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Youth and Social Media in Transition

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The Arab Transformations Project is an international research project operating within the European Commission's FP7 framework. The project looks comparatively at attitudes and behaviours in the context of the social, political and economic transformations taking place across Middle East and North Africa since February 2011. The countries covered are Morocco, Algeria, Tunisia, Libya, Egypt, Jordan, and Iraq.

Ethical approval for the Project was given through the Ethical Review Procedures of the University of Aberdeen.

Further details of the project including the Survey Technical Report and the Longitudinal Data Base and Guide can be found on the project web site at www.arabtrans.eu.

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Contents

INTRODUCTION

In the months and years since the beginning of the Arab Uprisings, the popular media have established a narrative of the youth revolts and 'Twitter' revolutions across the MENA region. Young people are presented as radicals and drivers of the events of 2011 and after, with popular and academic watchers often struggling to pin down the nature of a movement which appeared to span the entire region, bringing down decades-long dictatorships in some countries while leaving dynasties intact in their neighbours. In the years since then the impetus of 2011 has stalled and the region has failed to make the promised transformations, even regressed in some cases to something like its earlier state but sometimes progressed and begun to some extent to transform itself. The countries are in many ways very different from each other, though they also have economic situations and social systems in common and share an active religion, and various countries have faced war/invasion, civil war and terrorism, but the story of successful protest led by the young still informs the ways in which the MENA countries are seen and how they see themselves.

This report explores whether and to in what ways young people in this region differ in their political activities from older age groups and whether and how they use social media for political information and activism. It begins with a discussion of the research and theoretical literature surrounding collective action and the use of social media worldwide, young people's participation in the uprisings and the ways in which social media was used in the uprisings. It goes on to bring light to bear on the area by analysing data from the ArabTrans Survey carried out in six of the countries in 2014. The report seeks to look at political activity, on line and off, comparing younger people with their seniors and looking at the use of the 'social media' for political purposes as well as activism 'on the streets' and more conventional forms of political engagement. It also briefly considers the role played by the affluent and educated middle class and by the less affluent sections of the working population, though it would require qualitative research do to this topic justice. It concludes that young people played a large part in the movement, alongside others, and

were still politically active in 2014, and that social media played and still play a large part in their activity.

YOUTH AND THE ARAB UPRISINGS

The 'Arab Spring' has often been described as a youth rebellion driven by grievances about unemployment and dissatisfaction with existing regimes (Hoffman & Jamal 2012). Even before the 2011 Uprisings several studies (e.g. Assad & Roudi-Fahimi, 2009) pointed out that the developing world is experiencing its largest youth cohort ever. Populations in the Middle East and North Africa have actually experienced a rapid decline in fertility in the past two decades, but given the persistently high population growth rates of the past this produces an extended bulge in the region's age structure as the people who are growing into adolescence and then becoming young men and women are not replaced in the younger age groups at the same rate because of the fall in birth rate. The youth bulge tends to be more pronounced in countries where the onset of fertility decline occurred later and the decline was sharper (Assaad &Roudi-Fahimi 2007). Countries which started the 'fertility transition' in the 1970s, such as Tunisia and Lebanon, therefore experienced both the earliest increases and the shortest period of expansion in the youth population, and by 2025, their share of young population is expected to drop significantly. Other countries such as Egypt saw large fertility declines in the 1980s, and therefore their youth bulge will still have a central role for a few more years (Cincotta & Doces 2012).

Some have argued that this 'bulge' in demographic proportions is necessarily associated with political instability and unrest (Urdal 2007; Weber 2013; Cincotta, & Doces 2012; Goldstone 2015), and even some who would regard this assertion as controversial still suggest that the bulge is bringing specific challenges for ruling regimes (e.g. Murphy 2012; Nordas & Davenport 2013). This kind of rise in the share of the working-age group (15-64) and the shrinking share of the young dependent group (aged 0-14) is often considered 'a window of opportunity for economic development' or 'a demographic dividend' (Urdal 2007, p. 93); the reduction in the relative size of the dependent population could significantly accelerate development if productive employment can be found for new entrants to the labour market. However, in most MENA countries demographic conditions

were not matched by economic and institutional growth. Instead the large cohorts entering the labour markets in the past two decades coincided with negative socioeconomic trends such as the collapse of oil prices in the mid-1980s and the weak growth that followed afterwards (Keller & Nabli 2002) and of course the neoliberal 'economic restructuring' which was IMF's condition for debt adjustment, which meant government playing a smaller part in direct job creation. High unemployment rates followed, along with a strong shift towards casual work in both the informal and the formal sectors that was precarious and poorly paid and a growth in the numbers of 'those who are underemployed, the working poor, people no longer looking for work, and the disenfranchised' (LaGraffe 2012: 66-67). When the labour market is unable to absorb new entrants and/or provide decent jobs for them there is the potential for unrest among a disproportionately large cohort of the population – a situation which has proved to be a tinder-box for revolutions and rebellions elsewhere. In MENA countries, moreover, the group most hit by unemployment was the educated young people - young people with intermediate or secondary educations and university graduates, and not only they but also their often middle-class parents became frustrated by the lack of job opportunities for their educated children (Abbott and Teti 2016 a, b).

These demographic changes and pressures also relate to broader social and cultural issues. When the average years of education increases and marriage is delayed, because of unemployment or under-employment, the transition to adulthood is also 'delayed' for a large proportion of young people in the region (Dhillion & Yousef 2009; Goldstone 2015).

After 2011, studies were carried out which tried to describe the demographic profile and the attitudes of the young people who were participating to online offline protests. Howard and Hussain defined the protesters in Cairo as a

> ... 'community' of like-minded individuals, educated but under-employed ... eager for change but committed neither to religious fervour nor political ideology (Howard and Hussain 2011: 38-39).

Furthermore, according to Howard and Hussain, the beginning of the protests in each country was organised by a core group of literate, middle class young people' who should be regarded as 'unusual" participants:

> they were not the urban poor, unionized labour, existing opposition party members, radical Islamists, or minorities with grievances. They were middle-class, educated and under-employed, relatively leaderless, and technology-savvy youth" (Howard & Hussain 2011: 48, 2013: 49).

However, one should also note that workers and union leaders were very important in Egypt and far from leaderless.

The dynamics behind the organisation of the January 25th protest in Egypt do seem to be that it was promoted by a group of core activists, although they quickly lost control of the demonstration as numbers started to grow. When they tell the same story about Tunisia, however, Howard and Hussein may have been misled a little by their concentration on the big city, because the Tunisian protests did not start in Tunis. Despite the importance of the silent activity of urban educated activists in the years and months prior to the Revolution, in fact, the protests actually started in the rural area of Sidi Bouzid, following Mohamed Bouazizi's self-immolation. Again, the role of workers and the trade union movement should also be noted. It is fair to say, however, that in neither Tunis nor Egypt were party members involved, mostly because the formal political arena in these authoritarian regimes serves as a locus of co-optation.

These assumptions were partially confirmed by other studies. Wilson and Dunn's 'Tahrir Data project' (Wilson and Dunn 2011), collecting data from a snowball sample of 1,056 protesters, coordinators and the transnational audiences, claimed that the participants to the protests in Cairo included in their sample were

> ...predominately male (75.5%) and young (from 11 to 67 years old, with a mean age of 38 and a standard deviation of 9.067). The sample is also largely well educated (77% reported some kind of college or university degree) and reported wide access to the Internet (80.4% with access in their homes, 50.1% on their telephones) [They also found that] ... 65.3% of respondents ... identified themselves as not politically active in any way (including being nonactive in trade unions, political parties, charities, or social movements), and 66% had never before participated in a protest (Wilson and Dunn 2011: 1250).

(The age statistics quoted, however, suggest that half the participants would be 38 or older and two thirds would be between about 30 and 45; even allowing for some degree of

skew towards the younger end of the age scale, this would appear to be stretching the meaning of 'youth' beyond its normal boundaries.)

This, like the Howard and Hussein research, suggests a uniformity between Egypt and Tunisia, with a 'class' of young educated men with few allegiances to conventional politics as the driving force of the protests. Using a larger and more representative sample from the second round of Arab Barometer in Tunisia (October 2011) and Egypt (June 2011), Beissinger et al. (2012) argued instead that participants to the protests in the two countries had different social backgrounds and were driven by different priorities, as a result of the different ruling strategies adopted by the pre-revolutionary regimes. In their view, in Egypt

> a predominantly middle-class revolution prioritized economic grievances and focused its efforts through civil society associations—largely as a result of Mubarak's policies of dismantling welfare benefits for the middle class and allowing the growth of civil society activity. [By contrast, Tunisia's] cross-class alliance was forged out of corporatist policies that exacerbated regional disparities and eviscerated civil society associations (Beissinger et al. 2012, p. 29).

In general, the emphasis on the central role of the middle class during the Uprisings (Diwan 2013), especially in Egypt, reflects the deep boundaries between different groups of protestors who came together in a temporary alliance to oust Mubarak (Hirschkind 2012), but clearly ended up being represented very differently in the popular and mediated accounts of the Revolution. In her review of the debate over the role of middle-class and lower class protestors in Egypt in 2011, Mellor notes that

> social class is not necessarily based on economic factors but also, even more importantly, on differences in values and ideologies, such as secularism versus Islamism (Mellor 2014: 84).

It is these ideological differences that later divided the Tahrir revolutionaries, as

> the Muslim Brotherhood and the Salafists claimed to have protected this revolution by being in the forefront in battling with the police forces, [while] liberal middle-class youth see the revolution as a result of their political efforts during the past decade, thereby reducing the role played by other social groups (Mellor 2014: 95).

