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Duration in Power and Happiness in the World

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Duration in Power and Happiness in the World

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Abstract

This article examines the effect of leader longevity in power on world happiness. To make the assessment, a sample composed of 135 countries observed over the period 2006 to 2018 was constituted. The results obtained from OLS estimates show that longevity in power reduces individual happiness. Furthermore, the negative effect is more amplified in democratic countries. Quantile regression reveals variability in the effect over the different intervals. These results are robust to the use of alternative estimation techniques. We also identify the quality of institutions and public spending as two potential transmission channels through which longevity in power influences well-being. These results invite political authorities to respect constitutional limits or implement constitutional reforms with the aim of limiting the duration of the mandate of the executive in order to reduce the harmful effect of an extension of the latter on individuals' well-being.

Keywords: longevity in power, happiness, quality of institutions, public spending, quantile regression

JEL Classification: D72; H31; H52; I31

1. Introduction

Since the seminal work of Easterlin (1974), the question of improving the well-being of individuals has continued to arouse particular interest in the economic literature. This interest has also shifted to the political arena, thus placing questions related to well-being on the menu of the political agendas of all countries in the world. Indeed, by adopting the sustainable development goals (SDGs), most governments and politicians demonstrate their desire to enhance the living standards of their citizens, and therefore their happiness. Numerous works highlight the essential role of happiness[1]in economic performance, particularly on productivity and labor market performance. For example, Oswald et al. (2015) analyze the link between happiness and productivity. They show that a low level of happiness is associated with a low level of productivity. Piekałkiewicz (2017) states that happiness influences the labor market. Thus, it is essential to study the factors likely to influence the well-being of individuals.

In recent years, a vast literature has emerged to explain differences in individual happiness across countries. The very first empirical contributions highlighted the influence of demographic, cultural and socio-economic variables (unemployment rate, growth, budgetary choices, public finance, income level, education, natural resources, religion and age, *inter alia*) on levels of happiness (Easterlin, 1974, 1995; Oslon, 1993; Clark and Oswald, 1994; Besley et al., 1997; Winkelmann and Winkelmann, 1998; Frey and Stutzer, 2000; Gerdtham and Johannesson, 2001; Dreher et al., 2006; Fereidouni et al., 2013; Lin et al., 2014; Clark et al., 2016 ; Yogo and Keneck, 2018; Mignamissi and Malah, 2021; Ndayikeza, 2021). For the most part, the conclusions of this work are quite controversial. In the face of these developments, recent work postulates an institutional explanation of heterogeneities in happiness between economies. Most of these lead to conclusions according to which the proper functioning of political institutions (quality of governance, nature of political and legal systems, capacity of government, national confidence) remains a very important factor in the happiness of citizens (Li and An, 2019; Loubser and Steenekamp, 2017; Sulemana et al., 2016; Nikolaova, 2016; Nikolaev, 2014; Bjørnskov et al., 2010; Ott, 2011; Lane 2009; Bjornskov, 2008; Helliwell and Huang, 2008; Blanchflower and Oswald, 2004). However, facts show that many democracies around the world and especially in developing countries suffer from multiple failures which affect the quality of governance and therefore, the happiness of individuals. As such, the longevity of political leaders in power which is implicit in the non-compliance with the

[1]In the rest of our study, the expression well-being is used to designate happiness.

limitation of presidential mandates constitutes one of these failures. In Africa, for example, the continent has a sad record in terms of the longevity of its political leaders in power[2]. Indeed, more than 75% of the continent's political leaders seek more than three mandates once in power (Afrobarometer, 2017). But this characteristic is not only specific to African countries. Indeed, the Sultan of Brunei, Hassanal Bolkiah, has 52 years in power in 2019. Such a characteristic of governments tends to compromise the well-being of citizens.

A large literature shows the effect of the longevity of political in power on economic outcomes. For instance, Papaioannou et al. (2016) show that long years in power have a negative impact on economic growth and the quality of institutions. The authors highlight the fact that as political leaders remain in power for longer, it becomes increasingly difficult for them to pursue sound policies. Limi and Epoh (2023) show that the duration of heads of state in power have a harmful effect on economic growth in sub-Saharan Africa. Another part of the literature shows that the effects of the longevity of political leaders in power on public finances (Ndayikeza, 2021). However, it is surprising to note a deficiency in the literature on the implication in terms of well-being of the longevity of leaders in power. This study aims to fill this gap by setting itself the objective of analyzing the effect of the longevity of political leaders in power on happiness in the world.

Without being exhaustive, this article contributes to the economic literature in four ways. First, to our knowledge, this study is the very first to empirically highlight the link between longevity in office and happiness. Therefore, this study takes an approach to analyzing happiness based on the role of the political leader. Second, this study does not just do a simple analysis of direct causality between duration in power and happiness. Accordingly, it goes further by highlighting the potential transmission channels through which the effect of longevity in power on well-being passes. These are the governance channel and the public expenditure channel. Third, the interest of this study is also methodological. Indeed, unlike previous studies which are limited to estimating the average value for the entire sample (Appel et al., 2015; Chae, 2018), our study uses a quantile regression estimation approach developed by Koenker and Bassett (1978). The advantage of such an approach is that it makes it possible to analyze the relationship between longevity in office and happiness throughout the conditional distribution of happiness Fourth,

2For example, Ben Ali was at the head of Tunisia from 1987 to 2011, Colonel Gaddafi from 1969 to 2011, Mubarak from 1981 to 2011 and Paul Biya has been at the head of Cameroon since 1982, having been prime minister for 7 years prior.

the study carries out a comparative analysis according to the level of economic development and political heterogeneity between the countries in our sample.

The rest of the article is structured around five additional sections. The second discusses the channels through which time in power influences well-being. The third presents the empirical strategy used in this study. The fourth discloses the results, provides a corresponding discussion and sensitivity analyses. Finally, the fifth concludes with economic policy recommendations and future research directions.

2. Duration in power and happiness: identification of transmission channels

It appears from the literature that the effect of the leader's duration in power on happiness can pass through two potential channels. These are the institutions channel (governance) and the public expenditure channel. With regard to governance, in a study of developing countries, Papaioannou and Van Zanden (2015) showed that longevity in power reduces the quality of institutions. With regard to the second channel, Shonchoy (2016) and Ndayikeza (2021) have shown that duration in power affects public spending. So, we hope that duration in power affects happiness through these two channels.

2.1. Governance channel

Previous studies have shown that longevity in power affects the quality of institutions (Charron and Lapuente, 2011; Wintrobe, 1990, 1998; Wright, 2008; Papaioannou and Van Zanden, 2015). For example, Papaioannou and Van Zanden (2015) examined, over the period 1960–2009, the effect of leader tenure on economic development in developing countries. They show that longevity in power reduces economic growth, increases inflation and deteriorates the quality of institutions. This effect is more apparent in countries in Africa and the Middle East. In addition, literature has established the existence of a link between governance and happiness[3] (Ott, 2005, 2010, 2011; Bjørnskov, 2008; Helliwell and Huang, 2008; Bjørnskov et al., 2010; Nikolaev, 2014; Sulemana et al., 2016; Li and An, 2019). Some studies have found that individuals who live in countries with good quality institutions (effective governance and low corruption, *inter alia*) are happier than those living in countries with poor quality institutions.

[3]An excellent review of the literature has been done by Berggren and Bjørnskov (2020). For more insights, the interested reader can refer to the Handbook of Labor, Human Resources and Population Economics.

