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**DETERMINANTS AND PROSPECT OF BILATERAL
TRADE FLOW OF MALAYSIA AND ITS AFRICAN OIC
MEMBER COUNTRIES**

YUSUF HAMMED AGBOOLA



**DOCTOR OF PHILOSOPHY
UNIVERSITI UTARA MALAYSIA
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**DETERMINANTS AND PROSPECT OF BILATERAL TRADE FLOW OF
MALAYSIA AND ITS AFRICAN OIC MEMBER COUNTRIES PAGE**

By

YUSUF HAMMED AGBOOLA



**Thesis Submitted to
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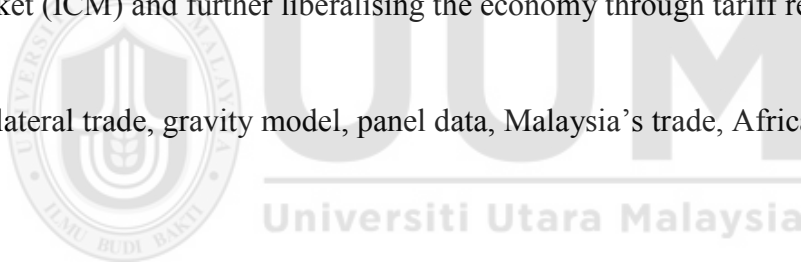


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ABSTRACT

International trade has always been playing a crucial role in the process of growth and development in Malaysia. This study examined the determinants and prospect of bilateral trade flow of Malaysia and Africa OIC member countries from the period 1985 to 2015. It is aimed to examine their trends, pattern of trade, determinants of exports and imports, and assess their future prospects. Quantitative method of analysis was used to achieve the objectives of this study. The methods employed were dynamic panel data using Gravity Model (GM) of trade, Poisson Pseudo Maximum likelihood (PPML), and Dynamic Ordinary Least Square (DOLS), to test for the long run relationship. Findings from the gravity results showed that exports and imports flow from Malaysia to OIC countries in Africa were determined by bilateral distance, Gross Domestic Product (GDP) per capita, GDP similarities, common colony, population growth and exchange rate. However, weak institutional quality among the OIC countries in Africa have been hindering bilateral trade flows between Malaysia and OIC countries in Africa. On these premises, the study suggested that OIC countries in Africa must address their weak institutional structures within their region in order to enhance bilateral trade between Malaysia and OIC countries in Africa. Findings from the analyses were constructed by employing the SWOT analysis to investigate future prospects of bilateral trade relationship between Malaysia and OIC member countries in Africa. Based on these findings, some policy issues were highlighted, and policy recommendations were developed, such as accelerating the effort to improve the environments of Islamic finance and banking, establishing the Islamic Common Market (ICM) and further liberalising the economy through tariff reduction.

Keywords: bilateral trade, gravity model, panel data, Malaysia's trade, Africa's trade



ABSTRAK

Perdagangan antarabangsa sentiasa memainkan peranan penting dalam proses pertumbuhan dan pembangunan di Malaysia. Penyelidikan ini, mengkaji kesan hubungan perdagangan dua hala antara Malaysia dan negara OIC lain di rantau Afrika sepanjang tempoh 1985 hingga 2015. Ia bertujuan untuk meneliti tren, bentuk perdagangan, penentu eksport dan import, dan menilai prospek masa depan mereka. Kaedah analisis kuantitatif telah digunakan dan data panel dinamik menggunakan graviti perdagangan; *Poisson Pseudo Maximum likelihood* (PPML) dan *Dynamic Ordinary Least Squares* (DOLS) turut digunakan untuk menguji hubungan jangka panjang bagi mencapai objektif kajian ini. Hasil daripada keputusan graviti menunjukkan bahawa aliran eksport dan import dari Malaysia ke negara OIC di Afrika ditentukan oleh jarak dua hala, Keluaran Dalam Negara Kasar (KDNK) per kapita, persamaan KDNK, tanah jajahan biasa, pertumbuhan penduduk dan kadar pertukaran. Sebaliknya, keterbukaan ekonomi didapati tidak signifikan dalam menjelaskan penentu perdagangan antara Malaysia dengan negara-negara OIC lain di Afrika. Namun, kualiti institusi yang lemah di kalangan negara OIC di Afrika telah menghalang aliran perdagangan dua hala antara Malaysia dan negara OIC lain di Afrika. Seterusnya, kajian ini mencadangkan bahawa negara-negara OIC di Afrika perlu mengatasi masalah kualiti struktur institusi yang lemah di rantau mereka bagi meningkatkan perdagangan dua hala antara Malaysia dan negara OIC di Afrika. Dapatan kajian daripada analisis telah dibina menggunakan analisis *SWOT* untuk menyiasat prospek masa depan hubungan dua hala antara Malaysia dan negara anggota OIC yang lain di Afrika. Berdasarkan penemuan ini, beberapa isu dasar ditekankan, dan cadangan dasar telah dibangunkan, seperti mempercepatkan usaha untuk memperbaiki persekitaran bidang kewangan dan perbankan Islam, mewujudkan Pasaran Islam Bersekutu (ICM) dan meliberalisasikan lagi ekonomi melalui pengurangan tarif.

Kata Kunci: perdagangan dua hala, model graviti, data panel, perdagangan Malaysia, perdagangan Afrika.

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LIST OF ABBREVIATIONS

AEC	Africa Economic Community
AFTA	ASEAN Free Trade Area
AMU	Arab Maghreb Union
APEC	Asia-Pacific Economic Cooperation
ASEAN	Association of Southeast Asian Nations
AU	Africa Union
BNM	Bank Negara Malaysia
BTA	Bilateral Trade Flow
CIA	Central Intelligence Agency
CM	Common Market
COMESA	Common Market for Eastern and Southern Africa
CU	Custom Union
DOTS	Direction of Trade Statistics
EAC	East Africa Community
ECCAS	Economic Community of Central Africa States
ECOWAS	Economic Community of West Africa States
EFTA	European Free Trade Agreement
EMU	Economic Monetary Union
ETP	Economic Transformation Programme
EU	European Union
FDI	Foreign Direct Investment
FTA	Free Trade Agreement
GCC	Gulf Cooperation Council
GDP	Gross Domestic Product
GTP	Government Transformation Programme
ICM	Islamic Common Market
IMF	International Monetary Fund
KPI	Key Performance Indicators
MENA	Middle East and North Africa
MI	Middle-Income
MITI	Ministry of International Trade and Industry

NAFTA	North American Free Trade Agreement
NEM	New Economic Model
NKEA	National Key Economic Area
NKRA	National Key Result Area
NTP	National Transformation Policy
OIC	Organization of Islamic co-operation countries
PPP	Public-Private Partnership
PTA	Preferential Trade Agreements
RTAs	Regional Trade Agreements
SITC	Standard International Trade Classification
SRI	Strategic Reform Initiative
TPS-OIC	Trade Preferential System – Organization of Islamic Cooperation
UAE	United Arab Emirates
UDEAC	Central Africa Customs and Economic Union
UN COMTRADE	United Nations Commodity Trade Statistics Database
UNCTAD	United Nations Conference on Trade and Development
UNECA	United Nations Economic Commission for Africa
WAEMU	West Africa Economic and Monetary Union
WAMZ	West Africa Monetary Zone
WDI	World Development Indicators
WIFE	World Islamic Economic Forum
WTO	World Trade Organization
10MP	10th Malaysia Plan

CHAPTER ONE

INTRODUCTION

1.1 Background and Motivation of the Study

Traditionally, international trade has been given more attention in the literature due to its vital role in global economy. It is among the fastest developing economic activities in the world and has a high level of influence on the income earned by many countries of the world. Development of foreign trade in the recent decades has been sophisticated due to the liberalisation phenomenon. Also, the development in technology witnessed in the last century after the end of World War Two (WW II) have led to a refined transportation system which resulted in a reduction in the cost of transportation, as well as better technology which promotes rapid growth in foreign trade and integration. Hence, trade accounts for a major share of most countries' gross domestic product (GDP), foreign exchange earnings, mitigation of poverty and other related vulnerabilities, and promotion of internalization (World Bank, 2017). Besides having economic influence, trade has political and social influences since a lot of today's negotiations and agreements have an implicit goal of trade. For instance, from 1950 to 2004, the average growth of the global trade was around 5.9 percent, with a manufacturing growth rate of 7.2 percent. Also, the global share of exports of manufacturers in developing countries grew from 10 percent in 1980 to nearly 45 percent in 2014 (UNTAD, 2016).

Of importance to trade growth is the process of regionalization. The ideas of economic integrations in international trade were introduced by Balassa (1961), which is also called regionalism. Moreover, this concept demonstrates that inverse relationship exists between economic integration and barrier to trade. There are five kinds of integration that exist which includes the preferential Trade agreement (PTA), Free Trade Area

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APPENDIX A: PPML result for model (1) export model

ppml export dist logopen diffgdppc logsimgdp comcol comlang_off logPopulationj logreer logGDPi logGDPj logPopulationi
oicij countrydum* , strict

Number of parameters: 34

Number of observations: 734

Pseudo log-likelihood: -3.102e+09

R-squared: .85634161

Option strict is: on

	Robust					
export	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
dist	-.0011699	.0002757	-4.24	0.000	-.0017102	-.0006296
logopen	-.0246751	.0267577	-0.92	0.356	-.0771192	.0277691
diffgdppc	-.0156473	.0342792	-0.46	0.648	-.0828333	.0515387
logsimgdp	.1862839	.0822038	2.27	0.023	.0251675	.3474003
comcol	6.456241	1.208586	5.34	0.000	4.087456	8.825027
logPopulationj	3.350226	.6086617	5.50	0.000	2.157271	4.543181
logreer	-2.925707	1.407751	-2.08	0.038	-5.684849	-.1665653
logGDPi	2.197454	.5576283	3.94	0.000	1.104523	3.290385
logGDPj	.0405832	.0528708	0.77	0.443	-.0630417	.1442081
logPopulationi	-6.877739	2.96978	-2.32	0.021	-12.6984	-1.057077
oicij	.1060254	.0662023	1.60	0.109	-.0237288	.2357796
countrydum1	-4.85949	1.338844	-3.63	0.000	-7.483575	-2.235404
countrydum2	.8050645	.437722	1.84	0.066	-.0528548	1.662984
countrydum3	-5.830645	.627007	-9.30	0.000	-7.059556	-4.601734
countrydum4	-4.734875	1.122599	-4.22	0.000	-6.93513	-2.53462
countrydum5	-8.082719	.9794779	-8.25	0.000	-10.00246	-6.162978
countrydum7	-2.701429	.6626142	-4.08	0.000	-4.000129	-1.402729
countrydum8	2.439764	.2583794	9.44	0.000	1.933349	2.946178
countrydum9	3.379708	.5461471	6.19	0.000	2.309279	4.450136
countrydum11	4.270669	1.206988	3.54	0.000	1.905017	6.636322
countrydum12	.2611428	.2216781	1.18	0.239	-.1733383	.695624
countrydum13	-8.075006	1.257377	-6.42	0.000	-10.53942	-5.610593
countrydum14	4.513679	.7464928	6.05	0.000	3.05058	5.976778
countrydum15	-4.082535	1.015428	-4.02	0.000	-6.072737	-2.092332
countrydum16	-7.017567	1.783313	-3.94	0.000	-10.5128	-3.522337
countrydum17	-4.699534	.7709715	-6.10	0.000	-6.21061	-3.188457

countrydum18	-15.16199	3.324125	-4.56	0.000	-21.67715	-8.64682
countrydum20	-4.31751	.8364226	-5.16	0.000	-5.956869	-2.678152
countrydum21	-13.37908	2.908857	-4.60	0.000	-19.08034	-7.677829
countrydum22	-15.01134	3.293488	-4.56	0.000	-21.46646	-8.556225
countrydum23	1.699665	.2010704	8.45	0.000	1.305574	2.093755
countrydum24	-2.518713	.7852573	-3.21	0.001	-4.057789	-.9796368
countrydum25	-16.59105	3.295999	-5.03	0.000	-23.05109	-10.13101
_cons	50.76174	40.92221	1.24	0.215	-29.44431	130.9678

test (logopen=diffgdppc= logsimgdp= logPopulationj= logreer= logGDPi= logGDPj= logPopulationi=1)

- (1) logopen - diffgdppc = 0
- (2) logopen - logsimgdp = 0
- (3) logopen - logPopulationj = 0
- (4) logopen - logreer = 0
- (5) logopen - logGDPi = 0
- (6) logopen - logGDPj = 0
- (7) logopen - logPopulationi = 0
- (8) logopen = 1

chi2(8) = 2387.35

Prob > chi2 = 0.0000

. test (dist= comcol= oicij =0)

- (1) dist - comcol = 0
- (2) dist - oicij = 0
- (3) dist = 0

chi2(3) = 118.94

Prob > chi2 = 0.0000

PPML RESULT FOR MODEL (2): IMPORT MODEL

PPML MODEL (2) IMPORT

ppml import comcol distcap logPopulationi logPopulationj logreeri logsimgdpj loggdpi
loggdpi diffgdppc oicij countrydum* , strict

Number of observations: 679

Pseudo log-likelihood: -4.022e+09

R-squared: .76287434

Option strict is: on

	Robust						
import	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]		
-----+-----							
comcol	2.313171	.295491	7.83	0.000	1.734019	2.892323	
distcap	-.0007917	.0000857	-9.23	0.000	-.0009598	-.0006237	
logPopulationi	2.578618	.7356162	3.51	0.000	1.136836	4.020399	
logPopulationj	4.90192	.8267348	5.93	0.000	3.281549	6.52229	
logreeri	-.0482586	.0437637	-1.10	0.270	-.1340338	.0375167	
logsimgdpj	.0460597	.0754755	0.61	0.542	-.1018696	.193989	
loggdpi	.020345	.0983152	0.21	0.836	-.1723492	.2130393	
loggdpi	.0608381	.0331516	1.84	0.066	-.0041378	.125814	
diffgdppc	.0375558	.0338874	1.11	0.268	-.0288622	.1039738	
oicij	-.1977235	.1645484	-1.20	0.230	-.5202323	.1247854	
countrydum1	-5.523501	2.496055	-2.21	0.027	-10.41568	-.6313236	
countrydum2	-2.345978	1.488624	-1.58	0.115	-5.263627	.5716715	
countrydum3	-6.223342	1.820654	-3.42	0.001	-9.791759	-2.654925	
countrydum4	-5.962499	2.098195	-2.84	0.004	-10.07488	-1.850113	
countrydum5	-9.641519	1.746452	-5.52	0.000	-13.0645	-6.218537	
countrydum6	-2.660833	.2683762	-9.91	0.000	-3.18684	-2.134825	
countrydum7	-4.483382	1.950283	-2.30	0.022	-8.305865	-.6608979	
countrydum9	.144114	.3140881	0.46	0.646	-.4714874	.7597153	
countrydum12	-2.708372	1.414365	-1.91	0.056	-5.480477	.0637325	
countrydum13	-9.196711	1.944349	-4.73	0.000	-13.00756	-5.385857	
countrydum14	.7789902	.6239226	1.25	0.212	-.4438756	2.001856	
countrydum15	-5.180174	2.336756	-2.22	0.027	-9.760131	-.6002174	
countrydum16	-7.672307	2.34916	-3.27	0.001	-12.27658	-3.068038	
countrydum17	-6.661747	1.860065	-3.58	0.000	-10.30741	-3.016087	

countrydum18		-11.32629	3.53371	-3.21	0.001	-18.25224	-4.400349
countrydum19		-3.246244	1.512122	-2.15	0.032	-6.209949	-.2825387
countrydum20		-3.408876	.9282168	-3.67	0.000	-5.228148	-1.589605
countrydum21		-9.876148	1.841227	-5.36	0.000	-13.48489	-6.267409
countrydum22		-10.25641	2.633124	-3.90	0.000	-15.41724	-5.095582
countrydum23		-2.009661	1.123457	-1.79	0.074	-4.211597	.1922747
countrydum24		-3.86555	1.639029	-2.36	0.018	-7.077988	-.6531119
countrydum25		-11.17894	2.615414	-4.27	0.000	-16.30506	-6.052826
_cons		-96.30532	8.089316	-11.91	0.000	-112.1601	-80.45056

