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The Arab Economies between Political Instability and Terrorism Propagation: Descriptive Analysis

*[1] Manel Ben Ayeche, [2] Mounir Barhoumi, [3] Mohamed Amine Hammas

[1,2,3] Faculty of Economic Sciences and Management of Sousse, University of Sousse, Tunisia

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ABSTRACT:
The economic situation in the Arab countries is due to several factors as the political crisis in a socio-economic vulnerability. Political changes are usually accompanied by a drop in production, a deterioration of macroeconomic balances, a high level of poverty, an appearance of economic corruptions and a structural increase in unemployment. In addition, the expansion of terrorism is a main ingredient of political instability in Arab countries. In fact, terrorism and political chaos feed on each other; the purpose of terrorism is often creating political chaos, but not systematically. It might be back to the jihadist literature in the second half of the 2000s to understand what is the possible strategy that determines by policy authorities, in part, that used of violence against security institutions. Then, we investigate our paper to examine the response of the Arab economies to the geopolitical instability and the propagation of terrorism, especially, after the Arab revolution.

Keywords: *Arab countries, Economic, Political, Social, Instability, Terrorism*

INTRODUCTION

The Arab world is presently not an economic unit not more than policy, each of the Arab States is integrated in the global capitalist system, as a separate unit of the other.

The historical foundations, the modalities and the degree of this integration, particular to each country, constitute objective factors which are opposed to the economic unity of the Arab world.

One of the consequences of the gulf war (1990-1991) was the bursting of the Arab world, or rather the return of the Arab world to what it was before, that is to say, the Maghreb, the Arabian Peninsula, the Nile Valley and the Near East. There has been a total confinement of each region of the Arab world on itself. It is difficult in these circumstances to speak of Arab economy itself, however for a political reason; we will adopt the term "Arab economy" in favor of Arab unity in a perspective of historical necessity.

The Arab revolution initiated in 2011 puts into question the States established or restored during the twentieth century and who have failed to rise to the rank of modern States, having not been freeing the citizen of the misery and fear, ensure the social and political progress, nor to ensure the security and integrity of the Arab territories. The revolution expressed the requirement of a burst of civilization in a sense at the political, economic, social and ethical.

Worsening of imbalances in the Maghreb, breakthrough of the radical Islamism and the jihadisme, bursting of a focus of instability in the Sahel threatening the stability and security of the countries of the Maghreb on the long-term, in

*Corresponding Author, Email: *benayeche.manel@yahoo.fr*

the arms race initiated by Algeria since 2006, freezing the Greater Maghreb aggravating its economic dependence and strategic, entry of the euro area in recession and ongoing restructuring of the Middle East scene on bottom of growing tensions, constitute as many crucial challenges for Tunisia in democratic transition.

In our paper, we try to study the Arab economic between political instabilities and Terrorism propagation. We present in section 2 the literature review of the impact of political instabilities and terrorism on economic growth. Then, we present in all next sections a representation of other economic, financial, social and political indicators relatives to the Arab countries.

We note in our paper the absence of some countries in other figures or the change of the period of study. This absence is justified by the unavailability of the data. Also, we note the absence of econometric modelling because we interest in descriptive analysis only.

Literature Review

Studies examining the relationship between terrorism or political instability and tourism can be broadly classified into two categories – 'qualitative' and 'quantitative'. Sonmez (1998) had provided a comprehensive list of qualitative studies (case studies) that have explored this relationship. Though, quantitative studies are scarce in the literature examining the impact of terrorism on tourism as it has been rightly pointed out by Llorca-Vivero (2008). For the present paper, the focus, in this section, will be on the studies that have quantified the impact of terrorism on tourists' inflow as well as the duration of this impact, both at the global level and separately for the Middle East. One of the early attempts to estimate the impact of terrorism on tourism and vice versa was made by Enders and Sandler (1991). The study focused on Spain for the period 1970–1988. Using Vector Auto-regression (VAR) methodology on monthly data on the number of foreign tourists visiting Spain and the number of terrorist incidents taking place, the authors found that terrorism affected tourism but not the reverse. A subsequent study by Enders et al. (1992) estimated the impact of international terrorism on domestic tourism in countries like Austria, Italy and Greece for the period of 1974–1988.12 They found terrorist activities not only reduced tourism in the targeted countries but also affected the neighboring countries negatively. Drakos and Kutan (2003) showed that international terrorism has a negative impact on tourism in countries like Turkey, Greece and Israel for the period of 1991–2000. The impact of terrorism on tourism industry in Turkey was also examined by Yaya (2008). For the period of 1985–2006, the author found that the impact of terrorism on tourism is negative but the magnitude of reduction of foreign tourist inflow is small. Moreover, the duration of the impact is observed approximately within one year. It also shows that terrorism has caused a loss of 6 million tourists in the span of nine years and the economic cost of terrorism on tourism industry was more than US $ 700 million in 2006.

Apart from the use of uni-variate and multi-variate time series models to explain the relationship between terrorism and tourism, Ordinary Least Squares (OLSs) technique has also been applied to explain this relationship. Dhariwal (2005), using the annual data of international tourist arrivals over the period 1966–2000, confirmed the existence of significant negative impact of terrorism on tourism. The author has found that in a disturbance year growth of tourist arrivals and growth of real tourism receipts decrease by nearly 6 and 8 percent respectively because of the disturbances as compared to a non-disturbance year. Moreover, growth in real tourism receipts declines by nearly 9 percent in a typical disturbance year compared to a typical non-disturbance year.

Bhattacharya and Basu (2010) established a one-way causality between incidences of terror attacks and foreign tourist arrivals. The one-way causality runs from terror incidents to foreign tourist arrivals and not the other way round. Foreign Tourist Arrivals (FTAs) in India begin to decline in the second month after the occurrence of the event till the fifth month after the terror attack. They then start rising from the sixth month onwards. After the seventh month, tourism reverts back to its original level.

Greenbaum and Hultquist (2006) found that terrorism in Italy had a significant negative impact on tourism over the period 1995-1997 and the impact was greater in case of large cities when compared with small cities. Moreover, the

study confirmed that the impact of terrorism on economic and tourism activity is transitory in nature and is confined largely to a period of 3–9 months after an event. The study measured the impact of terrorist activity on domestic as well as foreign tourist arrivals and it has pointed out that impact of terrorism is more on foreign lodging. Other than time series models, scholars have also used various other techniques such as cross-sectional gravity equations, market demand-supply models and general equilibrium models depending on the situation and availability of data, to explore the above-said relationship.

Then, Llorca-Vivero (2008), using cross-sectional gravity equation for tourism over the period 2001–2003, showed that domestic incidents and international events affect tourist inflows negatively. The impact of a domestic event is less when compared with an international event. They also found that cost of terrorist attacks in developing countries in terms of tourist flows is more severe than developed countries.

In addition, Fleischer and Buccola (2002), using the market demand-supply model, in case of Israel, found that two standard deviation or four unit increase in the terrorist index causes a decline of the visitors' demand for bed by 49,600 bed nights per month which is almost 7.5% from the sample mean. Their study also found that the effect of terrorism on tourism starts two months after the terror incident.

Aly and Strazicich (2000) had examined the annual data on tourists' night visits for Egypt for the period 1955–1997 and for Israel for the period 1971–1997 to investigate whether shocks (events such as terrorism or war) have permanent or transitory effects on the time path of tourist visits. The authors had found that a shock creates a transitory disturbance to tourist flows.

Blake and Sinclair (2002) used a Computable General Equilibrium (CGE) model to estimate the impact of 11 September 2001 attacks in the United States on travel and tourism. The authors found out that the impact was severe in terms of loss of income and employment. Their estimate shows a loss of US $ 30 billion GDP and more than half a million job.

Among the studies that had investigated the impact of terrorism/political violence on the tourism industry of the Middle-East region, Kalesar (2010) noted the emergence of new tourism markets in the Middle East post 9/11 terrorist attacks in the United States. The coordinated attacks at the World Trade Centre have had dramatic consequences for the global tourism market and were seen by many as a significant setback in the history of tourism industry.

But, according to Kalesar (2010), the tourism sector in the Middle East countries did not suffer as expected considering the causes and scope of the crisis. In fact the intra-regional tourism boomed in the post-2001 like never before, as many people from countries of the Middle-East changed their traditional travel behaviors for fear of backlashes and Islamophobia and preferred to stay within the region for vacations. This particular segment of the tourism market has been defined as 'Islamic Tourism', 'Arab Tourism' or the 'Arab Middle East Tourism Paradox' in the existing literature on tourism.

Also, Hazbun (2006) is of the opinion that while there is a general notion that tourism economies are generally vulnerable to political violence, tourism patterns in the Middle East may call for a subtle revision of our understanding of how that relationship plays out. According to Hazbun (2006), in the 1970s and 1980s, an "incident" (as for example, terrorist attacks/ political violence) anywhere in the region would have a sizeable negative impact on tourism receipts across much of the Middle East and North Africa as Western tourists reconsidered their travel plans. He further pointed out that in the post-9/11 era; however, such a broad neighborhood effect is mitigated by other factors. For example, despite the civil war in Iraq and the global tensions over Iran's nuclear program, the United States' posting its most serious "travel warnings" for locations across the region such as Lebanon, Israel13, the Palestinian territories, Iraq, Iran, Saudi Arabia, and Yemen have done little to dampen the expansion of regional tourism, as in places like Dubai.14 The author cited the World Tourism Organizations' (UNWTO) Report of 2005 which clearly stated that, 'in terms of consumer behavior, it is quite evident that travelers have been undeterred by external threats. At the global level the impact of such shocks have been negligible … They have led to temporary shifts

in travel flows, but they have not stopped people travelling. At the local level, the impact can be severe in the affected areas, but in most cases this is surprisingly short lived'.

Economic Policy and Debt

In this section, we try to explain the economic policy and debt of the Arab countries during the period of study (1961-2011). Then, we use two economic indicators; the GDP per capita growth (annual %) and the net inflows of Foreign Direct Investment (% of GDP).