Even more, on a sample of 126 countries, Li and An (2019) found that corruption has a detrimental effect on happiness. This result confirms that highlighted by Helliwel and Huang (2008).

Figure 1 below shows nexuses between time in power and the World Bank's Governance indicators[4] (WGI). We observe a negative relationship between duration in power and the six indicators of governance. This means that a change in the length of time in power deteriorates institutions. This result corroborates the argument developed by Papaioannou and Van Zanden (2015). Thus, longevity of the leader in power deteriorates the quality of institutions and by extension, happiness could also be negatively affected.

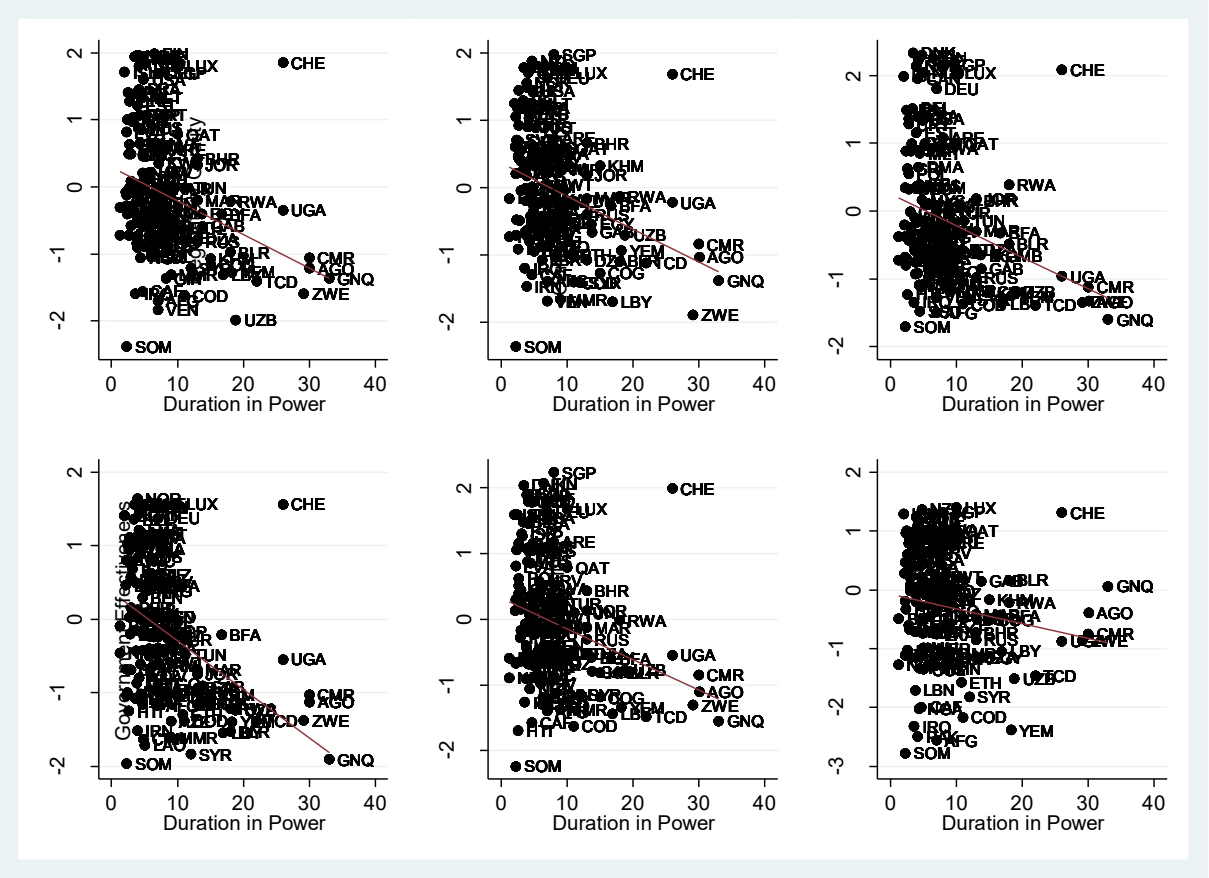

Fig.1. Correlation between governance and duration in power (i.e., in years) over the period 2006-2018.

Source: Authors' construction using data from Archigos leader's data and WGI.

4These indicators vary between – 2.5 (bad governance) and 2.5 (better governance).

2.2 Public expenditure channel

Some works have shown that a long duration in power also affects public spending (Shonchoy, 2016; Ndayikeza, 2021). Furthermore, the literature shows that the nature of the political regime influences public spending. According to this strand of studies, democratic countries spend more on education, health and less on security (military) spending than countries led by an autocratic or dictatorial regime (Lake and Baum, 2001; Deacon, 2009; Blum et al., 2021). For example, over the period 2000 to 2015, Blum et al. (2021) examined the effect of political institutions on public spending on a sample of 151 developed and developing countries. These authors show that health spending is higher in democratic countries than in autocratic countries. According to Shonchoy (2016), duration in power positively affects public spending. Contrary to the conclusion of the previous study, Ndayikeza (2021) finds that beyond a decade in power, public military spending per capita increases while public spending on education and health per capita decreases. A possible explanation is that the leader in democracy, in order to maximize his chances of being re-elected, spends more on the social sector (e.g., education and health) than in the military sector as in a democracy, granting that the risk of a coup d'état is low (Carbon and Pelletata, 2017). On the other hand, in less democratic countries, we observe weak electoral competition and therefore a weak incentive to spend on social issues. In order to maintain a firm grasp on power, the leader spends more in the security sector and less in the social sector (Meltzer and Richard, 1981; Besley and Kudamatsu 2006; Gregorio and Gregorio 2013; Carbone and Pelletata, 2016; Profeta et al., 2013; Blum et al., 2021).

A bulk of studies have investigated the effect of public spending on well-being (Ram, 2009; Bjørnskov et al., 2007; Flavin, 2018; Knoll and Pitlik, 2016; Kotakorpi and Laamanen, 2010; Perovic and Golem, 2010; Knoll and Pitlik, 2016). However, the conclusions of these work diverge as to the effect of public spending. For example, on a sample of 104 countries observed over the period 2005-2012, O'connor (2017) finds that social spending increases the well-being of individuals residing in the sampled countries. This result corroborates that of Kotakorpi and Laamanen (2010) who showed that in Finland, health spending positively affects happiness. Flavin (2018) also found the same result. Other studies conclude that public spending has a negative effect on happiness. According to Bjornkov et al. (2007), Knoll and Pitlik (2016), *inter alia,* public spending negatively affects well-being. According to these works, there is a limitation. In fact, they use total public expenditure, ignoring other components of public expenditure (e.g., health, education, social protection and military expenditure).

Figure 2 below shows the existing relationship between time in power and public spending. On the one hand, we observe in graph on the left-hand side that public education spending is negatively correlated with the length of time in power. This result is similar to that of Ndayikeza (2021). The latter notes that after a decade in power, public spending on education and health per capita declines. On the other hand, military spending is positively correlated with the duration of power, as apparent in the graph on the right-hand side. Ndayikeza (2021) states that after 10 years in power, military spending increases. In order to minimize the risk of a coup d'état and the risks of popular uprising, the leader spends more in the security sector.

