Governance and Happiness in African countries

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7 June 2019

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Abstract

Using Ordinary Least Squares and the Generalized Method of Moments techniques, this paper analyses the effect of governance on happiness in a panel of 31 African countries over the period 2006-2017. We find that governance quality improves happiness.

Keywords: Governance, Happiness, Africa
JEL code: D73, I31, O55

Forthcoming in Economics Bulletin

1 Introduction

Any economic policy, beyond promoting economic activity, will have value only if it contributes to human well-being or happiness (Frey and Stutzer, 2002). Human well-being has multiple constituents, including basic material for a good life, freedom and choice, health, good social relations, and security (OECD, 2011). Due to its strong socio-economic aspects, happiness requires a wider context to understand its determinants. This study takes the view that one key variable which has not been sufficiently analyzed is the governance quality. Governance is a multidimensional and complex phenomenon that has many definitions. However, according to World Bank, "Governance consists of the traditions and institutions by which authority in a country is exercised. This includes the process by which governments are selected, monitored and replaced; the capacity of the government to effectively formulate and implement sound policies; and the respect of citizens and the state for the institutions that govern economic and social interactions among them" (Kaufmann et al., 2008). In line with the above definition, many empirical studies have investigates the effects of governance quality on various dimensions of economic development, *inter alia* foreign direct investment (Gani, 2007), financial development (Law and Azman-Saini, 2012), trade (Levchenko, 2007), firms performance (Bozec et al., 2010) and more importantly economic growth (Alam et al., 2017), but fewer have focused on the relationship between governance quality and happiness, particularly in African countries. Theoretically, governance can affect happiness directly through "procedure utility" developed by Frey and Stutzer (2005) or indirectly through factors which are directly connected to happiness (Ott, 2013). Frey and Stutzer (2005) show that people are happier living in a context of good governance. In a context of good governance, people can experience greater subjective well-being when they participate in decision-making, and are treated fairly and equitably, anything that goes beyond what they could hope for. In an indirect way, if governance reaches its optimal level, governments will be more effective in achieving the conditions that contribute to the happiness of the people. For example, control of corruption may promote economic growth and help maintain social trust at the same time, both beneficial to happiness (Helliwell et al., 2018). Indirectly these conditions, which are possible only in a context of good governance, allow governments to improve the happiness of their populations (Ott, 2013).

There is little empirical literature on the effect of governance quality on happiness. Helliwell et al. (2018) examine the extent to which governance quality contributes to life evaluation in 157 countries over the period 2005-2012. They showed that changes in governance quality within a policy-relevant time horizon can lead to significant changes in the quality of life.

Bjørnskov et al. (2010) find that formal institution increases subjective well-being, but this effect differ among poor and rich countries. Ott (2010) find that good governance was a significant determinant of happiness. Others studies found a similar results (Helliwell and Huang, 2008; Ott, 2011). However, in the African context, such studies do not exist.

The contribution of this study to the literature is threefold. First, previous studies suffer from a limited number of data on happiness. This lack of data did not allow these studies to quantify in the long term the effect of governance on happiness. The most recent study by Helliwell et al. (2018) used data up to 2012 only. This paper extends the period to 2017 which allows us to have observations over 12 years. Moreover, previous empirical studies used specific aspect of governance quality such as corruption and democracy. However these specific factor are not sufficient to measure the general quality of governance. This paper uses six individuals' governance indicators developed by the World Bank. This measure of governance has the advantage of taking into account the multidimensionality of the concept of governance. Second, this study focus specifically on Africa countries, as among these few existing empirical studies, none has examined the case of African countries. Third, we use a more robust technique, Generalized Method of Moments (GMM) which control for omitted variable bias, endogeneity, measurement error and unobserved country heterogeneity to investigates the effect of governance quality on happiness in 31 African countries. We found a strong positive effect of governance quality on happiness.

The rest of this paper is organized as follows. Section 2 describes the data and methodology. Section 3 presents and analyses the results. Section 4 concludes.

2 Methodology and data

The empirical approach is designed to estimate the effect of governance quality on happiness in African countries. In this section the estimation strategy is discussed (section 2.1) and the data is described (section 2.2).

2.1 Methodology

To investigate the effect of governance on happiness, this paper estimates the following model:

$$Happiness_{it} = \alpha + \beta_1 Happiness_{it-1} + \beta_2 Governance_{it} + \beta_3 X_{it} + \mu_i + \nu_t + \epsilon_{it} \quad (1)$$

Where $Happiness_{it}$ is the happiness for country i in period t measured by life ladder. $Governance_{it}$ is governance quality indicators. X_{it} is a vector which includes control variables.