In general, therefore, the existing research does suggest a core of younger people (though not necessarily *young* in common understanding or referring to the scientific discourse which can be said to summarize "adolescents" (in their teens) and "emerging adults" (in their twenties) into the group of young people[1], many more of them male than female, who were involved in the protests and their organisation. There are suggestions that many may not previously have been involved in conventional politics, that they may have been involved with information and organisation more than with active protest on the streets and that they appear to be relatively anarchic in the sense of not having a clear leadership or chain of command. The last of these is compatible with the use of internet communication and 'social media' as a main channel of organisation. At the same time, it is clear that more conventional political forces - predominantly workers organised through trade unions – were also an important element in the protests, but they are spoken of less and take second place in the dominant narrative to 'youth' as a driving force. At the same time it is interesting to note that there is little in the research about countries other than Egypt and Tunisia; the unity of an 'Arab Spring' and its purpose is at least tacitly assumed, but the only evidence offered tends to be temporal coincidence. Given that disparities emerge even between Egypt and Tunisia, it is reasonable to suppose that there may be more variability across MENA than is being captured in the research.

Collective Action and the Internet

Castells (2012, 2013) argues that the internet and particularly social media sites have had a transformative effect on modern conflicts and contentious politics, permitting the emergence of a new type of social movement. The internet offers effective tools for rapid mobilization and facilitates the creation and maintenance of informal networks, as well as the formation of lasting frameworks for collective action.

Facilitating mobilization and network formation

When the role of information and communication technology was first beginning to be studied in conjunction with social movements and other forms of collective action, one of the directions of inquiry was from a 'political opportunity' perspective, reflecting on how

[1] Also including „emerging adults"

these new technologies had the potential to facilitate the mobilization and coordination of activists. One of the main advantages of the internet is that it offers quick and relatively cheap communication within networks allowing for fast mobilization (Rheingold, 2002), as well as allowing local groups to combine into wider national or trans-national movements (Loader, 2008).

The internet has been useful not only in allowing existing activist networks to mobilize, but also in the creation and the maintaining of new networks. This took place initially through blogs, forums and websites. However, this new medium was only used initially by a narrow range of technical-savvy activists, mainly from developed countries; there was a distinct and observable 'digital divide' between people having access to internet and with the knowledge and opportunity to use it effectively, and those who did not (Norris, 2001). The advent of modern social media sites such as Facebook and Twitter dramatically extended the range of social media users, reducing the technical requirements needed for accessing social networks. In addition, the landscape changed as the internet penetrated at an increased rate of into less-developed regions and digital literacy improved among younger cohorts (Warschauer, 2004).

Social Media as Tool for Protest and Identity-Building and as Tool for Corporations and Control

An equally important process that is facilitated by social media is the building of identities. This concept is derived from e.g., Goffman (1974) and refers to the shared constructed meaning of events and ideas that is essential for the emergence of a social movement, where actors engage in collective action based on their shared understanding (Snow, 2001). Activists need shared interpretative schemata in order to resonate together to the same themes of contention (Noakes and Johnston, 2005: 3-4). The creation of solidarity and trust between activists also allows them to feel safer and to engage in higher risk activities.

A collective identity is constructed through 'identity work', meaning activities through which people express their particular values and interpretative frames and position themselves in opposition or in accordance to others (Dugan, 2008). These activities are facilitated through the use of internet spaces. Forums, and more recently Facebook, have been used effectively for identity-building. Because of its features allowing for lengthier conversations on open pages, Facebook has the potential to become the 'public space'

most suitable for identity-building, allowing the dissemination of ideas needed for positioning and the creation of collective action frames.

In their mapping of political use of social media in different parts of the world, Margetts et al. (2015) point to the decisive differences among different social media platforms, which are far from being homogeneous. Some platforms in fact

> have particular designs and interfaces that offer (or do not offer) varying amounts of social influence .. [and] create different kinds of communities and information environments .. [that can be] more or less conducive to political participation (Margetts et al. 2015: 13).

Depending on the context, social media can 'facilitate a non-normal distribution of mobilizations, where most fail and a few succeed dramatically' (Margetts et al. 2015: 19).

In general, the relation between social media and protests is

often marred in narratives of modernisation and progress … a dominant narrative has emerged that celebrates the advent of social media platforms as simple tools to be used for liberating purposes by a host of progressive social and political actors (Dencik and Leister 2015: 1).

Against this positivist and technologically deterministic views, Mozorov and others produced evidence on the possible "dark side" of digital media, showing the ease with which these communication networks can be turned into tools for controlling and monitoring their users by political and military powers, or by 'anarcho-capitalist' multinational corporations (Mozorov 2011; Lovink 2013; Ippolita 2015). The debate over online surveillance technologies, such as Deep Packet Inspection (DPI), often sold by European and Western companies to private and public clients including MENA regimes, continued also after the Uprisings (Fuchs 2013; Deibert 2015), as well as the parallel efforts of activists, journalist and normal citizens to develop online anti-censorship tools (Eissa & Cho 2015). While popular studies such as Castells' *Networks of Outrage and Hope* (2012) stressed the "autonomous communicative capacity" shared by new social movements in different parts of the world (Castells 2012: 223), it is hard not to see the use of commercial corporate networks by political progressive movements as increasingly paradoxical. As Terranova and Donovan (2013) argued, for many contemporary activists it is hard to resist

the temptation represented by platforms such as Facebook, with their ready-to-use communicative infrastructure and their large number of users, despite the contradiction between the company's neo-liberal policies and the aims of many anti-corporate movements. From a similar perspective, Dencik and Leister (2015) suggested that we should

> contextualise the architectures of what are predominantly commercial social media platforms in terms of their use for the purpose of anti-systemic and progressive protest movement – aspects that have greatly benefitted activists, but at the same time powerful curtailing forces (Dencik and Leister 2015: 1).

The data profiling systems used by these companies, and the tracking of online activities of their users, can have serious consequences for the activists in oppressive political regimes – and, in terms of lack of privacy, also in progressive democracies. After all, the expression 'social media' itself, as noted by Dencik and Leister,

> requires caution since it euphemistically refers to the services of large companies aiming to redefine the very nature of sociality (Dencik and Leister 2015: 2).

In other words, the media tools are risky because accessible – less risky than speaking at a public meeting, probably, but more so than passing notes, even through the post, because the investigation of every sealed letter is a very large task for a government or other agency of control. The internet media are not what determines or causes revolution, but they are very good tools for mobilizing and creating a community with shared ideas it: (1) do provide a fast mechanism for contacting mobilising known sympathisers, (2) through even fairly crude mechanisms such as bulletin boards and circulation lists/forums they increase the likelihood of reaching new potential sympathisers, (3) and without the effort or the risk of having to do so face to face or the slow pace of written communication with people recommended by other sympathisers, (3) once enrolled in a conversation, the building of a common identity becomes more [possible as people and groups discover each other's' norms, values and expectations and at the same time negotiate change in them through the process of discussing them, and (4) tools such as Facebook make this kind of negotiation more natural and easier for the non-technocrat than has ever been the case before. Other than mobilizing and building a community of like-minded, in Arab Spring social media

were also important as organizing tool and as independent news source that, for example, let people know in real time about events and ongoing developments in current street protests (Cuconato & Waechter 2012).

COUNTRY DIFFERENCES

Comparative data on internet penetration and social media use in MENA region show that the countries experiencing the most dramatic changes in 2011 were not necessarily the ones with higher social media use (Mourtada and Salem 2011). However, one of the reasons why literature on digital media use in the region mostly focused on Tunisia and Egypt even before 2011 is that, despite having lower internet penetration than Gulf countries, these two countries had 'a long-term Internet-enabled civil society' that 'impacted the political communication systems' (Hussain & Howard 2013), despite the activists' difficulties in reaching a nationwide audience, not least because of class and ideological differences (Mellor 2014). In Egypt, long before 2011, a number of alternative media sources such as independent blogs and opposition newspapers were already well established (Khamis 2011). Building on these previous resources and networks, Twitter and Facebook rapidly became popular - not solely for political uses, but politics became one of the areas in which views and information were exchanged. In Tunisia, under Ben Ali a heavy censorship prevented the creation of a wide alternative media sphere, and the circulation of independent news was limited to a small 'digital elite'. When Facebook started to gain large numbers of subscribers, it offered an unprecedented resource to the activists to reach a wider audience and ultimately to promote political mobilisation (Kuebler 2011; Breuer et al 2015). Other relatively new communication technologies were pressed into service to reach a larger and known audience:

> not every Tunisian and Egyptian had access to a computer .. But mobile phones – n.b. 'dumb phones' rather than smartphones - were the key mediating instrument bridging the communication gaps (Hussain & Howard 2013: 63)

Depending on the pre-existing media environments and on the political context in each of the MENA countries, as Markham (2014) has argued,

> different social media have been favoured by participants in and supporters of different political, social and activist movements (Markham 2014: 90).

As Khamis et al (2012) argued when comparing cyber-activism in the Egyptian revolution and in the Syrian uprising, it is necessary to look at

> social, political and communication structures unique to each country, as well as the different roles of their various political actors and the types of online and offline communication strategies they deployed Khamis et al (2012: 2).

Generally speaking, it seems that the strategic choice of media tools in each country depended on the resources available to the activists (networks, contacts, support), and there is no evidence that specific media tools have been more effective than others. The existing literature confirms instead that a key factor for the mobilisations in all countries was the combination of different social media platforms (mostly Facebook, Twitter and YouTube), alongside other forms of communication, such as SMS, mass media, and word of mouth in social/religious gatherings (Cottle 2011; Arafa & Armstrong 2016). This combination was what allowed organisers to gain wider support for the mobilisations at a national level, overcoming social and cultural divides, but also to get international recognition and protest legitimation on a global scale (Lotan et al. 2011; Aday et al. 2013).