. test (comcol= distcap= oicij=0)

(1) comcol - distcap = 0

(2) comcol - oicij = 0

(3) comcol = 0

chi2(3) = 139.37

Prob > chi2 = 0.0000

. test(logPopulationi =logPopulationj= logreeri= logsimgdpj= loggdpi= diffgdppc=1)

(1) logPopulationi - logPopulationj = 0

(2) logPopulationi - logreeri = 0

(3) logPopulationi - logsimgdpj = 0

(4) logPopulationi - loggdpi = 0

(5) logPopulationi - loggdpi = 0

(6) logPopulationi - diffgdppc = 0

(7) logPopulationi = 1

chi2(7) = 2218.28

Prob > chi2 = 0.0000

PPML RESULT FOR MODEL (3): (INSTITUTIONAL QUALITY MODEL)

```
ppml export comcol logGDPi loggdpi dist logPopulationi logPopulationj diffgdppc Simgdpij
logpts logcorr Ge Rq logreer newoic countrydum*,strict
```

Number of observations: 395

Pseudo log-likelihood: -1.733e+09

R-squared: .86176629

Option strict is: on

	Robust					
export	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
comcol	11.1414	2.110107	5.28	0.000	7.005668	15.27714
logGDPi	1.57037	.3129763	5.02	0.000	.9569481	2.183793
loggdpi	-.0157085	.0559081	-0.28	0.779	-.1252865	.0938694
dist	-.0023316	.0004859	-4.80	0.000	-.003284	-.0013792
logPopulationi	-9.071099	2.262143	-4.01	0.000	-13.50482	-4.63738
logPopulationj	6.032567	1.103874	5.46	0.000	3.869013	8.196121
diffgdppc	-.0081553	.0363325	-0.22	0.822	-.0793657	.063055
Simgdpij	.0026028	.0202995	0.13	0.898	-.0371835	.042389
logpts	.2792265	.1089783	2.56	0.010	.065633	.49282
logcorr	-.0617506	.1106181	-0.56	0.577	-.2785581	.1550569
Ge	-.0168143	.0080282	-2.09	0.036	-.0325493	-.0010794
Rq	.0105735	.0065039	1.63	0.104	-.0021739	.0233208
logreer	-.0479453	.038687	-1.24	0.215	-.1237706	.0278799
newoic	1.197935	.243761	4.91	0.000	.7201725	1.675698
countrydum1	-10.23255	2.404646	-4.26	0.000	-14.94557	-5.519532
countrydum2	-1.223394	.7620922	-1.61	0.108	-2.717067	.2702792
countrydum3	-8.832007	1.110346	-7.95	0.000	-11.00824	-6.65577
countrydum4	-10.09625	2.106238	-4.79	0.000	-14.2244	-5.968102
countrydum5	-12.5164	1.775374	-7.05	0.000	-15.99607	-9.03673
countrydum7	-5.602075	1.238471	-4.52	0.000	-8.029434	-3.174717
countrydum8	1.802371	.3095509	5.82	0.000	1.195662	2.409079
countrydum9	5.41786	.9749422	5.56	0.000	3.507009	7.328712
countrydum11	9.298489	2.127753	4.37	0.000	5.12817	13.46881
countrydum13	-13.86453	2.251977	-6.16	0.000	-18.27833	-9.450739
countrydum14	7.67769	1.395631	5.50	0.000	4.942305	10.41308
countrydum15	-8.746619	1.831598	-4.78	0.000	-12.33648	-5.156753
countrydum16	-15.18756	3.17653	-4.78	0.000	-21.41344	-8.961672

countrydum17	-8.265642	1.390894	-5.94	0.000	-10.99174	-5.539539
countrydum18	-28.5961	5.881257	-4.86	0.000	-40.12315	-17.06904
countrydum19	-.5084173	.3963432	-1.28	0.200	-1.285236	.2684011
countrydum20	-7.742066	1.507449	-5.14	0.000	-10.69661	-4.787519
countrydum21	-24.82946	5.169486	-4.80	0.000	-34.96147	-14.69746
countrydum22	-28.79279	5.901691	-4.88	0.000	-40.35989	-17.22569
countrydum23	.8814077	.3560937	2.48	0.013	.1834769	1.579338
countrydum24	-5.476092	1.357644	-4.03	0.000	-8.137026	-2.815157
_cons	61.91761	26.45504	2.34	0.019	10.06668	113.7685

test (logGDPi = loggdpi= logPopulationi= logPopulationj= diffgdppi= Simgdpij =logpts= logcorr= Ge = Rq = logreer =1)

- (1) logGDPi - loggdpi = 0
- (2) logGDPi - logPopulationi = 0
- (3) logGDPi - logPopulationj = 0
- (4) logGDPi - diffgdppi = 0
- (5) logGDPi - Simgdpij = 0
- (6) logGDPi - logpts = 0
- (7) logGDPi - logcorr = 0
- (8) logGDPi - Ge = 0
- (9) logGDPi - Rq = 0
- (10) logGDPi - logreer = 0
- (11) logGDPi = 1

chi2(11) =77495.73

Prob > chi2 = 0.0000

test (comcol= dist = newoic=0)

- (1) comcol - dist = 0
- (2) comcol - newoic = 0
- (3) comcol = 0

Constraint 3 dropped

chi2(2) = 40.44

Prob > chi2 = 0.0000

APPENDIX B: Dynamic ordinary least square model for exports (1)

xtsum logexport logdist comlang_off openJ diffgdppc logsimgdp comcol logPopulationj logPopulationi logreer newgdpi
logGDPj oicij

Variable	Mean	Std. Dev.	Min	Max	Observations
logexp~t overall	15.18425	2.477446	5.572754	20.33031	N = 701

between	1.6502	11.37226	17.85963	n = 25
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within	1.923026	8.74268	19.21268	T-bar = 28.04
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|

|

logdist overall	9.219485	.2237466	8.742872	9.475931	N = 775
-----------------	----------	----------	----------	----------	---------

between	.228213	8.742872	9.475931	n = 25
---------	---------	----------	----------	--------

within	0	9.219485	9.219485	T = 31
--------	---	----------	----------	--------

|

|

comlan~f overall	0	0	0	0	N = 775
------------------	---	---	---	---	---------

between	0	0	0	n = 25
---------	---	---	---	--------

within	0	0	0	T = 31
--------	---	---	---	--------

|

|

openJ overall	351.9071	222.3901	1	738	N = 775
---------------	----------	----------	---	-----	---------

between	138.4341	88.35484	626.0968	n = 25
---------	----------	----------	----------	--------

within	176.1708	-272.1897	861.0361	T = 31
--------	----------	-----------	----------	--------

|

|

diffgd~c overall	3.016164	1.538596	.833385	9.290505	N = 774
------------------	----------	----------	---------	----------	---------

between	1.054301	2.136114	7.808632	n = 25
---------	----------	----------	----------	--------

within	1.139108	-1.895284	9.132769	T-bar = 30.96
--------	----------	-----------	----------	---------------

|

|

logsim~p overall	2.289345	.5843846	-.3665129	2.581938	N = 774
------------------	----------	----------	-----------	----------	---------

between	.5000041	-.085054	2.538533	n = 25
---------	----------	----------	----------	--------

within	.3176293	-.4715393	4.921923	T-bar = 30.96
--------	----------	-----------	----------	---------------

|

|

comcol overall	.24	.4273589	0	1	N = 775
----------------	-----	----------	---	---	---------

between	.4358899	0	1	n = 25
---------	----------	---	---	--------

within	0	.24	.24	T = 31
--------	---	-----	-----	--------

|

|

logPop~j overall	15.82922	1.302533	12.78753	19.02063	N = 774
------------------	----------	----------	----------	----------	---------

between	1.305443	13.20069	18.62984	n = 25
---------	----------	----------	----------	--------

within	.2388974	15.30675	16.39113	T-bar = 30.96
--------	----------	----------	----------	---------------

|

|

logPop~i overall	16.94153	.1962685	16.57326	17.22768	N = 775
------------------	----------	----------	----------	----------	---------

```

between |          0 16.94153 16.94153 | n = 25
within |    .1962685 16.57326 17.22768 | T = 31
|
|
logreer overall | 4.686798 .1513068 4.520366 5.151721 | N = 775
between |          0 4.686798 4.686798 | n = 25
within |    .1513068 4.520366 5.151721 | T = 31
|
|
newgdpj overall | 4.81e-10      1 -1.101864 2.090711 | N = 775
between |          0 4.81e-10 4.81e-10 | n = 25
within |          1 -1.101864 2.090711 | T = 31
|
|
logGDPj overall | 5.577028 .9763108      0 6.608001 | N = 774
between |    .3090939 4.695998 6.174673 | n = 25
within |    .9281954 .0310757 7.437809 | T-bar = 30.96
|
|
oicij overall | .5148387 .5001025      0      1 | N = 775
between |    .0064516 .483871 .516129 | n = 25
within |    .5000625 -.0012903 1.030968 | T = 31

```

Pesaran's CADF test for export

Cross-sectional average in first period extracted and extreme t-values truncated

Deterministics chosen: constant

panel is unbalanced, only standardized Ztbar statistic can be calculated

Z[t-bar] test, (N,T1-T22) = (22, 31 26 31 31 31 31 26 26 26 31 31 31 31 31 31 31 31 31 31)

Obs = 552 Augmented by 4 lags (average)

Z[t-bar] P-value

-1.257 0.104

. pescadf d.export if countrypairs>3, lags (4)

Pesaran's CADF test for D.export

Cross-sectional average in first period extracted and extreme t-values truncated

Deterministics chosen: constant

panel is unbalanced, only standardized Ztbar statistic can be calculated

Z[t-bar] test, (N,T1-T22) = (22, 30 25 30 30 30 30 25 25 25 30 30 30 30 30 30 30 30 30 30)

Obs = 530 Augmented by 4 lags (average)

Z[t-bar] P-value

-2.651 0.004

. pescadf GDP_j if countrypairs>3, lags (5)

Number of gaps in sample: 1

sample may not contain gaps

Pesaran's CADF test for GDP_j

Cross-sectional average in first period extracted and extreme t-values truncated

Deterministics chosen: constant

panel is unbalanced, only standardized Ztbar statistic can be calculated

Z[t-bar] test, (N,T1-T22) = (22, 31 31 31 30 31 31 31 31 31 31 31 31 31 31 31 31 31 31)

Obs = 543 Augmented by 5 lags (average)

Z[t-bar] P-value

1.393 0.918

Pesaran's CADF test for D.GDP_j

Cross-sectional average in first period extracted and extreme t-values truncated

Deterministics chosen: constant

panel is unbalanced, only standardized Ztbar statistic can be calculated

Z[t-bar] test, (N,T1-T22) = (22, 30 30 30 28 30 30 30 30 30 30 30 30 30 30 30 30 30 30)

Obs = 589 Augmented by 2 lags (average)

Z[t-bar] P-value

-11.845 0.000

Pesaran's CADF test for Simgdpj

Cross-sectional average in first period extracted and extreme t-values truncated

Deterministics chosen: constant

panel is unbalanced, only standardized Ztbar statistic can be calculated

Z[t-bar] test, (N,T1-T24) = (24, 31 31 31 31 31 30 31 31 31 31 31 31 31 31 31 31 31 31 31)

Obs = 618 Augmented by 4 lags (average)

Z[t-bar] P-value

2.202 0.986

. help pescadf

. pescadf d.Simgdpj if countrypairs>1, lags (4)

Number of gaps in sample: 1

sample may not contain gaps

Pesaran's CADF test for D.Simgdpj

Cross-sectional average in first period extracted and extreme t-values truncated

Deterministics chosen: constant

panel is unbalanced, only standardized Ztbar statistic can be calculated

Z[t-bar] test, (N,T1-T24) = (24, 30 30 30 30 30 28 30 30 30 30 30 30 30 30 30 30 30 30 30)

Obs = 593 Augmented by 4 lags (average)

Z[t-bar] P-value

-2.136 0.016

pescadf diffgdppc if countrypairs>1, lags (2) trend

Number of gaps in sample: 1

sample may not contain gaps

Pesaran's CADF test for diffgdppc

Cross-sectional average in first period extracted and extreme t-values truncated

Deterministics chosen: constant & trend

panel is unbalanced, only standardized Ztbar statistic can be calculated

Z[t-bar] test, (N,T1-T24) = (24, 31 31 31 31 31 30 31 31 31 31 31 31 31 31 31 31 31 31 31)

Obs = 668 Augmented by 2 lags (average)

Z[t-bar] P-value

0.546 0.707

. pescadf d.diffgdppc if countrypairs>1, lags (2) trend

Number of gaps in sample: 1

sample may not contain gaps

Pesaran's CADF test for D.diffgdppc

Cross-sectional average in first period extracted and extreme t-values truncated

Deterministics chosen: constant & trend

panel is unbalanced, only standardized Ztbar statistic can be calculated

Z[t-bar] test, (N,T1-T24) = (24, 30 30 30 30 30 28 30 30 30 30 30 30 30 30 30 30 30 30 30)

Obs = 643 Augmented by 2 lags (average)

Z[t-bar] P-value

-5.742 0.000

. pescadf export if countrypairs>3, lags (4) trend trunoff

Pesaran's CADF test for export

Cross-sectional average in first period extracted and no truncation of extreme t-values