μ_i is an unobserved country-specific effect, ν_t is time specific effect and ϵ_{it} is the error term. We begin by following Helliwell et al. (2018) in implementing a simple Pooled OLS model to estimate Equation (1). However, when the OLS technique is used to estimate this model, the estimated coefficients are inconsistent and likely to be biased since the lagged dependent variable is positively correlated with the omitted fixed effects. The presence of the lagged value of happiness places our model inside the context of dynamic panel model. We then estimate Equation (1) by using the Generalized Method of Moments (GMM) proposed by Arellano and Bond (1991), Arellano and Bover (1995) and Blundell and Bond (1998). This method enables us to control for unobserved country-specific factor. Moreover, the presence of a lag-dependent variable on the right hand of the equation and the reverse causality between governance quality and happiness will lead to simultaneity bias of the regression's coefficients. GMM estimation technique is developed to address such endogeneity problem, omission of relevant variables, measurement error and sample selectivity. The GMM technique is declined in two versions: the difference GMM were the lagged levels of the explanatory are used as instruments and system GMM were the combination of the regression in differences and the regression in levels are used. However, Bond et al. (2001) have recommended that the system GMM estimator developed by Arellano and Bover (1995) and Blundell and Bond (1998) can dramatically improve efficiency and avoid the weak instruments problem in the first -difference GMM estimator developed by Arellano and Bond (1991). The consistency of the System GMM estimator is verified by using two specification tests: the validity of the assumption that the error term does not exhibit serial correlation (AR(2)) and the validity of the instruments (Hansen test).

2.2 Data

We investigate a panel of 31[1] African countries over the period 2006-2017 with data from: World Development Indicators (WDI), World Governance Indicators (WGI), and World Happiness Report (WHR). The periodicity under investigation starts from 2006 due to the fact that happiness variable from World Happiness Report are only available from the year 2005 and at that date, several African countries have no data available. The dependent variable is happiness or Subjective well-being measured by life ladder[2] from the World Happiness Report. This variable is obtained by inviting respondents to think of their lives as a ladder, with the worst possible life for them as 0, and the best possible life as 10. Our main

[1]Benin, Botswana, Burkina Faso, Cameroon, Chad, Congo (Brazzaville), Congo (Kinshasa), Egypt, Gabon, Ghana, Guinea, Kenya, Liberia, Madagascar, Malawi, Mali, Mauritania, Morocco, Mozambique, Niger, Nigeria, Rwanda, Senegal, Sierra Leone, South Africa, Tanzania, Togo, Tunisia, Uganda, Zambia, Zimbabwe.

[2]See Ott (2010); Helliwell et al. (2018) for more details.

independent variable is Governance quality. This variable is made of six individual governance indicators from Kaufmann et al. (2010); namely: the rule of law, corruption-control, regulation quality, government effectiveness, voice and accountability, and political stability. Next to the governance quality variables, we include three control variables, namely: (i) GDP growth, (ii) Inflation rate, and (iii) Healthy life expectancy at birth (Healthy). Income per capita has been documented to increase well-being because it raises consumption, health, educational level, and employment (Dolan et al., 2008). Countries with higher healthy life expectancy at birth have also been documented to be associated with higher level of happiness (Helliwell et al., 2018). Rising consumer prices are very likely to influence negatively human happiness (Wolfers, 2003). The summary statistics are provided in Table 1 while Table 2 displays the correlation matrix.

Table 1: : Descriptive statistics

	Variable	Obs	Mean	S.D	Min	Max	Source
Governance indicators	VA	372	-0,4993	0,5887	-1,5715	0,6542	WGI
	PS	372	-0,5445	0,7474	-2,4002	1,1040	WGI
	GE	372	-0,6977	0,5303	-1,7457	0,6435	WGI
	RQ	372	-0,5686	0,5103	-2,1562	0,6834	WGI
	RL	372	-0,6266	0,5241	-1,8523	0,6960	WGI
	CC	372	-0,6320	0,5237	-1,5252	1,0391	WGI
Happinness	LifeLadder	309	4,2745	0,5751	2,7016	5,6082	WHR
Control variables	Healthy	309	51,3795	5,5710	37,7665	65,8806	WHR
	Inflation	351	6,4810	5,8004	-8,9747	34,6953	WDI
	GDP growth	372	4,8720	3,8180	-20,5988	20,7158	WDI