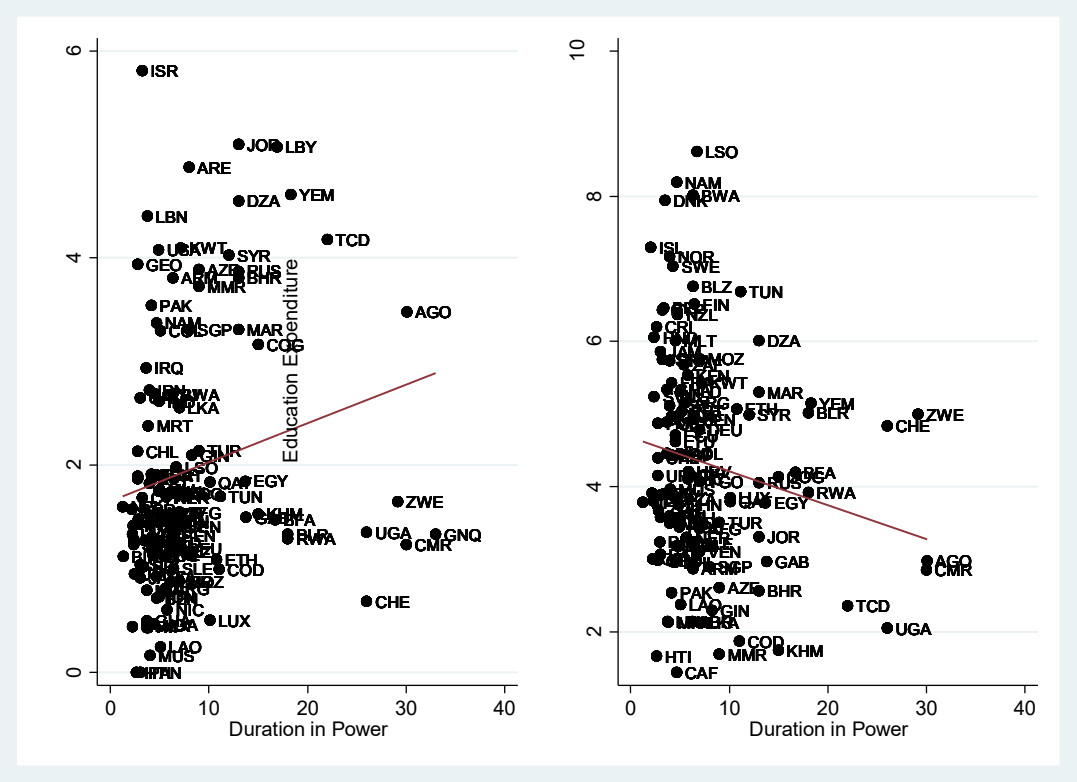

Fig. 2. Correlation between public spending and duration in power **(i.e., in years) over the period 2006-2018.**

Source: Authors' construction using data from Archigos leader's data and WDI.

3. Methodology and Data

3.1 Methodology

In order to evaluate the effect of duration in power on the happiness of individuals around the world, the empirical model is inspired by the work of Chung and Im (2021). The equation to estimate in panel is therefore as follows:

$$LL_{it} = \delta Duration_{it} + \beta X_i t' + d_i + \varepsilon_{it} \quad (1)$$

Where LL_{it} is the endogenous variable perceived as the level of national happiness or the average level of subjective well-being of the populations of country *i* in the year *t*. $Duration_{it}$ constitutes our independent variable of interest and measures the number of years spent in power by a political leader. X_{it} is the matrix of control variables which includes the other determinants of happiness. These include, the growth rate in terms of GDP per capita (GDPP per capita). According to Easterlin (2001), Nikolova (2016), Frey et al. (2018), individuals with a high-income level are happier than those with a low-income level. Natural resource endowment is measured by natural rent relative to GDP. According to the literature, natural resources are negatively correlated with happiness (Carmignani and Avom, 2010; Daniele, 2011; Segal, 2011; Mignamissi and Malah, 2021). Thus, countries rich in natural resources are victims of the phenomenon of the resource curse due to its implication in the subjective population's well-being. Inflation is proxied by the consumer price index and should intuitively reduce happiness because high inflation is associated with a reduction in the purchasing power of citizens. Unemployment captured by the unemployment rate. According to the literature, a high level of unemployment and inflation negatively affects happiness (Di Tella et al, 2001; Nikolova, 2016). Life expectancy at birth represents the proxy for health. Previous studies have highlighted a positive relationship between this variable and happiness (Helliwell et al., 2018; Mignamissi and Malah, 2021). We also include the population growth rate and social assistance in the equation. ε_{it} denotes the error term, d_i captures regional heterogeneity

The estimation of the above equation is done in cross sections using the ordinary least squares (OLS) estimator. We introduce certain control variables into the regression in order to limit the bias linked to the omission of variables. Furthermore, in order to take regional specificities into account, we introduce a set of variables which captures region fixed effects and by extension, account for some unobserved heterogeneity. Then, to analyze the sensitivity of our results we adopt on the one hand, the estimators of the censored variables in order to emphasize the limited range of the outcome variable and on the other hand, the quantile regression approach in order to account for potential outliers by assessing the linkages throughout the conditional distribution of the happiness outcome variable.

3.2 Data

Our sample is made up of 135 countries observed over the period 2006 to 2018. These countries were selected based on data availability. In other words, the choice of the time-frame is motivated by data availability constraints at the time of the study. Table 1 and Table 2 respectively, disclose the definitions (and corresponding sources) of variables and sampled countries. Happiness data are taken from the World Database of Happiness. The data used to calculate the duration in power is extracted from the Archigos leader's database. Regarding the control variables, we used data from the World Bank (Word Development Indicators). Moreover, the corruption-control and political stability governance indicators are obtained from the World Governance Indicators (WGI) of the World Bank.

Table 3 below highlights the results of the descriptive analysis of all the variables used in this study. It turns out that the average level of happiness in our sample is 5.46. Furthermore, this variable is less volatile. Indeed, its standard deviation is around 1.17. Regarding the independent variable of interest, the average duration of leaders in power is 7.62 years. Compared to the happiness index, the independent variable of interest exhibits more variation with duration in power ranging from 1 to 39 years.

Table 1: Definitions of variables

Variables	*Descriptions*	*Sources*
Corruption-control	***"Control of corruption (estimate): captures perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as 'capture' of the state by elites and private interests".***	***WGI***
Political stability	***"Political stability/no violence (estimate): measured as the perceptions of the likelihood that the government will be destabilized or overthrown by unconstitutional and violent means, including domestic violence and terrorism"***	***WGI***
Happiness index	Subjective well-being is obtained by inviting people participating in the survey to consider their life as a scale, the worst life for them being 0, and the best possible life 10.	**WHD**
Power duration	The number of years spent in power by the President of the Republic.	***Archigos leader's***
GDP per capita	Gross domestic product divided by the average population.	**WDI**
Unemployment	Share of the active population unemployed but available and looking for a job	**ILOSTAT**
Inflation	A consumer price index reflecting the annual percentage change in the cost to the average consumer of acquiring a basket of goods and services that may be fixed or changed at specific intervals, for example every year.	**WDI**
Population	Population growth rate. this variable makes it possible to take into account the role of the labor factor in economic activity.	**WDI**
Total natural resources rents	Sum of oil rents, gas rents, coal rents (hard and soft), forestry rents.	**WDI**
Social support	Dichotomous variable, which represents the national average to the following question: "If you were in trouble, do you have relatives or friends you can count on to help you whenever you need them, or not?"	**Gallup World Poll**
Health	Life expectancy at birth	**WDI**