Deterministics chosen: constant & trend

panel is unbalanced, only standardized Ztbar statistic can be calculated

Z[t-bar] test, (N,T1-T22) = (22, 31 26 31 31 31 31 26 26 31 31 31 31 31 31 31 31 31 31)

Obs = 552 Augmented by 4 lags (average)

Z[t-bar] P-value

0.232 0.592

. pescadf d.export if countrypairs>3, lags (4) trend trunoff

Pesaran's CADF test for D.export

Cross-sectional average in first period extracted and no truncation of extreme t-values

Deterministics chosen: constant & trend

panel is unbalanced, only standardized Ztbar statistic can be calculated

Z[t-bar] test, (N,T1-T22) = (22, 30 25 30 30 30 30 25 25 30 30 30 30 30 30 30 30 30 30)

Obs = 530 Augmented by 4 lags (average)

Z[t-bar] P-value

-0.522 0.301

. pescadf d.export if countrypairs>3, lags (2) trend trunoff

Pesaran's CADF test for D.export

Cross-sectional average in first period extracted and no truncation of extreme t-values

Deterministics chosen: constant & trend

panel is unbalanced, only standardized Ztbar statistic can be calculated

Z[t-bar] test, (N,T1-T22) = (22, 30 25 30 30 30 25 25 30 30 30 30 30 30 30 30 30)

Obs = 574 Augmented by 2 lags (average)

Z[t-bar] P-value

-7.654 0.000

Pesaran's CADF test for D.Populationj

Cross-sectional average in first period extracted and extreme t-values truncated

Deterministics chosen: constant & trend

panel is unbalanced, only standardized Ztbar statistic can be calculated

Z[t-bar] test, (N,T1-T22) = (22, 30 30 30 28 30 30 30 30 30 30 30 30 30 30 30 30)

Obs = 543 Augmented by 4 lags (average)

Z[t-bar] P-value

0.948 0.828

. pescadf d.Populationj if countrypairs>3, lags (5)

Number of gaps in sample: 1

sample may not contain gaps

Pesaran's CADF test for D.Populationj

Cross-sectional average in first period extracted and extreme t-values truncated

Deterministics chosen: constant

panel is unbalanced, only standardized Ztbar statistic can be calculated

Z[t-bar] test, (N,T1-T22) = (22, 30 30 30 28 30 30 30 30 30 30 30 30 30 30 30 30)

Obs = 520 Augmented by 5 lags (average)

Z[t-bar] P-value

-2.681 0.004

. pescadf logopen if countrypairs>3, lags (3) trunoff

Pesaran's CADF test for logopen

Cross-sectional average in first period extracted and no truncation of extreme t-values

Deterministics chosen: constant

t-bar test, N,T = (22,31) Obs = 594

Augmented by 3 lags (average)

t-bar	cv10	cv5	cv1	Z[t-bar]	P-value
-1.579	-2.080	-2.160	-2.300	0.955	0.830

. pescadf d.logopen if countrypairs>3, lags (3) trunoff

Pesaran's CADF test for D.logopen

Cross-sectional average in first period extracted and no truncation of extreme t-values

Deterministics chosen: constant

t-bar test, N,T = (22,30) Obs = 572

Augmented by 3 lags (average)

t-bar	cv10	cv5	cv1	Z[t-bar]	P-value
-2.670	-2.070	-2.150	-2.300	-4.401	0.000

pescadf GDPJ if countrypairs>3, lags (3) trunoff

Number of gaps in sample: 1

sample may not contain gaps

Pesaran's CADF test for GDPJ

Cross-sectional average in first period extracted and no truncation of extreme t-values

Deterministics chosen: constant

panel is unbalanced, only standardized Ztbar statistic can be calculated

Z[t-bar] test, (N,T1-T22) = (22, 31 31 31 30 31 31 31 31 31 31 31 31 31 31 31 31 31 31 31)

Obs = 589 Augmented by 3 lags (average)

Z[t-bar] P-value

2.951 0.998

. pescadf d.GDPJ if countrypairs>3, lags (3) trunoff

Number of gaps in sample: 1

sample may not contain gaps

Pesaran's CADF test for D.GDPJ

Cross-sectional average in first period extracted and no truncation of extreme t-values

Deterministics chosen: constant

panel is unbalanced, only standardized Ztbar statistic can be calculated

Z[t-bar] test, (N,T1-T22) = (22, 30 30 30 28 30 30 30 30 30 30 30 30 30 30 30 30 30 30)

Obs = 566 Augmented by 3 lags (average)

Z[t-bar] P-value

-3.023 0.001

xtdolshm logexport logdist openJ diffgdppc logsimgdp comcol logPopulationj logPopulationi logreer newgdpi logGDPj
oicij,nla(2) nle(2)

DOLS Hom. Panel data Coint. Estimation results Number of obs = 234

Group variable: countrypairs Number of groups = 9

Wald chi2(11) = 197.83 Obs per group: min = 31

Prob > chi2 = 0.000 avg = 31

max = 31

R-squared = 0.7962

Adj R-squared = 0.4436

	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]
logdist	-2.420233				
openJ	.0000568	.000384	0.15	0.882	-.0006959 .0008095
diffgdppc	.1225474	.0647931	1.89	0.059	-.0044448 .2495395
logsimgdp	-1.641033	.2081565	-7.88	0.000	-2.049012 -1.233054
comcol	.1224986				
logPopulationj	.6712633	1.788986	0.38	0.707	-2.835085 4.177612
logPopulationi	.8396174	2.46016	0.34	0.733	-3.982208 5.661443
logreer	-2.406705	.9197643	-2.62	0.009	-4.20941 -.6040005
newgdpi	.4349907	.2392965	1.82	0.069	-.0340219 .9040033
logGDPj	-.3563396	.0780486	-4.57	0.000	-.5093121 -.2033671
oicij	.4668074	.1397021	3.34	0.001	.1929962 .7406186

xtldolshm logexport logdist openJ diffgdppc logsimgdp comcol logPopulationj logPopulationi logreer newgdpi logGDPj
oicij,nla(3) nle(3)

DOLS Hom. Panel data Coint. Estimation results Number of obs = 216

Group variable: countrypairs Number of groups = 9

Wald chi2(11) = 866.19 Obs per group: min = 31

Prob > chi2 = 0.000 avg = 31

max = 31

R-squared = 0.8648

Adj R-squared = 0.4127

	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]
--	-------	-----------	---	------	----------------------

logdist	-2.467877				
openJ	.0004352	.000416	1.05	0.296	-.0003803 .0012506
diffgdppc	.2089742	.0701925	2.98	0.003	.0713994 .346549
logsimgdp	-3.122812	.2255029	-13.85	0.000	-3.56479 -2.680835
comcol	.1606515				
logPopulationj	.703702	1.938068	0.36	0.717	-3.094842 4.502246
logPopulationi	-10.37602	2.665174	-3.89	0.000	-15.59966 -5.152375
logreer	8.122026	.9964114	8.15	0.000	6.169096 10.07496
newgdpi	.6174017	.2592379	2.38	0.017	.1093047 1.125499
logGDPj	-.5693668	.0845527	-6.73	0.000	-.735087 -.4036465
oicij	1.080018	.151344	7.14	0.000	.7833889 1.376646

APPENDIX C: Dynamic model (2) for Import (Dols)

xtsum logimport comcol distcap logPopulationi logPopulationj logreeri Simgdpj loggdpi diffgdppc oicij comlang_off

Variable	Mean	Std. Dev.	Min	Max	Observations
-----+-----+-----					
logimp~t overall	15.35016	2.401462	6.084857	20.42562	N = 681
between	1.593015	11.46757	17.73952		n = 25
within	1.863196	7.138953	19.85658	T-bar = 27.24	
comcol overall	.24	.4273589	0	1	N = 775
between	.4358899	0	1		n = 25
within	0	.24	.24	T = 31	
distcap overall	10318.7	2117.622	6265.865	13042.01	N = 775
between	2159.894	6265.865	13042.01		n = 25
within	3.86e-12	10318.7	10318.7	T = 31	
logPop~i overall	15.82922	1.302533	12.78753	19.02063	N = 774
between	1.305443	13.20069	18.62984		n = 25
within	.2388974	15.30675	16.39113	T-bar = 30.96	
logPop~j overall	16.94153	.1962685	16.57326	17.22768	N = 775
between	0	16.94153	16.94153		n = 25
within	.1962685	16.57326	17.22768	T = 31	
logreeri overall	2.045033	2.451529	0	5.793014	N = 774
between	2.369051	0	5.075637		n = 25
within	.7848328	-2.337456	3.972549	T-bar = 30.96	
Simgdpj overall	10.82519	2.794877	.6931472	13.22274	N = 774
between	.43689	9.893862	11.43541		n = 25
within	2.76183	.0829239	14.11563	T-bar = 30.96	
loggdpi overall	1.779978	.643209	-.658407	2.302855	N = 700
between	0	1.779978	1.779978		n = 25
within	.643209	-.658407	2.302855	T = 28	
loggdpi overall	5.394846	1.453287	0	6.610696	N = 774

```

between |      1.051554 .6146188 6.339145 | n = 25
within |      1.023829 -.4241466 11.16711 | T-bar = 30.96
|
diffgd~c overall | 3.016164 1.538596 .833385 9.290505 | N = 774
between |      .5614543 2.261325 3.944703 | n = 25
within |      1.436623 1.519398 8.91003 | T-bar = 30.96
|
oicij overall | .516129 .5000625 0 1 | N = 775
between |      0 .516129 .516129 | n = 25
within |      .5000625 0 1 | T = 31
|
comlan~f overall | 0 0 0 0 | N = 775
between |      0 0 0 | n = 25
within |      0 0 0 | T = 31

```

```

xtdolshm logimport comcol distcap logPopulationi logPopulationj logreeri Simgdpj loggdpj loggdpi diffgdppc oicij, nle(2)
nla(1)

```

```

DOLS Hom. Panel data Coint. Estimation results Number of obs = 120
Group variable: countrypairs Number of groups = 5
Wald chi2(10) = 378.95 Obs per group: min = 28
Prob > chi2 = 0.000 avg = 28
max = 28
R-squared = 0.5649
Adj R-squared = 0.2131

```

```

-----+-----
| Coef. Std. Err. z P>|z| [95% Conf. Interval]
-----+-----
comcol | .4954731 . . . . .
distcap | .000301 . . . . .
logPopulationi | .407701 2.880398 0.14 0.887 -5.237775 6.053177
logPopulationj | 6.758908 4.013256 1.68 0.092 -1.10693 14.62474
logreeri | .3149126 .1475563 2.13 0.033 .0257077 .6041176
Simgdpj | .0471746 .0484768 0.97 0.330 -.0478381 .1421873
loggdpi | 2.266291 .1592679 14.23 0.000 1.954132 2.57845
loggdpi | -.0174405 .1685872 -0.10 0.918 -.3478655 .3129844
diffgdppc | .2387945 .0837075 2.85 0.004 .0747307 .4028582
oicij | 2.397722 .4861937 4.93 0.000 1.4448 3.350644
-----+-----

```

APPENDIX D: Export and Import flow data of Malaysia and OIC countries in Africa

Countries	Years	Export	InExport	Import	InImport	Trade
Algeria	1985	2.64	0.42			2.64
Algeria	1986	1.79	0.25	0.01	-2.00	1.80
Algeria	1987	1.49	0.17	0.01	-2.00	1.50
Algeria	1988	2.63	0.42			2.63
Algeria	1989	9.25	0.97	0.07	-1.15	9.32
Algeria	1990	0.86	-0.07	0.07	-1.18	0.92
Algeria	1991	0.36	-0.44	0.00	-2.48	0.37
Algeria	1992	28.25	1.45	0.00	-2.80	28.26
Algeria	1993	22.60	1.35	0.00	-2.41	22.60
Algeria	1994	4.38	0.64			4.38
Algeria	1995	11.49	1.06	0.05	-1.29	11.55
Algeria	1996	11.30	1.05	0.08	-1.07	11.39
Algeria	1997	12.10	1.08	7.39	0.87	19.49
Algeria	1998	12.33	1.09	2.84	0.45	15.17
Algeria	1999	22.83	1.36	4.57	0.66	27.40
Algeria	2000	19.69	1.29	5.27	0.72	24.96
Algeria	2001	30.69	1.49	1.79	0.25	32.49
Algeria	2002	113.68	2.06	2.47	0.39	116.15
Algeria	2003	75.22	1.88	1.65	0.22	76.87
Algeria	2004	90.98	1.96	0.14	-0.86	91.12
Algeria	2005	51.25	1.71	0.89	-0.05	52.14
Algeria	2006	67.02	1.83	6.68	0.82	73.70
Algeria	2007	113.35	2.05	5.80	0.76	119.15
Algeria	2008	137.72	2.14	6.77	0.83	144.49
Algeria	2009	129.83	2.11	2.37	0.37	132.20
Algeria	2010	157.88	2.20	1.14	0.06	159.02
Algeria	2011	184.80	2.27	0.18	-0.74	184.98
Algeria	2012	133.89	2.13	0.19	-0.72	134.08
Algeria	2013	143.71	2.16	46.07	1.66	189.78
Algeria	2014	145.36	2.16	310.40	2.49	455.75
Algeria	2015	115.94	2.06	189.79	2.28	305.73
Algeria	2016	123.58	2.09	0.92	-0.04	124.50
Djibouti	1985	0.19	-0.72	0.01	-2.00	0.20
Djibouti	1986	0.09	-1.05			0.09
Djibouti	1987	0.37	-0.43			0.37
Djibouti	1988	0.43	-0.37			0.43
Djibouti	1989	0.12	-0.93	0.01	-2.00	0.13
Djibouti	1990	0.23	-0.64	0.01	-2.22	0.24
Djibouti	1991	0.16	-0.79			0.16
Djibouti	1992	0.39	-0.41	0.00	-3.40	0.39
Djibouti	1993	0.26	-0.59	0.02	-1.75	0.28
Djibouti	1994	0.35	-0.45	0.11	-0.95	0.47
Djibouti	1995	1.70	0.23			1.70
Djibouti	1996	5.34	0.73	0.00	-2.55	5.35
Djibouti	1997	4.74	0.68	0.02	-1.65	4.76
Djibouti	1998	3.23	0.51	0.14	-0.86	3.36
Djibouti	1999	6.44	0.81	0.24	-0.61	6.69