RESEARCH QUESTIONS AND METHODS

THE ARABTRANS SURVEY AND ITS CONTEXT

The ArabTrans survey collected data by face-to-face interview in 2014 on a common questionnaire, translated into Arabic and its local variants, in six countries of the Middle East and North Africa – Egypt, Iraq, Jordan. Libya, Morocco and Tunisia. It contains questions from the Arab Barometer and the World Values survey but questions were added in a number of areas including more detail on the Arab Uprisings themselves than is available in the other surveys, more on political activity and some detailed questions about use of social media and the purpose of such use. Table 1 gives sample sizes and dates of fieldwork, and more detail may be found in the ArabTrans Methods Handbook (Abbott et al 2016). The Handbook also discusses sample size, which is sufficient to generalise at country level with a fair degree of confidence and will support multivariate analysis of the data to a fair degree of depth for variables which split the population into a fairly small number of reasonably equal subsets. However, those who say they supported the Arab

Uprising are a minority in most countries and those who actually took part in it seldom much more than a third of this minority. The numbers of those having participated in the protests are not large enough for us to have confidence in the precise results of multivariate analyses including more than about three or four variables – the possibility of the results being distorted by a small number of untypical cases that happened to fall in the sample are too great. Where such analysis is required for the argument of the paper it will be labelled 'indicative': the existence of the stronger relationships that it reveals is almost certainly true of the population as well, and the size of their relationship may well be a fair estimate, but much less confidence can be put in smaller effects and the inclusion or exclusion of minor influences at the borderline.

Table 1. ArabTrans fieldwork dates

Survey country	**Fieldwork dates**	**Achieved sample sizes after quality assurance checks**
Egypt	5th - 24th November 2014	1525
Iraq	4th May - 22nd June 2014	1613
Jordan	7th – 18th June 2014	2139
Libya	25th May - 31st August 2014	1540
Morocco	15th July - 30th October 2014	1777
Tunisia	August 2014	1215
Total N		9809

Much of the current literature available is related directly to the activities undertaken by people in this region during the uprisings. The ArabTrans survey looks at opinions, attitudes, beliefs and behaviours three years later in order to see the extent to which the Uprisings brought about more than temporary change of regime or governance. This puts

boundaries around the extent to which it can make definitive statements about what happened and what people were doing during the Uprising itself. A few questions are anchored to particular events - voting (in the last election) and participating in the Uprisings (within the limits of what is possible given memory effects and subsequent reconstructions of meaning) – but otherwise respondents were asked about their media use and therefore its role in political action, participation or activism on an open time-line: that is, they were generally not asked if the activity occurred during the Uprisings themselves. This means that the data are better for establishing whether structures and a culture of doing politics via the media has become established since the Uprisings than they are for pinpointing what actually occurred at that time.

Research Questions

Though the literature on the use of social media in the uprisings is extensive, gaps remain, some of which can filled by this report. First, the amount of research being done comparatively across the region is limited, with much of the discussion of social media being focused upon the activities leading up to and during the uprisings and only in certain countries. This report seeks to look into more depth at the use of social media across the region, focusing upon country-specific patterns as well as regional. There are questions surrounding the definition of a 'youth revolution', given that in some of the studies (e.g. Wilson and Dunn 2011, cited above) these 'youths' appear to be in their middle or late thirties or even their forties. In what follows we shall separate the 'age-bulge' group from the middle-aged to see if the political participation patterns which emerge are those of the young or rather those of the 'not old'. Finally, the existing surveys give only limited coverage to the use of social media in the region. Though there are some questions in the Arab Barometer, the Arab Trans survey goes into more depth about the use of social media for political participation.

This report aims to answer the following research questions:

- What is the extent of internet use and of social media use across the region and to what extent is it related to age, economic situation and education? (The last two of these are taken as a surrogate for middle-class situation and attitudes.)
- From what sources do people get their information?
- Who uses the internet and specifically social media for political purposes?

- What political activities do people undertake on and off line, and who are the 'activists'?
- Are there differences in political interest and political activism by age and class?
- What is the relationship between political activity on and off line, and to what extent do they overlap?

DEFINITIONS OF VARIABLES USED

Political activism:

We have opted for an ordered typology rather than a scale, as giving greater insight into differences in form of life. We shall distinguish between:-

- *Non-Political respondents*. These are individuals who are not in any way involved in politics: they do not watch political news, they say they are not interested in politics and they do not engage in any type of traditional political activity or political activism.
- *Watchers* are those respondents who said they follow political news (even if only occasionally) or who said they use social media to get political news. However, they do not express an interest in politics or participate in any other type of political action/activism.
- *Armchair* respondents are those who have expressed an interest in politics, but do not participate in any political activity or activism, whether or not they follow the news; it includes a small number of individuals who did not express any interested in political news even though they say they are interested in politics (N=116 across the region, out of the 11,000 + respondents).
- *Traditional actors* are those who say they have participated in traditional (thin) democracy, but not in any type of activism. That is, they voted in the last election, are members of a labour/trade union or are members of a political party but have not undertaken any activity that would qualify them for the label of 'activist', on or off line.
- *Political activists* are those who say they have engaged in more than traditional political activities, either on line or off. Offline political activism includes participating in demonstrations (including those during the Uprising), taken part in an unauthorised strike, occupied a building, signed a petition or boycotted companies. Online political

activism, in this report, includes those who use social media for commenting on or discussing political issues, those who use social media for finding out information about political events and those who use social media for organising political events. (Note that those who are classified as activists may or may not have engaged in any other political activity)

Source of political news: mostly we have dichotomised into 'online' vs 'not'. The respondents who said they received any political news from social media, even if only occasionally, were coded as 'online' ; all other were coded as not online. It was not possible with this dataset to narrow down exactly where all respondents received their news other than from social media.

Whether online: The report breaks down political activists, as defined above, into those who are online and those who are offline.

- 'Internet use' defined so as to include all respondents who used the internet, even if only occasionally. It was recoded as a binary variable. A wide definition is used, but focusing on use rather than just access, in order to include all those who have the means and capability to use the internet for political purposes.
- 'Social media use', include all the internet users who listed at least one type of use of social media tools, whether for social or political purposes. It is a self-defining group, as the term social media was not strictly defined. It includes all who use social media even occasionally, so that the report did not miss those who use them only occasionally but for high-impact activities.
- 'Use of social media for political purposes includes the social media users who use them for commenting on political news or events, use social media for getting information in order to participate in a political event or use them actually to organise a political event.

In order to examine whether there are similar patterns by age and country for online and offline political activism – the extent to which it is the same people who are involved in both - a typology of offline and online political activism was created.

- Non-activists. Respondents who do not participate in any type of political activism.
- Online only activists-respondents who use social media for political purposes but are not involved in political activism offline.

- Offline only activists are respondents who have participated in at least one offline non-traditional political activity including demonstrations (including the Uprisings), unofficial strike, boycott, or signed a petition.
- Online and offline activists are those who have participated in both type of activities.

Finally, through the entire analysis, the following demographic variables were used:

- Country was used as one of the two main independent variables.
- Age was the other main independent variable. For this analysis, age was coded into three groups. 'Young' were defined as respondents between 18 and 35 years old, to include the youth bulge in the region. 'Middle-aged' were the respondents between 36 and 55. Those who are 56 or older are the 'oldest' group.
- In addition, this report uses descriptive analysis of gender, household income and education as far as possible with the sample sizes. This is based upon indications in the literature that individuals who are better off financially, better educated and male are more likely to be activists – and education and income together act as a surrogate for social class. The sample size means that the extent to which patterns can be generalised is limited, but these factors can give some indication of patterns in types of young people who are engaging in political activism both on and offline.
- Household income is classed as *comfortable* ('covers our expenses well and we are able to save'), *adequate* ('covers our expenses without notable difficulties'), *inadequate* ('does not cover our expenses and we face some difficulties in meeting our needs'), and *struggling* ('does not cover our expenses and we face significant difficulties in meeting our needs').
- Education was recoded into *low* (completed primary or less), *middle* (completed preparatory or secondary), and *high* (higher education of some sort).