Figure 1 summarizes the annual percentage growth rate of GDP per capita for the 23 Arab countries. We remark that the high growth rate of GDP (43%) is in Iraq (after the American war in the Iraq; 2004). The low growth rate of GDP per capita (-42.8%) is in Lebanon (1988) and in Iraq (during the second Gulf War on 2003). However, for other countries the growth rate of GDP per capita is between 20% and -20%.

The volatility of the growth rate of GDP per capita is explained by the political instability and the propagation of the Terrorism in the Arab countries.

In figure 2, we present the net inflows of Foreign Direct investment (% of GDP) in the Arab countries during the period of study. By recording to figure 2, we observe that the Foreign Direct Investment present an important value, especially before the terrorist action in the United State. After the terrorist action of 2001, the Foreign Direct Investment of the Arab countries is decreased but there is always positive except for a few countries that are affected by the financial crisis and political instability and democratic, social and economic transition (Tunisia, Egypt, Syrian Arab Republic, Yemen, Eretria, Bahrain, Kuwait, Sudan, Somalia and Lebanon).

After the financial crisis of 2007, the net inflows of Foreign Direct Investment are between (-10) and 23 % of GDP.

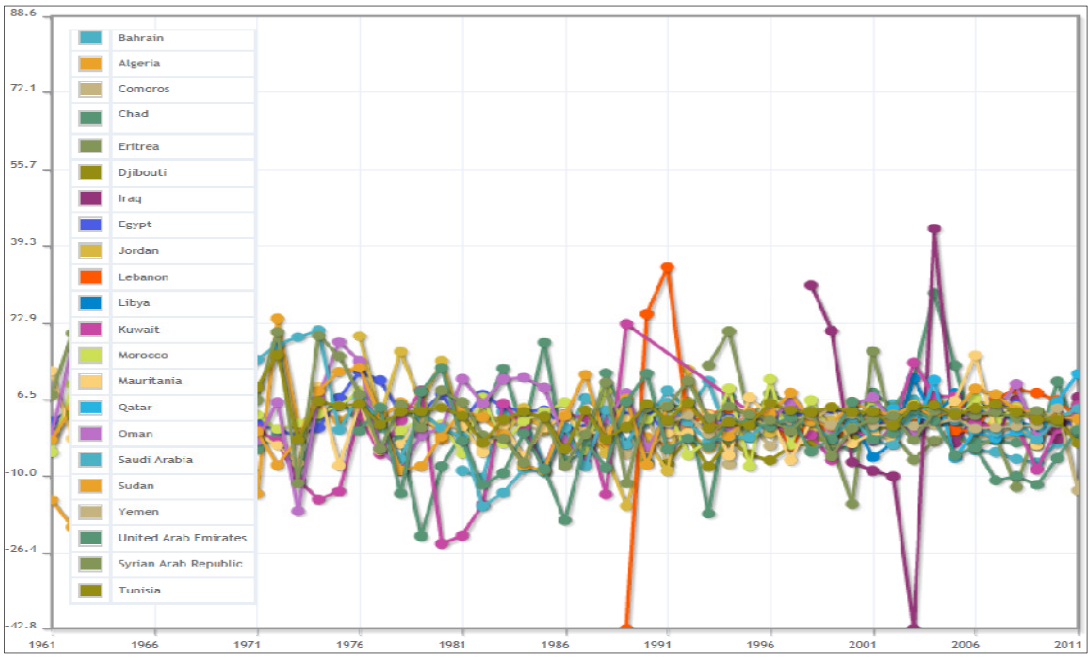

Figure 1: GDP per capita growth (annual %)

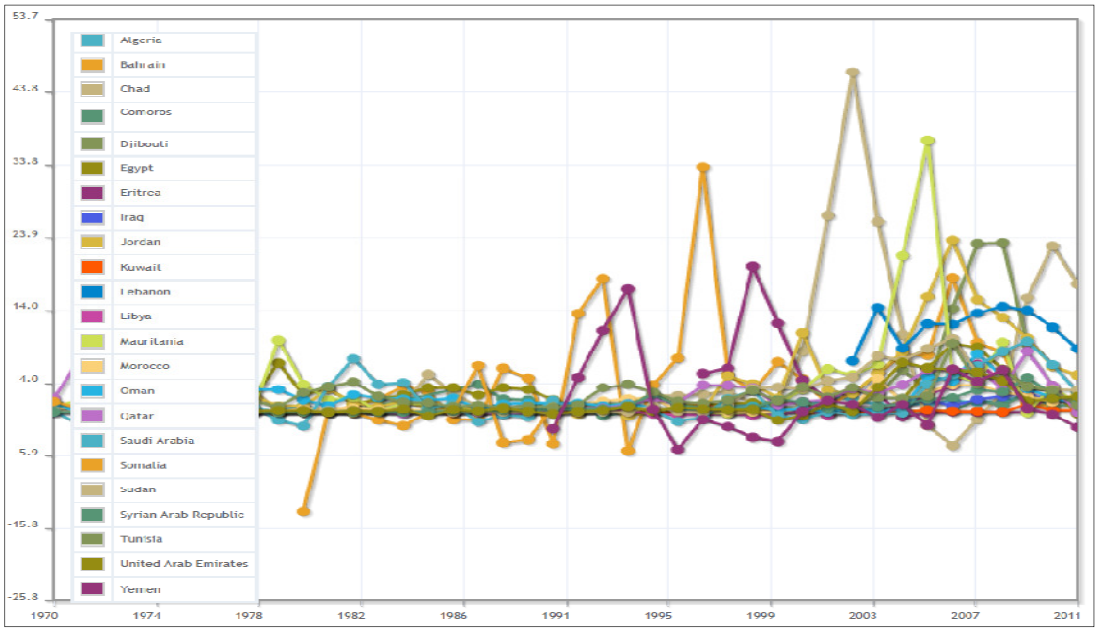

Figure 2: Foreign direct investment, net inflows (% of GDP)

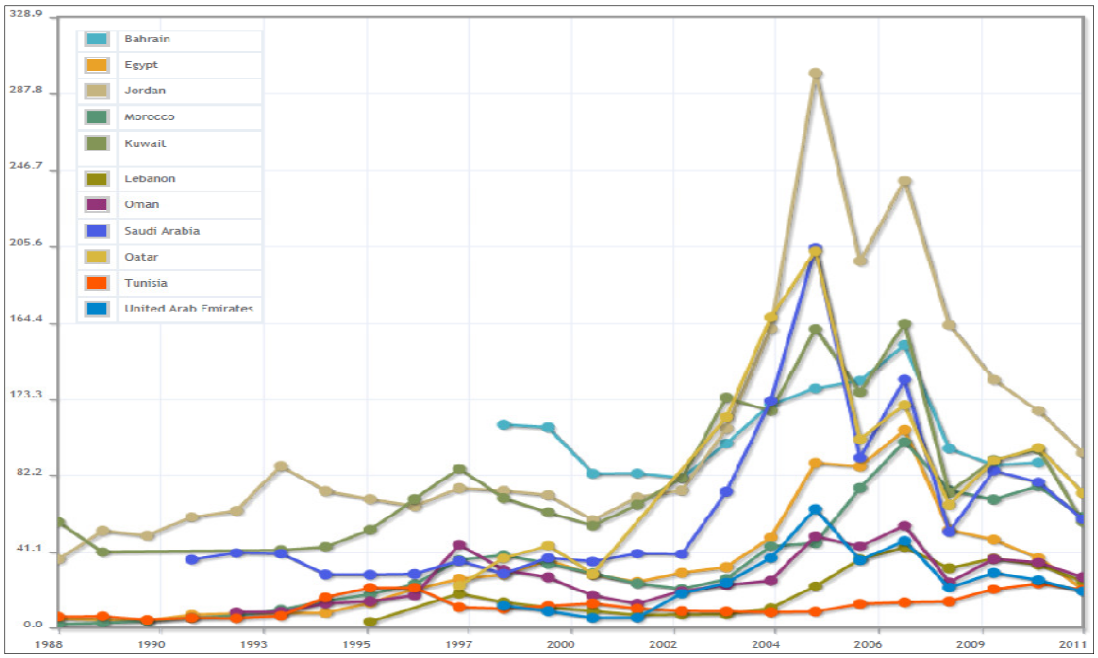

Figure 3: Market capitalization of listed companies (% of GDP)

Financial Sector

After studying the economic situation of the Arab countries, we try to present their Financial Sector. Then, we use three financial indicators; Market Capitalization of listed companies (% of GDP), Stocks traded, total value (% of GDP) and Consumer price index (Annual % of Inflation).

Figure 3 summarizes the percentage of GDP of the market capitalization of listed companies in the Arab countries. According to figure 3, we note that Jordan present the high market capitalization (300%) who decrease in tow date; in 2005 and after the financial crisis of 2007. But, the low market capitalization is especially in Tunisia which has a low volatility.

Next, we show the total value of stock traded (% of GDP) in figure 4. The Saudi Arabia has the highest rate of stock traded in all Arab countries (400%). But, Tunisia has the lowest rate of stock traded (0.02%).

Finally, we represent the last financial sector indicators, inflation, in figure 5. We note that the highest annual rate of inflation is in Iraq which increases in tow date; after the first Golf War and after the second Golf War. Also, Sudan has an important annual rate of inflation (130%). More, Syrian Arab Republic, United Arab Republic, Kuwait and Yemen have an important peak in figure 5. For other countries, the consumer price index is between 0% and 20%.

We note that the financial sector in the Arab countries, which have a political instability or terrorism attacks, is characterized by other difficulties even for petroleum countries.

Private Sector and Trade

To continue our investigation of the Arab economic, we try to study the Private Sector and Trade in all Arab countries. Then, we use tow indicators; Merchandise trade (% of GDP) and Net barter terms of trade index (2000 = 100).

In figure 6, we represent the share of merchandise trade in GDP of all Arab countries during the period of study (1960-2011). The highest value of merchandise trade is in Bahrain, Iraq and United Arab Emirates. But, the lowest value of merchandise trade is in Sudan, Chad and Egypt. For other countries the value of merchandise trade is between 30% and 100% of GDP.