Table 2: Correlation matrix

	VA	PS	GE	RQ	RL	CC	LifeLadder	Healthy	Inflation	GDP
VA	1.0000									
PS	0.5224	1.0000								
GE	0.6026	0.5402	1.0000							
RQ	0.6620	0.5030	0.8858	1.0000						
RL	0.6890	0.6479	0.9000	0.8870	1.0000					
CC	0.5994	0.6340	0.8369	0.8038	0.8706	1.0000				
LifeLadder	0.0834	0.0830	0.2559	0.1410	0.1459	0.0824	1.0000			
Healthy	0.0410	0.0881	0.4279	0.3112	0.4099	0.3453	0.1081	1.0000		
Inflation	0.1287	0.0404	0.0729	0.0713	0.1126	0.0570	0.0704	-0.0402	1.0000	
GDP growth	-0.0491	0.0861	0.0069	-0.0161	-0.0137	0.0184	0.0067	-0.1907	0.0532	1.0000

3 Empirical results

Table 3 and Table 4 present results corresponding to the effect of governance quality using the OLS and System GMM techniques respectively.

3.1 Main OLS results

As a starting exercise, we estimate the impact of governance on happiness by ordinary least squares (OLS). To provide the most data on our dependent variable (life ladder), we utilize the largest possible sample of African countries by taking a panel of 31 countries. Table 3 presents the results of the model estimations, which allows for an effect of governance on happiness. There are six regression in each table representing the estimates of the individual components of governance, which comprise voice and accountability (VA), political stability (PS), government effectiveness (GE), regulation quality (RQ), rule of law (RL), and corruption control (CC). The results in Table 3 show that all six indicators used to measure governance have a positive and statistically significant coefficient. For example the governance indicators in column (1) suggests that a 1-unit increase in voice and accountability increases the happiness by 0.0708 unit. Therefore, better life quality can be achieved by allowing voice and accountability, promoting political stability, improving government effectiveness, enhancing regulation quality, abiding by the rule of law, and reducing corruption control. Overall, the results displayed in Table 3 suggest that good governance increases the happiness of people. These result are in agreement with a number of empirical and theoretical studies which show that happiness is conditioned by the quality of governance. Helliwell et al. (2018) show that improvements in the quality of governance over a period of time can lead to significant improvement in the quality of life. Ott (2010) shows that the quality of governance appears to be more important for happiness than the size of governments and concludes that technically, good governance is a universal condition for happiness. Theoretically, Frey and Stutzer (2005) have proven that people gain utility from having the right to participate in the political decision-making process. For Ott (2013) if governments insist on some technical aspects of governance such as efficiency, quality of regulation, rule of law and control of corruption, this will directly contribute to the well-being.

Remaining independent variables also have the expected signs as found in other studies. The coefficients associated with GDP growth and healthy life expectancy at birth are positive and significant, suggesting an improvement in happiness with the increase in GDP growth (Wu and Li, 2017) and a better life expectancy at birth (Helliwell et al., 2018). On the other hand, the coefficient of inflation is negative and significant, meaning that the rise in the general level

of prices is detrimental to the welfare of the population (Wolfers, 2003).

3.2 System GMM results

The results reported in Table 3 potentially suffer from endogeneity. We thus estimate dynamic panel models using the Blundell and Bond (1998) two-step system GMM estimator. the results are presented in Table 4. The different diagnostic tests are respected. All the models passed the AR (2) tests for second order serial correlation as indicated by p-value. Too many instruments can severely weaken and bias the Hansen over identifying restriction test and therefore, the rule of thumb is that the number of instruments should be less than the number of countries (Roodman, 2009). The system GMM estimates generate 26 instruments which are lower than the number of countries (31 sample countries), hence regression results are free from instruments proliferation.

Table 3: Governance and happiness (OLS)

	Dependent variable : Life Ladder					
	(1)	(2)	(3)	(4)	(5)	(6)
Constant	3.622***	3.456***	4.406***	3.849***	3.921***	3.693***
	(0.345)	(0.348)	(0.396)	(0.374)	(0.397)	(0.385)
Voice and accountability (VA)	0.0708***					
	(0.0129)					
Political stability (PS)		0.0802*				
		(0.0468)				
Government effectiveness (GE)			0.280***			
			(0.0709)			
Regulation quality (RQ)				0.132*		
				(0.0723)		
Rule of law (RL)					0.126*	
					(0.0729)	
Corruption control (CC)						0.354*
						(0.204)
GDP growth	0.0154*	0.0153*	0.0135	0.0154*	0.0152*	0.0146*
	(0.00877)	(0.00876)	(0.00856)	(0.00877)	(0.00874)	(0.00873)
Healthy life expectancy at birth	0.0120*	0.0135**	0.0176**	0.0247***	0.0125***	0.0106***
	(0.00629)	(0.00631)	(0.00684)	(0.00361)	(0.00292)	(0.00175)
Inflation	-0.00335***	-0.00344***	-0.00475***	-0.00437***	-0.00466***	-0.00285***
	(0.000671)	(0.000335)	(0.000624)	(0.000345)	(0.000664)	(0.000561)
Observations	294	294	294	294	294	294
R-squared	0.230	0.287	0.682	0.299	0.283	0.422

Note: *, **, ***: significance levels of 10%, 5% and 1% respectively.