Djibouti	2000	5.18	0.71	0.17	-0.78	5.34
Djibouti	2001	4.58	0.66	0.03	-1.47	4.62
Djibouti	2002	5.04	0.70	0.02	-1.69	5.06
Djibouti	2003	12.79	1.11	0.02	-1.79	12.80
Djibouti	2004	13.38	1.13	0.00	-2.76	13.38
Djibouti	2005	21.81	1.34	0.01	-2.02	21.82
Djibouti	2006	32.97	1.52	0.41	-0.38	33.38
Djibouti	2007	79.31	1.90	2.15	0.33	81.47
Djibouti	2008	140.66	2.15	1.70	0.23	142.35
Djibouti	2009	146.67	2.17	0.01	-2.21	146.68
Djibouti	2010	180.15	2.26	0.02	-1.67	180.17
Djibouti	2011	162.16	2.21	0.13	-0.88	162.30
Djibouti	2012	77.79	1.89	0.03	-1.55	77.82
Djibouti	2013	92.27	1.97	2.81	0.45	95.08
Djibouti	2014	47.14	1.67	0.02	-1.61	47.16
Djibouti	2015	63.24	1.80	0.00	-2.43	63.24
Djibouti	2016	90.78	1.96	0.09	-1.06	90.87
Mauritania	1985					0.00
Mauritania	1986					0.00
Mauritania	1987					0.00
Mauritania	1988					0.00
Mauritania	1989					0.00
Mauritania	1990	0.33	-0.48	0.00	-2.95	0.33
Mauritania	1991	0.55	-0.26	0.02	-1.74	0.57
Mauritania	1992	0.46	-0.34	0.08	-1.11	0.53
Mauritania	1993	1.36	0.13	0.14	-0.84	1.50
Mauritania	1994	2.27	0.36	0.04	-1.45	2.31
Mauritania	1995	2.64	0.42	0.13	-0.87	2.77
Mauritania	1996	1.84	0.27	0.06	-1.25	1.90
Mauritania	1997	3.21	0.51	0.04	-1.38	3.25
Mauritania	1998	0.89	-0.05	0.15	-0.84	1.04
Mauritania	1999	3.66	0.56	0.08	-1.12	3.73
Mauritania	2000	3.28	0.52	0.16	-0.79	3.44
Mauritania	2001	6.38	0.80	0.22	-0.66	6.59
Mauritania	2002	2.87	0.46	0.47	-0.33	3.34
Mauritania	2003	14.16	1.15	2.06	0.31	16.22
Mauritania	2004	21.99	1.34	2.78	0.44	24.77
Mauritania	2005	12.82	1.11	1.28	0.11	14.11
Mauritania	2006	23.91	1.38	0.07	-1.13	23.98
Mauritania	2007	42.33	1.63	0.01	-1.84	42.34
Mauritania	2008	76.73	1.88	0.28	-0.55	77.01
Mauritania	2009	70.62	1.85	0.33	-0.49	70.95
Mauritania	2010	78.26	1.89	0.81	-0.09	79.07
Mauritania	2011	126.84	2.10	0.02	-1.82	126.85
Mauritania	2012	65.38	1.82	0.24	-0.63	65.61
Mauritania	2013	23.33	1.37	0.01	-1.96	23.34
Mauritania	2014	34.72	1.54	0.22	-0.65	34.94
Mauritania	2015	38.43	1.58	0.09	-1.04	38.52
Mauritania	2016	49.51	1.69	1.54	0.19	51.05
Somalia	1985			2.58	0.41	2.58
Somalia	1986	0.18	-0.74	0.85	-0.07	1.03
Somalia	1987			2.16	0.33	2.16

Somalia	1988			5.84	0.77	5.84
Somalia	1989	0.01	-2.00	4.10	0.61	4.11
Somalia	1990	2.63	0.42	4.61	0.66	7.25
Somalia	1991	0.04	-1.44	3.23	0.51	3.27
Somalia	1992	0.30	-0.52	0.39	-0.41	0.69
Somalia	1993	1.76	0.24	0.28	-0.56	2.04
Somalia	1994	1.31	0.12	0.71	-0.15	2.03
Somalia	1995	0.04	-1.35	0.76	-0.12	0.80
Somalia	1996	0.35	-0.46	0.71	-0.15	1.05
Somalia	1997	0.70	-0.16	1.12	0.05	1.81
Somalia	1998	1.83	0.26	4.50	0.65	6.33
Somalia	1999	3.80	0.58	6.45	0.81	10.25
Somalia	2000	3.80	0.58	6.29	0.80	10.09
Somalia	2001	2.62	0.42	2.32	0.37	4.94
Somalia	2002	3.42	0.53	3.28	0.52	6.70
Somalia	2003	3.42	0.53	6.75	0.83	10.17
Somalia	2004	4.21	0.62	6.78	0.83	10.99
Somalia	2005	7.27	0.86	15.18	1.18	22.45
Somalia	2006	6.22	0.79	33.84	1.53	40.07
Somalia	2007	15.41	1.19	25.21	1.40	40.62
Somalia	2008	26.18	1.42	15.58	1.19	41.76
Somalia	2009	11.37	1.06	17.51	1.24	28.88
Somalia	2010	9.26	0.97	15.32	1.19	24.59
Somalia	2011	10.45	1.02	16.29	1.21	26.74
Somalia	2012	12.23	1.09	14.25	1.15	26.49
Somalia	2013	30.12	1.48	11.62	1.07	41.74
Somalia	2014	69.33	1.84	19.16	1.28	88.49
Somalia	2015	66.64	1.82	19.64	1.29	86.27
Somalia	2016	82.99	1.92	24.65	1.39	107.64
Sudan	1985	9.26	0.97			9.26
Sudan	1986	12.21	1.09	0.02	-1.70	12.23
Sudan	1987	7.91	0.90			7.91
Sudan	1988	11.55	1.06			11.55
Sudan	1989	14.01	1.15			14.01
Sudan	1990	10.54	1.02	0.02	-1.64	10.56
Sudan	1991	17.87	1.25	0.03	-1.54	17.90
Sudan	1992	25.54	1.41			25.54
Sudan	1993	18.53	1.27	0.00	-2.56	18.53
Sudan	1994	18.78	1.27	0.00	-3.11	18.78
Sudan	1995	35.29	1.55	0.25	-0.60	35.54
Sudan	1996	33.03	1.52	0.06	-1.21	33.09
Sudan	1997	17.25	1.24	0.06	-1.20	17.31
Sudan	1998	16.77	1.22	0.00	-2.47	16.77
Sudan	1999	29.76	1.47	0.55	-0.26	30.31
Sudan	2000	16.16	1.21	0.00	-2.58	16.16
Sudan	2001	19.49	1.29	0.03	-1.48	19.52
Sudan	2002	17.92	1.25	0.04	-1.39	17.97
Sudan	2003	41.38	1.62	0.01	-2.00	41.39
Sudan	2004	39.18	1.59	0.02	-1.78	39.20
Sudan	2005	128.08	2.11	2.68	0.43	130.76
Sudan	2006	51.55	1.71	0.00	-3.58	51.55
Sudan	2007	52.93	1.72	0.00	-3.50	52.93

Sudan	2008	52.91	1.72	0.14	-0.86	53.05
Sudan	2009	34.95	1.54	0.00	-2.38	34.96
Sudan	2010	34.16	1.53	0.00	-3.12	34.16
Sudan	2011	93.19	1.97			93.19
Sudan	2012	231.67	2.36	0.00	-4.31	231.67
Sudan	2013	117.69	2.07			117.69
Sudan	2014	51.35	1.71			51.35
Sudan	2015	37.50	1.57	0.00	-3.26	37.50
Sudan	2016	45.10	1.65			45.10
Tunisia	1985	0.34	-0.47	0.46	-0.34	0.80
Tunisia	1986	0.96	-0.02	0.03	-1.52	0.99
Tunisia	1987	1.42	0.15	0.39	-0.41	1.81
Tunisia	1988	3.72	0.57	0.16	-0.80	3.88
Tunisia	1989	4.58	0.66	0.11	-0.96	4.69
Tunisia	1990	4.63	0.67	0.29	-0.54	4.91
Tunisia	1991	5.90	0.77	0.13	-0.88	6.03
Tunisia	1992	4.56	0.66	0.21	-0.69	4.77
Tunisia	1993	4.86	0.69	0.07	-1.17	4.93
Tunisia	1994	8.48	0.93	0.24	-0.62	8.72
Tunisia	1995	14.46	1.16	1.24	0.09	15.71
Tunisia	1996	14.25	1.15	0.06	-1.23	14.31
Tunisia	1997	8.80	0.94	0.23	-0.64	9.03
Tunisia	1998	13.18	1.12	0.06	-1.26	13.23
Tunisia	1999	10.42	1.02	0.09	-1.04	10.51
Tunisia	2000	8.93	0.95	1.23	0.09	10.16
Tunisia	2001	11.98	1.08	0.23	-0.63	12.22
Tunisia	2002	12.95	1.11	0.17	-0.76	13.12
Tunisia	2003	21.57	1.33	1.21	0.08	22.78
Tunisia	2004	33.32	1.52	0.39	-0.41	33.70
Tunisia	2005	39.16	1.59	0.13	-0.89	39.29
Tunisia	2006	61.34	1.79	0.23	-0.64	61.57
Tunisia	2007	25.52	1.41	41.96	1.62	67.48
Tunisia	2008	32.43	1.51	52.04	1.72	84.47
Tunisia	2009	48.29	1.68	102.84	2.01	151.13
Tunisia	2010	57.83	1.76	50.69	1.70	108.52
Tunisia	2011	55.94	1.75	0.49	-0.31	56.43
Tunisia	2012	50.99	1.71	0.68	-0.17	51.67
Tunisia	2013	65.93	1.82	1.94	0.29	67.87
Tunisia	2014	62.38	1.80	0.56	-0.25	62.94
Tunisia	2015	56.19	1.75	0.66	-0.18	56.85
Tunisia	2016	61.95	1.79	0.83	-0.08	62.79
Benin	1985					0.00
Benin	1986			0.03	-1.52	0.03
Benin	1987					0.00
Benin	1988			0.01	-2.00	0.01
Benin	1989			0.01	-1.97	0.01
Benin	1990	0.89	-0.05	0.13	-0.89	1.01
Benin	1991	3.73	0.57	0.37	-0.43	4.10
Benin	1992	2.42	0.38	0.39	-0.41	2.81
Benin	1993	1.81	0.26	1.54	0.19	3.35
Benin	1994	2.92	0.46	0.58	-0.23	3.50
Benin	1995	0.07	-1.14	2.76	0.44	2.83

Benin	1996	0.10	-1.01	16.14	1.21	16.23
Benin	1997	0.63	-0.20	15.25	1.18	15.88
Benin	1998	0.40	-0.40	14.37	1.16	14.77
Benin	1999	0.40	-0.39	14.79	1.17	15.20
Benin	2000	1.68	0.23	10.75	1.03	12.44
Benin	2001	3.18	0.50	11.41	1.06	14.60
Benin	2002	3.64	0.56	3.35	0.53	6.99
Benin	2003	21.83	1.34	7.80	0.89	29.63
Benin	2004	11.84	1.07	6.48	0.81	18.33
Benin	2005	26.45	1.42	4.15	0.62	30.59
Benin	2006	98.49	1.99	13.20	1.12	111.69
Benin	2007	210.77	2.32	20.03	1.30	230.80
Benin	2008	395.20	2.60	6.09	0.78	401.29
Benin	2009	298.14	2.47	9.81	0.99	307.95
Benin	2010	470.34	2.67	15.51	1.19	485.85
Benin	2011	361.67	2.56	13.05	1.12	374.72
Benin	2012	340.89	2.53	23.62	1.37	364.51
Benin	2013	519.85	2.72	18.46	1.27	538.31
Benin	2014	497.55	2.70	22.81	1.36	520.35
Benin	2015	342.14	2.53	18.94	1.28	361.08
Benin	2016	285.94	2.46	30.95	1.49	316.90
Botswana	1985					0.00
Botswana	1986					0.00
Botswana	1987					0.00
Botswana	1988					0.00
Botswana	1989					0.00
Botswana	1990	0.04	-1.41	0.88	-0.05	0.92
Botswana	1991	0.05	-1.27	0.28	-0.56	0.33
Botswana	1992	0.03	-1.48	0.08	-1.07	0.12
Botswana	1993	0.07	-1.13	0.53	-0.28	0.60
Botswana	1994	0.08	-1.08	0.52	-0.29	0.60
Botswana	1995	0.10	-1.00	1.16	0.07	1.26
Botswana	1996	0.54	-0.27	5.76	0.76	6.30
Botswana	1997	0.13	-0.90	3.96	0.60	4.09
Botswana	1998	0.04	-1.41	1.57	0.19	1.60
Botswana	1999	0.57	-0.24	1.46	0.17	2.04
Botswana	2000	0.39	-0.41	0.77	-0.12	1.16
Botswana	2001	0.72	-0.14	0.86	-0.07	1.58
Botswana	2002	0.70	-0.16	0.26	-0.59	0.95
Botswana	2003	0.54	-0.27	0.53	-0.28	1.07
Botswana	2004	1.69	0.23	1.75	0.24	3.44
Botswana	2005	3.37	0.53	0.91	-0.04	4.28
Botswana	2006	0.97	-0.01	0.06	-1.22	1.03
Botswana	2007	2.56	0.41	2.01	0.30	4.57
Botswana	2008	3.41	0.53	12.56	1.10	15.98
Botswana	2009	7.17	0.86	3.85	0.59	11.03
Botswana	2010	3.28	0.52	5.88	0.77	9.16
Botswana	2011	3.80	0.58	6.92	0.84	10.72
Botswana	2012	4.98	0.70	22.55	1.35	27.52
Botswana	2013	2.36	0.37	4.04	0.61	6.40
Botswana	2014	1.94	0.29	1.60	0.20	3.53
Botswana	2015	2.61	0.42	1.11	0.04	3.72

