table 2.
Correlation matrix for all variables

Results

Full sample

The estimated marginal effects of the panel random-effects model are presented in Table 3.

Starting with model 1, which controls for demographic and socio-economic factors, we observe that GDP per capita has a positive, significant effect on happiness in the MENA region. The result is strong across all seven models (columns 1 through 7), except for model six. This effect designates robust evidence that an upsurge in the population's income level acts as an encouragement for happiness since it increases consumption, health, and social status (Dolan *et al.*, 2008). The result is in line with a wide range of previous studies. Unemployment rate negatively affects happiness level; yet, its significance level varies across all models. However, education has no effect on happiness. In the MENA countries, the rate of return to education in terms of years is low and below the global average, explaining the insignificant relation between education and happiness (Rizk, 2019). Furthermore, we found that the working-age population and happiness are positively correlated. The higher the proportion of the working-age population in a country, the higher the happiness level.

Model 2 adds the control of corruption that indicates a better governance quality. We find that a 1 percentage point (pp) increase in control for corruption increases the level of happiness by approximately 1.89 pp and is significant at the 5% level. Transparency International Index, (2019) ranks the public sector's corruption from 0 (highly corrupted) to 100 (very clean) in 180 countries to illustrate the country's failure in controlling for corruption. In 2018, Yemen scored 4th lowest in the Corruption Perception Index while Libya's 10th lowest with a score of 14 and 17, respectively. During the same period, Yemen and Libya had the lowest Prosperity Index in the MENA region with a score of 32.6 and 43.3, respectively. In model 3, we add the government effectiveness variable. Results show a robust positive association between government effectiveness and happiness at a 1% significance level. A 1 pp upsurge in government effectiveness is associated with a 3.43 pp increase in happiness level. This result indicates that the more effective and incorrupt government institutions are, the happier people are (Helliwell and Huang, 2008).

Moreover, we add political stability and absence of violence variable in Model 4. Unlike Fereidouni *et al.* (2013), results reveal that political stability and absence of violence does not determine happiness level in the MENA region. Models 5 and 6 indicate that a sturdier rule of law and better regulatory quality lead to a higher level of happiness and are significant at the 1% level. Utilizing the cross-national model, Gropper *et al.* (2011) examine the relationship between economic freedom and happiness among more than 100 countries. They find a robust positive link between economic freedom and happiness, particularly in less developed countries. In other words, nations with greater economic freedom tend to experience a sturdier rule of law and better regulatory quality; thus, a higher happiness level. These results show how essential it is to have a strong rule of law in the MENA region since it safeguards the necessary conditions that empower a person to develop into a responsible individual (Mugraby, 2002).

Model 7 includes voice and accountability variable. Voice and accountability has a positive yet insignificant effect on happiness since political repression in the MENA region does not exist in all countries at the same level and at all times. Some MENA countries do not have fair and competitive elections especially gulf countries that are ruled by kings and emirs (World Bank, 2003). This result is not consistent with previous literature such as Frey and Stutzer (2005) and Satrovic *et al.* (2018) who find that participating in elections has a positive effect on happiness in terms of self-determination feeling and influence, regardless of the outcome. Nevertheless, our result is in line with Fereidouni *et al.* (2013).

Overall, the marginal effects of the different technical quality of government are greater than those related to the democratic processes, indicating that services of technical quality matter more than democracy in the MENA region. These results are in line with Helliwell *et al.* (2014).

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Demographic and socioeconomic variables							
lnGDPc	3.420*** (1.064)	2.762*** (1.018)	2.129** (0.843)	2.928** (1.266)	2.309** (1.135)	1.881 (1.162)	3.586*** (0.935)
UNEMP	−0.190** (0.0765)	−0.173** (0.0679)	−0.0504 (0.0787)	−0.160* (0.0907)	−0.108 (0.0862)	−0.108 (0.0900)	−0.228*** (0.0859)
EDUC	0.133 (0.167)	0.180 (0.138)	0.126 (0.107)	0.156 (0.161)	0.160 (0.137)	0.154 (0.138)	0.163 (0.155)
AGE	0.189** (0.0843)	0.226*** (0.0670)	0.236*** (0.0559)	0.199** (0.0838)	0.261*** (0.0786)	0.234*** (0.0640)	0.212*** (0.0720)
Governance variables							
CoC		1.886** (0.882)					
GE			3.434*** (0.493)				
PS				0.336 (0.229)			
RQ					2.324*** (0.467)		
RL						3.020*** (0.798)	
VA							0.559 (0.682)
Constant	6.301 (10.60)	10.10 (9.460)	15.32* (8.154)	10.21 (11.72)	11.88 (9.733)	18.14* (10.35)	3.607 (8.906)
p-value (*Woolridge test*)	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Observations	220	220	220	220	220	220	220
Number of countries	20	20	20	20	20	20	20