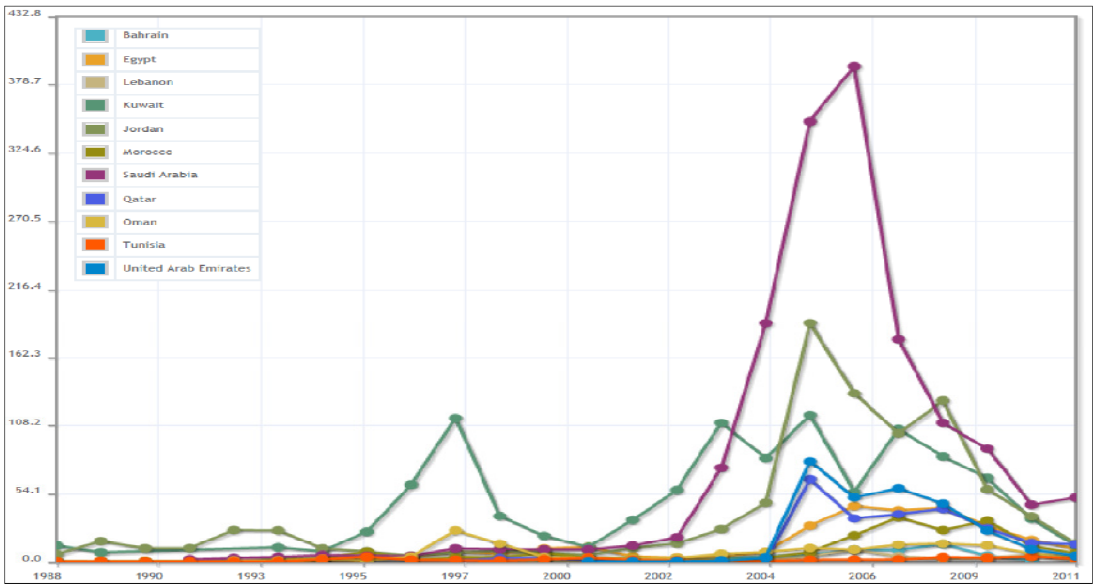

Figure 4: Stocks traded, total value (% of GDP)

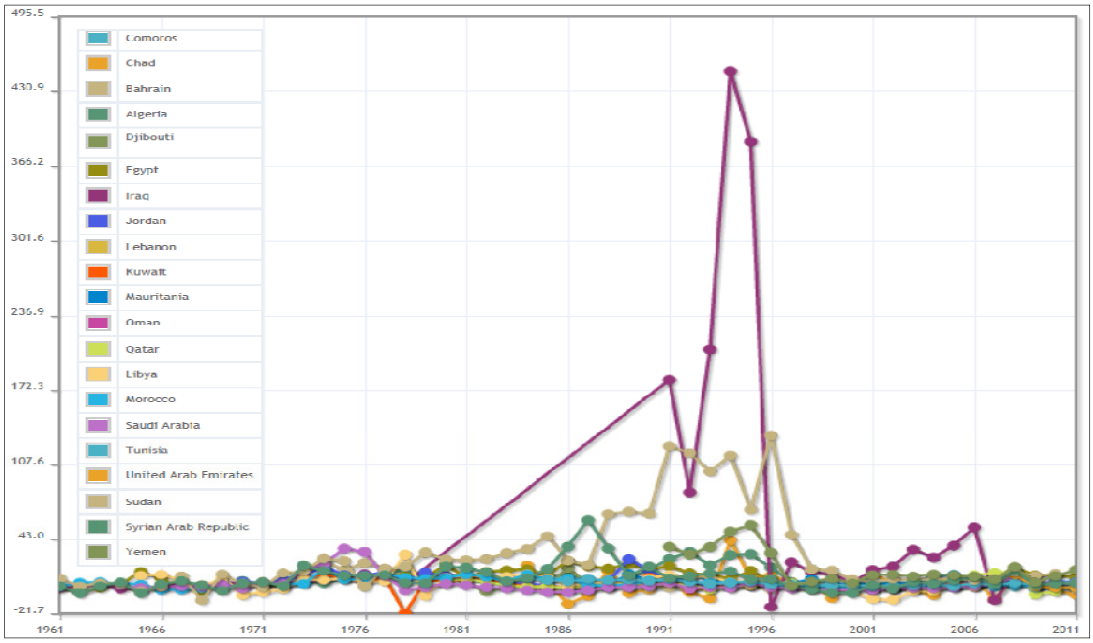

Figure 5: Inflation, consumer prices (annual %)

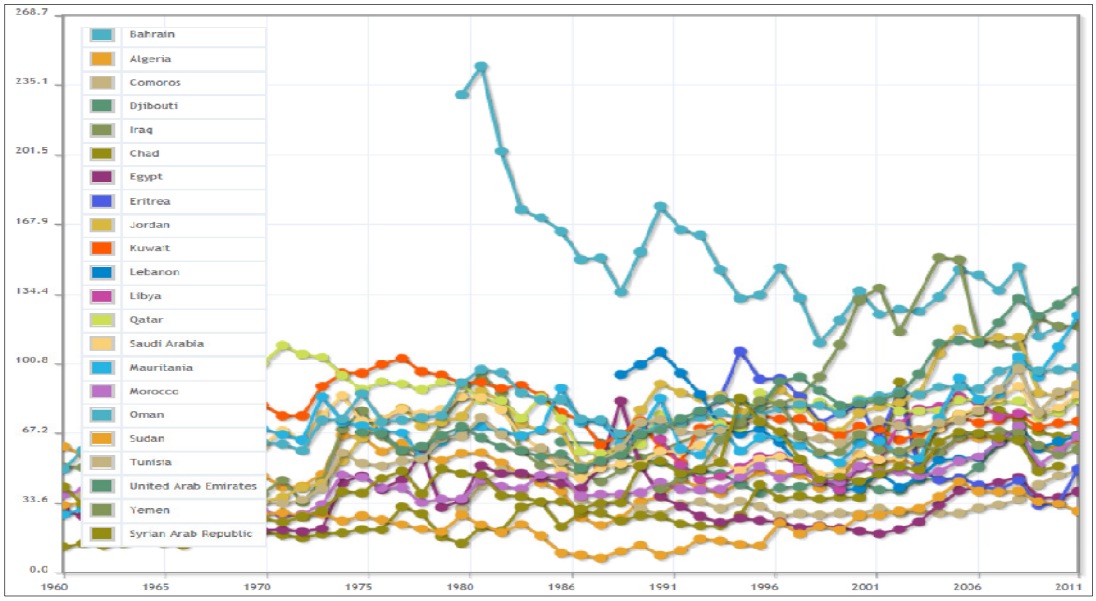

Figure 6: Merchandise trade (% of GDP)

Figure 7 summarizes the Net barter terms of trade index (2000 = 100) of the Arab World. This index increased on 2003 but decreased just after the financial crisis of 2007. The highest index is in Saudi Arabia but the lowest index is in Syrian Arab Republic and Algeria.

Public Sector

For the public sector of Arab countries, we use two indicators; the Cash surplus/deficit (% of GDP) and the Tax revenue (% of GDP). In figure 8, we represent the annual rate of the Cash surplus/deficit (% of GDP) of all Arab countries. Then, we note that the Arab countries present a negative rate of Cash surplus/deficit except two countries (Kuwait and Bahrain) just after 2004.

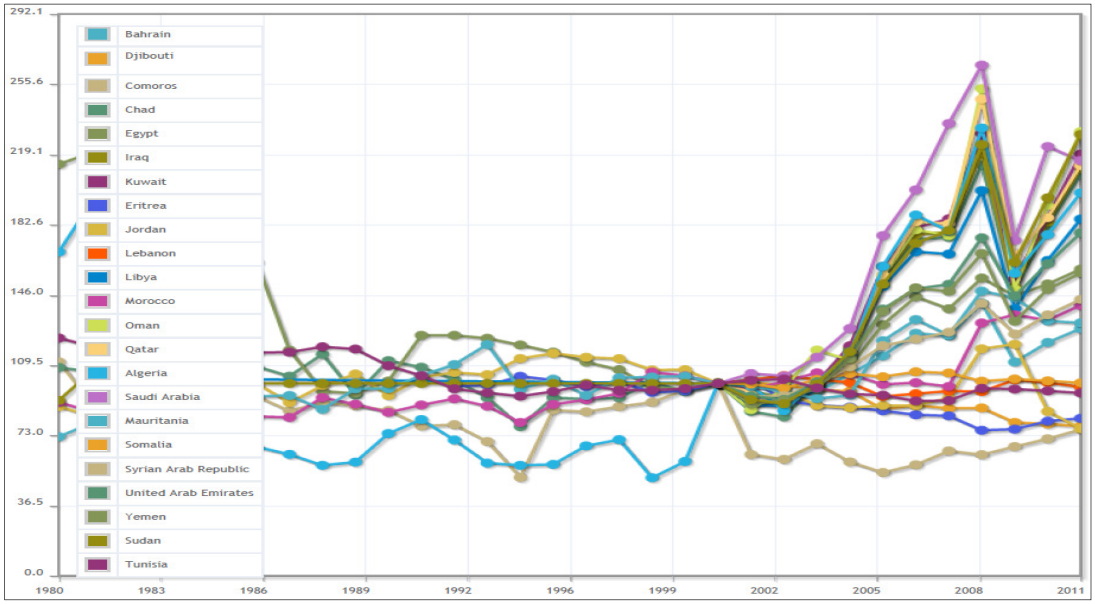

Figure 7: Net barter terms of trade index (2000 = 100)