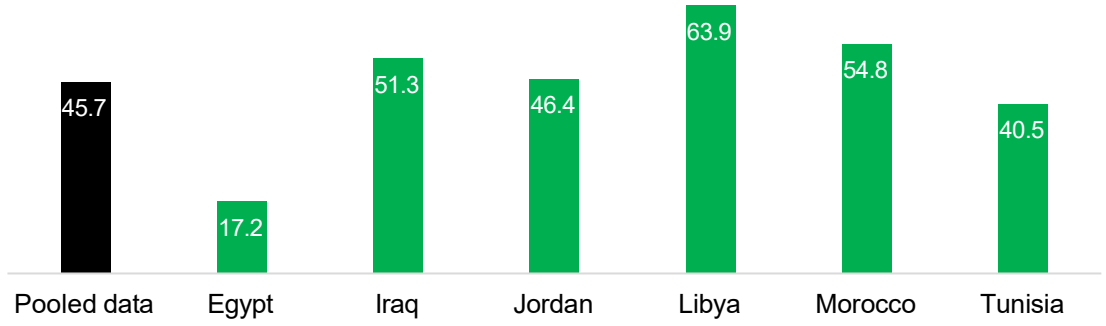
FINDINGS

USE OF THE INTERNET AND SOCIAL MEDIA

The first step in exploring activism in this report was to check what proportion of the population are internet users and what proportion use social media. Internet usage varies in this region both by country and by other demographic factors. There is a significant difference in usage by country across the sample; only 17 per cent of the Egyptian

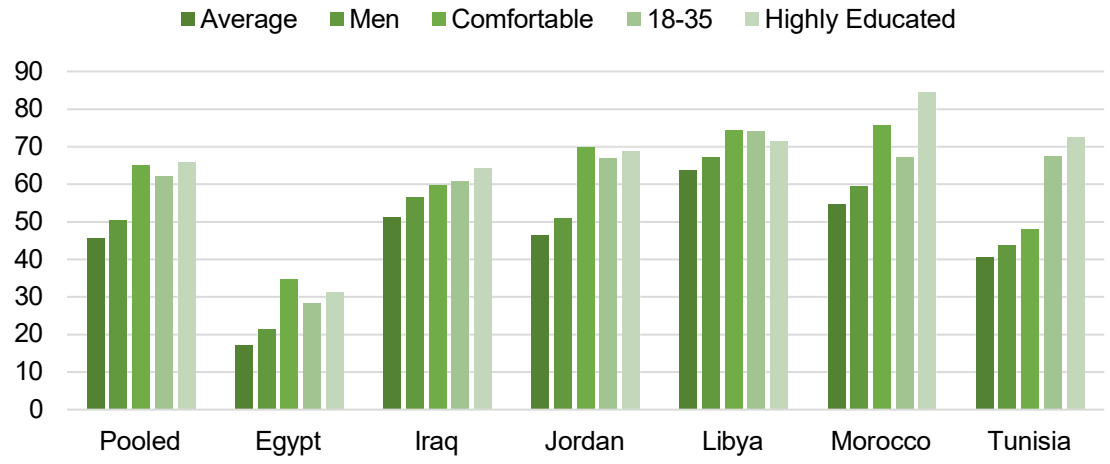
participants say they use it at least occasionally, compared with 64 per cent in Libya at the other extreme (Figure 1). (The Egyptian figure is out of line with other surveys, however, and may be an underestimate of the proportion of users in the population.) Further tabular analysis shows that gender, age, income and education also relate significantly to likelihood of using the internet; being male, being young (18-35), having a 'comfortable' income and having higher education all increase the probability of internet use (Figure 2), in the pooled data and also country by country.

Figure 1: **Percentage who use the Internet at least occasionally, by Country**



χ^2=848.77 with 5 d,f, p<0.001

Figure 2: Categories more likely than the average to use the internet (pooled data and by country, %)

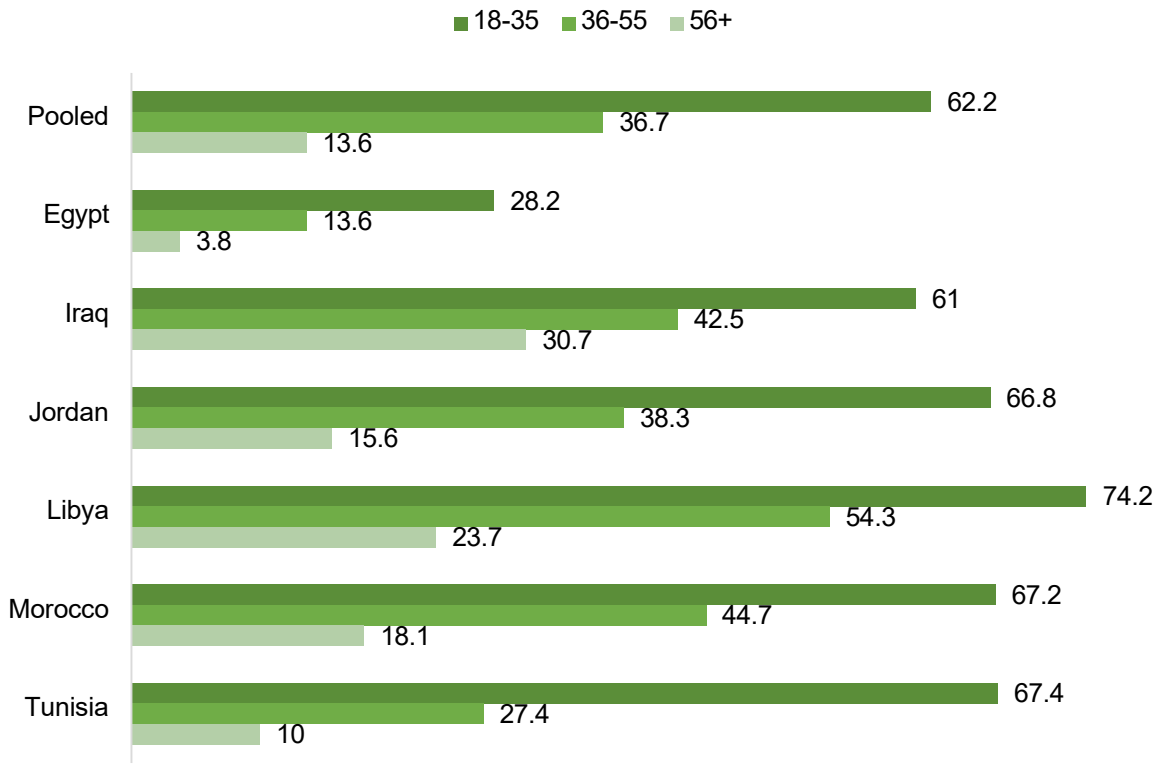


All χ^2 figures for the difference from the average are significant at p<0.005 or more often p<0.001

All the variables appear to have an independent effect on internet usage. We shall consider age first, because the number of users is small in the highest group (56+) and so it is not

possible to include it in a multivariate analysis with all the other variables without the expected number of older users becoming so small that the likelihood of results being distorted by a few untypical cases becomes too high. We can look at it in a three-way analysis, however – internet use within the three age groups and the six countries. Figure 3 shows the differences by age-group, controlling by country. What is notable is (a) that the countries differ considerably on the absolute magnitude of internet use, but (b) when we control for country, every country shows the same pattern *within* country, with the 'young' group being the most likely to be internet users by a substantial amount and the oldest group- the least likely, again by a substantial amount. It is fair to conclude, therefore, that both age and country are needed to produce a reasonable prediction of the level of internet use. This is not to say that *no-one* in the oldest group uses the internet; the average figure is 14 percent, one person in 7. It reaches nearly a third in Iraq, and even in Egypt 4 per cent of the age group use the internet, which is one person in 25. However, if we picked a random person from the population of users, he is seven times more likely to be in the youngest age-group than in the oldest one.

Figure 3: Percentage of age group using the internet, controlling for country



Logistic regression was used to investigate the extent to which country and composition factors (demographics) related to the use of internet in the sample and the extent to which they were independent of each other. *In the first step* of the regression, the countries were entered as independent variables, plus age excluding the oldest group, to check that the difference between the youngest and the middle -aged still had the independent effect that is suggested by Figure 3; Egypt and 'middle age' were the reference categories. As is shown in Table 2, controlling for country does not abolish the effect of age, nor vice versa. Across all the countries, young people are significantly more likely to use the internet than the middle age group. However, differences in internet use by country is not fully explained by differences in age composition and vice versa. *In the second step* of the regression, the other three composition factors – gender, income and education - are included to indicate how much of an independent impact they might have on internet use. (Because of decreasing expected values as more variables are entered, however, this second step must be considered as indicative rather than conclusive; the relationships probably hold true in the population but we can have little confidence in the precision of size estimates.) With the new variables in the equation the estimated effect of being in Iraq or Jordan rather than Egypt increases, Libya decreases and Morocco and Tunisia stay the same. The impact of age appears to reduce only slightly when adding income, gender and education, which would indicate that these factors have an effect which is to some extent independent of age. The impact of gender appears to be quite low: being male appears to increase the likelihood of using the internet by just under 50 per cent - odds of 1.49:1. Education is the most influential factor and having higher education counts for more even than country, though small expected numbers in some cells mean that this result should be treated with caution.

Table 2: Odds ratios for regression of internet use on country and demographic variables

Element	**Odds Ratio First Step**	**Odds Ratio Second step**
Iraq	4.383*	6.227*
Jordan	4.559*	5.007*
Libya	7.549*	4.729*
Morocco	5.268*	5.454*
Tunisia	3.806*	3.913*
Age: 18-35	2.834*	2.537*
Gender: Men	-	1.492*
Income Comfortable	-	2.706*
Income Adequate	-	1.968*
Income Inadequate	-	1.328*
Medium Education	-	3.325*
Higher Education	-	8.289*
-2 log likelihood	*10,099.32*	*8,951.67*
Cox-Snell R^2	*0.133*	*0.247*
% correctly classified (before Step 1: 50.9%)	*66.6%*	*71.9%*
χ^2 Goodness of Fit (df in brackets)	*1,157.25 (6)**	*2,304.90 (12)**

