

## About a revolution. The economic motivations of the Arab Spring

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**Abstract.** The paper reviews the economic motivations of the Arab Spring. After examining the possible relationships between the Arab riots and the global economic crisis started in 2007, the analysis focuses on some structural aspects characterizing North Africa and Middle East Countries, such as their demographic structure, the profound social inequalities and the discrepancy between the education levels, of youth in particular, and the civil and political rights accorded to the populations. The combination of youth demographics, high unemployment rates and high educational levels, coupled with an unrepresentative political system, increases the likelihood of social unrest.

## **1. Introduction**

On December 17<sup>th</sup> of 2010, a 26-year old Tunisian grocery vendor, Mohammed Bouazizi, set himself on fire following the confiscation of his goods by the police. This dramatic event took place at Sidi Bouzid, in one of the most depressed areas of Tunisia, where youth unemployment reaches 40 per cent. In the subsequent days, an uprising involving a wide proportion of the population, students and also the wealthy and educated classes, spread like a wildfire. The protest rapidly assumed the traits of a revolution, with the objective of obtaining greater civil and political rights.

In the first months of 2011 the revolt spread to other North African and Middle Eastern nations. The uprisings of the ‘Arab spring’ were so forceful as to determine the overthrow of well-established leaderships and autocrats who had been in power for decades. In Tunisia, Zine el-Abidine Ben Ali, in power since 1987, was forced to leave the country. In Egypt, Hosni Mubarak, in power since 1981, was compelled to resign and flee. In Libya, the revolt turned into a civil war, in which NATO forces participated, that led to the killing of Muammar Gaddafi, putting an end to a 40-year regime.

In Algeria and Morocco, the civilian protests, even if less marked than those in other Arab countries, led to the adoption of reforms in the name of a greater democracy. In Syria, the outbreak of a revolt, in March 2011, caused a crackdown by the regime led by president Bashar el Assad, but without producing any political or institutional changes. During 2011, the risings spread to the Middle East: Bahrain, Yemen, Jordan, Oman and Iran were affected, to various degrees and with different consequences.

In the past, Middle Eastern countries experimented significant political changes but no systemic transition towards democracy (Albrecht and Schlumberger, 2004). It is still too early to say what the final consequences of the Arab spring will be, and if the revolts will really lead to the adoption of democratic political systems. In Egypt, after the fall of Mubarak and the establishment of a Military Council, the manifestations of protest in Tahrir Square – a symbolic place for the Egyptian “Jasmine Revolution” – have been strongly suppressed. In Syria, the continuation of the revolt against the regime has caused the intensification of the repression, with thousands of civilian victims. In impoverished Yemen, after 33 years in power and ten months of revolt, president Ali Abdullah Saleh signed an agreement on November 2<sup>nd</sup> 2011, with which he handed over power to the vice-president

Abdrabuh Mansur Hadi, while obtaining immunity from prosecution for his family and himself.

The riots in North Africa and the Middle East occurred during an era in which the world's most advanced economies were faced with the consequences of an international recession, which commenced in 2008. With few exceptions, the crisis has caused the contraction of both production and consumption in all these economies, slowing growth, generating unemployment, increasing poverty and discontent among the masses.

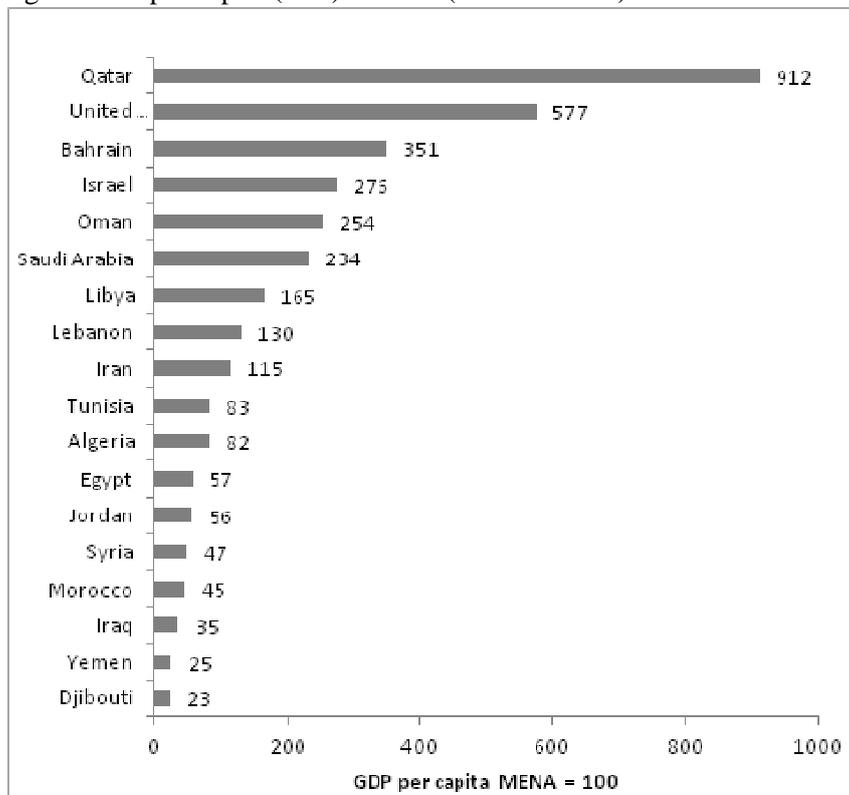
Popular riots are often associated with adverse economic trends: recession, rising unemployment and high prices or scarcity of food (Headey and Fan, 2008; Bush, 2010). Also in the case of the Arab Spring, scholars and analysts have attributed a primary role to these economic causes (Lagi et al., 2012). The global crisis has, probably, exacerbated the populations' discontent. Nevertheless, in the last decade almost all of the MENA economies have experienced a period of growth in which the standard of living has continued to improve, at least from the economic point of view. How important were economic factors, therefore, in the outbreak of the Arab Spring? And what of those structural social and economic imbalances that characterize North Africa and the Middle East? This article discusses these factors, focusing in particular on the countries of North Africa, where the wave of protests originated before spreading to the Middle East.

## **2. The economic factors**

### **2.1. The effects of the global crisis**

Overall, the Middle East and North Africa (MENA) region is far from being economically homogeneous. Countries included in this region differ dramatically both for their levels of economic development, and for their economic structures. Fig. 1 illustrates their GDP per capita levels with respect to the MENA average. It is easy to see how, in the oil-exporting countries, GDP per capita is from two to nine times higher than the average (with Israel representing a remarkable exception). Excluding Libya, the development levels of North African countries are lower than the regional average. Before 1950, North African countries were among the world's least developed. During the 1960s and 1970s they experienced sustained economic growth, based mainly on a high rate of investment in physical capital (Yousef, 2004).