Estimated results using the System GMM technique in Table 4 reinforce the OLS estimates reported in Table 3. The coefficients associated with all six governance indicators are found to be highly positively significant at 1% level, except for voice and accountability which is

significant at 5% level. This result demonstrates that improving happiness in country is highly conditional on the political, economical and institutional framework. Specifically, there is a positive effect of voice and accountability on happiness. this is consistent with Frey and Stutzer (2005) who pointed out that participation in elections (voice) contributes to happiness, independents of the outcomes. Political stability also contributes to the well-being so that a 1-unit increase in political stability increases happiness by 0.0802 unit. Good governance will allow governments to maintain a degree of political stability that will enable them to more effectively create the conditions that contribute to happiness in the country, such as material prosperity, good education and safety in the streets. Moreover, competent and democratic governments can create individual freedom, by maintaining stable and predictable conditions that enable people to make their own decisions in life (Veenhoven, 1999). Helliwell and Huang (2008) go further

Table 4: Governance and hapiness (System GMM)

	Dependent variable : Life Ladder					
	(1)	(2)	(3)	(4)	(5)	(6)
Constant	-0.00278	0.00288	0.0139	-0.0238**	-0.0268***	-0.00972
	(0.00443)	(0.00331)	(0.0142)	(0.00935)	(0.00711)	(0.00708)
L.Life Ladder	0.956***	0.938***	0.456***	0.725***	0.489***	0.702***
	(0.0112)	(0.00725)	(0.0264)	(0.0126)	(0.0119)	(0.0209)
Voice and accountability (VA)	0.0267**					
	(0.0104)					
Political stability (PS)		0.0447***				
		(0.00804)				
Government effectiveness (GE)			0.544***			
			(0.0179)			
Regulation quality (RQ)				0.249***		
				(0.0174)		
Rule of law (RL)					0.498***	
					(0.0240)	
Corruption control (CC)						0.268***
						(0.0181)
GDP growth	0.00103***	0.000778***	0.00186***	0.000672*	0.00259***	0.00155***
	(0.000260)	(0.000247)	(0.000519)	(0.000358)	(0.000473)	(0.000396)
Healthy life expectancy at birth	0.0117***	0.00798***	0.00499***	0.00313***	0.00126	0.00419
	(0.00317)	(0.00141)	(0.00124)	(0.00106)	(0.00153)	(0.00274)
Inflation	-0.00273***	-0.00237***	0.00131***	-0.00207***	-0.000527	-0.000956
	(0.000564)	(0.000324)	(0.000350)	(0.000477)	(0.000423)	(0.000730)
Observations	202	202	202	202	202	202
Number of countries	30	30	30	30	30	30
AR(1)	0.00110	0.000748	0.00123	0.00202	0.0229	0.00162
AR(2)	0.259	0.266	0.715	0.270	0.465	0.127
Instruments	26	26	26	26	26	26
Hansen OIR	0.376	0.418	0.327	0.502	0.511	0.540
Fisher	86026***	15983***	3359***	13336***	5112***	4081***

Note: *, **, ***: significance levels of 10%, 5% and 1% respectively.

and show that democracy begins to be important for poor countries only when the technical quality of government governance has reached a minimal threshold. The role of control of corruption also confirms that living in a least corrupt country guarantees a better sharing of wealth and maintains peace and social trust, all things that contribute to the happiness of the people (Helliwell et al., 2018). Of the control, the growth rate of GDP and healthy life expectancy at birth show significant positive impacts on happiness; whereas higher inflation exhibits a negative effect on happiness as expected.

4 Conclusion

Due to the lack of happiness data for many countries, there is almost no analysis at the African level about the relationship between governance and happiness. The few existing studies focus either on developing countries or on developed countries. To fill this gap, this study has investigated how governance quality affects happiness in 31 African countries for the period 2006-2017. Six governance quality indicators are used. They are: Voice and accountability (VA), Rule of law (RL), Regulation quality (RQ), Government effectiveness (GE), Political Stability (PS), and Corruption control (CC). Life ladder is used to measure happiness. The empirical evidence is based on Ordinary Least Squares and System Generalized Method of Moments. This paper finds that governance quality is positively and significantly correlated to happiness of population in Africa. Thus, improving governance quality can enhance significantly the happiness of African population.

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