Note(s): Robust standard errors (clustered by country) are within parentheses. Statistical significance: * = 10%, ** = 5%, *** = 1%

Table 3.
Panel random-effects
regression: the
determinants of
happiness level in the
MENA countries

The MENA region lags on political institution and participation, transparency of government, and freedom of the press, causing it to fall short of the rest of the world (World Bank, 2003). Strict and fair monetary regulations, democracy, and providing basic needs to citizens would keep a nation happy (Helliwell *et al.*, 2014).

Rich and poor subsamples

Next, we examine the effect of good governance factors on happiness by splitting the sample into rich and poor countries using the same panel random-effects regression as in Table 3. Findings for the rich countries subsample are presented in Table 4. We observe that GDP per capita positively correlates with happiness, yet its significance varies across all models. The working-age population is highly significant and positively correlated to happiness across all models, whereas the unemployment rate and education have no effect on happiness. Analyzing the effect of each governance factor on happiness, we find that government effectiveness, political stability and absence of violence, regulatory quality, and rule of law positively affect happiness levels. However, control of corruption and voice and accountability are insignificant determinants for happiness. Unlike the full sample model, political stability and absence of violence matters for people's happiness in rich countries. This result highlights that any improvement in technical and democratic qualities enhances happiness levels in rich MENA countries.

Table 5 presents the results for the poor countries subsample. GDP per capita has a positive effect on happiness, whereas the unemployment rate has a negative effect, yet their significance varies across all models. The magnitude of GDP per capita in the poor subsample is greater than that of the rich subsample countries. Education is found to be insignificant across all models except in model 5, where a one-year increase in education increases happiness by nearly 0.97 pp. Moreover, the working-age population is only statistically significant in models 3 and 6, where a higher working-age population increases happiness level. Based on the governance factors results, control of corruption, government effectiveness, regulatory quality, and rule of law are positively significant at the 1% level. Nonetheless, political stability and absence of violence and voice and accountability do not affect happiness. Although governance factors that enhance happiness are the same as in the full sample, the magnitude of their effects is higher in the poor subsample than that of the full one. This result emphasizes the importance of having good governance in terms of technical quality. Furthermore, any improvement in democratic quality will not impact people's happiness level in these poor MENA countries unless their governments reach some level of development.

Conclusion

Many researchers from different fields have been interested in studying happiness. According to Helliwell *et al.* (2020), happiness levels in the MENA region follow a deteriorating trend, making the MENA countries a perfect place to study happiness levels. The purpose of this paper is to investigate the contribution of governance determinants to the heterogeneity in happiness levels across the MENA countries while controlling for income, unemployment rate, education, and age.

Our analysis replicates Fereidouni *et al.* (2013) model by extending the sample understudy to cover 20 MENA countries from 2007 to 2017 using a panel random-effects regression model. Our findings indicate that level of income and working-age population are positively linked to the level of happiness. However, the unemployment rate negatively affects happiness, and education is insignificant. Good governance has a crucial effect on people's well-being. Among all governance qualities studied, only political stability and absence of violence and voice and accountability do not affect happiness levels, reflecting a significant gap in MENA governance, particularly in democratic quality (Kaufmann, 2006).

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Demographic and socioeconomic variables							
lnGDPc	2.625*** (0.625)	2.079** (0.869)	1.118 (0.840)	1.819* (1.017)	0.645 (1.150)	0.362 (1.004)	2.970*** (0.702)
UNEMP	−0.0806 (0.0854)	−0.0908 (0.0989)	−0.0709 (0.103)	−0.0541 (0.0880)	−0.0506 (0.106)	−0.0426 (0.0791)	−0.0993 (0.0959)
EDUC	0.155 (0.190)	0.195 (0.167)	0.0834 (0.120)	0.179 (0.182)	0.0545 (0.155)	0.137 (0.166)	0.212 (0.173)
AGE	0.228** (0.0902)	0.222** (0.0902)	0.222*** (0.0725)	0.240** (0.0955)	0.311*** (0.108)	0.265*** (0.0756)	0.230*** (0.0860)
Governance variables							
CoC		1.433 (1.059)					
GE			3.601*** (0.688)				
PS				0.428* (0.249)			
RQ					3.024*** (0.593)		
RL						3.793*** (0.882)	
VA							1.115 (0.957)
Constant	11.79 (10.59)	17.50 (12.31)	28.41** (11.53)	19.02 (12.46)	27.63** (13.58)	32.64*** (10.99)	8.486 (10.45)
Observations	143	143	143	143	143	143	143
Number of countries	13	13	13	13	13	13	13