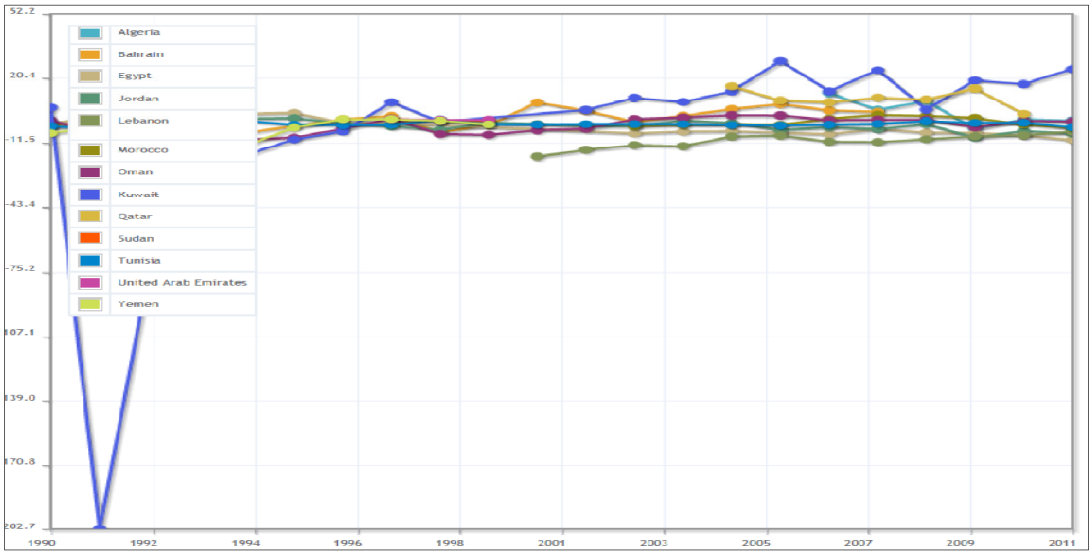

Figure 8: Cash surplus/deficit (% of GDP)

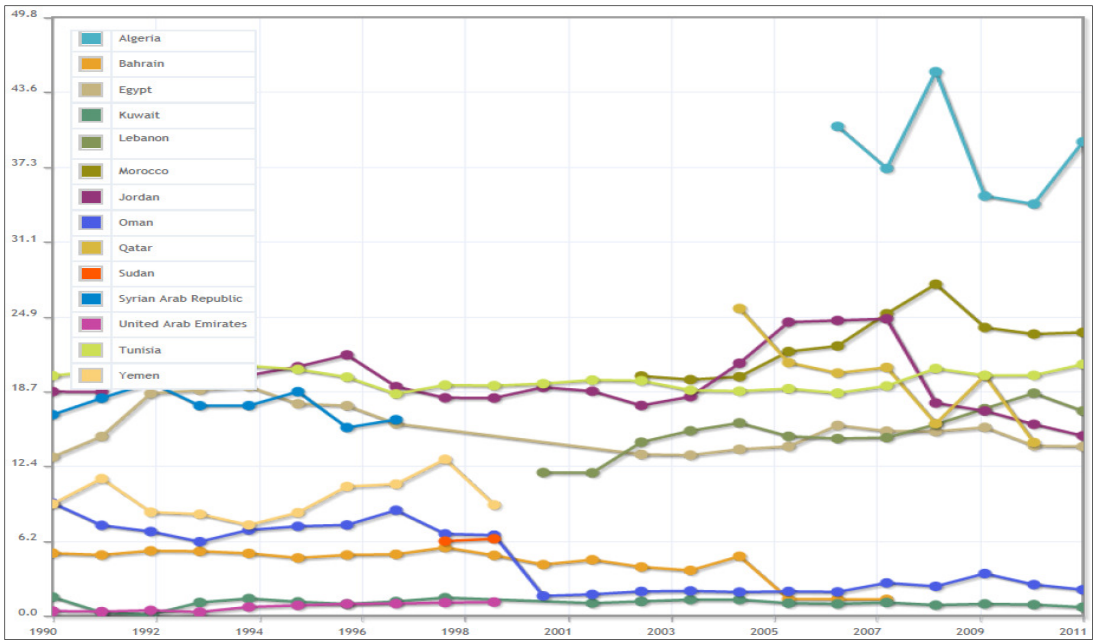

Figure 9: Tax revenue (% of GDP)

Infrastructure

Economic growth requires in large part an infrastructure very developed. In our study, we interested in the infrastructure of the Arab countries. Then, to examine the infrastructure of the Arab World, we use four indicators; Vehicles (per km of road), Research and development expenditure (% of GDP), Internet users (per 100 people) and Quality of port infrastructure (1=extremely underdeveloped to 7=well developed and efficient by international standards).

In figure 10, we represent the vehicles per kilometre of road include cars. Kuwait has the highest number of vehicles per kilometre of road. We note that the petroleum countries possess the highest number of vehicles per kilometre of road.

Figure 11 summarizes the percentage of Research and development expenditure of GDP in the Arab World. We observe that the North Africa countries have the highest percentage of Research and Development expenditure especially Tunisia and Morocco.

The index of Internet users is represented in figure 12. By recording to the figure 12, we remark that the Golf countries have the highest value of Internet users. Also, the number of internet user grows from one period to another in all Arab countries.

Then, we represent the Quality of port infrastructure in figure 13. We note that the quality of port infrastructure of the petroleum countries well developed and efficient by international standards, especially, Bahrain, Kuwait, Qatar, United Arab Emirates, Saudi Arabia and Oman.

By observing the infrastructure of the Arab World, we can postulate that the petrol Give an advantage to the Arab countries to improve their economic situation.

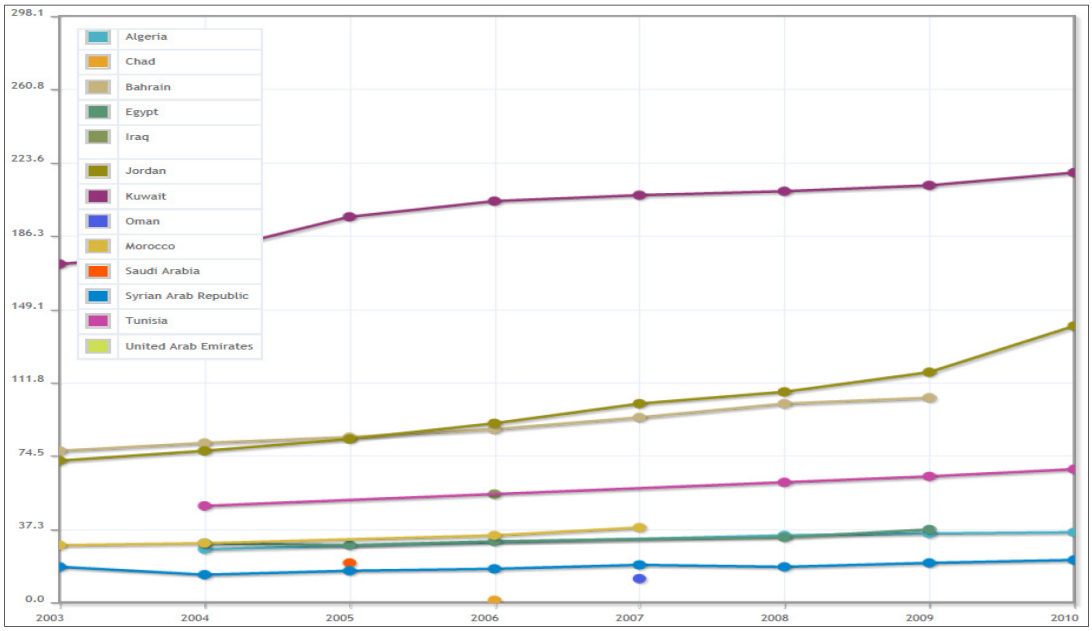

Figure 10: Vehicles (per km of road)

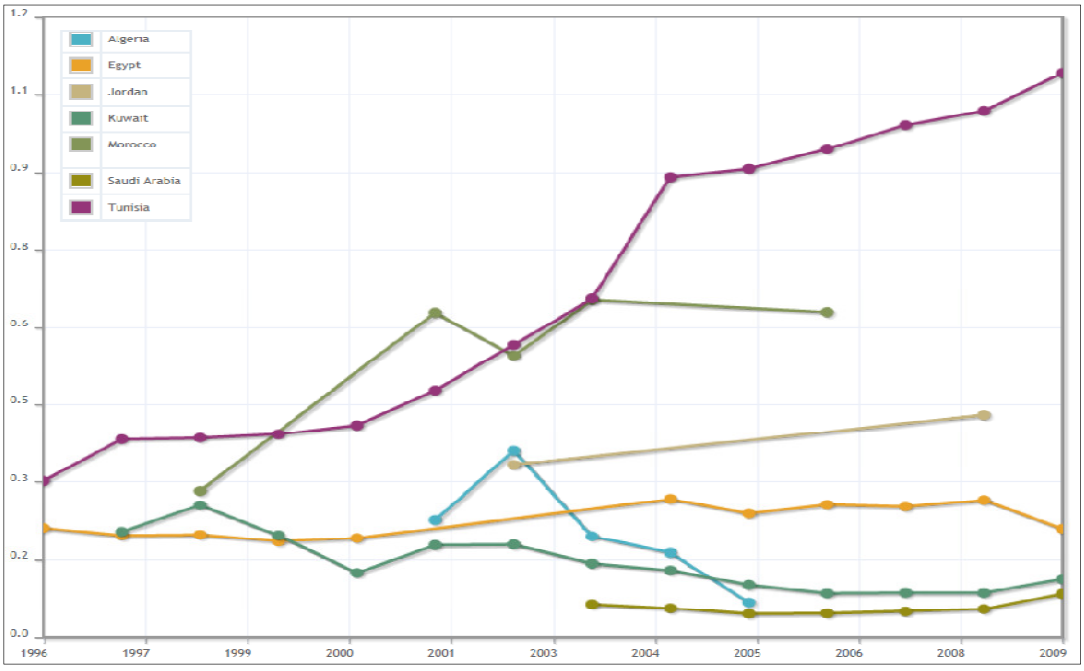

Figure 11: Research and development expenditure (% of GDP)