Polity IV	Democratization level: -10⩽Autocracy <6; 6⩽Democracy⩽10	**CSP (2018)**

Note: Authors' construction

Table 2: List of countries

Africa	Am Latina	East Asia	South Asia	North America	Europe & Central Asia	Middle East
Algeria	Argentina	Australia	Afghanistan	Canada	Albania	Bahrain
Angola	Belize	Cambodia	Bangladesh	United States	Armenia	Iran
Benign	Bolivia	China	Bhutan		Austria	Iraq
Botswana	Brazil	Hong Kong	India		Azerbaijan	Israel
Burkina Faso	Chile	Indonesia	Nepal		Belarus	Jordan
Cameroon	Colombia	Japan	Pakistan		Belgium	Kuwait
Central African Republic	Costa Rica	Lao PDR	Sri Lanka		Bosnia	Lebanon
Chad	Dominica	Malaysia			Bulgaria	Qatar
Congo. Dem	Ecuador	Myanmar			Croatia	Syrian
Congo. Rep.	El Salvador	New Zealand			Cyprus	Turkey
Ivory Coast	Guatemala	Philippines			Denmark	Arab Emirates
Egypt	Haiti	Singapore			Estonia	Yemen
Equatorial Guinea	Honduras	Thailand			Finland	
Ethiopia	Jamaica	Vietnam			France	
Gabon	Mexico				Georgia	
Gambia	Nicaragua				Germany	
Ghana	Panama				Greece	
Guinea	Peru				Iceland	
Kenya	Uruguay				Kazakhstan	
Lesotho	Venezuela				Kosovo	
Liberia					Lithuania	
Libya					Lithuania	
Malawi					Luxembourg	
Mali					Malta	
Mauritania					Norway	
Mauritius					Poland	
Morocco					Portugal	
Mozambique					Romania	
Namibia					Russian Federation	

Niger	Serbia
Nigeria	Spain
Rwanda	Sweden
Senegal	Switzerland
Sierra Leone	United Kingdom
Somalia	Uzbekistan
South Africa	Slovenia
South Sudan	
Tanzania	
Togo	
Tunisia	
Uganda	
Zambia	
Zimbabwe	

Note: Authors' construction

Table 3: Descriptive analysis of variables

Variable	Obs	Mean	Std. Dev	Min	Max
Happiness	1438	5.45877	1.176758	2.66172	8.10615
Duration	1617	7.629561	7.811165	1	39
Lgdpperca	1720	8.537339	1.559242	4.11684	11.62597
Consumer	1645	117.4725	138.9394	.135212	4583.71
Unemployment	1729	7.383382	5.549432	.11	31.11
Healthy	1417	69.89728	10.96544	2.60024	84.9341
Population	1755	2.286792	8.786556	-4.53656	107.363
Social support	1427	1.314235	5.328829	.290184	59.6
Total natural resources	1681	8.572618	12.01742	0	68.7901
Control of corruption	1701	-0.2333903	1.025903	-3.31494	1.86661
Political stability	1720	8.537339	1.559242	4.11684	11.62597

Source : Authors

Table 4 below describes the results of the correlation analysis between the different variables taken into account in this study. We note a negative and significant correlation at the 1% level between duration in power and happiness in the countries of our study. This means that an extension of the duration in power of the leader can lead to a reduction in the level of happiness. We also see that inflation; population growth and natural resources are negatively correlated with happiness. Furthermore, it also appears from the correlation analysis that GDP per capita

is positively correlated with happiness. These correlation signs are broadly consistent with the narrative on the expected signs discussed prior.

Table 4: Correlation Matrix

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Happiness	1								
Duration	-0.219***	1							
Lgdpperca	0.700***	-0.155***	1						
Consumer	-0.201***	0.0848**	-0.0676*	1					
Unemployment	-0.0820**	-0.136***	0.214***	0.00354	1				
Healthy	0.468***	-0.248***	0.805***	0.114***	0.130***	1			
Population	0.157***	0.0362	-0.324***	-0.263***	-0.0959***	-0.644***	1		
Social support	0.219***	-0.00884	-0.255***	-0.277***	-0.0481	-0.579***	0.988***	1	
Total natural res	-0.304***	0.251***	-0.224***	0.0490	-0.0812**	-0.294***	0.00620	-0.0739*	1

*Note: Authors' estimates, p < 0.05, ** p < 0.01, *** p < 0.001

Figure 3 below describes the relationship between time in power and happiness. We observe in accordance with the correlation matrix that there is a negative relationship between duration in power and happiness. This means that in countries where leaders stay in power for too long, people seem less happy.

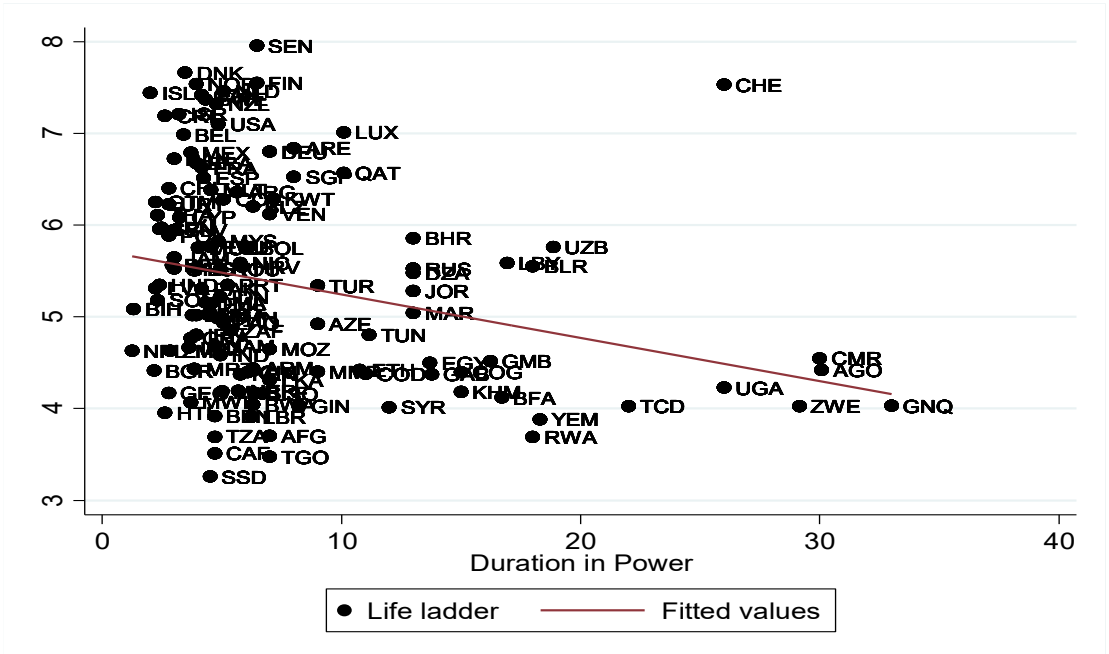

Fig. 3. Correlation between duration in power (i.e., in years) and happiness **over the period 2006-2018**.

Source: Authors' construction using data from Archigos leader's data and WHD.

4. Empirical results and discussion

4.1 Presentation of results

The results of the different estimations are presented in Table 5. Columns (1), (2) and (3) highlight the effect of duration in power on happiness. Column 1 presents the results of the estimates of the effect of duration in power on happiness without control variables and without fixed effects. In the other two columns, we gradually introduce control variables (Column 3) as well as regional specificities (Column 4).