Botswana	2016	3.25	0.51	0.04	-1.37	3.29
Burkina Faso	1985					0.00
Burkina Faso	1986					0.00
Burkina Faso	1987					0.00
Burkina Faso	1988					0.00
Burkina Faso	1989					0.00
Burkina Faso	1990	0.20	-0.70	1.76	0.25	1.96
Burkina Faso	1991	0.07	-1.18	2.06	0.31	2.13
Burkina Faso	1992	0.25	-0.59	2.43	0.38	2.68
Burkina Faso	1993	0.29	-0.54	2.47	0.39	2.76
Burkina Faso	1994	0.08	-1.10	2.57	0.41	2.65
Burkina Faso	1995	0.04	-1.38	6.03	0.78	6.07
Burkina Faso	1996	0.16	-0.78	13.60	1.13	13.76
Burkina Faso	1997	0.05	-1.27	8.56	0.93	8.61
Burkina Faso	1998	0.17	-0.77	4.91	0.69	5.08
Burkina Faso	1999	0.17	-0.77	5.34	0.73	5.51
Burkina Faso	2000	0.28	-0.55	1.91	0.28	2.20
Burkina Faso	2001	0.00	-3.58	2.73	0.44	2.73
Burkina Faso	2002	1.39	0.14	0.99	-0.01	2.37
Burkina Faso	2003	0.32	-0.49			0.32
Burkina Faso	2004	0.05	-1.34			0.05
Burkina Faso	2005	0.05	-1.31	0.06	-1.25	0.11
Burkina Faso	2006	0.00	-3.40	0.02	-1.74	0.02
Burkina Faso	2007	0.63	-0.20	0.61	-0.21	1.24
Burkina Faso	2008	0.05	-1.35	4.74	0.68	4.78
Burkina Faso	2009	0.40	-0.40	15.68	1.20	16.08
Burkina Faso	2010	0.86	-0.06	1.49	0.17	2.35
Burkina Faso	2011	1.09	0.04	37.67	1.58	38.76
Burkina Faso	2012	2.26	0.35	32.14	1.51	34.40
Burkina Faso	2013	2.77	0.44	8.82	0.95	11.60
Burkina Faso	2014	1.16	0.07	18.28	1.26	19.45
Burkina Faso	2015	2.52	0.40	7.01	0.85	9.53
Burkina Faso	2016	3.05	0.48	6.90	0.84	9.95
Chad	1985					0.00
Chad	1986					0.00
Chad	1987					0.00
Chad	1988					0.00
Chad	1989			0.75	-0.12	0.75
Chad	1990	0.07	-1.18	0.10	-0.99	0.17
Chad	1991	0.03	-1.52	0.82	-0.09	0.85
Chad	1992			0.89	-0.05	0.89
Chad	1993	0.01	-2.08	2.37	0.37	2.37
Chad	1994	0.24	-0.61	2.44	0.39	2.69
Chad	1995	0.06	-1.23	5.38	0.73	5.44
Chad	1996			10.80	1.03	10.80
Chad	1997			11.43	1.06	11.43
Chad	1998			7.64	0.88	7.64
Chad	1999	0.08	-1.07	6.22	0.79	6.31
Chad	2000	0.06	-1.23	1.76	0.25	1.82
Chad	2001			2.30	0.36	2.30
Chad	2002	0.01	-1.85	0.76	-0.12	0.77
Chad	2003	0.06	-1.23	1.79	0.25	1.85

Chad	2004	0.05	-1.29	44.53	1.65	44.58
Chad	2005	0.04	-1.37	29.55	1.47	29.59
Chad	2006	0.00	-3.08	41.98	1.62	41.98
Chad	2007	0.44	-0.36	20.69	1.32	21.13
Chad	2008	0.15	-0.83	38.35	1.58	38.50
Chad	2009	0.29	-0.54	44.36	1.65	44.64
Chad	2010	0.69	-0.16	53.46	1.73	54.15
Chad	2011	0.22	-0.67	68.95	1.84	69.17
Chad	2012	0.14	-0.85	85.67	1.93	85.81
Chad	2013	0.12	-0.93	54.81	1.74	54.92
Chad	2014	2.06	0.31	82.68	1.92	84.74
Chad	2015	0.32	-0.49	60.20	1.78	60.52
Chad	2016	0.41	-0.38	71.86	1.86	72.27
Comoros	1985					0.00
Comoros	1986					0.00
Comoros	1987					0.00
Comoros	1988					0.00
Comoros	1989					0.00
Comoros	1990	0.24	-0.62	0.20	-0.70	0.44
Comoros	1991	0.09	-1.03	0.37	-0.43	0.46
Comoros	1992	1.08	0.04	0.05	-1.34	1.13
Comoros	1993	0.02	-1.71	0.01	-1.94	0.03
Comoros	1994	0.01	-1.86	0.03	-1.58	0.04
Comoros	1995	0.22	-0.67	0.37	-0.44	0.58
Comoros	1996	0.40	-0.40	1.16	0.07	1.56
Comoros	1997	0.11	-0.95	0.76	-0.12	0.87
Comoros	1998	0.01	-2.01	0.34	-0.47	0.35
Comoros	1999	0.18	-0.73	0.00	-2.83	0.19
Comoros	2000	0.19	-0.73	0.00	-2.65	0.19
Comoros	2001	0.20	-0.69	0.00	-3.28	0.20
Comoros	2002	0.29	-0.54	0.00	-2.80	0.29
Comoros	2003	0.40	-0.40	0.00	-2.33	0.41
Comoros	2004	0.38	-0.42	0.18	-0.75	0.55
Comoros	2005	0.65	-0.19	0.13	-0.89	0.78
Comoros	2006	0.87	-0.06	0.00	-2.53	0.87
Comoros	2007	1.62	0.21	0.44	-0.36	2.06
Comoros	2008	3.76	0.58	0.00	-3.04	3.76
Comoros	2009	3.14	0.50	0.11	-0.96	3.25
Comoros	2010	3.80	0.58	0.05	-1.30	3.85
Comoros	2011	4.25	0.63	0.00	-3.88	4.25
Comoros	2012	3.65	0.56	1.43	0.16	5.08
Comoros	2013	4.27	0.63	0.05	-1.27	4.32
Comoros	2014	3.92	0.59	0.02	-1.76	3.93
Comoros	2015	7.62	0.88	0.00	-2.40	7.63
Comoros	2016	4.67	0.67			4.67
Côte d'Ivoire	1985	0.11	-0.96			0.11
Côte d'Ivoire	1986	0.22	-0.66			0.22
Côte d'Ivoire	1987	0.34	-0.47			0.34
Côte d'Ivoire	1988	0.60	-0.22			0.60
Côte d'Ivoire	1989	1.01	0.00			1.01
Côte d'Ivoire	1990	1.28	0.11			1.28
Côte d'Ivoire	1991	2.97	0.47	0.00	-3.44	2.97

Côte d'Ivoire	1992	2.78	0.44	2.04	0.31	4.83
Côte d'Ivoire	1993	2.58	0.41	0.00	-2.41	2.59
Côte d'Ivoire	1994	2.37	0.38	0.00	-3.41	2.38
Côte d'Ivoire	1995	7.06	0.85	0.00	-3.40	7.07
Côte d'Ivoire	1996	3.81	0.58	0.03	-1.50	3.84
Côte d'Ivoire	1997	11.10	1.05	0.00	-2.44	11.10
Côte d'Ivoire	1998	8.48	0.93	0.00	-2.98	8.48
Côte d'Ivoire	1999	8.96	0.95	0.30	-0.52	9.26
Côte d'Ivoire	2000	9.05	0.96	0.06	-1.19	9.11
Côte d'Ivoire	2001	6.36	0.80	0.00	-4.15	6.36
Côte d'Ivoire	2002	6.25	0.80	0.01	-1.88	6.26
Côte d'Ivoire	2003	8.30	0.92	0.01	-1.94	8.32
Côte d'Ivoire	2004	5.83	0.77	0.00	-4.52	5.83
Côte d'Ivoire	2005	5.97	0.78	0.02	-1.65	6.00
Côte d'Ivoire	2006	11.67	1.07			11.67
Côte d'Ivoire	2007	16.27	1.21	0.11	-0.98	16.38
Côte d'Ivoire	2008	24.66	1.39	0.02	-1.64	24.68
Côte d'Ivoire	2009	27.51	1.44	0.03	-1.48	27.54
Côte d'Ivoire	2010	47.24	1.67	0.01	-1.89	47.26
Côte d'Ivoire	2011	27.30	1.44	0.00	-5.52	27.30
Côte d'Ivoire	2012	77.04	1.89			77.04
Côte d'Ivoire	2013	99.54	2.00	0.10	-0.99	99.64
Côte d'Ivoire	2014	52.03	1.72			52.03
Côte d'Ivoire	2015	87.25	1.94			87.25
Côte d'Ivoire	2016	67.70	1.83	0.10	-1.01	67.80
Gabon	1985			6.25	0.80	6.25
Gabon	1986			5.59	0.75	5.59
Gabon	1987			4.27	0.63	4.27
Gabon	1988			9.10	0.96	9.10
Gabon	1989			7.32	0.86	7.32
Gabon	1990	0.58	-0.24	8.04	0.91	8.62
Gabon	1991	0.99	0.00	11.11	1.05	12.10
Gabon	1992	0.69	-0.16	8.67	0.94	9.36
Gabon	1993	0.36	-0.44	17.45	1.24	17.82
Gabon	1994	0.18	-0.75	21.49	1.33	21.66
Gabon	1995	0.60	-0.22	22.37	1.35	22.97
Gabon	1996	9.52	0.98	26.02	1.42	35.54
Gabon	1997	3.56	0.55	38.16	1.58	41.72
Gabon	1998	0.68	-0.16	36.07	1.56	36.75
Gabon	1999	0.59	-0.23	18.60	1.27	19.19
Gabon	2000	0.81	-0.09	13.90	1.14	14.70
Gabon	2001	0.78	-0.11	8.68	0.94	9.46
Gabon	2002	0.99	-0.01	2.77	0.44	3.76
Gabon	2003	0.37	-0.43	12.41	1.09	12.78
Gabon	2004	1.25	0.10	41.38	1.62	42.63
Gabon	2005	4.62	0.66	48.50	1.69	53.12
Gabon	2006	7.10	0.85	129.28	2.11	136.38
Gabon	2007	7.50	0.87	79.50	1.90	86.99
Gabon	2008	17.20	1.24	69.00	1.84	86.20
Gabon	2009	10.83	1.03	136.67	2.14	147.49
Gabon	2010	15.13	1.18	147.84	2.17	162.97
Gabon	2011	27.58	1.44	324.19	2.51	351.77

Gabon	2012	24.58	1.39	359.57	2.56	384.14
Gabon	2013	25.68	1.41	339.53	2.53	365.21
Gabon	2014	46.80	1.67	355.08	2.55	401.88
Gabon	2015	29.42	1.47	239.49	2.38	268.91
Gabon	2016	33.53	1.53	278.67	2.45	312.20
Gambia, The	1985					0.00
Gambia, The	1986					0.00
Gambia, The	1987					0.00
Gambia, The	1988					0.00
Gambia, The	1989					0.00
Gambia, The	1990	0.02	-1.61	0.11	-0.96	0.13
Gambia, The	1991	0.14	-0.85	0.23	-0.64	0.37
Gambia, The	1992	0.09	-1.07	0.19	-0.73	0.27
Gambia, The	1993	0.12	-0.93	0.57	-0.24	0.69
Gambia, The	1994	0.21	-0.68	2.28	0.36	2.49
Gambia, The	1995	0.63	-0.20	2.37	0.37	2.99
Gambia, The	1996	0.27	-0.57	3.59	0.56	3.86
Gambia, The	1997	0.25	-0.60	1.63	0.21	1.88
Gambia, The	1998	0.20	-0.69	0.01	-2.05	0.21
Gambia, The	1999	0.15	-0.82	1.50	0.18	1.65
Gambia, The	2000	0.44	-0.36	0.07	-1.13	0.51
Gambia, The	2001	0.86	-0.06	0.84	-0.07	1.71
Gambia, The	2002	3.57	0.55	0.67	-0.18	4.23
Gambia, The	2003	8.85	0.95	0.02	-1.73	8.87
Gambia, The	2004	15.07	1.18	0.03	-1.49	15.10
Gambia, The	2005	15.85	1.20	0.95	-0.02	16.81
Gambia, The	2006	17.19	1.24	85.67	1.93	102.86
Gambia, The	2007	30.38	1.48	414.17	2.62	444.54
Gambia, The	2008	30.49	1.48	167.55	2.22	198.05
Gambia, The	2009	20.56	1.31	310.92	2.49	331.47
Gambia, The	2010	18.62	1.27	767.43	2.89	786.05
Gambia, The	2011	34.32	1.54	952.92	2.98	987.24
Gambia, The	2012	28.80	1.46	184.86	2.27	213.66
Gambia, The	2013	24.38	1.39	54.85	1.74	79.23
Gambia, The	2014	35.12	1.55	130.65	2.12	165.77
Gambia, The	2015	31.27	1.50	181.82	2.26	213.09
Gambia, The	2016	27.17	1.43	120.18	2.08	147.35
Ghana	1985	0.01	-2.00			0.01
Ghana	1986	1.25	0.10			1.25
Ghana	1987	1.61	0.21			1.61
Ghana	1988	0.65	-0.19			0.65
Ghana	1989	1.76	0.25			1.76
Ghana	1990	0.47	-0.32	0.84	-0.08	1.31
Ghana	1991	1.04	0.02	0.99	0.00	2.03
Ghana	1992	2.69	0.43	0.50	-0.30	3.19
Ghana	1993	2.93	0.47	2.36	0.37	5.29
Ghana	1994	3.88	0.59	2.06	0.31	5.94
Ghana	1995	3.45	0.54	2.09	0.32	5.54
Ghana	1996	3.91	0.59	1.19	0.08	5.10
Ghana	1997	6.40	0.81	2.17	0.34	8.56
Ghana	1998	14.43	1.16	0.98	-0.01	15.41
Ghana	1999	18.68	1.27	0.74	-0.13	19.42

Ghana	2000	23.90	1.38	0.95	-0.02	24.85
Ghana	2001	20.26	1.31	0.96	-0.02	21.21
Ghana	2002	26.53	1.42	3.65	0.56	30.19
Ghana	2003	46.80	1.67	0.98	-0.01	47.78
Ghana	2004	55.66	1.75	1.66	0.22	57.32
Ghana	2005	67.27	1.83	0.23	-0.63	67.51
Ghana	2006	86.48	1.94	1.58	0.20	88.06
Ghana	2007	119.87	2.08	0.16	-0.78	120.04
Ghana	2008	181.06	2.26	0.08	-1.10	181.14
Ghana	2009	108.20	2.03	0.24	-0.62	108.45
Ghana	2010	151.80	2.18	1.04	0.02	152.84
Ghana	2011	204.14	2.31	0.15	-0.82	204.30
Ghana	2012	255.14	2.41	0.00	-3.50	255.14
Ghana	2013	175.97	2.25	0.00	-2.40	175.98
Ghana	2014	135.84	2.13	0.11	-0.94	135.96
Ghana	2015	169.96	2.23	0.00	-2.77	169.96
Ghana	2016	193.79	2.29			193.79
Guinea	1985					0.00
Guinea	1986					0.00
Guinea	1987					0.00
Guinea	1988					0.00
Guinea	1989					0.00
Guinea	1990	0.04	-1.35	0.06	-1.23	0.10
Guinea	1991	0.06	-1.20	0.25	-0.61	0.31
Guinea	1992	0.04	-1.45	0.28	-0.56	0.31
Guinea	1993	0.32	-0.50	0.31	-0.51	0.63
Guinea	1994	1.43	0.15	0.03	-1.60	1.45
Guinea	1995	0.60	-0.22	1.25	0.10	1.85
Guinea	1996	23.23	1.37	0.85	-0.07	24.09
Guinea	1997	2.26	0.35	0.01	-1.95	2.27
Guinea	1998	2.70	0.43	2.14	0.33	4.84
Guinea	1999	1.70	0.23	3.12	0.49	4.82
Guinea	2000	1.94	0.29	1.03	0.01	2.96
Guinea	2001	3.03	0.48	0.06	-1.19	3.09
Guinea	2002	0.93	-0.03	0.04	-1.37	0.98
Guinea	2003	3.20	0.50	1.00	0.00	4.20
Guinea	2004	5.07	0.70	0.27	-0.56	5.34
Guinea	2005	3.34	0.52	0.24	-0.62	3.58
Guinea	2006	8.85	0.95	0.10	-0.98	8.95
Guinea	2007	13.56	1.13	1.99	0.30	15.55
Guinea	2008	13.85	1.14	8.04	0.91	21.89
Guinea	2009	11.93	1.08	1.24	0.09	13.16
Guinea	2010	23.55	1.37	5.16	0.71	28.71
Guinea	2011	75.80	1.88	3.09	0.49	78.90
Guinea	2012	34.00	1.53	6.39	0.81	40.39
Guinea	2013	42.34	1.63	2.63	0.42	44.97
Guinea	2014	43.99	1.64	2.84	0.45	46.82
Guinea	2015	36.04	1.56	2.02	0.30	38.06
Guinea	2016	50.45	1.70	3.32	0.52	53.77
Guinea-Bissau	1985					0.00
Guinea-Bissau	1986					0.00
Guinea-Bissau	1987					0.00