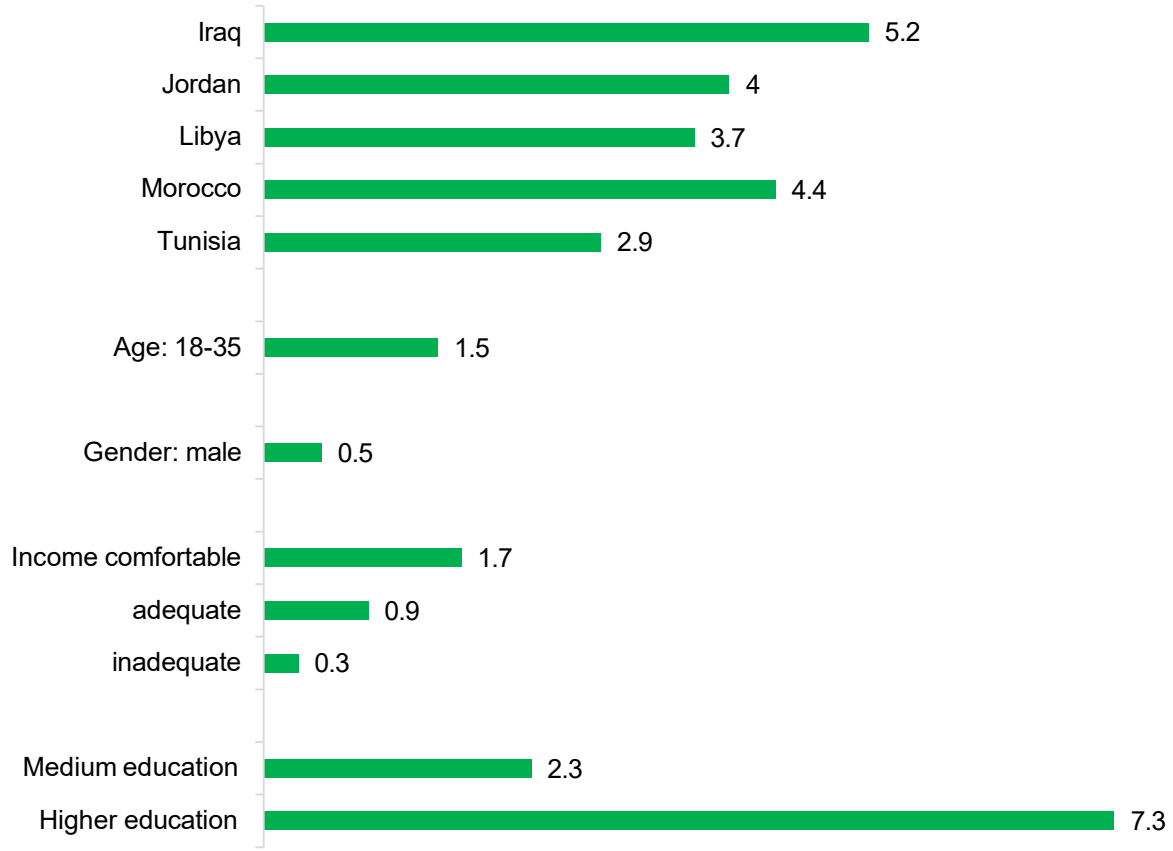
* Wald statistic (elements) and χ^2: p<.001

Reference categories are 'Egypt', '36-55' and, in step 2, 'Women'.' Struggling' and 'Low education'.

Figure 4 illustrates the difference in internet use predicted by each of the elements in the regression equation. Given that parity (no effect) is indicated by an odds ratio of 1 (odds are 1:1 – 'evens'), we have followed the convention of decreasing the value of the odds ratio has been decreased by 1 so that 'evens' (no effect) will be shown as zero and direction

of effect can be shown. In this case there are no negative effects, however, because the lowest score has been taken as the reference category for each variable.

Figure 4: Increased likelihood over reference category of being an internet user

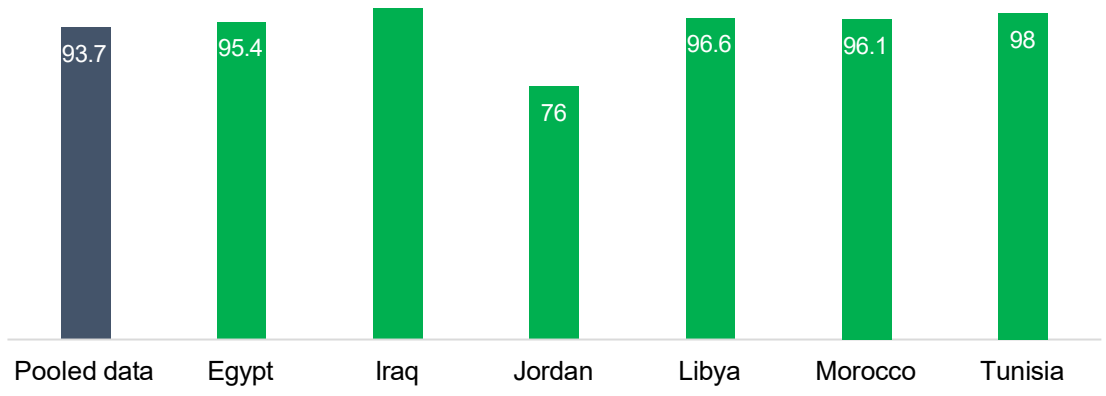


Reference categories are 'Egypt', '36-55' and, in step 2, 'Women'.' Struggling' and 'Low education'.

Of the internet users among the pooled sample, 94 per cent use social media for at least one activity. By and large all of the countries are in the top decile in terms of use of social media and do not differ from each other significantly, but Jordan stands out as having a significantly lower usage rate – see Figure 5; even there, however, three quarters of the internet users use social media. The difference may be due to a difference in the approaches to internet use, expansion of certain platforms in the country or country-based

definition of 'social media'. There are also significant differences in social media use between by age, gender and income (p at or below 0.001, using χ^2) but they are not large – Gender ranges from 92 to 95 per cent and the other two variables from 88 to 95 per cent. There is no significant bivariate association between education and social media use. Numbers are too small – there are too many cells with expected values below 5 – to permit an overall three-way analysis of the relationship of any of these variables with social media use controlling for country

Figure 5: Internet users' usage of social media, by country



F=111.18 with 5, 4473 degrees of freedom; p<0.001. Jordan differs significantly from the rest, which do not differ from each other.

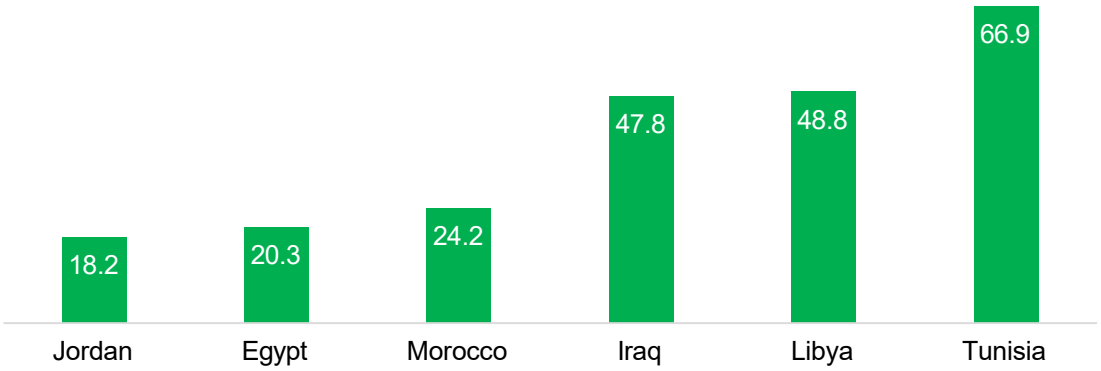
In summary, it appears that both country and demographic composition (age, gender, economic situation and education) can help to predict who will be a user of the internet. Country has nearly the largest effect, with Egypt and Tunisia lower and Iraq substantially higher than the other countries, but having higher education is even more predictive. There is also a steady gradient by affluence, with those in the 'comfortable' category nearly twice

as likely to use the net than those who are struggling. Age also has a marked effect – the younger age group are more likely to use the net and the oldest group least likely, by a fair margin, and the age effect persists into multivariate analysis even when it becomes necessary to delete the oldest age group because of small numbers. (Age, affluence and education share variance – they are correlated with each other – so leaving any of them out increases the apparent effect of those that remain.) Gender is significantly related to net use but the effect is not large. Thus while it is far from true that all or even most net users are young, male, comfortably off and highly educated – substantial numbers of users lie outside these categories - we will find a higher proportion of such people among net users than in the population at large. Nearly everyone uses the net also uses social media, over 90 per cent everywhere except in Jordan and three quarters even there. Within the population of net users there is some propensity for those who also use social media to be male, young (or at least not old) and/or comfortably off, but there is no significant indication that highly educated people are more likely to use social media than other internet users.

POLITICAL INTEREST AND SOURCES OF POLITICAL INFORMATION

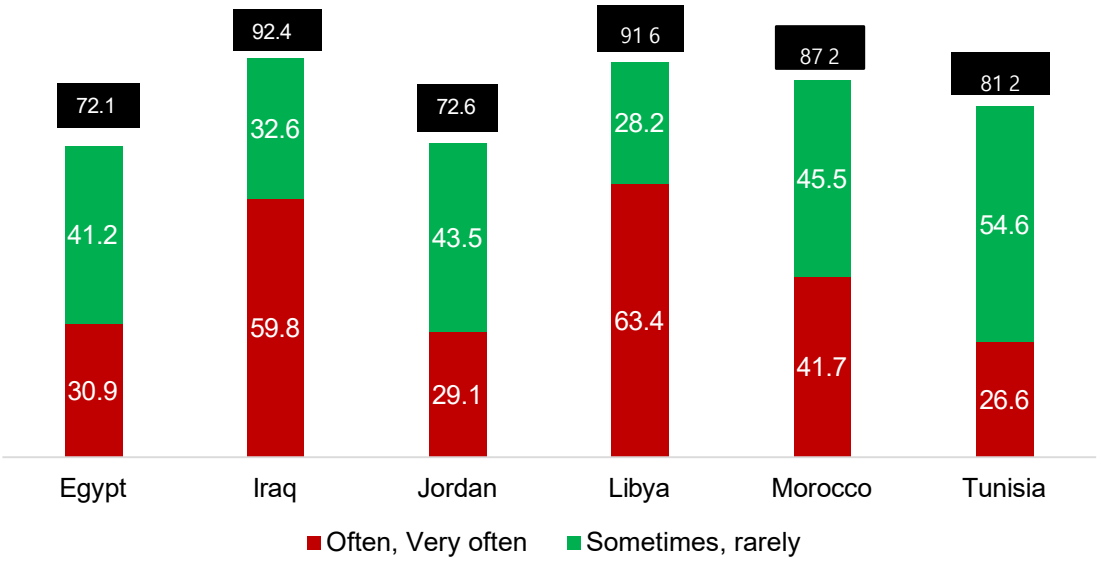
About 38 per cent of the total sample express any serious interest in politics; 35 percent say they are only 'somewhat interested', and 27 per cent deny being interested at all. There are substantial differences between the countries, however, shown in Figure 6, where the countries have been rearranged to show the pattern of difference. Scheffé's procedure in one-way analysis of variance suggests that Jordan, Egypt and Morocco form a homogeneous group at the bottom, followed after a significant gap by Iraq and Libya and with Tunisia significantly the most interested at the top.