Fig. 1. GDP per capita (PPP) in 2009 (MENA = 100)



Source: World Bank, World Development Indicators, 2011.

Between 1960 and 2010, the rates of GDP growth have been relatively high: about 5 per cent in Egypt and Tunisia, 4 per cent in Morocco and 3.4 per cent in Algeria. Because of the sustained demographic dynamic, the growth rate of GDP per inhabitant has, however, been inferior (Tab. 1). In the last 15 years, growth rates have been slightly higher than those during the period 1960-2010. During the global crisis of 2008-2010, growth decelerated; nevertheless, aggregate and per capita incomes have continued to increase, although at a moderate pace.

Tab. 1. Average rates of growth of North African countries, 1960-2010 (%)

	GDP			GDP per capita		
	1960-2010	1995-2010	2008-2010	1960-2010	1995-2010	2008-2010
Egypt	5.2	5.0	3.9	3.0	3.1	2.8
Libya	..	4.1 <sup>a</sup>	..	..	2.1 <sup>a</sup>	..
Tunisia	4.8	4.9	2.2	3.0	3.7	1.5
Algeria	3.4	3.4	1.6	1.1	1.9	0.6
Morocco	4.1	4.4	2.7	2.0	3.1	1.8

Note: Rates for Libya refer to the period 1999-2009. Source: World Bank, World Development Indicators, 2011.

The economic structures of North African countries present significant differences. Libya and Algeria have scarcely diversified productive structures, almost entirely based on the export of oil and gas, with state-owned enterprises playing a notable role. Egypt, Tunisia and Morocco have, instead, more diversified structures, with a higher share of manufacturing and services, particularly tourism. Despite this greater diversification, production in these countries is mainly in low value-added sectors: cereals, foodstuffs, textiles, cement, machinery and transport equipment. Estimates show, in fact, how high-tech export reaches just 5 per cent of the total for exports from Tunisia, while this drops to about 1 per cent in the other countries of the region (Abdmoulah and Laabas, 2010).

Since the early 1990s, North African countries, under the auspices of the World Bank and the International Monetary Fund (IMF), have implemented a series of reforms aimed at increasing the degree of international openness and the liberalization of some sectors. With the exception of Libya, these countries have privatized diverse public enterprises, reduced state interference in the financial and banking sectors, improved fiscal and monetary policies, and simplified labour market regulation (Rashid, 2008). These efforts have, however, produced modest effects with regard to the attractiveness of the regions: FDI inflows in North Africa have represented, in fact, a small fraction of the flows towards the developing countries. Taking into account the contraction determined by the global crisis, and the local political instability, in 2010 North Africa attracted 1.2 per cent of global FDI inflows. A small share, but notably higher than that of previous years, when the figure was 0.2 per cent. It is probable that both the reforms that improved the business environment in some countries, particularly Egypt, and their adhesion to the international agreements regarding the Mediterranean basin (Barcelona) and, more specifically, the North Africa region (Agadir) have contributed to this performance (Péridy, 2007). More recently, commercial partnerships established with the USA (Morocco), China (Libya and Egypt) and with Middle Eastern and emerging countries, have all contributed significantly to promoting exports outside traditional European destinations.

A greater international openness generates benefits but also exposes economies to greater risks of contagion in the event of an international crisis. The global crisis hit the economies of the Maghreb both in the more 'robust' sectors, through the fall in oil prices, for raw materials, and the drop in tourism, and in the more 'fragile' sector, that is

manufacturing (Behr, 2012). The significant diminution of oil prices – a sort of collapse between the summer of 2008 and the first months of 2009 – had a direct effect on exporting countries such as Algeria and Libya, and indirect effects on the other countries of the region, due to the reduction of capital flow and the remittances of emigrants in the petroleum producing countries.

During the crisis, the global demand for manufactured goods, particularly in Europe and America, has fallen or been re-orientated towards Asian production. Already between 2008 and 2009 – the latest figures available - the fall in exports was, in real terms, close to 14 per cent in Egypt and Morocco, 3 per cent in Algeria and Tunisia. The drop becomes more significant if expressed in current values, so as to reflect the revenues generated by exports. In this case, the highest decreases were recorded in Algeria (-21%) and Libya (-28%), which are relatively protected by a constant demand for natural resources and, together, highly vulnerable to price volatility. The drop in foreign demand generated a slowdown in growth rates. This effect has been worsened by the fall of remittances from emigrants who in their host countries (Europe, Persian Gulf countries) represent the humblest and most vulnerable group of workers, highly exposed to the effects of the global crisis in terms of loss of employment and wages.

However, the effects of the global economic crisis on economic growth in North African have been much less severe than in other economies, in particular the most advanced in Mediterranean Basin – like France, Spain or Italy - which, in 2008-09, experienced a significant decline in real GDP.

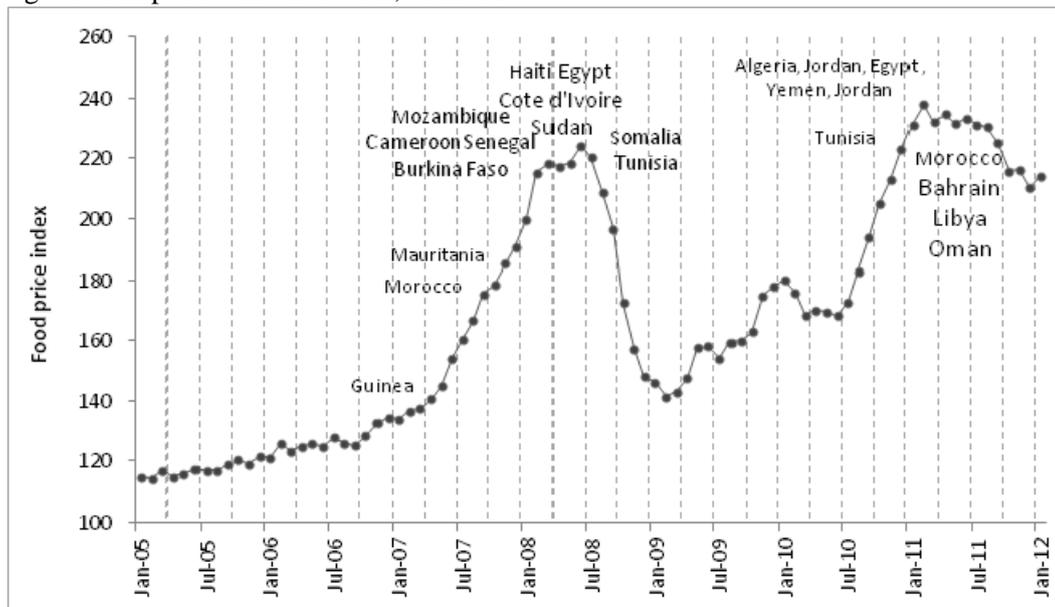
## **2.2. Food riots?**

Historically, there are numerous examples of political riots caused by food scarcity or high prices, with subsequent effects on politics and institutions (Walton and Seddon, 1994). Today many poor countries rely on global food supply systems, and are consequently sensitive to global food prices. In fact, a relationship between food price increases, social unrest and violent riots can be established (Headey and Fan, 2008; Bush, 2010; Lagi et al. 2011; Brinkman and Hendrix, 2011).