Guinea-Bissau	1988					0.00
Guinea-Bissau	1989					0.00
Guinea-Bissau	1990	0.04	-1.45			0.04
Guinea-Bissau	1991			0.01	-1.95	0.01
Guinea-Bissau	1992	0.00	-3.40	0.00	-2.93	0.00
Guinea-Bissau	1993	0.03	-1.55	0.00	-2.46	0.03
Guinea-Bissau	1994		#NUM!	0.00	-2.39	0.00
Guinea-Bissau	1995	0.24	-0.62	0.00	-3.11	0.24
Guinea-Bissau	1996	0.03	-1.58	0.00	-3.40	0.03
Guinea-Bissau	1997	0.15	-0.81	0.00	-3.10	0.15
Guinea-Bissau	1998	0.00	-2.58			0.00
Guinea-Bissau	1999	0.13	-0.90	0.00	-3.28	0.13
Guinea-Bissau	2000			0.00	-3.51	0.00
Guinea-Bissau	2001			0.00	-3.02	0.00
Guinea-Bissau	2002	0.00	-2.38	0.03	-1.48	0.04
Guinea-Bissau	2003	0.15	-0.82	0.00	-2.75	0.15
Guinea-Bissau	2004	0.02	-1.67			0.02
Guinea-Bissau	2005			0.00	-4.01	0.00
Guinea-Bissau	2006	0.17	-0.76	0.00	-3.19	0.17
Guinea-Bissau	2007	1.63	0.21	0.05	-1.33	1.68
Guinea-Bissau	2008	3.62	0.56	0.47	-0.32	4.10
Guinea-Bissau	2009	2.93	0.47	0.00	-2.45	2.93
Guinea-Bissau	2010	3.08	0.49	0.56	-0.25	3.64
Guinea-Bissau	2011	4.60	0.66	0.24	-0.62	4.85
Guinea-Bissau	2012	2.31	0.36	0.07	-1.19	2.38
Guinea-Bissau	2013	4.99	0.70	0.06	-1.26	5.05
Guinea-Bissau	2014	5.13	0.71	0.14	-0.85	5.27
Guinea-Bissau	2015	4.36	0.64	0.00	-2.69	4.36
Guinea-Bissau	2016	4.64	0.67			4.64
Mali	1985					0.00
Mali	1986					0.00
Mali	1987					0.00
Mali	1988					0.00
Mali	1989					0.00
Mali	1990	0.50	-0.30	1.96	0.29	2.47
Mali	1991	0.13	-0.89	1.49	0.17	1.62
Mali	1992	0.47	-0.33	1.82	0.26	2.29
Mali	1993	0.51	-0.30	1.94	0.29	2.44
Mali	1994	0.82	-0.09	0.24	-0.62	1.06
Mali	1995	0.29	-0.54	5.51	0.74	5.80
Mali	1996	0.67	-0.17	10.70	1.03	11.37
Mali	1997	0.13	-0.90	2.14	0.33	2.27
Mali	1998	0.57	-0.24	4.96	0.70	5.53
Mali	1999	0.25	-0.61	10.12	1.01	10.37
Mali	2000	0.34	-0.47	5.38	0.73	5.72
Mali	2001	1.40	0.15	3.94	0.60	5.33
Mali	2002	3.08	0.49	1.22	0.09	4.29
Mali	2003	0.15	-0.82	0.02	-1.80	0.17
Mali	2004	0.73	-0.14	0.37	-0.44	1.10
Mali	2005	0.91	-0.04	0.25	-0.60	1.16
Mali	2006	0.55	-0.26	0.43	-0.36	0.99
Mali	2007	0.45	-0.35	1.59	0.20	2.04

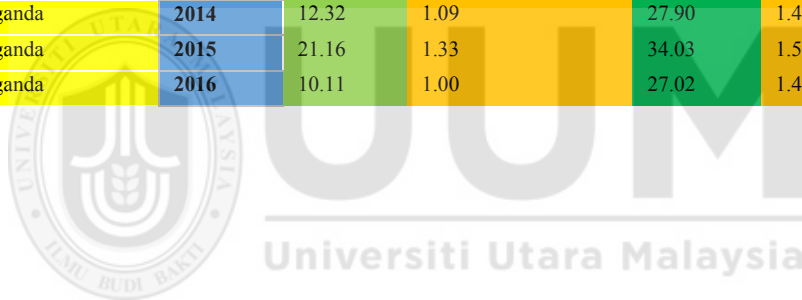
Mali	2008	1.75	0.24	3.41	0.53	5.16
Mali	2009	0.51	-0.29	5.04	0.70	5.55
Mali	2010	1.12	0.05	2.13	0.33	3.25
Mali	2011	2.20	0.34	25.79	1.41	27.99
Mali	2012	2.07	0.32	69.08	1.84	71.15
Mali	2013	1.87	0.27	8.94	0.95	10.81
Mali	2014	1.78	0.25	4.03	0.61	5.81
Mali	2015	1.53	0.18	0.36	-0.44	1.89
Mali	2016	2.42	0.38	0.45	-0.35	2.87
Mozambique	1985	8.03	0.90			8.03
Mozambique	1986	11.45	1.06	0.82	-0.09	12.27
Mozambique	1987	17.99	1.26	5.82	0.76	23.81
Mozambique	1988	20.92	1.32	14.33	1.16	35.25
Mozambique	1989	18.03	1.26	3.58	0.55	21.61
Mozambique	1990	21.32	1.33	2.17	0.34	23.49
Mozambique	1991	8.61	0.94	5.94	0.77	14.55
Mozambique	1992	9.24	0.97	5.20	0.72	14.44
Mozambique	1993	14.03	1.15	2.26	0.35	16.29
Mozambique	1994	3.05	0.48	0.84	-0.08	3.89
Mozambique	1995	3.87	0.59	0.24	-0.62	4.11
Mozambique	1996	2.71	0.43	0.25	-0.60	2.96
Mozambique	1997	2.38	0.38	0.01	-2.11	2.38
Mozambique	1998	6.34	0.80	0.83	-0.08	7.17
Mozambique	1999	2.73	0.44	0.01	-1.85	2.74
Mozambique	2000	4.17	0.62	0.02	-1.72	4.19
Mozambique	2001	4.66	0.67	0.19	-0.73	4.85
Mozambique	2002	61.58	1.79	1.22	0.09	62.81
Mozambique	2003	17.32	1.24	0.05	-1.31	17.37
Mozambique	2004	16.02	1.20	0.09	-1.05	16.10
Mozambique	2005	15.21	1.18	0.73	-0.14	15.94
Mozambique	2006	23.80	1.38	1.93	0.29	25.74
Mozambique	2007	35.41	1.55	1.53	0.19	36.94
Mozambique	2008	65.14	1.81	9.76	0.99	74.91
Mozambique	2009	42.31	1.63	2.79	0.45	45.11
Mozambique	2010	62.15	1.79	2.42	0.38	64.57
Mozambique	2011	36.44	1.56	13.41	1.13	49.85
Mozambique	2012	95.90	1.98	9.82	0.99	105.72
Mozambique	2013	54.55	1.74	11.88	1.07	66.43
Mozambique	2014	184.90	2.27	9.51	0.98	194.42
Mozambique	2015	129.25	2.11	57.18	1.76	186.42
Mozambique	2016	157.16	2.20	4.03	0.61	161.19
Niger	1985					0.00
Niger	1986					0.00
Niger	1987	0.02	-1.70			0.02
Niger	1988	0.13	-0.89			0.13
Niger	1989	0.01	-2.04			0.01
Niger	1990	0.38	-0.42	0.25	-0.61	0.63
Niger	1991	0.32	-0.50	0.57	-0.25	0.88
Niger	1992	0.26	-0.59	0.93	-0.03	1.19
Niger	1993	0.24	-0.61	0.56	-0.25	0.81
Niger	1994	0.38	-0.42	0.43	-0.37	0.81
Niger	1995	0.47	-0.32	0.39	-0.40	0.87

Niger	1996	2.08	0.32	1.14	0.06	3.22
Niger	1997	0.93	-0.03	0.25	-0.60	1.18
Niger	1998	0.23	-0.63	0.19	-0.72	0.42
Niger	1999	0.46	-0.34	0.15	-0.83	0.60
Niger	2000	0.60	-0.22	0.11	-0.95	0.71
Niger	2001	0.59	-0.23	0.88	-0.06	1.47
Niger	2002	0.56	-0.25	0.74	-0.13	1.30
Niger	2003	4.06	0.61	0.08	-1.10	4.14
Niger	2004	6.68	0.82	0.23	-0.65	6.91
Niger	2005	2.52	0.40	0.09	-1.05	2.61
Niger	2006	1.45	0.16	0.02	-1.75	1.46
Niger	2007	4.48	0.65	0.16	-0.80	4.63
Niger	2008	13.94	1.14	0.09	-1.04	14.03
Niger	2009	10.61	1.03	0.07	-1.15	10.68
Niger	2010	10.85	1.04	0.26	-0.58	11.11
Niger	2011	7.55	0.88	0.02	-1.69	7.57
Niger	2012	3.56	0.55	0.00	-3.16	3.56
Niger	2013	5.78	0.76	0.00	-4.17	5.78
Niger	2014	9.20	0.96	0.18	-0.73	9.38
Niger	2015	6.90	0.84	0.03	-1.59	6.92
Niger	2016	4.03	0.61	0.13	-0.88	4.17
Nigeria	1985	8.07	0.91	0.02	-1.70	8.09
Nigeria	1986	16.94	1.23	0.79	-0.10	17.73
Nigeria	1987	4.41	0.64	2.22	0.35	6.63
Nigeria	1988	9.54	0.98	7.78	0.89	17.32
Nigeria	1989	16.08	1.21	27.57	1.44	43.66
Nigeria	1990	8.74	0.94	18.11	1.26	26.86
Nigeria	1991	46.76	1.67	13.88	1.14	60.64
Nigeria	1992	44.42	1.65	6.20	0.79	50.61
Nigeria	1993	61.56	1.79	8.74	0.94	70.30
Nigeria	1994	26.81	1.43	7.97	0.90	34.78
Nigeria	1995	24.10	1.38	4.90	0.69	29.00
Nigeria	1996	19.16	1.28	5.58	0.75	24.73
Nigeria	1997	14.45	1.16	3.53	0.55	17.98
Nigeria	1998	24.86	1.40	2.04	0.31	26.91
Nigeria	1999	52.51	1.72	6.85	0.84	59.36
Nigeria	2000	49.07	1.69	7.86	0.90	56.94
Nigeria	2001	48.60	1.69	4.26	0.63	52.86
Nigeria	2002	78.87	1.90	3.08	0.49	81.96
Nigeria	2003	90.75	1.96	1.76	0.24	92.50
Nigeria	2004	54.99	1.74	4.22	0.62	59.21
Nigeria	2005	185.01	2.27	13.53	1.13	198.54
Nigeria	2006	62.99	1.80	21.00	1.32	83.99
Nigeria	2007	98.51	1.99	26.00	1.41	124.51
Nigeria	2008	141.10	2.15	39.86	1.60	180.95
Nigeria	2009	243.17	2.39	33.72	1.53	276.89
Nigeria	2010	149.14	2.17	104.64	2.02	253.77
Nigeria	2011	628.73	2.80	89.17	1.95	717.90
Nigeria	2012	327.49	2.52	96.10	1.98	423.59
Nigeria	2013	387.76	2.59	300.67	2.48	688.44
Nigeria	2014	389.52	2.59	278.27	2.44	667.79
Nigeria	2015	675.06	2.83	92.18	1.96	767.24

Nigeria	2016	714.36	2.85	107.29	2.03	821.65
Senegal	1985					0.00
Senegal	1986					0.00
Senegal	1987					0.00
Senegal	1988					0.00
Senegal	1989					0.00
Senegal	1990	0.51	-0.29	0.74	-0.13	1.25
Senegal	1991	0.97	-0.01	0.20	-0.70	1.17
Senegal	1992	0.84	-0.08	0.06	-1.19	0.90
Senegal	1993	0.62	-0.21	0.36	-0.44	0.99
Senegal	1994	0.18	-0.74	2.03	0.31	2.21
Senegal	1995	2.04	0.31	1.05	0.02	3.09
Senegal	1996	1.71	0.23	0.15	-0.81	1.87
Senegal	1997	2.47	0.39	1.83	0.26	4.30
Senegal	1998	0.65	-0.19	0.40	-0.39	1.05
Senegal	1999	1.94	0.29	0.09	-1.04	2.03
Senegal	2000	1.79	0.25	0.01	-2.05	1.80
Senegal	2001	1.15	0.06	1.35	0.13	2.50
Senegal	2002	1.70	0.23	0.04	-1.40	1.74
Senegal	2003	7.67	0.88	0.04	-1.38	7.71
Senegal	2004	8.14	0.91	0.03	-1.47	8.18
Senegal	2005	16.10	1.21	0.38	-0.42	16.48
Senegal	2006	9.96	1.00	0.40	-0.39	10.37
Senegal	2007	14.98	1.18	0.64	-0.20	15.62
Senegal	2008	14.54	1.16	1.62	0.21	16.16
Senegal	2009	14.16	1.15	3.10	0.49	17.26
Senegal	2010	11.28	1.05	5.22	0.72	16.50
Senegal	2011	25.29	1.40	4.59	0.66	29.88
Senegal	2012	29.19	1.47	1.86	0.27	31.05
Senegal	2013	53.80	1.73	2.16	0.33	55.96
Senegal	2014	105.16	2.02	6.60	0.82	111.75
Senegal	2015	75.75	1.88	2.87	0.46	78.62
Senegal	2016	58.82	1.77	5.15	0.71	63.96
Sierra Leone	1985					0.00
Sierra Leone	1986	0.02	-1.70			0.02
Sierra Leone	1987					0.00
Sierra Leone	1988	0.01	-2.00			0.01
Sierra Leone	1989	0.19	-0.71			0.19
Sierra Leone	1990	0.25	-0.61	0.35	-0.46	0.59
Sierra Leone	1991	0.34	-0.46	0.03	-1.48	0.38
Sierra Leone	1992	0.32	-0.49	0.20	-0.69	0.53
Sierra Leone	1993	0.97	-0.02	0.86	-0.06	1.83
Sierra Leone	1994	2.32	0.36	0.90	-0.05	3.21
Sierra Leone	1995	1.17	0.07	1.55	0.19	2.72
Sierra Leone	1996	0.87	-0.06	0.54	-0.27	1.41
Sierra Leone	1997	0.27	-0.56	0.75	-0.13	1.02
Sierra Leone	1998	0.33	-0.48	0.52	-0.28	0.86
Sierra Leone	1999	0.57	-0.24	0.32	-0.50	0.89
Sierra Leone	2000	1.84	0.26	0.26	-0.59	2.10
Sierra Leone	2001	1.53	0.18	0.20	-0.69	1.73
Sierra Leone	2002	1.51	0.18	0.29	-0.53	1.81
Sierra Leone	2003	2.11	0.32	0.48	-0.32	2.58