Note(s): Robust standard errors (clustered by country) are within parentheses. Statistical significance: * = 10%, ** = 5%, *** = 1%

Table 4.
Panel random-effects
regression:
determinants of
happiness level in rich
MENA countries

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Demographic and socioeconomic variables							
lnGDPc	5.619*** (2.157)	3.464** (1.606)	1.345 (2.207)	4.806** (2.279)	2.500 (2.500)	2.724 (2.199)	5.089** (2.216)
UNEMP	−0.313** (0.130)	−0.267*** (0.0460)	0.112 (0.103)	−0.241 (0.231)	−0.115 (0.157)	0.0997 (0.0708)	−0.297* (0.157)
EDUC	0.119 (0.317)	0.151 (0.280)	0.420 (0.443)	0.211 (0.361)	0.968** (0.491)	−0.660 (0.588)	0.103 (0.340)
AGE	0.138 (0.228)	0.320 (0.249)	0.487*** (0.166)	0.118 (0.203)	0.247 (0.185)	0.994*** (0.194)	0.0349 (0.215)
Governance variables							
CoC		3.586*** (1.063)					
GE			5.101*** (1.096)				
PS				0.586 (0.916)			
RQ					3.632*** (0.980)		
RL						5.777*** (1.299)	
VA							0.0270 (0.649)
Constant	−10.24 (25.82)	−0.810 (20.45)	0.934 (23.03)	−3.036 (24.58)	1.365 (25.85)	−29.75* (16.73)	0.730 (27.02)
Observations	77	77	77	77	77	77	77
Number of countries	7	7	7	7	7	7	7

Note(s): Robust standard errors (clustered by country) are within parentheses. Statistical significance: * = 10%, ** = 5%, *** = 1%

Table 5.
Panel random-effects
regression:
determinants of
happiness level in poor
MENA countries

Moreover, we split the sample into two categories: rich and poor countries. In both subsamples, government effectiveness, regulatory quality, and rule of law positively impact happiness levels, whereas voice and accountability has no effect. On the one hand, political stability and absence of violence matters for people's happiness level in the rich subsample while control of corruption does not. Overall, an improvement in technical and democratic qualities increases happiness levels in rich countries. On the other hand, control of corruption is positively associated with happiness only in poor countries, while political stability and absence of violence has no impact. This result emphasizes the importance of having good governance in terms of technical quality in poor countries. Nonetheless, improvement in democratic quality will not impact people's happiness level in this subsample unless governments reach some level of development.

This paper sheds light on some implications for policymakers in the MENA region. First, we find that rule of law is directly related to happiness; hence, governments should strengthen existing laws and create a comprehensive database of all laws. Consequently, it will prevent political conflicts and strengthen accountability. Second governments should be transparent and efficient to fight corruption and increase social trust. Lastly, rising income in developing nations should be a priority in governments' plans.

A possible limitation of the paper is using the Legatum prosperity index, which assigns a subjective weight distribution in calculating the twelve pillars for each country. In other words, not all twelve pillars have the same importance and should not be assigned the same weights. This is a crucial drawback of the Legatum prosperity methodology. Consequently, future research may implement a novel method using data envelopment analysis (DEA) for international prosperity as Amin and Siddiq (2019) did. Another limitation is not including all variables correlated with happiness, such as health and environmental factors, which could be considered in future studies.

Notes

1. Technical quality of governance represents a simple average of control of corruption, government effectiveness, regulatory quality, and rule of law. Governance democratic quality is an average of political stability and absence of violence and voice and accountability.

2. The definition of the MENA region followed in this article covers 20 out of 23 countries. These countries include Algeria, Bahrain, Egypt, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Libya, Mauritania, Morocco, Oman, Qatar, Saudi Arabia, Sudan, Tunisia, Turkey, United Arab Emirates, and Yemen.