In the past, the Arab countries have experienced diverse episodes of ‘bread riots’ (Sadiki, 2000). For example, in the years 2007-08, riots and protests occurred in Egypt, Morocco, Tunisia and Yemen. Those riots coincided with a peak in food prices, while a

second peak was registered in 2010. Fig. 2 illustrates the timing of some relevant riots and the food price index during the period 2005-2010. It is possible to see how food price peaks effectively coincide with most episodes of political instability in underdeveloped countries.

Fig. 2. Food price index and riots, 2005-08



Note: Food Price Index 2002-2004 = 100. Sources: FAO Food Price Index FAO. For the timeline of riots: [http://en.citizendium.org/wiki/Arab\\_Spring/Timelines](http://en.citizendium.org/wiki/Arab_Spring/Timelines); Berazneva and Lee (2011); Lagi, Bertrand, Bar-Yam (2011).

Since expenditure on food, in low and middle income countries, absorbs a high share of household income, rising commodity prices can undoubtedly exacerbate the living conditions of the poorest in a society. Nevertheless, if we look at the inflation rates in North African countries in the years before the riots, the causal nexus appears less clear. In the period 2008-10, the years immediately prior to the revolts, the average inflation rate was 5 per cent in Algeria and Lybia, 13 per cent in Egypt, around 4 per cent in Tunisia, and about 1 per cent in Morocco<sup>1</sup>. These rates were not dissimilar to those registered during the first years of the new millennium: moderate inflation with respect to the historical trends. During the 1980s and 1990s, inflation rates in Libya and Algeria were, in fact, around 30 per cent, and 25 per cent in Egypt.

In economies heavily dependent on natural resources, volatile inflation is not infrequent, being correlated to the revenues of the extractive sector. In North Africa, however, there historically exists a relationship between food prices and food riots. The link between the two phenomena is indirect, being mediated by the regulation of political power. Today, as in the past, the price of food tends to be administered by governments in order to create consent in the populations.

A pervasive control of the economy can be self-defeating: on the one hand, people tend to attribute the responsibility of price increases to the government; on the other hand, price controls can amplify the negative perceptions of restrictive fiscal policies – frequently adopted in North African countries – on people's welfare.

In synthesis, the evidence does not permit us to establish a definitive causal nexus between the global economic crisis and the Arab uprisings. The crisis has certainly contributed to generating restlessness and fears for the economic prospective. The effects of the crisis have, however, hit countries which had, under the old political regimes, significantly improved their economic conditions. For these reasons, it can be reductive to trace social discontent in the populations exclusively back to the adverse business cycle. Other structural factors – such as demography, the labour markets and education - have probably played a crucial role.

### **2.3. Unemployment**

A reduction in production levels implies a reduction of employment: in 2010, in the economies for which we have data – Egypt, Tunisia and Morocco – the unemployment rates were slightly higher than in the preceding year. According to official statistics, total unemployment in North Africa was about 10 per cent (Tab. 2). Nevertheless, these were not particularly high rates of unemployment, when considered regionally and historically. An aspect that can help us to understand the social causes of the popular riots, is the composition of unemployment: youth unemployment, particularly female, was very high. Juvenile dissatisfaction has been considered as one of the most relevant causes of the Arab Spring (IMF, 2011; Sika, 2012).

Before the peak of the global crisis, one young Egyptian or Moroccan in four was already unemployed. Data referring to 2005-06 show a worse situation in Tunisia and Algeria, where one young person in three was unemployed. These levels of unemployment

could appear similar to those registered in other countries in a phase of global recession that eliminated or made jobs precarious everywhere. However, these data are dramatic for the fact that – because of the demographic boom of the past decades - the average age of the populations of North Africa countries is very low - around 25 years – and young people represent more than 1/3 of the labour forces.

Tab. 2. Composition of unemployment in North African countries, 2010

Variables	Algeria	Egypt	Morocco	Tunisia
Unemployment (total) <sup>c</sup>	10.0	8.9	9.1	13.0
Unemployment (female) <sup>d</sup>	10.1**	22.9*	10.5*	..
Youth unemployment	21.5	24.8	17.6	29.4
Youth unemployment (female) <sup>b</sup>	..	47.9**	19.4	..

Note: <sup>a</sup> on labour force 15-24 years; <sup>b</sup> on female labour force 15-24 years; <sup>c</sup> on total labour force; <sup>d</sup> on total female labour force. No data for Libya; \* 2008; \*\* 2007. Source: World Bank, World Development Indicators and ILO, Statistical update on Arab states and territories and North African countries, May 2011.

With the exception of Egypt, the data on unemployment rates for women do not appear particularly high (Tab. 2). These figures are, however, misleading: for obvious cultural reasons, in the Arab countries, female labour-force participation rates are among the lowest in the world<sup>2</sup>. Women represent about one quarter of the labour force in the MENA region, but rates vary widely among countries, with a minimum of 12 per cent in Qatar. In Libya, females represent 22.5 per cent of the labour force; in Egypt, Morocco and Tunisia around one quarter, and around one third in Algeria. Also, when women have a job, it is very frequently in agriculture and underpaid (World Bank, 2004). Obviously, the number of female entrepreneurs is very small: only in Algeria is the quota of female self-employed over 1 per cent. The low participation of females in the workforce represents a waste of labour and human capital, curbing economic growth (World Bank, 2004; Salehi-Isfahani, 2009). This detrimental effect is particularly significant when considered together with the education levels of the population, including those of women, which have notably improved in the last two decades.

Human capital tends, then, to be largely underemployed because of productive structures based mainly on agricultural activities, extractives, refining, low tech manufacturing and tourism. That is in sectors that do not use highly skilled workers, where the labour demand consists of poor quality jobs, with wages that are not proportional to the educational levels of workers. Unemployment and the mismatch between qualifications and

jobs offered are, undoubtedly, causes of dissatisfaction among young people (Behr, 2012). Identifying merely unemployment as the root cause of the riots, is too simplistic. Consider that, during the economic crisis, unemployment rates in many European countries have reached values higher than those of the Arab countries and, in particular, those of North Africa. In Spain, for example, in 2011, the general unemployment rate reached 23 per cent and 48 per cent for the youth component of the labour force. In Italy, in the first months of 2012, the youth unemployment rate reached 31 per cent<sup>3</sup>. In summary, examining the data in a comparative perspective, it is difficult to attribute the Arab spring solely to economic causes.