Sierra Leone	2004	6.34	0.80	0.34	-0.47	6.68
Sierra Leone	2005	5.67	0.75	0.18	-0.74	5.85
Sierra Leone	2006	9.71	0.99	0.17	-0.77	9.87
Sierra Leone	2007	20.02	1.30	0.10	-1.00	20.12
Sierra Leone	2008	27.25	1.44	0.35	-0.45	27.60
Sierra Leone	2009	48.38	1.68	1.26	0.10	49.64
Sierra Leone	2010	55.62	1.75	2.42	0.38	58.04
Sierra Leone	2011	60.37	1.78	0.81	-0.09	61.18
Sierra Leone	2012	30.63	1.49	2.36	0.37	33.00
Sierra Leone	2013	29.86	1.48	0.98	-0.01	30.84
Sierra Leone	2014	21.05	1.32	0.37	-0.43	21.43
Sierra Leone	2015	13.86	1.14	0.05	-1.32	13.90
Sierra Leone	2016	10.50	1.02	0.00	-2.65	10.51
Togo	1985			0.01	-2.00	0.01
Togo	1986			0.15	-0.82	0.15
Togo	1987	0.05	-1.30	0.01	-2.00	0.06
Togo	1988	0.19	-0.72			0.19
Togo	1989	0.51	-0.30	0.88	-0.05	1.39
Togo	1990	0.28	-0.55	2.14	0.33	2.43
Togo	1991	0.27	-0.57	4.90	0.69	5.17
Togo	1992	0.22	-0.66	3.63	0.56	3.85
Togo	1993	0.14	-0.85	0.90	-0.05	1.04
Togo	1994	0.32	-0.50	0.75	-0.12	1.07
Togo	1995	0.95	-0.02	3.91	0.59	4.85
Togo	1996	0.98	-0.01	6.70	0.83	7.69
Togo	1997	0.28	-0.55	14.85	1.17	15.13
Togo	1998	0.11	-0.95	18.25	1.26	18.36
Togo	1999	0.24	-0.62	8.89	0.95	9.12
Togo	2000	6.26	0.80	2.74	0.44	9.01
Togo	2001	4.78	0.68	1.62	0.21	6.40
Togo	2002	16.24	1.21	0.83	-0.08	17.07
Togo	2003	35.24	1.55	1.58	0.20	36.82
Togo	2004	58.48	1.77	2.53	0.40	61.01
Togo	2005	50.39	1.70	1.43	0.15	51.82
Togo	2006	71.93	1.86	5.07	0.70	77.00
Togo	2007	93.92	1.97	9.41	0.97	103.33
Togo	2008	136.49	2.14	30.32	1.48	166.81
Togo	2009	107.31	2.03	1.97	0.29	109.27
Togo	2010	270.79	2.43	13.17	1.12	283.96
Togo	2011	249.46	2.40	48.15	1.68	297.61
Togo	2012	252.57	2.40	12.49	1.10	265.06
Togo	2013	333.85	2.52	0.01	-2.12	333.85
Togo	2014	173.08	2.24	2.08	0.32	175.16
Togo	2015	232.36	2.37	0.95	-0.02	233.31
Togo	2016	85.93	1.93	0.87	-0.06	86.80
Uganda	1985	0.13	-0.89	0.49	-0.31	0.62
Uganda	1986	0.03	-1.52	0.02	-1.70	0.05
Uganda	1987	8.37	0.92	0.17	-0.77	8.54
Uganda	1988	28.70	1.46	22.00	1.34	50.70
Uganda	1989	0.49	-0.31	0.05	-1.27	0.55
Uganda	1990	0.07	-1.18	0.51	-0.29	0.58
Uganda	1991	0.02	-1.64	0.60	-0.22	0.62

Uganda	1992	0.34	-0.46	0.64	-0.19	0.99
Uganda	1993	0.53	-0.28	1.19	0.07	1.72
Uganda	1994	0.89	-0.05	0.23	-0.63	1.12
Uganda	1995	0.76	-0.12	0.66	-0.18	1.42
Uganda	1996	3.38	0.53	0.11	-0.97	3.49
Uganda	1997	5.30	0.72	1.29	0.11	6.59
Uganda	1998	1.83	0.26	1.90	0.28	3.73
Uganda	1999	0.84	-0.08	1.17	0.07	2.01
Uganda	2000	0.61	-0.21	1.74	0.24	2.35
Uganda	2001	2.41	0.38	1.36	0.13	3.77
Uganda	2002	1.71	0.23	0.70	-0.15	2.42
Uganda	2003	2.55	0.41	1.03	0.01	3.58
Uganda	2004	5.74	0.76	0.47	-0.33	6.21
Uganda	2005	4.50	0.65	0.18	-0.74	4.68
Uganda	2006	6.43	0.81	0.35	-0.46	6.77
Uganda	2007	8.35	0.92	1.98	0.30	10.34
Uganda	2008	12.33	1.09	0.57	-0.24	12.91
Uganda	2009	10.98	1.04	5.07	0.71	16.05
Uganda	2010	11.70	1.07	1.31	0.12	13.02
Uganda	2011	16.81	1.23	7.39	0.87	24.20
Uganda	2012	20.41	1.31	33.06	1.52	53.47
Uganda	2013	13.63	1.13	15.18	1.18	28.80
Uganda	2014	12.32	1.09	27.90	1.45	40.22
Uganda	2015	21.16	1.33	34.03	1.53	55.19
Uganda	2016	10.11	1.00	27.02	1.43	37.12



APPENDIX E: The membership year of each OIC countries selected for the study

Country/Territory	WBCode	year
ALGERIA	DZA	1969
BENIN	BEN	1982
BURKINA FASO	BFA	1975
CAMEROON	CMR	1975
CHAD	TCD	1969
COMOROS	COM	1976
CÔTE D'IVOIRE	CIV	2001
DJIBOUTI	DJI	1978
GABON	GAB	1974
GAMBIA, THE	GMB	1974
GUINEA	GIN	1969
GUINEA-BISSAU	GNB	1974
MALAYSIA	MYS	1969
MALI	MLI	1969
MAURITANIA	MRT	1969
MOROCCO	MRC	1969
MOZAMBIQUE	MZB	1994
NIGER	NER	1969
NIGERIA	NGA	1986
SENEGAL	SEN	1969
SIERRA LEONE	SLE	1972
SOMALIA	SOM	1969
SUDAN	SDN	1969
TOGO	TGO	1997
TUNISIA	TUN	1969
UGANDA	UGA	1974

APPENDIX F: Institution data on government effectiveness (1996- 2016)

Country/Territory	1996 Rank	1998 Rank	2000 Rank	2002 Rank	2003 Rank	2004 Rank	2005 Rank	2006 Rank	2007 Rank	2008 Rank	2009 Rank	2010 Rank	2011 Rank	2012 Rank	2013 Rank	2014 Rank	2015 Rank
ALGERIA	15. 61	20. 49	14. 15	30. 73	30. 73	35. 12	39. 02	37. 56	32. 52	32. 52	35. 89	38. 76	35. 07	34. 60	35. 07	35. 58	35.10
BENIN	40. 00	46. 34	45. 37	41. 95	43. 41	45. 85	31. 71	33. 17	34. 47	40. 78	37. 32	33. 01	37. 44	36. 97	36. 97	36. 54	30.29
BURKINA FASO	14. 15	22. 93	29. 76	26. 83	30. 24	34. 63	33. 17	26. 83	25. 24	39. 81	34. 93	35. 41	36. 97	31. 75	29. 86	30. 29	31.73
CAMEROO N	14. 63	23. 41	26. 83	22. 93	27. 80	24. 39	20. 49	19. 02	21. 36	20. 87	21. 05	19. 62	18. 96	20. 38	18. 96	21. 63	21.63
CHAD	27. 80	27. 80	23. 90	17. 56	12. 20	8.7 8	7.8 0	5.3 7	2.4 3	2.4 3	5.2 6	4.7 8	7.5 8	4.2 7	7.5 8	6.2 5	6.73
COMOROS	2.9 3	3.4 1	7.3 2	20. 49	5.3 7	3.4 1	1.4 6	1.4 6	0.9 7	0.9 7	0.9 6	0.9 6	1.4 2	2.8 4	1.9 0	2.4 0	5.77
CÔTE D'IVOIRE	54. 63	47. 80	16. 10	15. 61	13. 66	7.3 2	7.3 2	9.2 7	10. 19	9.7 1	11. 48	8.1 3	12. 80	14. 22	19. 43	20. 67	28.37
DJIBOUTI	17. 07	10. 73	10. 73	20. 49	23. 90	31. 22	23. 41	19. 51	17. 96	17. 48	20. 10	15. 79	16. 59	14. 69	17. 06	16. 35	16.35
GABON	42. 93	29. 76	29. 27	40. 98	35. 61	20. 49	21. 95	22. 93	22. 33	20. 39	25. 36	24. 40	22. 27	19. 91	22. 27	26. 92	23.56
GAMBIA, THE	29. 76	34. 63	36. 59	27. 80	36. 10	36. 10	29. 76	27. 32	31. 07	26. 21	31. 58	29. 67	31. 75	37. 91	28. 44	26. 44	18.75
GUINEA	8.2 9	21. 46	19. 51	14. 63	22. 93	16. 59	14. 63	6.8 3	7.2 8	10. 19	13. 40	11. 48	11. 37	9.0 0	12. 32	10. 10	12.50
GUINEA- BISSAU	4.3 9	6.3 4	11. 71	9.7 6	6.3 4	4.8 8	5.8 5	11. 71	12. 62	13. 59	13. 88	13. 88	14. 69	9.9 5	6.1 6	3.8 5	4.33
MALAYSIA	76. 10	77. 56	82. 44	81. 46	84. 88	84. 88	83. 90	85. 37	86. 41	82. 52	78. 95	82. 78	81. 04	76. 78	79. 15	83. 65	76.92
MALI	9.2 7	13. 66	16. 59	31. 71	32. 68	30. 73	28. 29	27. 80	25. 73	23. 79	22. 97	22. 01	23. 22	17. 54	20. 85	14. 90	17.79
MAURITA NIA	52. 20	53. 66	48. 29	56. 59	57. 56	38. 05	43. 90	25. 37	18. 45	16. 50	20. 57	16. 27	17. 54	19. 43	15. 17	15. 87	13.94
MOROCCO	56. 10	56. 59	54. 63	51. 22	54. 15	56. 10	46. 83	51. 22	50. 97	48. 54	50. 24	50. 72	48. 34	52. 61	54. 03	51. 92	50.48
MOZAMBI QUE	52. 68	40. 98	39. 51	42. 93	36. 59	35. 61	37. 07	32. 68	36. 89	37. 86	34. 80	31. 45	30. 28	32. 81	23. 23	23. 56	23.08
NIGER	8.2 9	12. 68	11. 22	18. 54	23. 41	24. 88	24. 88	23. 90	22. 82	26. 70	29. 19	29. 19	30. 81	27. 96	27. 01	24. 52	30.77
NIGERIA	15. 12	10. 24	14. 63	11. 71	15. 61	14. 63	19. 51	18. 05	16. 02	15. 53	9.5 7	10. 53	13. 74	16. 59	16. 59	12. 02	16.83
SENEGAL	57. 07	51. 71	51. 71	58. 05	47. 32	50. 24	47. 32	43. 90	39. 32	50. 97	38. 28	35. 89	39. 34	39. 34	40. 76	38. 94	38.94
SIERRA LEONE	4.3 9	4.3 9	4.3 9	4.8 8	8.7 8	9.7 6	6.8 3	11. 22	11. 17	10. 68	8.6 1	10. 05	9.9 5	10. 43	11. 37	11. 06	9.62
SOMALIA	0.4 9	0.4 9	0.4 9	3.9 0	0.4 9	0.0 0	0.0 0	0.0 0	0.0 0	0.0 0	0.0 0	0.0 0	0.0 0	0.0 0	0.0 0	0.0 0	0.00
SUDAN	12. 20	8.2 9	9.2 7	10. 24	7.3 2	7.8 0	5.3 7	10. 24	13. 11	8.2 5	7.1 8	6.7 0	5.6 9	6.1 6	4.2 7	4.8 1	6.25
TOGO	22. 44	14. 15	7.8 0	5.8 5	3.9 0	2.4 4	3.9 0	2.9 3	3.8 8	3.4 0	6.2 2	5.7 4	6.1 6	8.0 6	9.0 0	9.6 2	11.06
TUNISIA	66. 83	72. 68	71. 22	73. 66	71. 22	70. 24	65. 85	71. 71	68. 93	66. 02	65. 55	63. 16	55. 92	53. 55	51. 66	48. 08	49.04
UGANDA	24. 39	41. 46	40. 98	38. 54	42. 44	46. 83	36. 10	36. 10	40. 78	34. 95	32. 06	36. 84	37. 91	32. 70	32. 70	33. 65	37.02

APPENDIX G: Institution data on regulatory quality (1996- 2016)