3. The World Bank gathered governance information from several sources, consisting of surveys of firms and individuals, non-governmental organizations, multilateral aid agencies, and other public sector organizations. This information is transformed into scores for every governance factor to follow a normal distribution with 0 mean and a standard deviation of one. These standardized scores range from approximately -2.5 (weak) and $+2.5$ (strong) governance performance.

4. In this study we consider poor countries to include Algeria, Egypt, Mauritania, Morocco, Tunisia, Sudan, and Yemen. Rich countries are Bahrain, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Libya, Oman, Qatar, Saudi Arabia, Turkey, and United Arab Emirates.

References

Abdelbaky, M. (2012), "Governance and growth in MENA region: evidence from panel data analysis", *International Research Journal of Finance and Economics*, Vol. 98 No. 4, p. 2012.

Amin, G.R. and Siddiq, F.K. (2019), "Measuring global prosperity using data envelopment analysis and OWA operator", *International Journal of Intelligent Systems*, Vol. 34 No. 10, pp. 2713-2738.

Arampatzi, E., Burger, M., Ianchovichina, E., Röhricht, T. and Veenhoven, R. (2018), "Unhappy development: dissatisfaction with life on the eve of the Arab spring", *Review of Income and Wealth*, Vol. 64, pp. S80-S113.

Baum, C.F. and Baum, C.F. (2006), *An Introduction to Modern Econometrics Using Stata*, Stata press, Texas.

Castriota, S. (2006), *Education and Happiness: A Further Explanation to the Easterlin Paradox*, Mimeo, New York.

Clark, T.S. and Linzer, D.A. (2015), "Should I use fixed or random effects", *Political Science Research and Methods*, Vol. 3 No. 2, pp. 399-408.

Clark, A.E., Flèche, S. and Senik, C. (2016), "Economic growth evens out happiness: evidence from six surveys", *Review of Income and Wealth*, Vol. 62 No. 3, pp. 405-419.

Deaton, A. (2008), "Income, health, and well-being around the world: evidence from the gallup world poll", *The Journal of Economic Perspectives*, Vol. 22 No. 2, pp. 53-72.

Dolan, P., Peasgood, T. and White, M. (2008), "Do we really know what makes us happy? A review of the economic literature on the factors associated with subjective well-being", *Journal of Economic Psychology*, Vol. 29 No. 1, pp. 94-122.

Easterlin, R.A. (1974), "Does economic growth improve the human lot? Some empirical evidence", *Nations and Households in Economic Growth*, Academic Press, Vol. 4, pp. 89-125.

Eren, K.A. and Aşıcı, A.A. (2017), "The determinants of happiness in Turkey: evidence from city-level data", *Journal of Happiness Studies*, Vol. 18 No. 3, pp. 647-669.

Fakih, A., Haimoun, N. and Kassem, M. (2020), "Youth unemployment, gender and institutions during transition: evidence from the arab spring", *Social Indicators Research*, Vol. 150 No. 1, pp. 311-336.

Fereidouni, H.G., Najdi, Y. and Amiri, R.E. (2013), "Do governance factors matter for happiness in the MENA region?", *International Journal of Social Economics*.

Frey, B.S. and Stutzer, A. (2005), "Beyond outcomes: measuring procedural utility", *Oxford Economic Papers*, Vol. 57 No. 1, pp. 90-111.

Frey, B.S. and Stutzer, A. (2018), *Economics of Happiness*, Springer International Publishing, New York, NY.

Frijters, P. and Beatton, T. (2012), "The mystery of the U-shaped relationship between happiness and age", *Journal of Economic Behavior and Organization*, Vol. 82 Nos 2-3, pp. 525-542.

Garces, E.J., Adriatico, C. and Timbal, L.R.E. (2019), "Analysis on the relationships on the global distribution of the world happiness index and selected economic development Indicators", *Open Access Library Journal*, Vol. 6 No. 6, pp. 1-13.

Gerdtham, U.G. and Johannesson, M. (2001), "The relationship between happiness, health, and socio-economic factors: results based on Swedish microdata", *The Journal of Socio-Economics*, Vol. 30 No. 6, pp. 553-557.

Graham, C. and Pozuelo, J.R. (2017), "Happiness, stress, and age: How the U curve varies across people and places", *Journal of Population Economics*, Berlin.

Gropper, D.M., Lawson, R.A. and Thorne, J.T. Jr (2011), "Economic freedom and happiness", *Cato Journal*, Vol. 31, p. 237.