### **3. The social causes**

#### **3.1. The ‘youth bulge’, education and democracy**

Despite their political and economic heterogeneity, the North African countries – and also some of the Middle East societies involved in the Arab Spring – share some common characteristics. Demographically they have very youthful populations: 15 to 29-year olds represent about 30 per cent of the total population; youth unemployment rates are structurally high; the education levels have significantly increased in the last three decades and are, on average, higher than those in nations with analogous development levels. These socio-economic characteristics can have a prominent role in the processes of social change and, in particular, of democratization. Studies indicate how nations with very young or youthful age structures are more likely to risk riots, political violence and civil conflicts. In their analysis of the effects of demographic structure on political changes and conflicts, Leahy et al. (2007) found that in the period 1970-99, 80 percent of all civil conflicts with at least 25 deaths occurred in countries in which 60 percent or more of the population was under the age of 30. During the 1990s, countries with very young populations were three times more likely to experience civil conflict than countries with a mature age structure. Cincotta (2008) has suggested that the proportion of young adults (15-29 years) in the working-age (15-64 years) population of a country approximates the relative level of risk of political violence within that society: for states, a median age of 25 years is a sort of milestone. After that benchmark the incidence of civil conflict declines, while the chances for a liberal democracy increase.

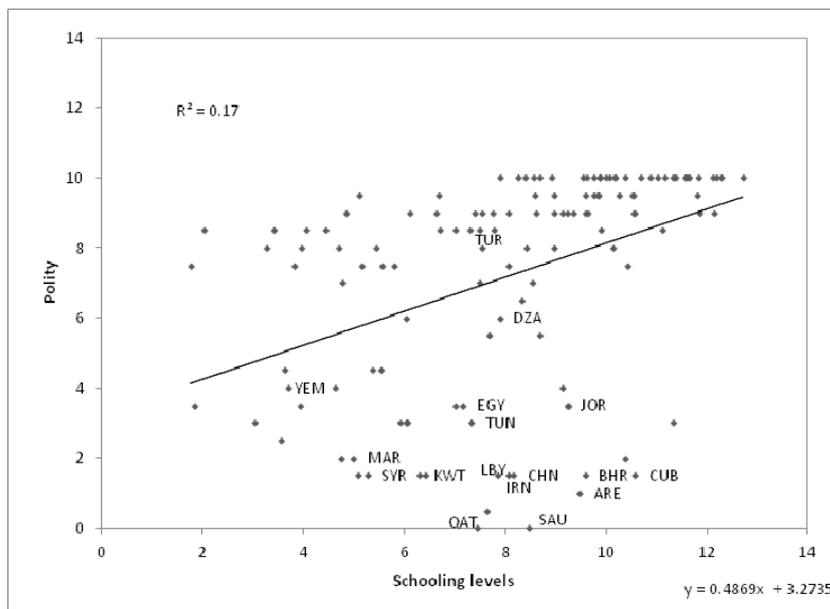
In the ‘youth bulge’ hypothesis, the process of political and institutional change can be divided into two stages. In the first stage, in developing countries facing a demographic transition, a large proportion of young adults tends to exacerbate unemployment, prolonging dependency on parents and causing frustration and social discontent. This generates a tendency towards violence or for extra-legal political changes. In this stage, regimes tend to repress violence and maintain political order; democratic gains are possible, although infrequent. Examples of countries that have sustained a democracy under a ‘youth bulge’ are Costa Rica, Jamaica and South Africa. In a second stage, the dissipation of a ‘youth bulge’ tends to yield a ‘demographic dividend’: the number of children for each working adult diminishes, and the increase in the middle-aged segment of the working population tends to generate economic and social benefits. Evidence shows how, as the regional average of the proportion of young adults declines, the number of liberal democracies increases (Cincotta, 2011).

Another factor traditionally associated with social progress and democratization is education. The idea that the increase of education levels constitutes a strong spur for the adoption of institutional democratic reforms has been well known since the time of Alexis de Tocqueville. In the modernization theory education, jointly with other economic development-related variables, assumes a central role in the process of democratization (Lipset, 1959; Almond and Verba, 1963).

The causal nexus between education and democracy is a matter of debate. For example, Acemoglu et al. (2005), considered *changes* in democracy and *changes* in education, and by using fixed-effect regression, did not find any relationship between the two variables. Other studies have provided strong evidence, however, for the modernization theory (Glaeser, Ponzetto and Shleifer 2007; Castelló-Climent, 2008). In particular, the work of Murtin and Wacziarg (2011), that considers a large sample of countries for the period 1870 to 2000, shows how education, particularly primary schooling (and to a lesser extent per capita income), is a strong predictor of democratization. Fig. 3, plots the relationship between a commonly used index of democracy (the variable *Polity*, by the Polity IV Project) and the average years of schooling, a proxy of human capital, in 135 countries<sup>4</sup>. It is possible to see how values in MENA countries lie below the regression line. Their scores in the democracy index are considerably lower than those corresponding to their educational levels. Consistent with the estimations of Murtin and Wacziarg (2011), when this discrepancy

exists, the likelihood that a process of democratization may commence is comparatively higher.