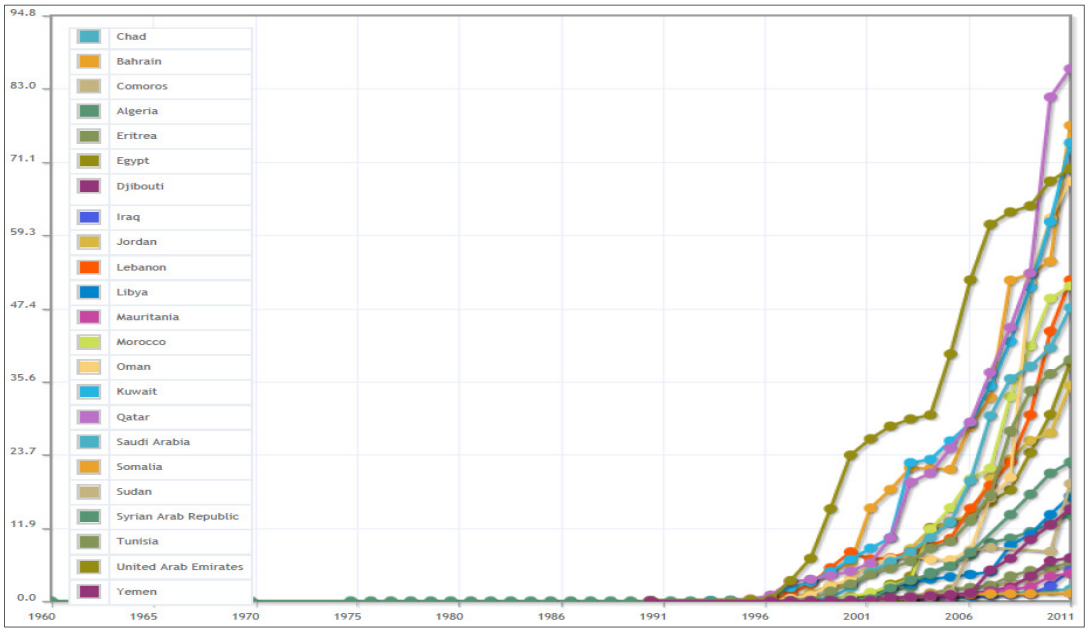

Figure 12: Internet users (per 100 people)

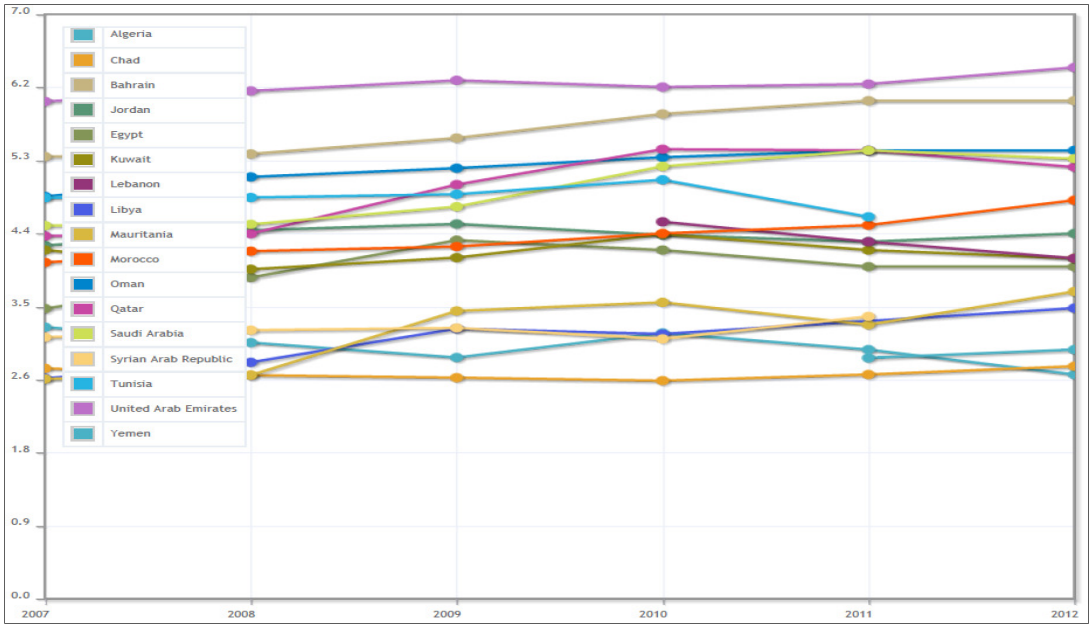

Figure 13: Quality of port infrastructure,
WEF (1=extremely underdeveloped to 7=well developed and efficient by international standards)

Environment

For the environment situation of the Arab countries, we use tow indicators; CO2 emissions (kt) and Total natural resources rents (% of GDP).

In figure 14, we represent the CO2 emissions in all Arab countries. We note that the most industrialized countries have the highest CO2 emissions (Saudi Arabia, Algeria, United Arab Emirates, Qatar and Egypt).

Then, figure 15 summarizes the total natural resources rents in the Arab countries. By recording to this figure, we can assume that the petroleum Arab countries have the highest total natural resources rents. The natural resources have an important percentage on the GDP of the Arab countries. The percentage of natural resources rents in the GDP great than 30%.

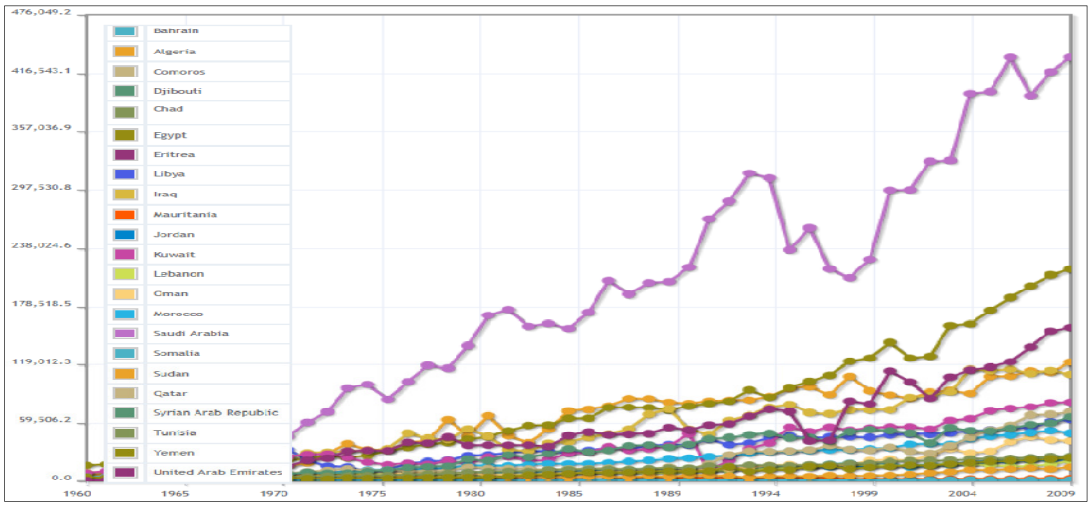

Figure 14: CO2 emissions (kt)

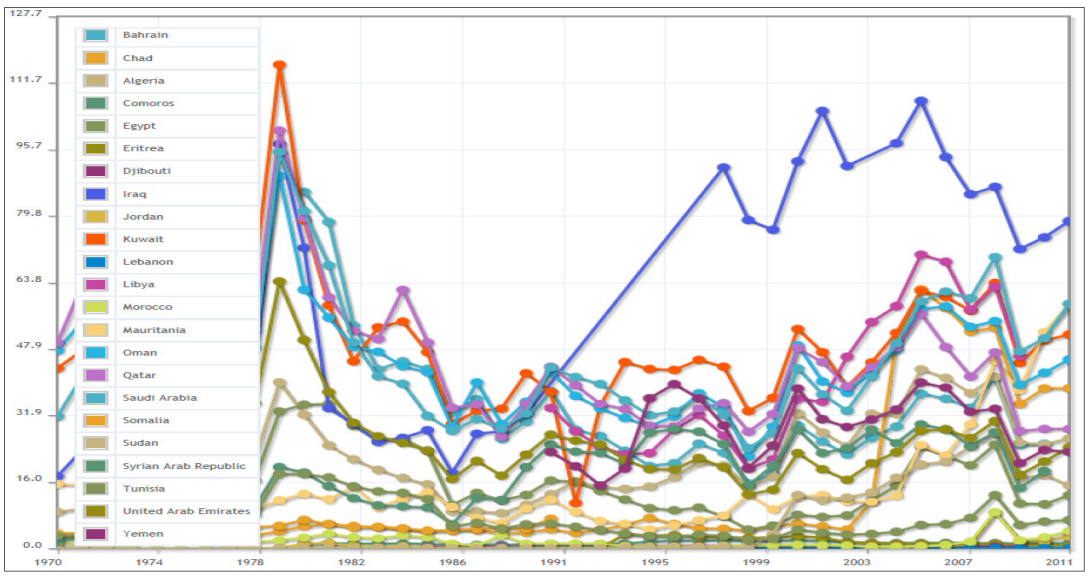

Figure 15: Total natural resources rents (% of GDP).

Poverty

The Arabic revolution is beginning after the expansion level of poverty in the Arab countries. By observing figures 16 and 17 which represent respectively the GINI index and the percentage of Poverty gap at $1.25 a day (PPP), we can assume the inequality is located only in the non petroleum countries. Also, we can assume that the terrorism is correlated to the poverty (Tunisia, Egypt, Yemen, Sudan, Somalia and Syrian Arab Republic).