Figure 6: People who said they were interested or very interested in politics (%)



A slightly higher proportion, 42 per cent, say they follow the political news often or very often; 41 per cent say they seldom follow it and 17 per cent say they never do so. The overlap between those who say they are interested in politics and those who say they follow the news more than occasionally is substantial, as would be expected, but it is not complete; nearly ten per cent of the total sample are interested in politics but do not follow the news regularly, and about 13 per cent follow the news more than occasionally but say they are not interested. On the other hand, a high proportion *do* follow the news, at least occasionally -nearly three quarters in Egypt and Jordan, over 80 per cent in Tunisia and around 90 per cent in Iraq, Libya and Morocco.

Figure 7: Frequency of following the political news, % by country



In the sample as a whole, around 15 per cent do not follow political news at all, around 10 per cent use social media to access the news at least occasionally, and the remaining

75 per cent use only off-line sources. If we restrict the analysis to internet users these figures change to 5 per cent who are not following political news, over 20 per cent who are using the social media and, again, around three quarters who use only conventional sources. There is variation by country. If we look at the whole population (Figure 8) – looking at the overall distribution of news-following and how much of it is mediated by social media, we find that Egypt and Jordan, and to a lesser extent Tunisia, have substantial minorities who say they do not follow the news at all. In Egypt around two thirds get their news only offline, and in Jordan 61 percent, but everywhere else (including Tunisia) the figure is 76 per cent or higher. Internet as a source of news is rare in Egypt, Libya, Morocco and Tunisia as a percentage of the total population climbs to above ten per cent in Iraq and is at its highest, 17 per cent of the population, in Jordan; in other words, not many people get their news from the internet. If we look only at users of the internet, however, which is what we must do if we are interested in the influence of internet use on sourcing of news, a different picture emerges (Figure 9). Only a tiny proportion of internet users do not follow the news – ten per cent in Tunisia and Jordan, but otherwise less than four per cent. There are many more internet users getting their news only offline that there are people who use social media for this purpose, but the proportion who do so is obviously higher than the proportion in the general population, but different countries emerge as the heavy uses of social media for information; the high scorers are Egypt (31% of internet users) and even more Jordan (37%), with Iraq, Morocco and Tunisia following behind with about 32%. The lowest use of social media for news-gathering is in Libya (11%).

Figure 8: Source of news, % of total population, by country

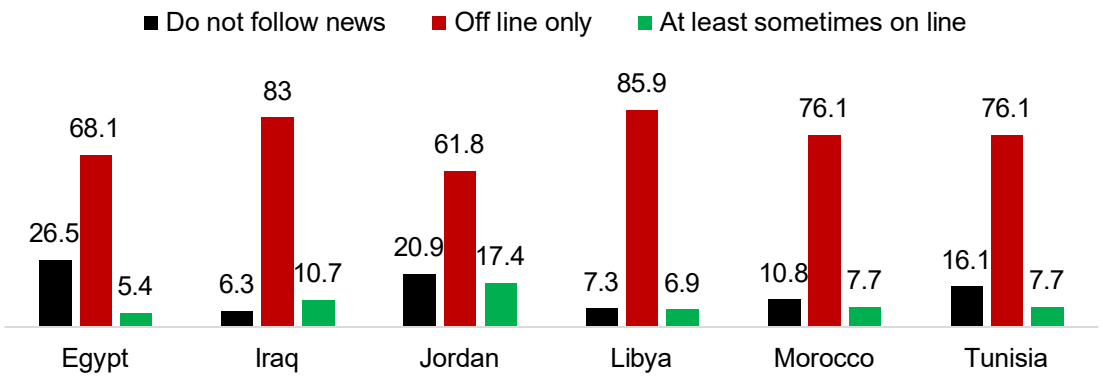
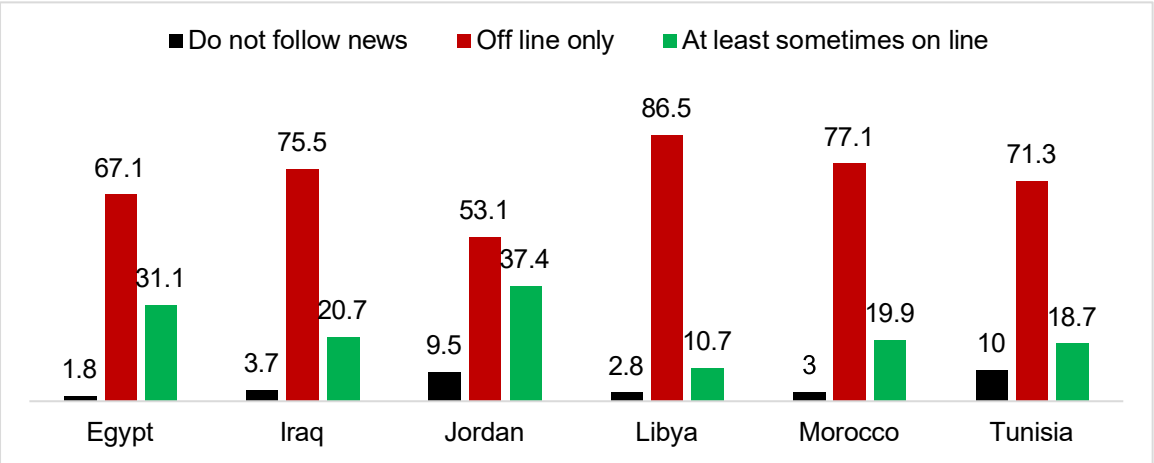


Figure 9: **Source of news, % of internet users, by country**



POLITICAL ACTIVITIES

Those whom we have categorised as active in politics need to have done more than just expressed an interest and/or kept up with the political news. As described above, we have characterised those who do not show active engagement with politics as

- *Non-Political respondents*, who express no interest in politics, do not follow the news and undertake no kind of political activity, or
- *Watchers*, who follow the news but do not express an interest in politics or undertake political activities, or
- *Armchair politicians*, who express an interest in politics but never put it into action.

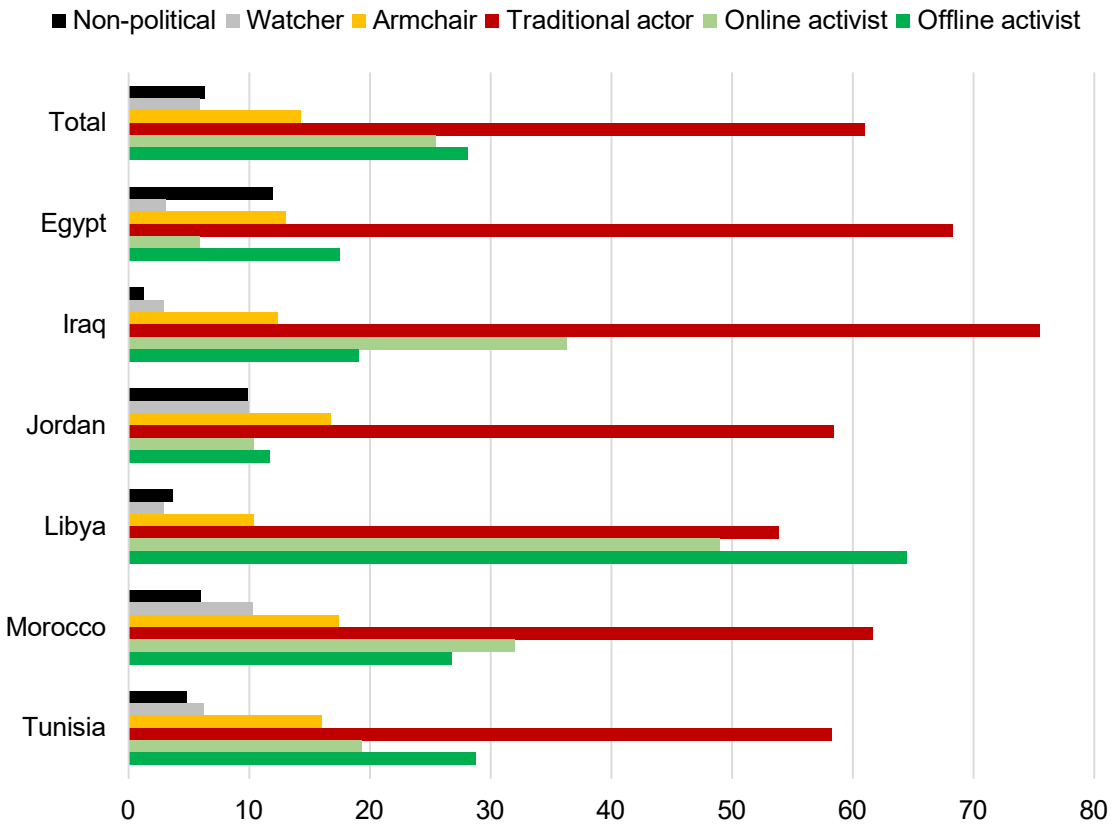
Beyond these we can distinguish three overlapping classes of people who are active in politics in one way or another and often in more than one way:

- *Traditionally active* people take part in politics but are not crucially engaged in it; for the purpose of the paper this is operationalised as people who voted in the last election and/or belong to a political party and/or are a member of a trade union.
- *Off-line activists* take an active part in politics 'in the real world', operationalised here as people who join demonstrations or sign petitions or boycott companies or occupy buildings or take part in unsanctioned strikes.
- On-line activists are people who are active on social media, expressing political opinions and/or using them as an aid to taking part in events and/or organising events.