Fig. 3. Democracy and education

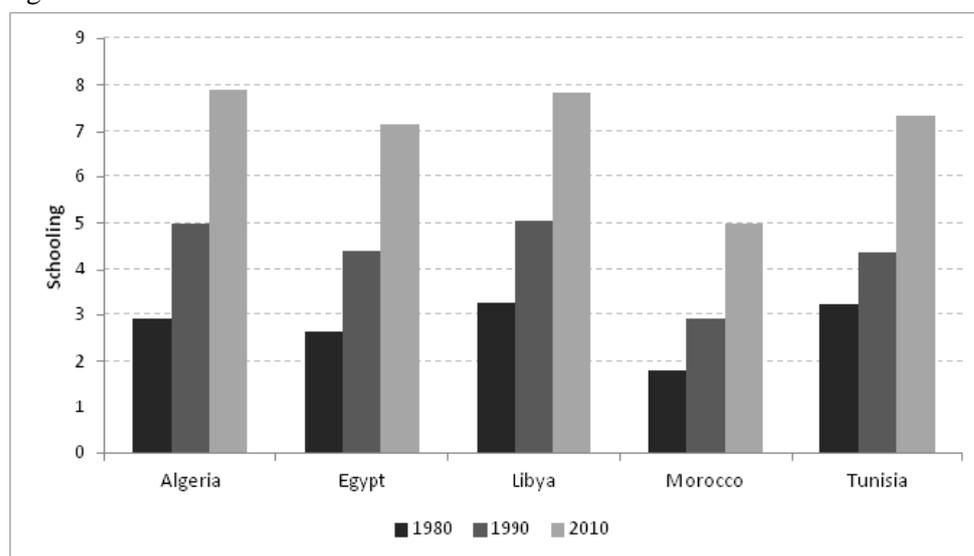


Note: Data refers to the year 2010. In the Polity IV dataset, the Polity scores range from -10 to 10. In the figure the variable has been rescaled between 0 (full autocracy) to 10 (full democracy). Countries are identified by ISO codes. For a comparison, codes for China (CHN), Turkey (TUR) and Cuba (CUB) are reported. Data sources: Polity IV Project and, for the average years of schooling, Barro and Lee (2010). The equation is  $POLITY = 3.27 + 0.487SCHOOL$  (t-stat = 5.17).

In the last thirty years, education attainment levels in Middle Eastern countries have increased considerably. Fig. 4 illustrates the increase in the average years of schooling in North-African countries over the period 1980-2010. It is easy to observe how the gains in education levels have been notable in all countries.

Progress in education (and income) is reflected in the trends of the Human Development Index (HDI). Tab. 3 reports the HDI trends for Arab countries over the period 1980-2011. Because of their wide differences in per capita income, these countries considerably differ in HDI levels: the oil-rich nations of the Middle East have high levels of income and, consequently, also very-high HDI. Libya and Tunisia are classified as high-HDI countries, while the other North African nations occupy positions significantly lower in the international rankings.

Fig. 4. Educational attainment in North Africa 1980-2010



Note: The figure illustrates the average years of schooling for the population over 25 years old. Data source: Barro and Lee (2010).

Tab. 3. Human development index of the Arab countries 1980-2011

HDI rank		Average annual HDI growth (%)		
		1980–2011	1990–2011	2000–2011
Very high human development				
30	United Arab Emirates	0.96	0.97	1.06
37	Qatar	0.54	0.54	0.53
42	Bahrain	0.69	0.54	0.38
High human development				
56	Saudi Arabia	0.55	0.50	0.55
63	Kuwait	0.32	0.31	0.07
64	Libya	..	..	..
71	Lebanon	..	..	..
89	Oman	..	..	..
94	Tunisia	1.43	1.21	0.94
Medium human development				
95	Jordan	0.83	0.80	0.70
96	Algeria	1.40	1.13	1.03
113	Egypt	1.50	1.24	0.88
119	Syrian Arab Republic	0.78	0.68	0.73
130	Morocco	1.52	1.39	1.26
132	Iraq	..	..	..
Low Human development				
154	Yemen	..	..	1.93
165	Djibouti	..	..	..
169	Sudan*	1.41	1.52	1.23
	Arab States	1.19	1.04	0.94
	World	0.65	0.66	0.66

Note: The rankings refer to HDI 2011 values in a rating of 187 countries. Source: UNDP, Human development report 2011.

Notwithstanding the national differences, the entire region has seen a considerable improvement in HDI during the period considered. Moreover, fertility rates and infant mortality have been considerably reduced, transforming family structures (Boutayeb and Helmert, 2011). Improvements in living standards have, however, been unequally distributed among groups and individuals: all Arab countries, including those of North Africa, remain characterized by profound social and economic inequalities (Salehi-Isfahani, 2010).

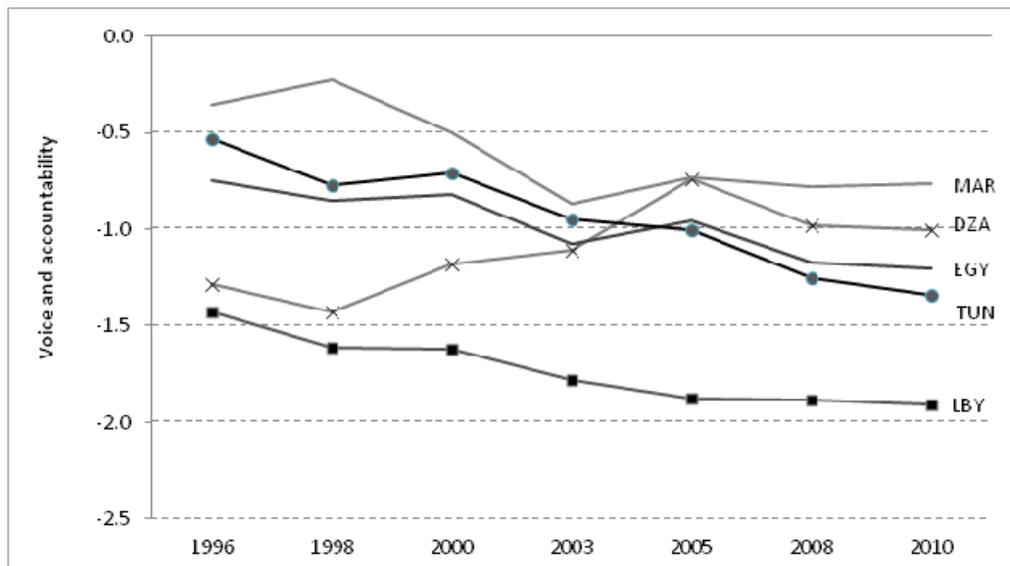
### **3.2. Political liberties and economic inequalities**

Since the mid-1980s, the regimes of the Middle East and North-Africa have realized profound economic reforms: most countries have adopted programs of economic stabilization and fiscal austerity, reduced public expenditure and cut subsidies. Overall, debt levels have diminished and inflation has been brought under control. In North African countries, governments have implemented structural adjustment processes, with the privatization of state-owned enterprises, trade liberalization and deregulation, in order to create a market-oriented institutional framework (Layachi, 1998; Yousef, 2004). While some scholars have pointed out how these reforms have been partial, and insufficient to ensure sustained economic growth for the region (Dasgupta, Keller and Srinivasan, 2002), others have observed how the spill-over effects of economic reforms on the poor have been negligible. Although structural reforms, centred on liberalization and privatization, have fuelled the economic growth of North African countries, they have failed to include the middle classes and a high number of socially and economically excluded youth (Joya, 2011; Springborg, 2011).