Estimates show that duration in power negatively and significantly affects happiness, at the 1% level. In other words, the longer the leader stays in power, the less happy individuals become. A possible explanation for this result is that in countries where leaders last too long in power, there is a decrease in the provision of public goods such as education, health (Lake and Baum, 2001; Bueno de Mesquita et al, 2003) and a greater proportion of military and security spending which have as ultimate purpose to the protection of the regime against possible destabilization. However, social spending is positively correlated with the level of well-being. Furthermore, it is established in the theoretical literature that democratic regimes provide more public goods and services (a higher quality health system, higher life expectancy and a better supply of drinking water) than autocratic regimes (Acemoglu and Robinson, 2006; Besley and Kudamatsu, 2006; Welander et al., 2015). Furthermore, previous studies have shown that longevity of the leader negatively affects economic growth, the quality of institutions and increases inflation (Papaioannou and Van Zanden, 2015; Asongu and Nwachukwu, 2016). Okada (2017) shows that autocratic regimes negatively affect infant mortality[5] (proxy for happiness).

Regarding the control variables, they are all identical in terms of sign to the results obtained previously. GDP per capita affects happiness positively and significantly at the 1% threshold. The level of wealth of the country increases happiness. Thus, the richer the country becomes, the happier individuals are (Obydenkova and Salahodjaev, 2017; Nikolova, 2016). The results show that the level of natural rents reduces happiness. This result is significant at the 1% level. Similar results have been highlighted by previous work, notably by Carmignani and Avom (2010), Daniele (2011), Segal (2011) and Mignamissi and Malah (2021). For example, Ali et al. (2020) showed that oil rent negatively affects happiness. The estimates also

[5]According to Sen (1998), it is an indicator of economic development and the well-being of a country's citizens.

show that inflation and unemployment negatively affect happiness with a respective significance threshold of 5% and 1%. These results are consistent with those of Di Tella et al. (2001), Frey and Stutzer (2002), Nikolova (2016), Harbi and Grolleau (2012), Knabe and Ratzel (2010) and Mignamissi and Malah (2021). Social support (captured by social support) positively affects the happiness of individuals. This significant result at the 1% threshold confirms that highlighted by Helliwell et al. (2018).

Table 5: Results of panel OLS estimations

	Dependent variable: Happiness		
Variables	(1)	(2)	(3)
Duration	-0.0334***	-0.0128***	-0.00793***
	(0.00394)	(0.00256)	(0.00271)
Lgdpperca		0.545***	0.599***
		(0.0247)	(0.0289)
Consumer		-0.000931**	-0.000696*
		(0.000392)	(0.000376)
Unemployment		-0.0551***	-0.0515***
		(0.00354)	(0.00382)
Healthy		0.0188***	0.00844
		(0.00462)	(0.00542)
Population		0.00481	0.00524
		(0.0159)	(0.0168)
Social support		0.0976***	0.0907***
		(0.0278)	(0.0307)
Natural resources		-0.00701***	-0.00683***
		(0.00187)	(0.00201)
Constant	5.661***	-0.0512	0.586**
	(0.043)	(0.196)	(0.298)
Regional dummies	No	No	Yes
Countries	1,325	1,206	1,206
R-squared	0.044	0.742	0.790

Note: Authors' estimates, $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$; Robust standard errors in parentheses

4.2 Sensitivity analyzes

To analyze the sensitivity of our baseline results, we perform a series of robustness tests. The first test is based on taking into account political heterogeneity between different countries. The second test is based on the use of estimation techniques for censored variables. These are mainly Tobit and censored negative binomials. Concerning the third test, we use the quantile regression analysis introduced by Koenker and Bassett (1978).

4.2.1 Focus on heterogeneity between countries

In order to determine if our basic results are robust when we take into account political heterogeneity between countries, we distinguish two groups of countries depending on the nature of the political regime. Countries with a Polity IV index[6] between -10 and 5 form the group of autocratic countries. Those whose index value is between 6 and 10 are classified among democratic countries. The corresponding results are provided in Table 6.

Table 6: Effect of duration in power on happiness in different panel samples

	Dependent variable: Happiness		
	All countries	**Level of democracy**	
Variables		**Democracy**	**Autocracy**
Duration	**-0.00793*** **	**-0.0208*** **	**-0.00318**
	(0.00271)	(0.00671)	(0.00320)
Lgdpperca	0.599***	0.647***	0.488***
	(0.0289)	(0.0384)	(0.0373)
Consumerprice	-0.000696*	-0.000265	-0.000475
	(0.000376)	(0.000763)	(0.000425)
Unemployment	-0.0515***	-0.0461***	-0.0495***
	(0.00382)	(0.00453)	(0.00612)
Healthy	0.00844	-0.00129	0.00972
	(0.00542)	(0.00841)	(0.00611)
Population	0.00524	0.0687***	-0.0202
	(0.0168)	(0.0250)	(0.0220)
Social support	0.0907***	-0.0282	1,414***
	(0.0307)	(0.0457)	(0.318)
Total natural resources	-0.00683***	-0.0110**	-0.00170
	(0.00201)	(0.00446)	(0.00219)
Constant	0.586**	0.924*	-0.254
	(0.298)	(0.475)	(0.351)
Regional dummies	Yes	Yes	Yes
Countries	1,206	798	408
R-squared	0.790	0.774	0.743

Note: Authors' estimates, Robust standard errors in parentheses; ***p<0.01, **p<0.05, *p<0.1

The estimates confirm the existence of the negative effect of duration in power on happiness. We find that the negative effect is more pronounced in the sub-sample of democratic countries. Note, however, that with regard to the sub-sample of autocratic countries, the estimates reveal the existence of a negative but not significant relationship between duration in power and happiness. Which means that an increase in the length of time in power in democratic states is comparable to a decline in democracy. This decline can take the form of restriction of civil or

[6]The Polity IV index varies from -10 (autocracy) to 10 (democracy) see CSP, 2017

political liberties. Thus, the longer leaders remain in power, the more we see a decline in democracy. Due to the relationship between democracy and well-being, a decline in the latter can have a detrimental effect on individual happiness.

4.2.2Approaches using estimation techniques for censored variables

We use the Tobit regression model and the truncated negative binomial model. These models are appropriate given the nature of our dependent variable. Indeed, given that the Happiness index oscillates in the interval [0; 10], the OLS estimator provides biased results. To reduce this bias, the Tobit and truncated negative binomial estimators are appropriate (Asongu and Le Roux, 2017; Mignamissi and Malah, 2021).

The results of the robustness test on the nature of the dependent variable are recorded in Table 7. It appears that the results of the sensitivity test are the same as those obtained from the basic results in terms of expected sign but with a slight variation in the level of the estimation results of the negative binomial regression model. It appears that longevity in power of the leader reduces happiness. These results are consistent with those established in the previous section. Thus, our results are robust even to changing the estimation technique.