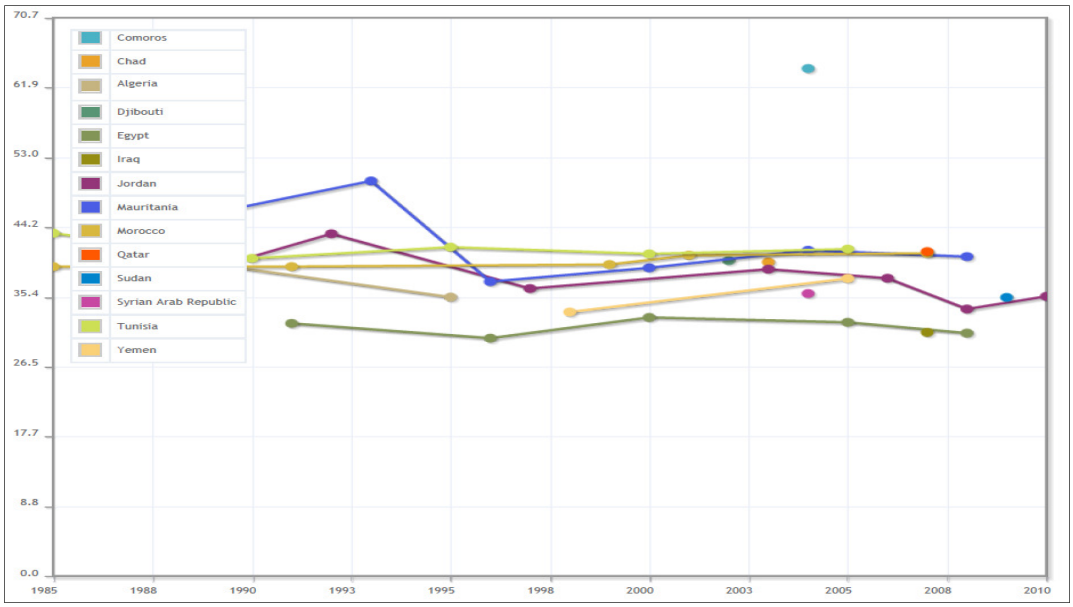

Figure 16: GINI index

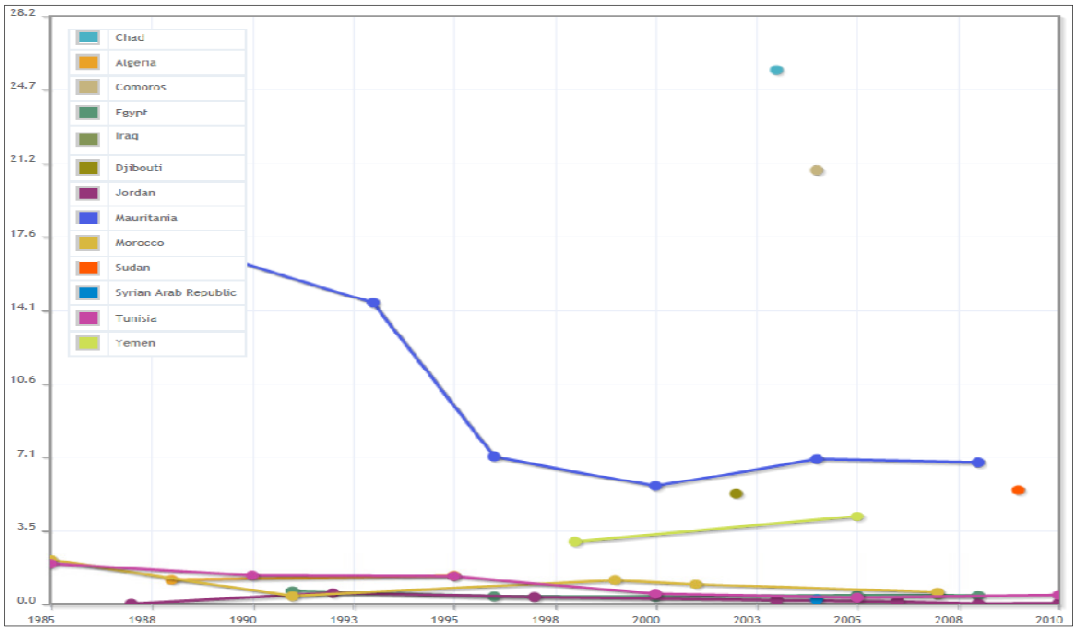

Figure 17: Poverty gap at $1.25 a day (PPP) (%)

Education

Education in the Arab World is studied in many researches. In our study, we use only a descriptive analysis of two education indicators; total public spending on education (% of GDP) and percentage of total Literacy rate of adult (% of people ages 15 and above).

Figure 18 summarizes the total of public spending on education in all Arab countries. For this figure, we note that the percentage of the total of public spending on education is between 2% and 10% of GDP except for Kuwait and Arab United Emirates.

By recording to figure 19, we can note that the percentage of total literacy rate of adult increase in all Arab countries.

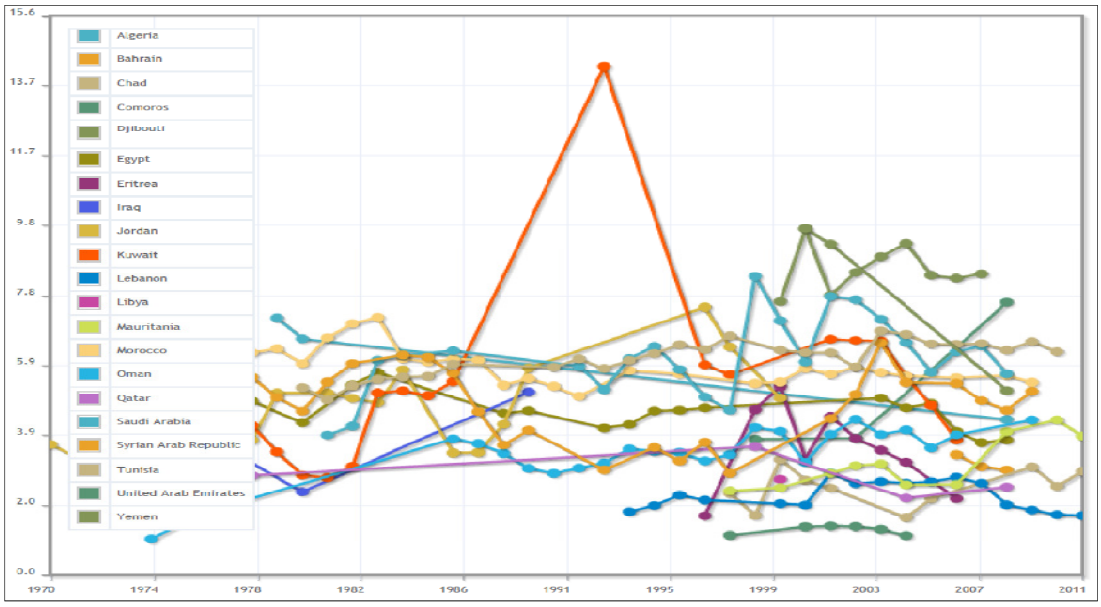

Figure 18: Public spending on education, total (% of GDP)

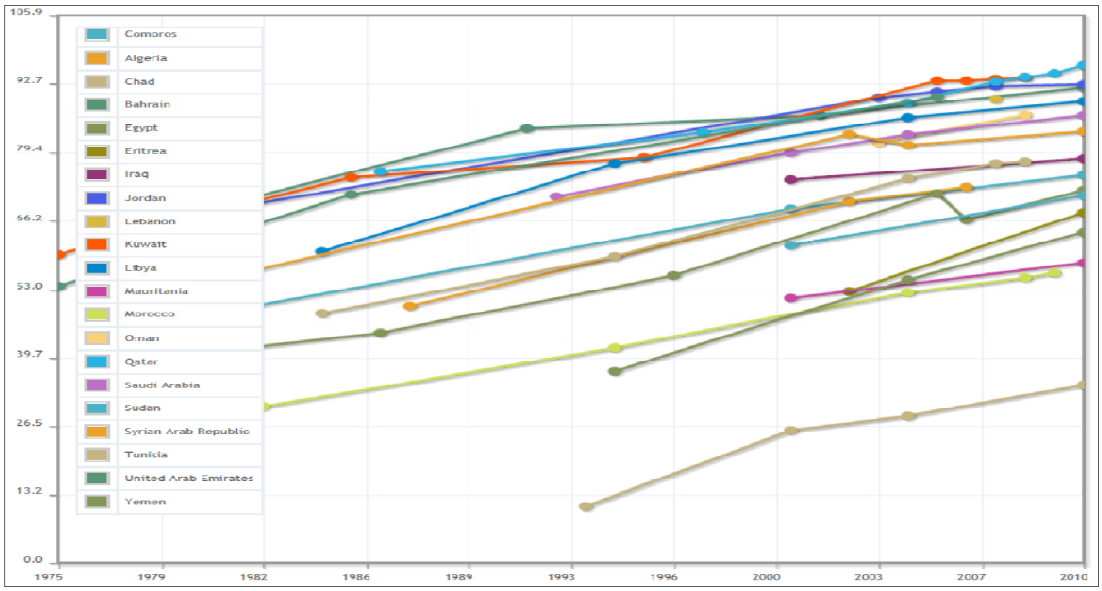

Figure 19: Literacy rate, adult total (% of people ages 15 and above)

Health

The public Health expenditure of all Arab countries is represented in figure 20. For recording to this figure, we note that the percentage of total Health expenditure of the Arab countries is between 1 % and 6% of GDP as except for Jordan, Somalia, Iraq, Bahrain and Djibouti that have a value of total of Health expenditure Greater than 6% of their GDP.

Labor and Social Protection

In this section, we use tow indicators which represent the total of Children in employment (% of children ages 7-14) and the total of Labor force participation rate (% of total population ages 15-64).

Figure 21 summarizes the percentage of children in employment during the period of study. By recording to this figure, we can note that only the non petroleum countries, especially the African countries (Chad, Somalia, Sudan, Morocco, Mauritania and Egypt), have an important rate of children in employment.

In figure 22, we represent the proportion of the population ages 15-64 that is economically active. The rate of labor force participation is constant during the period of study.

After studying the economic, financial and social, we can note that the petroleum Arab countries have an important advantage relative to their natural resources, principally petrol and gaz. But, the presence of the terrorism and the political instability in some Arab countries can affect negatively others countries. This affect is justified by the religious and economic dependence.