The economic liberalization of the 1990s was not accompanied by political reforms capable of ensuring more civil rights for the populations: the economic reforms and liberalizations, implemented by decrees, have strengthened the existing authoritarian regimes while obstructing democratization (Hinnebusch, 2006; Dahi, 2011). Fundamental freedoms - of expression, the vote, of association, freedom of the press, of movement - have been hampered by limitations, such as perpetual 'states of emergency', as declared by the regimes like Tunisia. Economic reforms, especially in middle-and lower-income economies like Yemen, Egypt or Tunisia, have been accompanied by cronyism and corruption, and realized at the expense of good governance and the rule of law (Sika, 2012).

In all nations, the ‘rules of the political game’ shape the functioning of the public apparatus. In non-democratic regimes, maintaining consensus often means the upkeep of an enormous and corrupt bureaucratic apparatus (composed of the military and civil servants), with rules and procedures that create the preconditions for the phenomena of rent seeking and rent-extraction from the private sectors (La Porta et al., 1999). The World Bank includes the ‘rules of the political game’ among the dimensions of the institutional quality of countries. The *Voice and accountability* index (a measure of governance), summarizes quantitatively the perceptions of citizens regarding the extent to which they are able to participate in selecting their government, as well as freedom of expression, freedom of association, and a free media. Fig. 5 illustrates the trends of this index in the North African countries.

Fig. 5. Voice and accountability index, 1996-2010



Source: World Bank, Worldwide Governance Indicators, 2011.

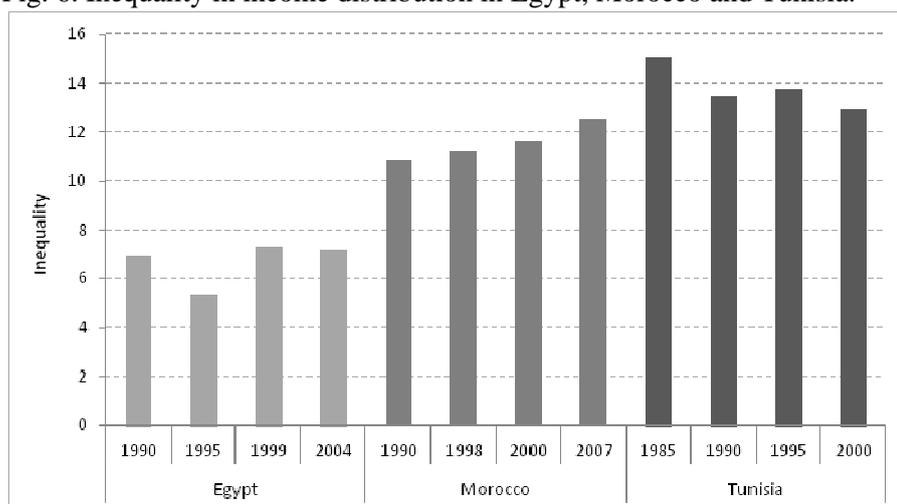
The Voice and accountability index ranges between -2.5 and +2.5: the lower the values, the worse the performance of a country. In 2010, all North African countries had negative values, with the index ranging from that of Libya (one of the lowest in the world) to those of Algeria and Morocco, two countries in which, significantly, the riots did not cause the overthrow of the regimes. It is interesting to note the trends of the index: in each country

the perception of its citizens regarding the degree of democracy deteriorated over time, gradually approaching the outbreak of the Arab Spring.

The social quest for more political and civil rights can help to explain the popular riots from a political economy perspective. Nevertheless, the requests from the peoples to the governments also included more opportunities for social mobility, that is the possibility, in particular for young people, of improving their social and economic conditions by means of education and work. But the economic and social systems of Middle Eastern and North African Countries do not offer an adequate return on education. In addition, the social structures of these countries are not fluid, and tend to perpetuate inequalities in the distribution of wealth among the classes.

The lack of data does not permit us to offer an updated illustration of income distribution in Arab countries. Figure 6 shows, for some nations, the ratio between the richest 10 per cent and the poorest 10 per cent of their populations. In the years examined, the extent of inequalities increased in Egypt and Morocco, while diminishing slightly in Tunisia. It is necessary to observe, however, that income inequality, even if it is high in all MENA countries, exhibits significant national differences (Bibi and Nabli, 2009): in Tunisia and Morocco it is higher than in Egypt, Yemen and Syria and, in some cases, not dissimilar to that registered in other nations, including some developed countries, such as Israel and Portugal.

Fig. 6. Inequality in income distribution in Egypt, Morocco and Tunisia.



Note: Income inequality is measured by the ratio between the richest 10 per cent and the poorest 10 per cent of the population. Source: PovcalNet, World Bank.

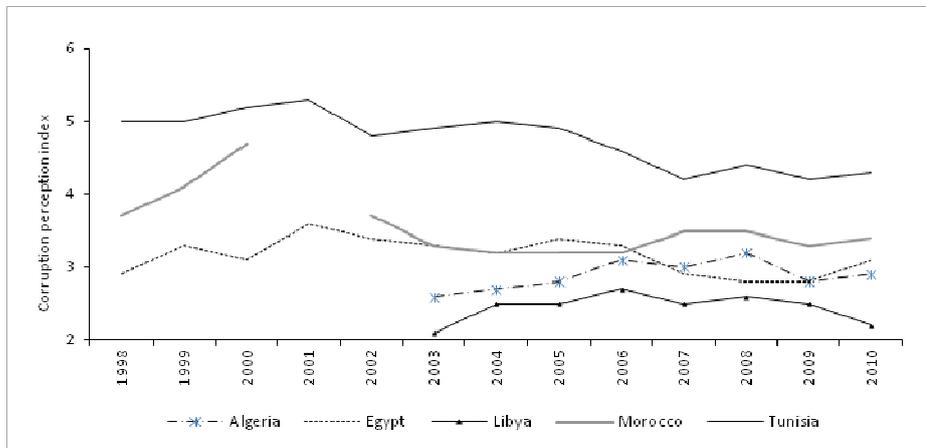
It is important to note, however, how measures of income inequality, especially the Gini coefficients, are highly uncertain in the Arab countries, and tend to underestimate the effective dimension of inequalities. Furthermore, there is evidence to indicate how the inequality in wealth has worsened significantly more than that regarding income, while perception-based survey polls show how, in recent years, people's satisfaction with living standards has fallen, possibly indicating a deterioration of welfare indicators (Breisinger et al., 2012).

To a certain extent, disparities in income are almost physiological at a middle-low level of development. Indeed, they tend to worsen with the processes of economic growth and the marginalization of rural areas. Even if the reliability of data imposes diverse caveats, in the North Africa region there is no evidence of a significant increase in inequalities. This suggests that the profound inequalities are not mainly driven by economic changes, as happens in fast-growing economies, they are, rather, structural, that is related to historical, institutional and social factors.