Table 7: Accounting for the limited range of the dependent variable (in panel)

	Dependent variable: Happiness			
Variables	**Tobit**		**Truncated negative binomial**	
Duration	**-0.0128*** **	**-0.00793*** **	**-0.00257**	**-0.00149**
	(0.00257)	(0.00236)	(0.00197)	(0.00201)
Lgdpperca	0.545***	0.599***	0.0945***	0.111***
	(0.0228)	(0.0231)	(0.0167)	(0.0192)
Consumer	-0.000931*	-0.000696	-0.000180	-0.000135
	(0.000475)	(0.000436)	(0.000363)	(0.000369)
Unemployment	-0.0551***	-0.0515***	-0.0101***	-0.00931***
	(0.00355)	(0.00344)	(0.00266)	(0.00287)
Heath	0.0188***	0.00844*	0.00496	0.00189
	(0.00414)	(0.00450)	(0.00318)	(0.00385)
Population	0.00481	0.00524	-0.00280	-0.00302
	(0.0162)	(0.0176)	(0.0111)	(0.0134)
Social support	0.0976***	0.0907***	0.0249	0.0234
	(0.0284)	(0.0314)	(0.0197)	(0.0240)
Total natural resources	-0.00701***	-0.00683***	-0.000945	-0.00119
	(0.00204)	(0.00192)	(0.00152)	(0.00160)
Africa		-0.539***		-0.0641
		(0.175)		(0.124)
Latin America		0.122		0.0738
		(0.162)		(0.111)
East Asia		-0.666***		-0.0764
		(0.164)		(0.112)
South Asia		-0.512***		-0.0555
		(0.181)		(0.131)
North America		-0.120		-0.00935
		(0.190)		(0.128)
Middle East		-0.626***		-0.0638
		(0.174)		(0.121)
Europe and Central Asia		-0.584***		-0.0681
		(0.157)		(0.106)
Constant	0.763**	0.586*	0.602***	0.702***
	(0.360)	(0.305)	(0.152)	(0.243)
Countries	1,206	1,206	1,206	1,206
Pseudo R-squared	0.424	0.488	0.0521	0.0558

Note: Authors' estimates, Standard errors in parentheses; ***p<0.01, **p<0.05, *p<0.1

4.2.3 Analysis using quantile regressions

It is generally accepted that standard linear regression techniques, including OLS, focus on estimating the mean of the dependent variable based on the values of the independent variables. This may raise doubt as to the relevance of the choice of the estimation technique used. However, one may be interested in studying the relationship at other points in the conditional distribution of the dependent variable. Quantile regression (QR) allows us to estimate effects at

different points in the distribution of conditional outcomes. Furthermore, unlike OLS, QR is robust to outliers of the dependent variable.

The simplified version of the QR specifies the conditional quantile as a linear function of the explanatory variables and can be expressed as follows:

$$Y_i = X_i'\beta_\theta + \varepsilon_{\theta i} \quad (2)$$

$$Quantiles_i(Y_i/X_i) = X_i'\beta_i \ , \quad (3)$$

Where θ is the order of the quantile, β_θ is the vector of the quantile parameter and $Quantiles_i(Y_i/X_i)$ denotes the conditional expected value of the dependent variable Y in the quantile θ, given the specified regressor vector X, without the zero assumption of $Quantiles_i(Y_i/X_i) = 0$

The quantile regression estimator is obtained by optimizing the following objective function:

$$\boldsymbol{min_\beta}\left\{\sum_{\boldsymbol{i=Y_i\geq X_i'\beta}} \boldsymbol{\theta|Y_i - X_i'\beta|} + \sum_{\boldsymbol{i=Y_i<X_i'\beta}} \boldsymbol{(1-\theta)|Y_i - X_i'\beta|}\right\} \quad (\mathbf{4})$$

Where i designates the country, Y_i the happiness proxy, β is the vector of parameters to be estimated and X_i' the vector of explanatory variables.

In this study, as apparent in Table 8, we consider 5 quantiles, namely 0.1; 0.25; 0.50; 0.75 and 0.95 quantiles. Compared to the OLS estimate, the differences in magnitude from attendant quantiles show that the QR technique is worthwhile in further providing insights into the investigated linkages, not least, because there is an apparent U-shape nexus between happiness and duration in power in the top quantiles of the conditional distribution of happiness. Accordingly, the nexus between duration of power and happiness is significant in the median and top quantiles of the conditional distribution of happiness. Moreover, in terms of shape, it is U-shape because the negative magnitude decreases from the median to the 0.75 quantile and then increases again in the 0.90th quantile.

Table 8: panel OLS and QR

	Dependent Variable: Happiness					
Variables	**OLS**	**Q(0.1)**	**Q(.25)**	**Q(.5)**	**Q(.75)**	**Q (.95)**
Duration	**-0.00793*** **	**-0.006**	**-0.004**	**-0.007** **	**-0.005***	**-0.009** **
	(0.00271)	(0.006)	(0.004)	(0.003)	(0.003)	(0.004)
Constant	0.586**	0.499	0.974	0.369	-0.061	0.627
	(0.298)	(0.462)	(0.745)	(0.574)	(0.451)	(0.827)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Regional dummies	Yes	Yes	Yes	Yes	Yes	Yes
Countries	1,208	1206	1206	1206	1206	1206
R^2 / Pseudo R^2	0.791	0.4816	0.5207	0.5725	0.5934	0.5616

Note: Authors' estimates. Bootstrapped standard errors in parentheses. *p < 0.10, **p < 0.05, ***p < 0.010.

4.2.4 Controlling for governance indicators

In order to establish if the previous findings withstand empirical scrutiny, dimensions of political governance and institutional governance are involved in the conditioning information set. This is essentially because political stability within the perspective of political governance and corruption-control within the remit of institutional governance are likely to affect the manner in which people happy. Accordingly, from intuition, politically-unstable countries are likely to engender less happiness because political instability is not intuitively associated with favorable conditions for citizens to realize the maximum of their potentials in many walks of life. Moreover, corruption-control is also likely to boost happiness because people are certain that government officials are not diverting public resources for private gain and hence, the equitable of distribution of fruits of economic prosperity across to population to enhance happiness.

The corresponding findings are provided in Table 9. It is apparent from the findings that the negative sign of duration of power on happiness established earlier withstands empirical scrutiny. Moreover, the considered governance variables reflect the anticipated positive signs, through the effect of political stability is not significant.

Table 9: OLS Estimation with Governance control variables

	Dependent Variable: Happiness	
Duration	**-0.00550****	**-0.0139*****
	(0.00266)	**(0.00324)**
Control of Corruption	0.397***	
	(0.0363)	
Political Stability		0.0145
		(0.0298)
Control variables	Yes	Yes
Regional dummies	Yes	Yes
Observations	1,216	1,213
R-squared	0.749	0.717

Note: Authors' estimates, p < 0.10, ** p < 0.05, *** p < 0.01; Robust standard errors in parentheses

5. Conclusion, policy implications, caveats and future research directions

This paper has empirically analyzed the effect of the longevity of leaders in power on the happiness of individuals around the world over the period 2006 to 2018. To make the assessment, we have constituted a sample of 135 countries. The findings show that longevity in power negatively affects the well-being of individuals. The estimated negative nexus is robust to accounting for the limited range of happiness (i.e., by means of Tobit regressions) as well as to the conditional distribution of happiness (i.e., when quantile regression are employed). In addition, we have highlighted two potential transmission channels, namely the governance channel (institution) and the public expenditure channel.

The main economic policy recommendation that arises from our study is that political authorities should respect the constitutional term limit or carry out constitutional reforms with the aim of limiting the term of office of the executive in order to reduce the harmful effect of duration of power on the well-being and/or happiness of individuals. These policy implications can be further expanded from three angles, notably: (i) policy makers based in Africa; (ii) below-median and above-median levels of happiness and (iii) sustainable development goals (SDGs). These are expanded in what follows in the same chronology as highlighted.