Helliwell, J.F. (2003), "How's life? Combining individual and national variables to explain subjective well-being", *Economic Modelling*, Vol. 20 No. 2, pp. 331-360.

Helliwell, J.F. and Huang, H. (2008), "How's your government? International evidence linking good government and well-being", *British Journal of Political Science*, Vol. 38 No. 4, pp. 595-619.

Helliwell, J.F., Huang, H., Grover, S. and Wang, S. (2014), "Good governance and national well-being: what are the linkages?", *OECD Working Papers on Public Governance*, No. 25, OECD Publishing, Paris. doi: 10.1787/5jxv9f651hvj-en.

Helliwell, J.F., Huang, H. and Wang, S. (2019), "Changing world happiness", *World Happiness Report 2019*, Vol. 2, pp. 11-46.

Helliwell, J.F., Huang, H., Wang, S. and Norton, M. (2020), "Social environments for world happiness", *World Happiness Report 2020*, Vol. 1, pp. 13-45.

Hoechle, D. (2007), "Robust standard errors for panel regressions with cross-sectional dependence", *STATA Journal*, Vol. 7 No. 3, pp. 281-312.

Index, C.P. (2019), "Corruption perception index", *Transparency International*, available at: https://www.transparency.org/en/cpi/2018/index/dnk (accessed 1 March 2021).

Kaufmann, D. (2006), "The governance gap in the arab countries: what does the data say", *IMF/AMF Seminar in Abu Dhabi*, UAE.

Li, Q. and An, L. (2020), "Corruption takes away happiness: evidence from a cross-national study", *Journal of Happiness Studies*, Vol. 21 No. 2, pp. 485-504.

Lin, C.H.A., Lahiri, S. and Hsu, C.P. (2014), "Happiness and regional segmentation: does space matter?", *Journal of Happiness Studies*, Vol. 15 No. 1, pp. 57-83.

Mugraby, M. (2002), "Some impediments to the rule of law in the Middle East and beyond", *Fordham International LJ*, Vol. 26, p. 771.

Ott, J.C. (2011), "Government and happiness in 130 nations: good governance fosters higher level and more equality of happiness", *Social Indicators Research*, Vol. 102 No. 1, pp. 3-22.

Rizk, R. (2019), "Returns to education in MENA countries: a continuing story of under-achievement", *International Journal of Education Economics and Development*, Vol. 10 No. 4, pp. 427-448.

Romani, V. (2009), *The Politics of Higher Education in the Middle East: Problems and Prospects. Middle East Brief*, Brandeis University Crown Center for Middle East studies, MA.

Satrovic, E., Cetiner, O. and Muslija, A. (2018), Whether control of corruption matters for happiness: evidence from panel data analysis, *Press Academia Procedia*, Vol. 7 No. 1, pp. 381-387.

Sgroi, D., Hills, T.T., O'Donnell, G., Oswald, A.J. and Proto, E. (2017), *Understanding Happiness: A Cage Policy Report*, Centre for Competitive Advantage in the Global Economy.

Striessnig, E. (2015), *Too Educated to Be Happy? an Investigation into the Relationship between Education and Subjective Well-Being*, IIASA Interim Report, IIASA, Laxenburg.

Winkelmann, R. (2014), "Unemployment and happiness", *IZA World of Labor*, Vol. 94, pp. 1-5.

Witt, D.D., Lowe, G.D., Peek, C.W. and Curry, E.W. (1980), "The changing association between age and happiness: emerging trend or methodological artifact?", *Social Forces*, Vol. 58 No. 4, pp. 1302-1307.

Woo, C. (2018), "Good governance and happiness: does technical quality of governance lead to happiness universally in both rich and poor countries?", *Journal of International and Area Studies*, Vol. 25 No. 1, pp. 37-56.

World Bank (2003), *Better Governance for Development in the Middle East and North Africa: Enhancing Inclusiveness and Accountability*, The World Bank, Washington.

World Bank (2018), *GDP Per Capita (Current US$)*, The World Bank, available at: https://data.worldbank.org/indicator/NY.GDP.PCAP.CD (accessed 1 March 2021).

Youssef, J.A. (2021), "Investigating consumer finance in Lebanon: an empirical study of ATM and virtual currency", *Impact of Globalization and Advanced Technologies on Online Business Models*, IGI Global, pp. 32-54.

Corresponding author
Jamile Youssef can be contacted at: jamile_youssef@hotmail.com