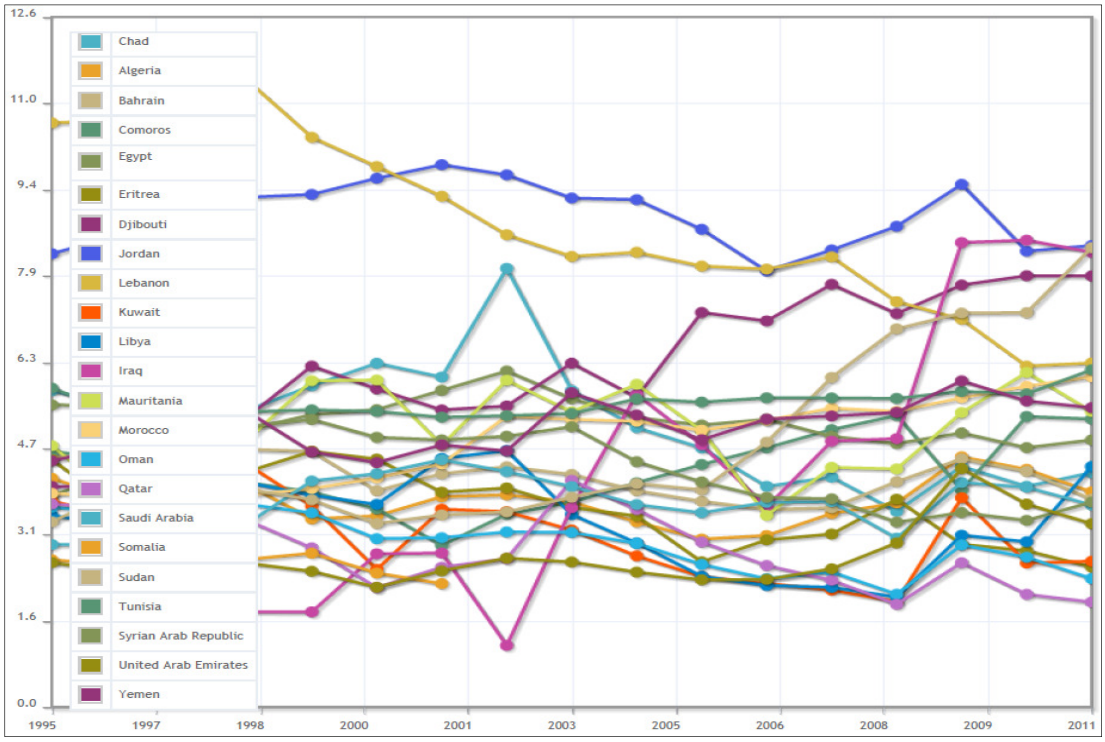

Figure 20: Health expenditure, total (% of GDP)

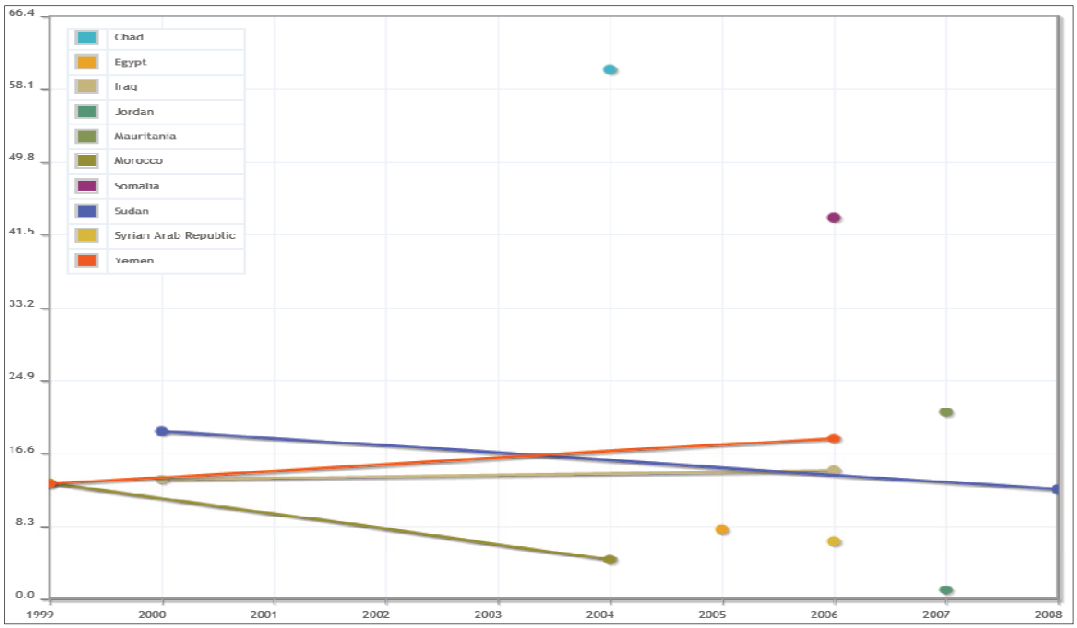

Figure 21: Children in employment, total (% of children ages 7-14)

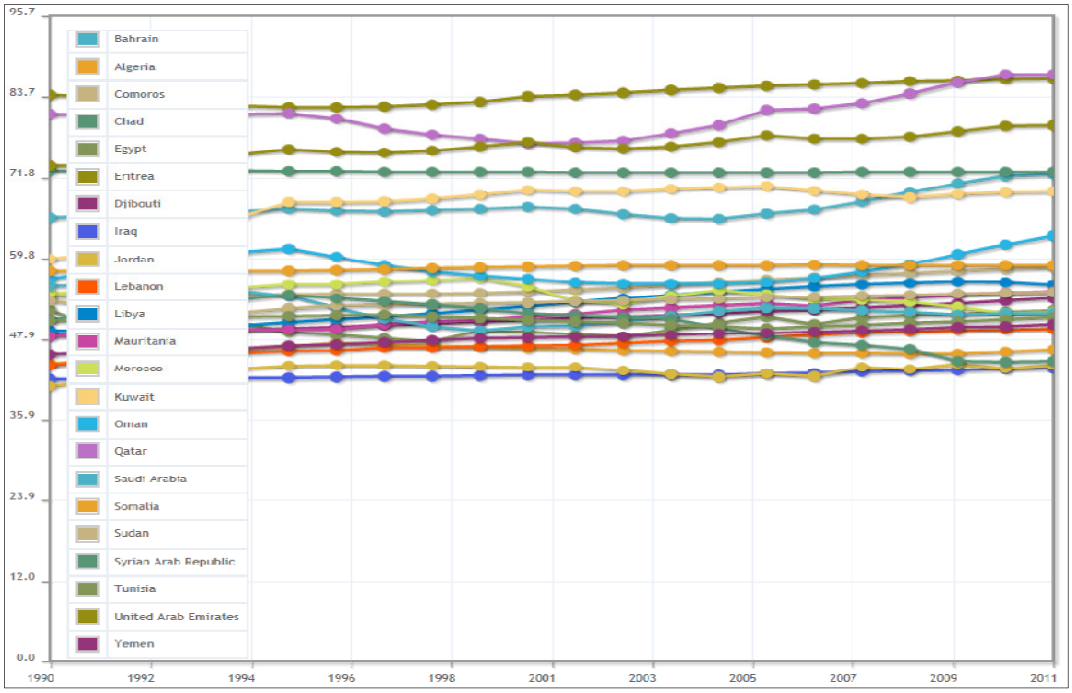

Figure 22: Labor force participation rate, total (% of total population ages 15-64)

Terrorism Propagation

The theories about terrorism contain all branches of the social sciences, including law, politics, sociology, economics and religion. Also, we can use an objective definition of terrorist acts and the reasons behind the relationship of the definition within individual countries and their external links. There should be frankness and openness if we want to end this phenomenon which threatens Arab societies.

Without getting into unnecessary details, take a look at the Arab chart. You will see that at least 90 per cent of Arab countries suffer from terrorism: Egypt, Iraq, Palestine, Lebanon, Syrian Arab Republic, Somalia, Yemen, Saudi Arabia, Morocco, Algeria, Tunisia, Libya, Bahrain and Sudan. This means that terrorism is a phenomenon that is present across the Arab world; it is almost becoming an Arab phenomenon, similar to the international concept of terrorism, which links it to Islam in order to attack Muslim figures.

Since Arabism and Islam are the pillars of identity in the region, the issue has become serious, because terrorism in the Arab world is still connected to Islamic elements; this means that we have to deal with it in a scientific manner well away from slogans and political intrigues between governments and opposition. It requires the mentality of researchers and setting out with a broad hypothesis so that we can achieve outcomes that can save the Arab existence (Al-Ashal, 2014).

The danger of terrorism in the Arab world is that it not only destroys pillars of identity, but also leads to crushing the Arab existence, which is a definite goal for Israel and the enemies of this nation. It is shameful for us to cover up, under various pretexts, this phenomenon which leads to the elimination of security, freedom, stability and prosperity, which are necessities of life in all societies.

A careful look at terrorism in the Arab region reveals a number of characteristics which may help our research. For a start, terrorism affects almost the whole Arab world so it is something that requires cooperation if we are going to deal with it. Although there are variations in its manifestation in different countries, terrorism demands a holistic view and solution.

Then there is the connection of terrorism in the Arab world to Islam which goes beyond the region, except for Palestine, which suffers from Israel's state terrorism. As such, there must be an informed mentality that can search for ways to save Muslims and their children and preserve their energy, which is exhausted by terrorism.

Terrorism has truly become one of the tools of political intrigue in relations between Arab states, as well as within those states. The interests of the whole Arab world must be given priority for the benefit of all, small and large nations alike, moving beyond the narrow-mindedness which has blinded the media.

It should be remembered that Iraq has always been the strong wing of the Arab region, with Egypt as the central state; that is why these two countries have been targeted by, dare we say, this conspiracy. The overthrow of Saddam Hussein was the beginning of this sectarian war. National reconciliation must be a priority to end it, putting Iraqi's interests above sectarian and ethnic issues. Before that, though, we need rapprochement between Iran and Saudi Arabia for a settled region.

Table 1 summarizes a representation of a global terrorism index in 2011 and figure 23 represents the terrorist incidents in the Arab countries (1970-2013).

CONCLUSION

The terrorist activity and the internal conflicts are incriminated in a trend increase in violence for the 7th consecutive year. An evolution to the gradual decline, which indicates the authors of the report, overturned 60 years of an upward trend of world peace that dated back to the end of the Second World War.