First, the findings evidently speak to many African countries in which, most heads of states stay in power for more than the required constitutional terms, often changing constitutional limits to

remain in power for as long as possible. With the exception of Rwanda which is a success story in terms of economic development, despite the head of state being in power beyond the initial presidential term limits, economic development and wellbeing in other African countries has not been followed by presidents staying long in power. Perhaps another slight exception that is not covered by the sampled periodicity is Côte d'Ivoire. It follows that the African Union and relevant continental bodies should seriously consider limiting executive terms in order to provide opportunities for the enhanced wellbeing of citizens.

Second, it is also apparent from the findings that the negative nexus between duration in power and happiness is significant in the top quantiles of the conditional distribution of happiness compared to the bottom quantiles of the conditional distribution of happiness for which, the nexus is not significant. It follows that the significance of the nexus is only apparent when existing levels of happiness are above median happiness levels. Thus, policy makers should allocate more resources to fighting the incidence of duration of power on happiness in countries where existing levels of happiness are above the median level of happiness. By extension, policy makers who have been tailoring blanket policies building on the potential negative nexus between the duration of power and happiness have been getting their dynamics wrong, not least, because such policies should be contingent on initial levels of happiness and thus tailored differently across countries with various initial levels of happiness and/or wellbeing.

Third, the findings also speak to SDG3 that is focused on the promotion of healthy lives and wellbeing. Hence, it is worthwhile to conceive that if the underlying SDG3 is not met by the year 2030 in some/most African countries, the reason of such non-achievement could be traceable to the long duration of political leaders in office. By extension, given that wellbeing is intuitively correlated to reduction of poverty and mitigation of income inequality, it follows that the findings also speak to SDG1 and SDG10 focusing respectively, on extreme poverty reduction and income inequality mitigation.

A major caveat in this study is that the conception and measurement of the independent variable of interest or duration of power, makes abstraction to the democratic or autocratic context of the corresponding duration. Hence, distinguishing the underlying context in future research could provide more insights into the nexuses being examined, not least, because happiness in the context of duration of power within the remit of democracies could be different from happiness enjoyed by the population when presidents stay in power under autocratic rule. Furthermore, while the motivation and intuition for the direction of causality are clarified in the

introduction and Section 2 of the study, we fully acknowledge that the opposite direction is also plausible and thus a worthwhile future research direction. Accordingly, happiness can be predictor of duration in office, not least, because unhappy people may be fearful of the future and more likely to turn to religion as a coping mechanism for their fears (Kuzenbayev and Pelizzo, 2023), and thus, more inclined to support the status quo in politics because they believe that a change in government would only make them feel even more anxious and less happy.

The findings in this study also leave space for further research, especially within the remit of understanding how the established nexuses affect other United Nations' SDGs as well as Agenda 2063 of the African Union. Moreover, reconsidering the intuitions motivating the study in the context of failed common currency arrangements in the continent as well as the potential of the African Continental Free Trade Area (AfCFTA), are worthwhile future research endeavours that can improve scholarly and policy understanding of the macroeconomic consequences of duration in power. Moreover, duration of power as conceived and measured in the study is at the presidential level and hence, since presidential powers are at country or macroeconomic levels, the corresponding study is bound to be macroeconomic. Hence, contingent on data availability, future studies should assess if the established findings withstand empirical scrutiny within the framework of micro-level analyses. Considering World Governance Indicators (WGI) of the World Bank as well as how public spending (e.g., size of the budget deficit and the size of the public debt) is affected in the suggested future direction is also worthwhile.

References

Acemoglu, D., & Robinson, J. A. (2006). *Economic origins of dictatorship and democracy*. Cambridge University Press.

Ali, S., Murshed, S. M., & Papyrakis, E. (2020). Happiness and the resource curse. *Journal of Happiness Studies*, *21*, 437–464.

Appel, H., Crusius, J., & Gerlach, A. L. (2015). Social comparison, envy, and depression on Facebook: A study looking at the effects of high comparison standards on depressed individuals. *Journal of Social and Clinical Psychology*, 34(4), 277–289.

Argyle, M. (2003). 18 causes and correlates of happiness. *Well-Being: The Foundations of Hedonic Psychology*, *353*.

Asongu, S. A., & Le Roux, S. (2017). Enhancing ICT for inclusive human development in Sub-Saharan Africa. *Technological Forecasting and Social Change*, *118*, 44–54.

Besley, T., & Kudamatsu, M. (2006). Health and democracy. *American Economic Review*, *96*(2), 313–318.

Besley, T., Montalvo, J. G., & Reynal-Querol, M. (2011). Do educated leaders matter? *The Economic Journal*, *121*(554), F205-227.

Bjørnskov, C., Dreher, A., & Fischer, J. A. (2007). The bigger the better? Evidence of the effect of government size on life satisfaction around the world. *Public Choice*, *130*, 267–292.

Bjørnskov, C., Dreher, A., & Fischer, J. A. (2010). Formal institutions and subjective well-being: Revisiting the cross-country evidence. *European Journal of Political Economy*, *26*(4), 419–430.

Blanchflower, D. G. (2021). Is happiness U-shaped everywhere? Age and subjective well-being in 145 countries. *Journal of Population Economics*, *34*(2), 575–624.

Blanchflower, D. G., & Oswald, A. J. (2008). Is well-being U-shaped over the life cycle? *Social Science & Medicine*, *66*(8), 1733–1749.

Blum, J., Dorn, F., & Heuer, A. (2021). Political institutions and health expenditure. *International Tax and Public Finance*, *28*, 323–363.

Carmignani, F., & Avom, D. (2010). The social development effects of primary commodity export dependence. *Ecological Economics*, *70*(2), 317–330.

Chae, J. (2018). Reexamining the relationship between social media and happiness: The effects of various social media platforms on reconceptualized happiness. *Telematics and Informatics*, 35(6), 1656–1664.

Charron, N., & Lapuente, V. (2011). Which dictators produce quality of government? *Studies in Comparative International Development*, *46*, 397–423.

Chung, K. H., & Im, T. (2022). Happiness in developing countries: Can government competitiveness substitute for formal institutions? *International Review of Administrative Sciences*, *88*(3), 899–918.

Daniele, V. (2011). Natural resources and the 'quality'of economic development. *The Journal of Development Studies*, *47*(4), 545–573.

Dreher, A., Lamla, M. J., Lein, S. M., & Somogyi, F. (2009). The impact of political leaders' profession and education on reforms. *Journal of Comparative Economics*, *37*(1), 169–193.

Easterlin, R. A. (1974). Does economic growth improve the human lot? Some empirical evidence. In *Nations and households in economic growth* (pp. 89–125). Elsevier.

Easterlin, R. A. (2001). Income and happiness: Towards a unified theory. *The Economic Journal*, *111*(473), 465–484.

El Harbi, S., & Grolleau, G. (2012). Does self-employment contribute to national happiness? *The Journal of Socio-Economics*, *41*(5), 670–676.

Eren, K. A., & Aşıcı, A. A. (2017). The determinants of happiness in Turkey: Evidence from city-level data. *Journal of Happiness Studies*, *18*, 647–669.

Frey, B., & Stutzer, A. (2002). The economics of happiness. *WORLD ECONOMICS-HENLEY ON THAMES-*, *3*(1), 25–42.

Greene, W. (2008). Econometric Analysis. 6th (ed.) Prentice Hill Publishing. *Upper Saddle River*.