In North African Countries, the elites in power have always benefited from great privileges. Exemplary are the cases of the rich families of Mubarak, Gaddafi and the Tunisian President Ben Ali, on whose properties, symbols of the enormous divide between the poor and those in power, the crowds gathered shortly after the outbreaks of the riots. In these countries the religious authorities and military elites exert enormous influence: consider the traditional role of the Egyptian army and soldiers at the personal service of the Libyan leader. The concentration of power and wealth, the lack of transparency, and the existence of cumbersome and ineffective regulation systems tend to be incentives for corruption in the market of licences for the exploitation of natural resources, public procurements, and the management of the bureaucratic sector: not surprisingly, the Tunisian riot originated from an abuse by a police officer.

According to the 'corruption perceptions index', in fact, corruption appears generally widespread and pervasive in North African countries. As shown in Fig. 7, this indicator – which spans from 0 (the high levels) to 10 – exhibits very low values that tend to diminish over time. As expected, the lowest values of the corruption index were registered in those countries richest in natural resources: Libya, Algeria and Egypt. In the case of Libya, the degree of perceived corruption was not dissimilar to those of some Sub-Saharan countries.

Fig. 7. Corruption perceptions index, 1998-2010.



Note: The corruption perceptions index ranges between 0 and 10. Source: Transparency International.

These data depict a situation in which the access to wealth has been firmly held by a small number of people, while the majority of the population did not have the social or political channels – education, work or through political dissent – to improve their status or, indeed, to express their dissatisfaction.

### 3.3. The role of social networks

The economic explanations for the democratization process are diverse. As we have seen above, a prominent role is attributed to economic development and education. Recently, Acemoglu and Robinson (2006) have proposed a model in which social conflict constitutes the main driving force of institutional transformations. In this model, political reforms are introduced by autocratic regimes under threat of a revolution by workers. More specifically, if workers pose a credible threat of revolution, the power elites try to prevent the revolution through a commitment to redistributive measures. A simple promise of redistribution can, nevertheless, be perceived as barely credible without institutional reforms. From this point of view, democratization can be considered as a means to make the promises of elites to redistribute resources towards the working classes credible. In the riots of the Arab Spring, regimes have accompanied repression with promises of improving the economic conditions of the people. This has been the case in Tunisia, Egypt and Libya. Nevertheless, the commitment of the regimes has appeared untrustworthy, since it has not avoided the spread of riots and, in the cited cases, the overthrow of the political classes.

The 'information cascade' model, recently proposed by Ellis and Fender (2011), helps to explain the spread of revolts. An information cascade occurs when people make a decision after observing what others are doing. In this model, people decide whether or not to rebel by observing others' behaviour, and by considering any signs of weakness in the regime. If enough people rebel, a successful revolution with the overthrow of the rulers can take place. Regimes may try to prevent revolutions by democratization or by redistributing income. In the dynamics of riots, the dissemination of information has a crucial role, today, in explaining why all the autocratic or dictatorial regimes tend to censor or manipulate information. The information cascade, if rapid, may also explain why revolutions are often unforeseen for the parts involved. The information cascade model is useful in order to understand the Arab Spring, considering the role of internet and the social networks, such as Facebook and Twitter, channels that facilitate the spread of information and which, for regimes, are difficult to control. In the Arab riots, a number of analysts have attributed a prominent role to the mass media, such as the Arab television stations Al-Jazeera e Al-Arabiya, and to social networks, both for the spread of information among rebels and for the international diffusion of news (Khondker, 2011; Joffé, 2011). Significantly, the Arab Spring risings were defined by the mass-media as 'social network revolutions'.

Tab. 4 reports some data on the diffusion of internet and Facebook and Twitter in the countries of North Africa and in some in the Middle East involved in riots (ASRM, 2011). The data show significant differences among countries. The use of internet and the social networks is clearly related to development and, consequently, to education levels of countries. After high-income Bahrain, the number of internet users is also relatively high in Tunisia, Egypt and Jordan. In these nations, internet, mobile phones and the social networks have been used to promote riots (Behr and Aaltola, 2011).

Nevertheless, excepting Tunisia, social network users represent a very modest share of the populations (Murphy, 2011). The role of these communication channels, in disseminating news and videos abroad, has been very important in avoiding censorship by the regimes. The case of Iran has been emblematic. Harshly repressed by the regime of Tehran – the greater part of the scant information on the riots of 2011 was transmitted through internet. In the case of Egypt, the regime suspended the web for five days during the riots, while in Libya, at the start of the protests, Gaddafi's regime interrupted telephone communications from Cyrenaica, the region where the outbreak of the riots took place. The role of the mass-media

was, therefore, important for the ‘domino effect’ that characterized the rapid spread of revolutions in the Arab world.

Tab. 4. Internet and social network penetration in selected Arab countries, 2011

Countries	Internet	Facebook	Twitter
Algeria	13,5	5,4	0,04
Egypt	24,3	7,7	0,15
Libya	5,5	1,1	0,96
Morocco	41,3	9,8	0,05
Tunisia	34,1	22,5	0,34
Jordan	26,0	21,3	0,85
Syria	20,4	1,6	0,17
Bahrain	57,1	36,4	7,53
Yemen	10,0	1,4	0,12
World	30,2*	11,5*	..

Note: Data are calculated as a percentage of population. Source: ASRM (2011); \*Data internetworldstats.com referred to 30 June 2011.

#### 4. A move towards democracy?

A crucial question is whether the Arab Spring really represents a prelude for a process of democratization. It is probably too early to make a conclusive judgement. Nevertheless, the popular riots have had totally different effects in the various countries. In the oil-rich countries of the Gulf peninsula (Kuwait, Saudi Arabia, Oman, United Arab Emirates, and Qatar), the protests have been easily repressed (or bought off) by regimes (Schlumberger and Matze, 2012: 106). In Algeria, Morocco and Jordan, the governments managed the riots by conceding food subsidies, increasing minimum wages and pensions, or by creating employment in the public sectors. In other words, the regimes preserved themselves by preventing pressures for democratization through adopting populist policies. In Algeria, the material legitimization of the regime has been financed through the rents from extractive sectors, while Morocco (and Jordan) have sought aid from the Gulf Cooperation Council to maintain the *status quo*.

Only in Tunisia and Egypt have the strategies of ‘upgrading authoritarianism’ failed to avoid the collapse of the regimes (Joffé, 2011). The case of Libya is totally different. After the civil war, the extensive intervention by the North Atlantic Treaty Organization and the

overthrown of Qaddafi’s regime, Libyan society has remained divided by the cleavages of kinship and region (Anderson, 2011: 6; Paoletti, 2011). The lack of social cohesion and the absence of socially-legitimated national institutions has hampered the transition towards democracy.