The Middle East and North Africa region (MENA) always attracts the attention, indicates the report by noting that many conflicts resulting from the Arab Spring continue to intensify. He notes, without surprise that Egypt and Syria are the two countries who see their overall results deteriorate the more, Egypt displaying the second largest decrease at the global scale. Syria, it, dethroned the Afghanistan as the most dangerous country of the world.

Note that our objective in this work is to analyze the economic, financial, political and social of the different Arab countries.

From the results presented we have noticed that the oil countries are the most advantageous in term of profit with the exception of Iraq.

However, the economy of other countries (non-petroleum) is more sensitive to political instability and terrorism propagation.

The fight against terrorism and the search for solutions to situations of political instability, especially in the non petroleum countries, can help countries in transition policy to improve their economic situations in the direction of mitigating a certain level of economic, financial, political and social.

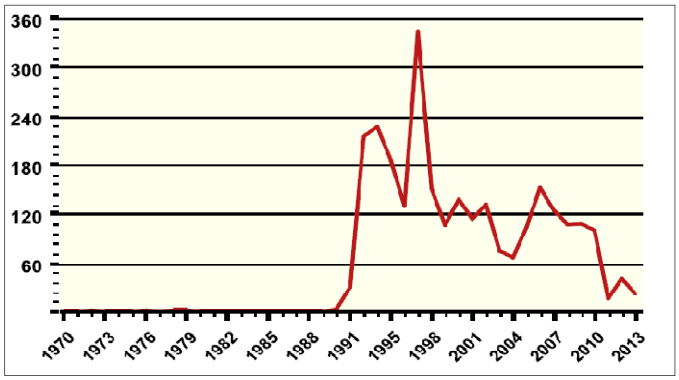

Figure 23: The terrorist incidents in the Arab countries (1970-2013)[*]
[*]Source: Global Terrorism Database (2014)

Table 1: Global terrorism index, 2011[*]

Country	Score	Incidents	Fatalities	Injuries	Property Damage
Iraq	9.56	1228	1798	4905	660
Yemen	7.3	113	454	415	44
Somalia	7.24	175	294	493	35
Sudan	6.3	34	183	117	5
Syrian Arab Republic	5.86	45	149	195	9
Algeria	5.83	15	25	34	4
Egypt	4.58	16	26	107	9
Lebanon	4.48	10	1	23	5
Eretria	3.92	1	17	5	0
Morocco	3.6	1	17	24	0
Chad	3.01	0	0	0	0
Saudi Arabia	2.71	2	3	15	1
Qatar	2.68	1	8	1	1
Tunisia	2.36	3	4	0	1
Mauritania	2.18	3	1	4	1
Bahrain	0.62	1	0	0	0
Jordan	0.58	0	0	0	0
Libya	0.35	2	0	0	0
Kuwait	0.16	1	0	0	0
United Arab Emirates	0.08	0	0	0	0
Djibouti	0	0	0	0	0
Oman	0	0	0	0	0
Comoros	0	0	0	0	0

[*] Whilst the score refers to a five year weighted average, the number of incidents, fatalities, and injuries only refers to 2011 (Global Terrorism Index, 2012).

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Appendix A. List of Arab Countries

Countries (23) included in this study are Iraq, Yemen, Somalia, Sudan, Syrian Arab Republic, Algeria, Egypt, Lebanon, Eretria, Morocco, Chad, Saudi Arabia, Qatar, Tunisia, Mauritania, Bahrain, Jordan, Libya, Kuwait, United Arab Emirates, Djibouti, Oman, Comoros.

Appendix B. Economic Policy and Debt

B.1. Annual percentage growth rate of GDP per capita

Annual percentage growth rate of GDP per capita is based on constant local currency. GDP per capita is gross domestic product divided by midyear population. GDP at purchaser's prices is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources.

B.2. Foreign Direct Investment, net inflows (% of GDP)

Foreign direct investment are the net inflows of investment to acquire a lasting management interest (10 percent or more of voting stock) in an enterprise operating in an economy other than that of the investor. It is the sum of equity capital, reinvestment of earnings, other long-term capital, and short-term capital as shown in the balance of payments. This series shows net inflows (new investment inflows less disinvestment) in the reporting economy from foreign investors, and is divided by GDP.

Appendix C. Financial Sector

C.1. Market capitalization of listed companies (% of GDP)

Market capitalization (also known as market value) is the share price times the number of shares outstanding. Listed domestic companies are the domestically incorporated companies listed on the country's stock exchanges at the end of the year. Listed companies does not include investment companies, mutual funds, or other collective investment vehicles.

C.2. Stock traded, total value (% of GDP)

Stocks traded refers to the total value of shares traded during the period. This indicator complements the market capitalization ratio by showing whether market size is matched by trading.

C.1. Inflation, consumer prices (annual %)

Inflation as measured by the consumer price index reflects 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 specified intervals, such as yearly. The Laspeyres formula is generally used.

Appendix D. Private Sector and Trade

D.1. Merchandise trade (% of GDP)

Merchandise trade as a share of GDP is the sum of merchandise exports and imports divided by the value of GDP, all in current U.S. dollars.

D.2. Stock Net barter terms of trade index (2000=100)

Net barter terms of trade index is calculated as the percentage ratio of the export unit value indexes to the import unit value indexes, measured relative to the base year 2000. Unit value indexes are based on data reported by countries that demonstrate consistency under UNCTAD (United Nations Conference on Trade and Development) quality controls, supplemented by UNCTAD's estimates using the previous year's trade values at the Standard International Trade Classification three-digit level as weights. To improve data coverage, especially for the latest periods, UNCTAD constructs a set of average prices indexes at the three-digit product classification of the Standard International Trade Classification revision 3 using UNCTAD's Commodity Price Statistics, international and national sources, and UNCTAD secretariat estimates and calculates unit value indexes at the country level using the current year's trade values as weights.

Appendix E. Public Sector

E.1. Cash Surplus/deficit (% of GDP)

Cash surplus or deficit is revenue (including grants) minus expense, minus net acquisition of nonfinancial assets. In the 1986 GFS manual nonfinancial assets were included under revenue and expenditure in gross terms. This cash surplus or deficit is closest to the earlier overall budget balance (still missing is lending minus repayments, which are now a financing item under net acquisition of financial assets).

E.2. Tax revenue (% of GDP)

Tax revenue refers to compulsory transfers to the central government for public purposes. Certain compulsory transfers such as fines, penalties, and most social security contributions are excluded. Refunds and corrections of erroneously collected tax revenue are treated as negative revenue.

Appendix F. Infrastructure

F.1. Vehicles (per Km of road)

Vehicles per kilometre of road include cars, buses, and freight vehicles but do not include two-wheelers. Roads refer to motorways, highways, main or national roads, secondary or regional roads, and other roads. A motorway is a road specially designed and built for

motor traffic that separates the traffic flowing in opposite directions.

F.2. Research and development expenditure (% of GDP)

Expenditures for research and development are current and capital expenditures (both public and private) on creative work undertaken systematically to increase knowledge, including knowledge of humanity, culture, and society, and the use of knowledge for new applications. R&D covers basic research, applied research, and experimental development.

F.3. Internet users (per 100 people)

Internet users are people with access to the worldwide network.

F.4. Quality of port infrastructure, WEF (1=extremely underdeveloped to 7=well developed and efficient by international standards)

The Quality of Port Infrastructure measures business executives' perception of their country's port facilities. Data are from the World Economic Forum's Executive Opinion Survey, conducted for 30 years in collaboration with 150 partner institutes. The 2009 round included more than 13,000 respondents from 133 countries. Sampling follows a dual stratification based on company size and the sector of activity. Data are collected online or through in-person interviews. Responses are aggregated using sector-weighted averaging. The data for the latest year are combined with the data for the previous year to create a two-year moving average. Scores range from 1 (port infrastructure considered extremely underdeveloped) to 7 (port infrastructure considered efficient by international standards). Respondents in landlocked countries were asked how accessible are port facilities (1 = extremely inaccessible; 7 = extremely accessible).

Appendix G. Environment

G.1. CO2 emissions (kt)

Carbon dioxide emissions are those stemming from the burning of fossil fuels and the manufacture of cement. They include carbon dioxide produced during consumption of solid, liquid, and gas fuels and gas flaring.

G.2. Total natural resources rents (% of GDP)

Total natural resources rents are the sum of oil rents, natural gas rents, coal rents (hard and soft), mineral rents, and forest rents.

Appendix H. Poverty

H.1. GINI index

Gini index measures the extent to which the distribution of income (or, in some cases, consumption expenditure) among individuals or households within an economy deviates from a perfectly equal distribution. A Lorenz curve plots the cumulative percentages of total income received against the cumulative number of recipients, starting with the poorest individual or household. The Gini index measures the area between the Lorenz curve and a hypothetical line of absolute equality, expressed as a percentage of the maximum area under the line. Thus a Gini index of 0 represents perfect equality, while an index of 100 implies perfect inequality.

H.2. Poverty gap at $1.25 a day (PPP) (%)

Poverty gap is the mean shortfall from the poverty line (counting the nonpoor as having zero shortfall), expressed as a percentage of the poverty line. This measure reflects the depth of poverty as well as its incidence.

Appendix I. Education

I.1. Public spending on education, total (% of GDP)

Public expenditure on education consists of current and capital public expenditure on education includes government spending on educational institutions (both public and private), education administration as well as subsidies for private entities (students/households and other privates entities).

I.2. Literacy rate, adult total (% of people ages 15 and above)

Adult literacy rate is the percentage of people ages 15 and above who can, with understanding, read and write a short, simple statement on their everyday life.

Appendix J. Health

J.1. Health expenditure, total (% of GDP)

Total health expenditure is the sum of public and private health expenditure. It covers the provision of health services (preventive and curative), family planning activities, nutrition activities, and emergency aid designated for health but does not include provision of water and sanitation.

Appendix K. Labor and Social Protection

K.1. Children in employment, total (% of children ages 7-14)

Children in employment refer to children involved in economic activity for at least one hour in the reference week of the survey.

K.2. Labor force participation rate, total (% of total population ages 15-64)

Labor force participation rate is the proportion of the population ages 15-64 that is economically active: all people who supply labor for the production of goods and services during a specified period.