Gregorio, L. E., & Gregorio, D. I. (2013). Polity and health care expenditures: The association among 159 nations. *Journal of Epidemiology and Global Health*, *3*(1), 49–57.
Helliwell, J. F. (2006). Well-being, social capital and public policy: What's new? *The Economic Journal*, *116*(510), C34–C45.
Helliwell, J. F., & Huang, H. (2008). How's your government? International evidence linking good government and well-being. *British Journal of Political Science*, *38*(4), 595–619.
Helliwell, J. F., Huang, H., Grover, S., & Wang, S. (2018). Empirical linkages between good governance and national well-being. *Journal of Comparative Economics*, *46*(4), 1332–1346.
Knoll, B., & Pitlik, H. (2016). Who benefits from big government? A life satisfaction approach. *Empirica*, *43*, 533–557.
Koenker, R., & Bassett Jr, G. (1978). Regression quantiles. *Econometrica: Journal of the Econometric Society*, 33–50.
Kotakorpi, K., & Laamanen, J.-P. (2010). Welfare state and life satisfaction: Evidence from public health care. *Economica*, *77*(307), 565–583.
Kuzenbayev, N., & Pelizzo, R. (2023). Political Stability, Confidence in the Future, and Values. Social Sciences, 12(2), 82.
Lake, D. A., & Baum, M. A. (2001). The invisible hand of democracy: Political control and the provision of public services. *Comparative Political Studies*, *34*(6), 587–621.
Levinson, A. (2012). Valuing public goods using happiness data: The case of air quality. *Journal of Public Economics*, *96*(9–10), 869–880.
Li, Q., & An, L. (2020). Corruption takes away happiness: Evidence from a cross-national study. *Journal of Happiness Studies*, *21*, 485–504.
Limi, K. I., & Epo, N. B. (2023). Duration of heads of state in power and economic growth in sub-saharan africa. Journal of Economic Development, 48 (1), 145-172.
Maddison, D., & Rehdanz, K. (2011). The impact of climate on life satisfaction. *Ecological Economics*, *70*(12), 2437–2445.
Mignamissi, D., & Kuete, Y. F. M. (2021). Resource rents and happiness on a global perspective: The resource curse revisited. *Resources Policy*, *71*, 101994.
Murray, T., Maddison, D., & Rehdanz, K. (2013). Do geographical variations in climate influence life-satisfaction? *Climate Change Economics*, *4*(01), 1350004.
Næss, S., Blekesaune, M., & Jakobsson, N. (2015). Marital transitions and life satisfaction: Evidence from longitudinal data from Norway. *Acta Sociologica*, *58*(1), 63–78.
Ndayikeza, M. A. (2021). Government expenditure and longevity of African leaders. *Scientific African*, *13*, e00929.
Nikolova, M. (2016). Minding the happiness gap: Political institutions and perceived quality of life in transition. *European Journal of Political Economy*, *45*, 129–148.
Njangang, H. (2019). *Governance and Happiness in African countries*. MPRA Paper No. 94361 https://mpra.ub.uni-muenchen.de/94361/ (Accessed: 12/12/2023)
Obydenkova, A. V., & Salahodjaev, R. (2017). Government size, intelligence and life satisfaction. *Intelligence*, *61*, 85–91.
O'Connor, K. J. (2017). Happiness and welfare state policy around the world. *Review of Behavioral Economics*, *4*(4), 397–420.
Olson, M. (1993). Dictatorship, democracy, and development. *American Political Science Review*, *87*(3), 567–576.
Orru, K., Orru, H., Maasikmets, M., Hendrikson, R., & Ainsaar, M. (2016). Well-being and environmental quality: Does pollution affect life satisfaction? *Quality of Life Research*, *25*, 699–705.
Oswald, A. J., Proto, E., & Sgroi, D. (2015). Happiness and productivity. *Journal of Labor Economics*, *33*(4), 789–822.

Ott, J. (2005). Level and inequality of happiness in nations: Does greater happiness of a greater number imply greater inequality in happiness? *Journal of Happiness Studies*, *6*(4), 397.
Ott, J. C. (2010). Good governance and happiness in nations: Technical quality precedes democracy and quality beats size. *Journal of Happiness Studies*, *11*(3), 353–368.
Ott, J. C. (2011). Government and happiness in 130 nations: Good governance fosters higher level and more equality of happiness. *Social Indicators Research*, *102*, 3–22.
https://doi.org/10.1016/j.jce.2018.07.014
Papaioannou, K. J., & Van Zanden, J. L. (2015). The dictator effect: How long years in office affect economic development. *Journal of Institutional Economics*, *11*(1), 111–139.
Perovic, L. M., & Golem, S. (2010). Investigating macroeconomic determinants of happiness in transition countries: How important is government expenditure? *Eastern European Economics*, *48*(4), 59–75.
Profeta, P., Puglisi, R., & Scabrosetti, S. (2013). Does democracy affect taxation and government spending? Evidence from developing countries. *Journal of Comparative Economics*, *41*(3), 684–718.
Ram, R. (2009). Government spending and happiness of the population: Additional evidence from large cross-country samples. *Public Choice*, *138*, 483–490.
Rehdanz, K., Welsch, H., Narita, D., & Okubo, T. (2015). Well-being effects of a major natural disaster: The case of Fukushima. *Journal of Economic Behavior & Organization*, *116*, 500–517.
Segal, P. (2011). Resource rents, redistribution, and halving global poverty: The resource dividend. *World Development*, *39*(4), 475–489.
Siverson, R. M., Morrow, J. D., de Mesquita, B. B., & Smith, A. (2003). The logic of political survival. *M. Press, Ed*.
Sulemana, I., Iddrisu, A. M., & Kyoore, J. E. (2017). A micro-level study of the relationship between experienced corruption and subjective wellbeing in Africa. *The Journal of Development Studies*, *53*(1), 138–155.
Tella, R. D., MacCulloch, R. J., & Oswald, A. J. (2003). The macroeconomics of happiness. *Review of Economics and Statistics*, *85*(4), 809–827.
Weech-Maldonado, R., Miller, M. J., & Lord, J. C. (2017). The relationships among socio-demographics, perceived health, and happiness. *Applied Research in Quality of Life*, *12*, 289–302.
Welander, A., Lyttkens, C. H., & Nilsson, T. (2015). Globalization, democracy, and child health in developing countries. *Social Science & Medicine*, *136*, 52–63.
Welsch, H. (2002). Preferences over prosperity and pollution: Environmental valuation based on happiness surveys. *Kyklos*, *55*(4), 473–494.
Welsch, H. (2006). Environment and happiness: Valuation of air pollution using life satisfaction data. *Ecological Economics*, *58*(4), 801–813.
Wintrobe, R. (2000). *The political economy of dictatorship*. Cambridge University Press.
Wright, J. (2008). Do authoritarian institutions constrain? How legislatures affect economic growth and investment. *American Journal of Political Science*, *52*(2), 322–343.
Yogo, U. T., & Keneck Massil, J. (2019). Presidential term limits and fiscal policy in African countries. *Journal of African Economies*, *28*(2), 202–224.
Zhang, W., Lawell, C.-Y. C. L., & Umanskaya, V. I. (2017). The effects of license plate-based driving restrictions on air quality: Theory and empirical evidence. *Journal of Environmental Economics and Management*, *82*, 181–220.
Zimmermann, A. C., & Easterlin, R. A. (2006). Happily ever after? Cohabitation, marriage, divorce, and happiness in Germany. *Population and Development Review*, 511–528.