The effect of natural resources rents, particularly from oil, in preventing democratization has been extensively investigated in the literature of both economics (El Badawi and Maksidi, 2007; Aslaksen and Torvik, 2007) and political science (Karl, 1997; Ross, 2001, 2008; Wantchekon, 2002; Dunning, 2008). The literature indicates that natural resource dependence tends to be associated with low levels of democracy and with the insurgence of authoritarian governments. One of the main arguments for the ‘curse’ of resources is that, in the presence of conspicuous resource-rents, autocratic governments can apply low taxation or redistribute subsidies in order to maintain the consent of populations. Rentier states are consequently scarcely accountable, and rents can serve to prevent pressure (from below) for democratic change. In the case of the MENA countries, studies indicate how oil rents have historically played a crucial role in inhibiting democratization, granting political stability and supporting regime neo-patrimonialism (Mahdavy, 1970; Brynen, 1992; Schwarz, 2008).

In order to provide some evidence on the strong negative relationship between fuel exports, democracy and political and civil liberties, we have estimated the ‘minimal model’ represented by eq. (1) in a cross-section of 135 countries:

$$Democracy = \alpha + \beta_1GDPpc + \beta_2School + \beta_3MENA + \beta_4OilExp + \varepsilon \quad (1)$$

in which three measures of ‘democracy’ are regressed on per capita GDP, the average years of schooling, a dummy for MENA countries and a dummy variable for oil and fuel exporting countries. In the estimates, democracy is measured by the variable *Polity* (Polity IV), and by the *Political Rights Index* and the *Civil Rights Index* by the Freedom House<sup>5</sup> (for a description of variables see Tab. 1.A. in appendix).

Tab. 5 reports the results of estimations. It is possible to see how per capita GDP and schooling levels are significantly and positively linked with the different measures of democracy; the dummy for MENA countries is, instead, negatively and strongly associated both with political and civil liberties and with *Polity* scores. Notably, when the dummy for fuel exporting countries is included in the regressions, the positive effect of schooling

disappears. Even in this simple analytical framework, these results are consistent with the findings of the vast empirical literature that shows how oil hinders democracy

Tab. 5. The effects of oil on regimes and political and civil liberties

	Political liberties		Civil liberties		Polity IV	
	(1)	(2)	(3)	(4)	(5)	(6)
const	-2.35** (-2.12)	-3.11** (-2.77)	-2.09** (-2.78)	-2.82** (-3.84)	-4.74 (-1.30)	-7.48** (-2.07)
GDP p. c.	0.54** (2.66)	0.69** (3.41)	0.54** (3.98)	0.69** (5.18)	0.55 (0.83)	1.08* (1.68)
Schooling	0.20* (1.82)	0.13 (1.29)	0.17** (2.16)	0.11 (1.46)	0.70** (2.04)	0.49 (1.51)
MENA	-2.67** (-5.35)	-1.89** (-3.68)	-2.12** (-5.30)	-1.37** (-4.07)	-9.06** (-5.36)	-7.03** (-4.47)
Oil-Exp.		-2.05** (-3.92)		-1.96** (-5.22)		-6.19** (-3.35)
Obs.	135	135	135	135	126	126
Adj. R <sup>2</sup>	0.44	0.49	0.53	0.60	0.39	0.44
lnL	-250.00	-240.00	-210.00	-200.00	-370.00	-360.00

OLS estimates - heteroskedasticity-robust standard errors; t-statistics in parentheses; \* indicates significance at the 10 percent level; \*\* indicates significance at the 5 percent level.

#### 4. Conclusion

Was the Arab Spring determined by short-term economic motives? Our review suggests that these motives, considered singly, do not appear sufficient to explain a complex phenomena that involved numerous countries with cultural similarities, but also with notable economic and institutional differences (Sakbani, 2011). It seems reasonable that adverse short-term economic factors – such as the growth of food prices or the increase of unemployment – have contributed to exacerbate the chronic economic problems of North African countries, and the profound social inequalities in particular. Nevertheless, it is necessary to consider that the economic crisis which started in 2007 has had a global dimension. In many countries, the negative shock of the global crisis has had far more severe effects than in North African countries, without provoking popular riots. Some peculiar aspects of these countries must, therefore, be considered. These aspects are the youth demographic structure and the profound discrepancy existing between the education levels,

of youth in particular, and the civil and the political rights accorded to the people. The combination of youth demographics, high unemployment rates and high educational levels, coupled with an unrepresentative political system, increases the likelihood of social unrest.

For millions of people – and for a wide section of public opinion around the world – the Arab Spring has undoubtedly represented the hope for a change towards more representative forms of government. The evolution of the events has, however, notably reduced that hope. Among the countries affected by protests only Tunisia and Egypt have commenced a phase of political transition. In Libya and Syria the popular protests have quickly transformed into a civil war. The other countries still have the same political regimes they had before the outbreak of the Arab spring.

## Appendix

Tab. 1. A. Description of variables

Variables	Description	Source
Polity	POLITY scores range from -10 for strongly autocratic state to 10 indicating a strongly democratic state. Data refer to the year 2010.	Polity IV Project
Political rights	The Political rights index ranges from 1 to 7, where 1 represents the highest degree of freedom and 7 the lowest. In the estimates data have been rescaled, assigning the highest scores to better performances.	Freedom House <a href="http://www.freedomhouse.org">http://www.freedomhouse.org</a>
Civil liberties	The Civil liberties index ranges from 1 to 7, where 1 represents the highest degree of liberties and 7 the lowest. In the estimates, data have been rescaled assigning the highest scores to better performances.	Freedom House <a href="http://www.freedomhouse.org">http://www.freedomhouse.org</a>
Schooling	Educational attainments measured by average years of schooling attained by adult population. Data used in the estimates refer to 2010.	Barro and Lee (2010)
Fuel-Oil	Dummy variable for countries exporters of fuel, mainly oil.	W. Easterly, Global Development Network Growth Database, The World Bank.

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## Note

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<sup>1</sup> IMF, World Economic Outlook Database, April 2011

<sup>2</sup> According to Ross (2008), in the oil-producing countries of the Middle East, the low participation of woman in labor markets would not depend on institutional or religious factors (Islam) but would be due to the productive structures, largely based on oil. In other words, the role of women in the economies and societies of Middle East countries would constitute a further aspect of the ‘curse of oil’.

<sup>3</sup> For Spain, Eurostat, *Unemployment statistics*, January 2012; for Italy, National Institute of Statistics (Istat), January 2012.

<sup>4</sup> See Table 1.A in Appendix for a description of variables.

<sup>5</sup> The Political rights index and the Civil liberties index are commonly used measures of democracy. Nevertheless, the use of these variables to measure democracy may pose some methodological problems. For a discussion see, for example, Giannone (2011).