	1996	1998	2000	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Country/Territory	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank
ALGERIA	23.04	22.55	23.04	28.92	29.90	29.90	38.24	29.90	27.18	21.36	13.40	10.53	9.95	9.00	11.85	8.17	10.58
BENIN	43.63	45.10	40.69	37.25	32.84	33.82	27.94	38.24	36.41	34.95	40.19	41.63	40.28	38.86	36.97	31.25	30.77
BURKINA FASO	41.18	34.31	46.57	49.02	41.67	41.67	39.71	43.63	46.60	49.51	51.20	48.33	47.39	47.87	47.39	43.27	41.83
CAMEROON	14.71	24.51	26.47	19.61	19.61	24.02	20.59	21.08	21.84	20.39	24.88	25.36	23.22	21.33	18.96	19.71	19.23
CHAD	9.31	16.67	20.10	19.12	18.14	20.10	11.76	15.20	13.11	12.14	14.83	14.83	16.11	13.74	17.06	10.58	9.62
COMOROS	13.73	10.78	10.29	12.75	6.86	5.88	4.90	4.41	5.34	3.88	4.78	5.74	7.11	7.58	10.43	11.54	12.98
CÔTE D'IVOIRE	29.90	37.75	28.92	36.76	20.10	16.67	18.14	18.63	20.87	18.45	18.66	19.62	21.80	24.64	24.64	30.77	32.69
DJIBOUTI	19.12	14.22	21.57	30.88	21.08	25.49	24.02	23.04	24.27	27.67	29.67	27.75	33.18	36.49	32.70	32.21	28.37
GABON	54.41	55.39	43.63	46.08	48.53	34.80	48.04	37.75	31.07	28.16	31.10	32.06	32.23	30.81	28.91	25.00	24.04
GAMBIA, THE	19.61	33.82	37.75	32.35	38.24	38.24	31.86	40.20	39.81	40.29	41.15	38.76	42.65	45.02	38.86	35.10	34.62
GUINEA	24.02	27.45	25.98	17.65	17.16	17.16	15.69	10.78	10.19	10.68	12.44	13.88	17.06	17.06	16.59	14.90	20.67
GUINEA-BISSAU	22.06	8.82	11.76	17.16	18.63	13.73	13.24	18.14	15.05	10.19	10.05	12.44	11.85	10.43	9.00	10.10	9.13
MALAYSIA	72.55	68.63	68.14	67.65	68.14	67.16	68.63	67.16	67.96	62.14	61.72	70.81	71.09	70.62	73.46	75.96	74.52
MALDIVES	82.35	75.98	72.55	73.53	66.67	50.49	63.73	62.75	54.37	39.81	37.32	37.80	37.44	37.91	35.55	39.90	37.50
MALI	29.41	39.71	49.51	36.27	32.35	35.29	32.35	36.27	41.26	39.32	38.28	35.41	37.91	37.44	34.12	30.29	30.29
MAURITANIA	27.45	25.49	33.33	62.25	50.98	51.96	43.14	39.71	35.44	29.13	26.79	22.97	23.70	28.91	27.49	25.96	21.15
MOROCCO	46.08	51.47	52.45	47.55	45.59	46.57	41.18	49.51	49.51	48.54	51.67	51.20	50.71	50.71	48.34	49.52	49.04
MOZAMBIQUE	27.94	36.27	42.16	41.18	31.37	34.31	25.00	30.39	30.10	36.89	38.76	38.28	35.55	36.02	37.44	37.98	34.13
NIGER	14.22	23.04	25.49	25.00	25.98	28.92	39.22	33.82	32.04	37.86	34.45	34.45	33.65	30.33	31.28	26.92	26.44
NIGERIA	22.55	17.16	20.59	11.76	10.29	8.33	23.53	19.12	19.90	21.84	25.36	26.32	27.49	26.07	27.01	23.56	21.63
SENEGAL	43.14	43.63	46.08	45.59	47.06	45.10	46.08	44.12	40.29	44.66	43.54	42.58	45.02	50.24	52.61	46.15	48.56
SIERRA LEONE	4.90	10.29	8.82	10.78	13.24	15.20	14.71	12.75	16.02	16.50	23.92	25.84	26.54	27.01	25.59	24.52	20.19
SOMALIA	0.00	0.00	0.00	0.00	0.49	0.49	0.49	0.00	0.00	0.00	0.00	0.48	0.47	0.47	0.95	1.44	0.96
SUDAN	8.33	8.33	8.33	10.29	8.82	11.76	8.33	10.29	7.28	4.85	8.13	7.18	8.06	5.69	6.16	5.29	4.81
TOGO	34.80	28.43	24.02	22.55	24.02	21.08	21.08	19.61	17.48	16.99	21.53	21.05	18.01	22.27	19.91	23.08	22.60
TUNISIA	52.94	50.49	51.96	48.04	53.92	51.47	51.96	55.39	55.34	54.85	53.11	53.11	46.45	45.97	40.76	38.46	38.94
UGANDA	57.84	57.84	55.39	52.45	53.43	55.39	49.02	47.06	48.54	47.09	47.85	47.37	47.87	44.55	45.50	46.63	46.15

APPENDIX H: Institution Data on Control Of Corruption (1996-2016)

	1996	1998	2000	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Country/Territory	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank
ALGERIA	33.17	15.12	14.15	21.46	30.24	28.29	41.46	38.05	36.89	33.98	34.45	37.14	37.44	39.34	39.34	31.73	28.37
BENIN	20.00	33.17	37.56	28.29	35.61	38.54	17.56	31.22	38.83	36.89	27.27	26.19	28.91	18.96	21.33	24.04	30.77
BOTSWANA	74.63	77.56	75.12	74.63	85.85	80.00	83.41	79.02	80.10	80.10	78.95	80.48	80.09	78.67	79.15	75.96	77.40
BURKINA FASO	64.39	46.83	54.63	57.07	56.59	52.68	54.15	44.88	44.66	45.15	42.58	43.81	43.13	37.91	35.07	37.02	47.12
CAMEROON	7.32	11.22	8.78	9.27	18.05	11.71	11.22	13.66	16.50	17.48	18.66	16.19	12.80	5.69	9.48	10.10	12.98
CHAD	20.00	16.59	22.93	19.51	5.37	6.83	3.90	6.34	5.34	3.40	4.31	2.86	5.69	7.11	5.69	8.17	6.73
COMOROS	20.00	2.93	6.34	24.39	20.49	20.00	21.46	30.24	30.10	24.27	23.44	24.76	25.59	27.49	26.07	36.54	30.29
CÔTE D'IVOIRE	63.41	42.93	27.32	27.32	14.15	9.27	8.29	8.78	11.17	10.19	12.44	10.48	16.59	21.80	23.70	41.83	42.31
DJIBOUTI	36.10	27.32	14.63	32.68	20.49	37.07	30.24	33.66	39.81	52.91	49.76	48.10	46.92	46.92	41.71	37.98	33.65
GABON	16.10	20.98	36.10	40.49	40.49	23.41	37.07	17.56	14.56	14.08	17.70	22.86	22.75	31.28	32.23	30.29	28.85
GAMBIA, THE	39.02	36.10	40.98	40.00	46.34	31.71	28.78	25.85	23.79	25.24	31.10	33.33	36.97	29.86	26.54	28.85	21.63
GUINEA	37.07	27.80	25.85	35.61	26.83	19.51	15.12	11.22	6.80	7.77	13.88	9.05	11.85	13.74	14.22	12.98	15.38
GUINEA-BISSAU	11.71	7.32	11.71	26.34	10.24	10.24	13.17	15.61	9.22	10.68	10.53	13.81	13.74	9.00	6.64	2.88	3.37
MALAYSIA	71.22	70.73	65.85	62.44	68.78	70.24	62.93	65.37	64.08	57.77	58.37	62.86	59.72	64.93	68.25	68.27	65.87
MALI	39.02	32.20	29.27	35.12	38.05	37.56	42.93	40.00	46.60	40.78	29.67	30.95	34.12	24.17	24.64	27.40	29.81
MAURITANIA	60.49	50.24	50.24	62.93	61.46	45.37	47.32	26.83	37.38	26.70	33.97	29.05	34.60	25.59	23.22	18.27	16.35
NIGER	11.71	11.71	16.10	9.76	11.71	19.02	28.29	20.00	21.84	23.79	30.62	29.52	32.70	30.33	35.55	30.77	33.17
NIGERIA	8.78	10.24	5.85	1.46	4.39	6.34	11.71	10.73	15.05	21.36	17.22	15.24	10.43	10.90	9.00	7.21	11.06
SENEGAL	49.27	50.73	57.07	66.34	53.66	56.10	56.10	39.51	34.95	36.41	36.36	28.10	36.49	50.24	50.71	57.69	59.13
SIERRA LEONE	26.34	21.46	17.07	30.24	16.59	18.54	13.66	14.15	19.90	16.50	18.18	24.29	20.85	18.01	18.48	15.87	21.15
SOMALIA	1.95	0.98	0.98	6.83	0.49	0.00	0.49	0.00	0.49	0.00	0.00	0.00	0.00	0.00	0.47	0.48	1.44
SUDAN	5.37	13.17	24.39	12.68	6.83	7.80	2.44	8.29	3.40	2.91	6.70	5.71	6.16	0.95	1.42	3.85	2.40
TOGO	26.83	32.20	29.27	29.27	17.07	16.10	21.95	12.68	14.08	15.53	15.31	18.10	17.06	16.59	14.69	16.83	25.96
TUNISIA	49.27	57.56	59.02	72.20	66.34	61.95	54.63	57.07	56.31	53.40	56.94	54.76	55.92	54.98	54.98	55.77	55.29

APPENDIX I: Institutional Data On Control Of Political Stability (1996- 2016)

	1996	1998	2000	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2014	2015
Country/Territory	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Lower	Rank
ALGERIA	4.35	4.83	9.18	6.76	5.31	10.63	20.77	15.94	14.49	14.90	13.27	11.37	10.43	9.95	12.32	10.48	8.53	13.33
BENIN	81.64	68.60	70.53	71.50	67.63	54.59	60.39	62.32	55.56	55.77	57.35	52.61	56.40	57.82	57.82	48.57	34.12	48.10
BURKINA FASO	32.37	38.16	43.48	31.88	43.00	41.55	43.00	51.69	53.62	45.02	45.02	45.02	28.44	26.54	20.38	20.38	10.90	23.33
CAMEROON	17.87	20.77	28.02	24.64	29.95	31.40	40.58	37.20	33.33	27.40	29.38	23.70	26.54	27.49	28.44	12.86	8.53	14.29
CHAD	15.46	10.14	13.04	6.28	10.14	7.25	9.66	6.28	5.80	4.33	6.16	9.00	10.90	17.06	15.17	8.10	6.64	14.76
COMOROS	57.00	60.87	39.61	54.11	25.60	39.13	35.27	33.82	16.43	15.87	21.80	28.44	30.81	35.07	38.86	40.95	28.91	40.48
CÔTE D'IVOIRE	45.89	34.30	12.08	2.42	4.83	2.90	0.97	3.86	5.31	7.21	11.37	8.06	8.53	11.37	17.06	13.33	8.53	20.48
DJIBOUTI	30.92	15.46	32.37	28.99	20.77	34.78	24.15	40.10	40.58	54.33	63.51	54.50	54.50	51.66	42.18	20.95	11.37	30.95
GABON	44.93	50.72	65.22	57.00	53.14	59.90	56.04	52.17	53.14	53.37	48.82	55.45	60.19	56.87	58.77	53.33	38.86	50.48
GAMBIA, THE	61.35	64.73	63.77	70.05	56.52	54.11	55.56	44.44	45.41	47.12	49.76	49.76	47.87	44.55	44.55	39.05	28.91	49.05
GUINEA	11.59	24.15	3.86	10.14	22.71	17.39	15.46	4.35	1.93	2.40	2.84	4.74	9.48	10.90	11.37	14.29	9.48	31.43
GUINEA-BISSAU	6.28	5.31	29.95	19.81	28.50	31.88	28.02	30.43	29.95	23.08	23.70	25.59	23.70	18.01	19.43	22.86	11.85	31.90
MALAWI	27.54	37.68	30.92	43.00	40.58	49.28	49.28	48.79	44.44	41.83	46.92	48.34	44.55	45.02	38.39	49.52	36.49	45.24
MALAYSIA	61.84	39.13	47.34	60.87	59.90	56.52	64.73	54.11	49.76	46.63	42.18	51.66	49.29	44.08	48.34	56.19	43.13	54.29
MALI	54.11	57.97	51.21	56.04	51.69	62.80	53.62	57.49	51.21	50.48	41.71	37.91	25.59	3.79	6.16	6.67	5.69	7.62
MAURITANIA	54.59	54.59	55.07	55.56	42.51	42.03	38.16	53.14	35.75	24.52	19.43	14.69	13.74	15.64	18.01	24.76	14.22	22.86
MOROCCO	36.71	53.62	38.16	33.82	31.40	35.75	28.99	30.92	27.54	25.96	31.28	33.18	34.12	32.23	29.86	29.52	20.85	34.76
MOZAMBIQUE	43.96	46.86	38.65	47.34	51.21	44.44	51.21	60.87	54.59	56.25	66.82	56.87	57.35	58.29	37.44	31.43	22.27	26.19
NIGER	43.48	30.92	44.93	38.16	41.55	28.50	30.92	39.61	28.99	24.04	14.69	12.80	19.91	14.69	9.00	9.52	8.06	15.24
NIGERIA	13.53	24.64	8.70	7.25	5.80	4.83	6.28	2.90	3.86	5.29	4.27	3.32	3.32	3.32	3.79	5.24	2.84	5.71
SENEGAL	22.22	15.94	25.12	34.78	36.23	45.41	39.61	35.27	36.23	38.94	38.39	31.75	37.91	41.23	44.08	37.62	28.91	40.00
SIERRA LEONE	5.31	2.90	4.35	21.26	18.36	29.95	34.30	38.16	42.51	37.50	34.60	36.49	40.28	37.44	40.76	41.43	29.38	43.33
SOMALIA	0.48	1.93	2.42	0.00	0.00	0.48	0.00	0.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.90	0.00	1.90
SUDAN	1.93	2.42	0.97	3.86	3.86	5.80	3.38	1.93	2.42	1.92	0.95	0.95	0.95	2.37	2.84	3.81	0.47	4.29
TOGO	29.95	23.67	31.88	43.48	36.71	34.30	7.73	28.02	32.37	38.46	38.86	38.39	39.81	34.12	35.07	38.10	28.91	39.52
TUNISIA	49.76	52.66	56.52	45.41	56.04	50.24	47.34	53.62	50.24	49.04	47.39	44.08	34.60	22.27	18.48	18.10	9.95	19.05
UGANDA	7.73	12.56	11.59	11.11	6.28	11.59	8.21	14.01	18.36	17.31	17.06	16.11	18.01	19.43	19.91	15.24	9.48	20.00