People can fulfil more than one of these roles, of course; for instance, it is perfectly possible to be a member of a trade union *and* sign a petition or join a demonstration

and express political opinions on social media. The number who fall in each group are shown in Figure 10, with some double-counting among the last three groups.

Figure 10: Extent of political engagement (%), by country, inclusive definition



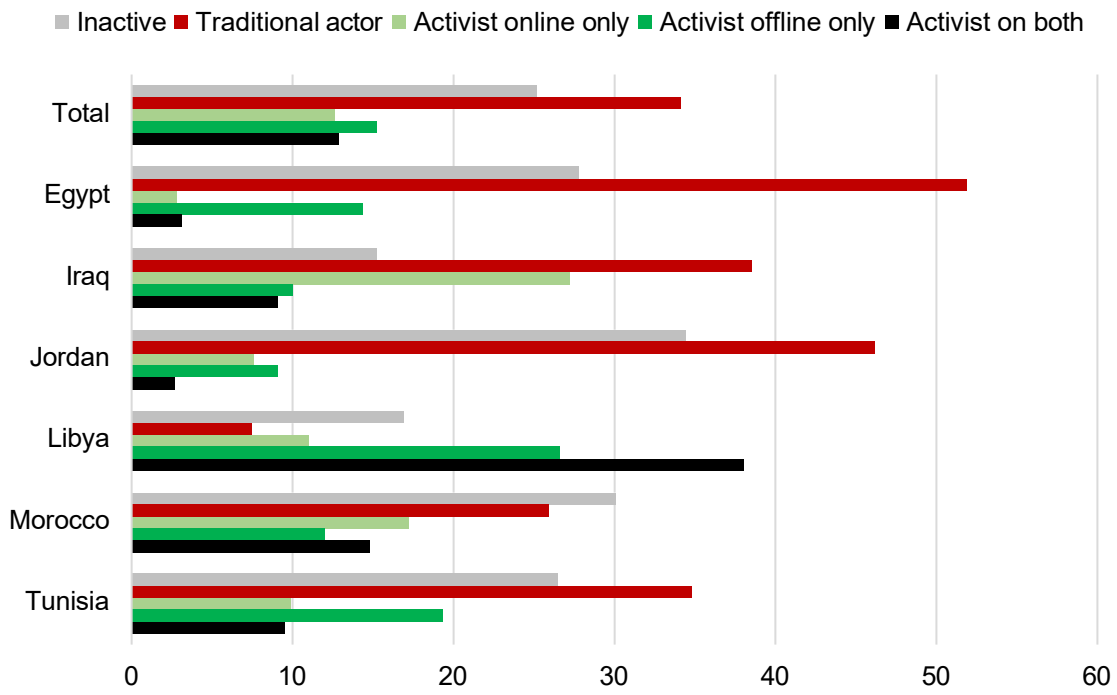
Inclusive definition: people may fall in more than one of the 'activist' categories

In the total sample we have six per cent non-political (who take no part and show no interest), another six per cent who are classed as 'watchers' (they follow the news, at least occasionally, but do nothing else and are not at all interested in politics), 14 per cent 'in the armchair' (saying they are interested or very interested in politics, and perhaps following the news, but taking no active part). Among those who do engage in politics, those who take on 'traditional' roles (they vote and/or belong to a party or a union) make up 61 per cent of the population, 25.5 per cent of the population are 'on-line activists' (who use the social media to take part or to organise), and 28 per cent are 'off-line activists', who participated in the Uprising and/or have taken some other active political action – with overlap between these last three categories. Although the figures for the individual countries follow the same broad pattern to a considerable extent, there are substantial individual variations as well. Egypt has few on-line activists, which we would

expect given that it has few people who use the internet compared with the other countries. Egypt and Iraq have more people voting and/or forming part of a political party or trade union than the other countries. Libya and to a lesser extent Iraq and Morocco have more on-line activists than the other three countries, and Libya has remarkably more people who are active 'off line' on the streets and in the campaigns.

Figure 11 uses a more exclusive set of definitions for the activists and traditional actors, moving traditional actors into an 'activist' category if they appear in one or both as well and creating a category of 'activist in both' for those who are activists both on and off line, so that people appear in only one category. Overall, a quarter are politically inactive (non-politicals, watchers and armchair politicians); Jordan is the highest at 34 per cent and Libya and Iraq stand out at the other extreme with only 17 and 15 per cent respectively (probably a reflection of their current state of political division). A third are active only in traditional ways in the sample as a whole (voting, party and/or trade union membership), but the figures conceals considerable diversity, with over 50 per cent in Egypt and not far short of this in Jordan, while only 7.5 per cent are active only in conventional ways in Libya. Among the activists, Libya has the most who are active off line only and also the most who are active both on and off line. Iraq has the highest proportion of 'online only' activists. Egypt and Jordan have the smallest proportion of activists, and more off line than on.

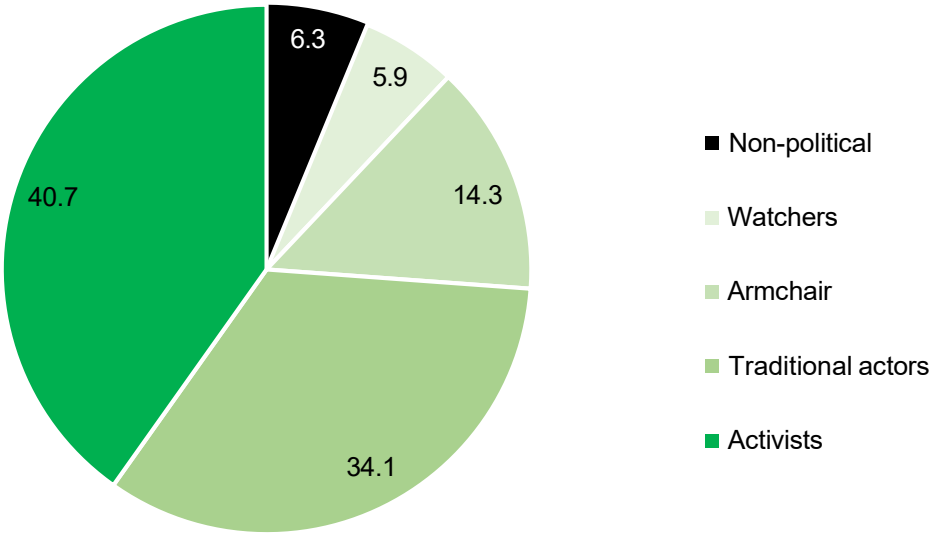
Figure 11: Type of political engagement (% in category), by country, exclusive definition



Exclusive definition: people are allocated to a single category

Overwhelmingly, the region appears to be politically active. Only six per cent of the sample did not participate in any type of political activity or express any interest in politics. Watchers are the smallest proportion of the entire sample, with under six per cent, while 14 per cent at least indicate an interest in politics, though not enough of an interest to take an active part in their country's politics. About a third of the sample are active in politics but not 'activists' – they have voted and/or belong to a trade union and/or a political party but have done nothing else that would qualify them for the label. Those who have, the activists on or off line, form 40 per cent of the sample and constitute the largest category (Figure 12). We should note, however, that two thirds of those classed as 'activists' in the Figure have also engaged in more conventional political activities.

Figure 12: Levels of Engagement in Political Activity (% of total sample)



Comparing the whole 'inactive' group (non-politicals, watchers, armchair) with all those who are active in politics by conventional means or, beyond that, as activists, we find little effect of age – just a mild tendency for the middle-aged to be more active, though often in traditional activities rather than as activists (in which half of the oldest age group also participate). Gender was significantly related- a majority of both women and men were politically active, but it is a somewhat larger majority for men than women. There is also a significant but not overwhelming positive relationship with age and education. To sum up, there are some age and country differences, particularly in levels of traditional participation and, in Egypt and Jordan, the levels of those who are not participating in politics, coupled with some tendency for those who are active to be more affluent and better educated. In the next section we pursue these differences further, splitting up the active into traditional actors and activists to see if differences are being concealed rather than illuminated by the crude dichotomous classification into active and inactive.

POLITICAL ACTIVISM

In order to look at the finer detail of differences between politically active individuals convenient to the sample is divided into three categories:

1. activists, whether on line, off line or both,
2. traditional actors who are not activists, and

3. a category of 'the uninvolved', who express an interest in politics ('armchair' above) or follow the news without claiming such an interest ('watchers' above) who will act as a baseline for the comparison.

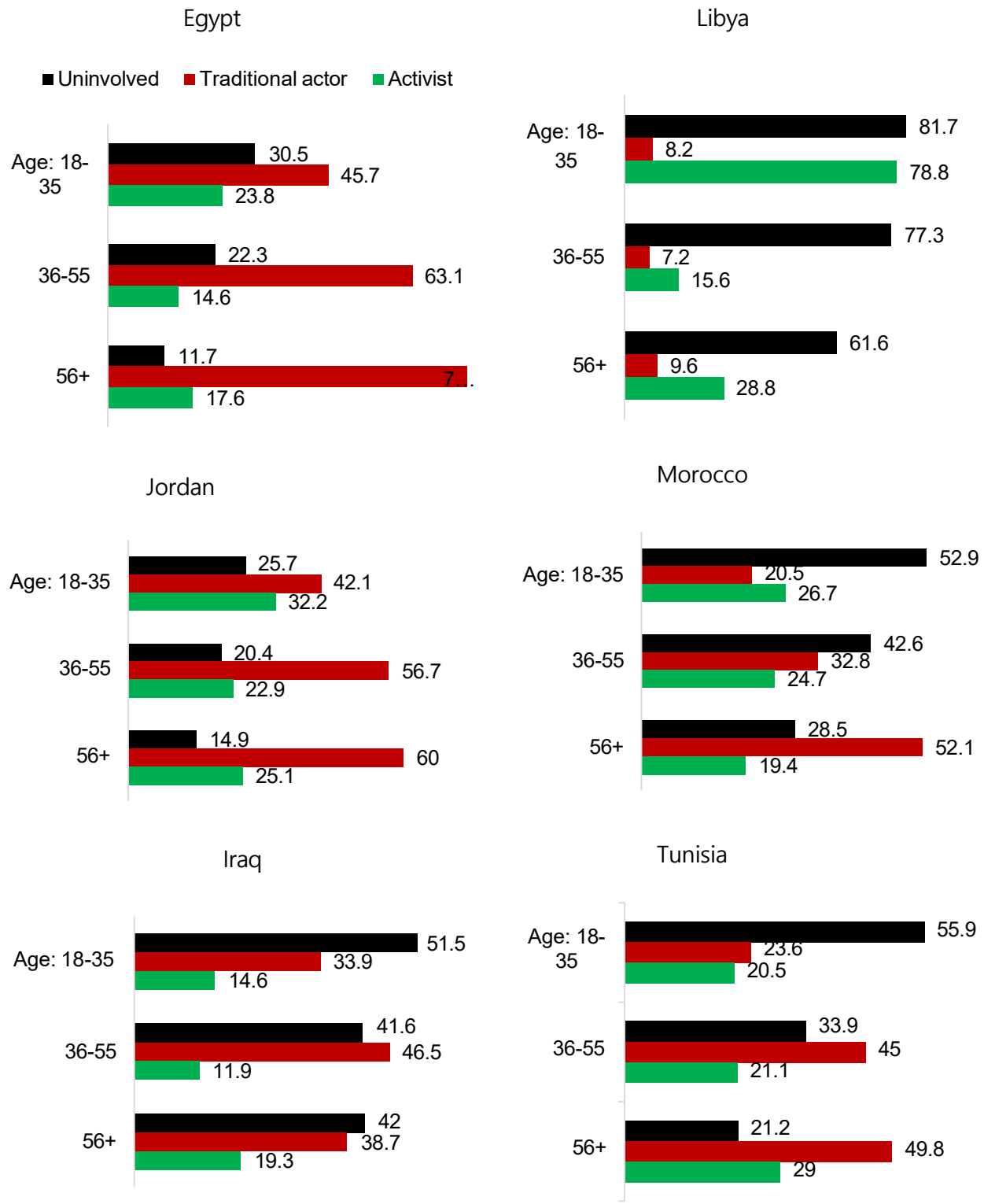
The small group of people who have no interest in politics and do not even read the news, the 'non-politicals', have been omitted from the analysis.

Figure 13 shows these categories, broken down by age, separately for each country, and interesting patterns emerge.

- Egypt and Jordan are like each other and unlike any of the other four. The large category is the traditional actors, and it increases as a proportion of the age band as age increases – from less than half among the youngest age group to respectively 75 and 60 per cent. The proportion of the subsample who are 'uninvolved' decreases with age; in Egypt it is slightly smaller than the proportion of activists and in Jordan slightly larger. Activism is at its lowest in the middle years, and it is quite a small category compared with some of the other countries.
- In all other countries the increase in involvement with age is also to be found, but the proportion who are uninvolved is much larger - over 50 per cent in the 18-30 band (and over 80 per cent in it in Libya).
- The proportion who are traditional actors is very small in Libya. In the other countries it is larger and mostly declines with age.
- In Libya, activism is extremely high among the youngest and lower elsewhere, with its lowest level in middle age. In Tunisia it increases slightly with age. In Morocco the middle group is the highest, and in Iraq it is the lowest.

The underlying patterns are therefore quite complex. There are strong relationships with age, but they are not the same in all countries. Egypt and Jordan resemble each other and the four others tend on the whole to display the opposite trend, but with considerable variation between countries. All bivariate differences within and between countries are significant at $p<0.001$ using χ^2.

Figure 13: Inactive, Traditional and Activist (% age group by country)



Gender, income and education levels were also examined in the pooled sample, and all of them show differences which are significant at $p<0.001$ using χ^2. Women are slightly more likely to be inactive than men but much more likely to be traditionally active (a difference of almost 10 percentage points), while they are much less likely to be activists than men. Low and mid-educated respondents are more likely to be 'uninvolved' than the highly educated. People with a low level of education are much more likely to be traditionally active (53.5%), followed by the mid-educated (36%), with the highly educated at 26 per cent. The high educated are those most likely to be activists. Level of political activity increases with household income. Those with the lowest income are most likely to be uninvolved, and traditional actors-though at higher levels for the latter, while those with higher incomes are more likely to be involved in activism.

The low number of older respondents in the sample mean that more extensive analysis is restricted (expected cell counts were regularly below 20). Removing the oldest age group makes it possible to carry out a logistic regression to determine the independent impact of age, country and other demographic factors that appear to differ between non-actors and political actors. Each regression included a two-stage process.

- Age and country are the primary differences in political mobilisation according to the research literature, and when age and country are each controlled using cross-tabulations they repeatedly end up with both being significant, so these two variables were included in the first stage of the regression. Numbers were sufficient for the regression to be interpreted with reasonable confidence. The reference categories for these variables are Egypt for Country and *36-55* for Age (with respondents older than 55 removed from the analysis).
- In the second stage we added gender, income and education; as we have seen, these appear to bear a significant relationship to the type of political

activity in which a respondent engages. However, adding three more variables seriously reduced the expected cell counts, so the results should be interpreted with great caution and treated as not much more than indications of where further research might prove fruitful. The reference categories for the additional variables are *Women* (Gender), *Struggling* (Income) and *Low education* (Education).

Again, none of the effects is very large, judging by the odds ratios in Table 3. Tunisia has the same likelihood as Egypt (a ratio of 1.0, odds of 1:1, means 'no difference'), Libya and Iraq are slightly more likely to have actors rather than people who are uninvolved than Egypt and Jordan and Morocco are slightly less likely. There is a slight age effect: younger people are slightly less likely than the middle-aged to have political actors. At stage 2, where other variables are introduced, the Tunisia country effect increases slightly and the Iraq one decreases, gender shows a small influence (men are more likely to be actors) and being highly educated increases the likelihood of being politically active. But there are no apparent effects of income. Overall the regression is not explaining a great deal of the variance between the uninvolved (armchair+watchers) and the actors (traditional+activists). Figure 14 shows the Stage 2 results in graphic format.

Table 3: Odds ratios for regression of uninvolved people vs political actors on country and demographic variables

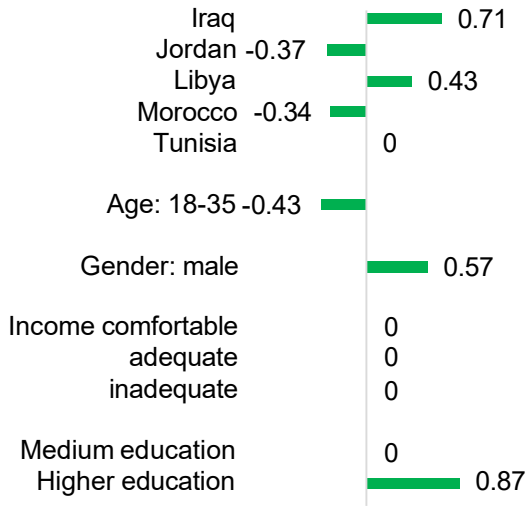
Element	**Uninvolved vs Actors (Stage 1)**	**Uninvolved vs Actors (Stage 2)**
Iraq	1.544**	1.711**
Jordan	.615**	.627**
Libya	1.662**	1.426*
Morocco	.688**	.663**
Tunisia	1	1
18-35	.841*	.787**

Men	-	1.568**
Comfortable Income	-	1
Adequate Income	-	1
Inadequate Income	-	1
Medium Educated	-	1
Highly Educated	-	1.868**
-2 log likelihood	*7358.86*	*7214.32*
Cox-Snell R^2	*0.02*	*0.04*
% correctly classified (before Step 1: 80.4%)	*80.4%*	*80.4%*
χ^2 Goodness of Fit (df in brackets)	*172.86 (6)***	*315.40 (12)***

* Wald statistic (elements) and χ^2: ** p<0.001 *<0.005

Reference categories are 'Egypt', '36-55' and, in step 2, 'Women', 'Struggling' and 'Low education'.

Figure 14: Increased likelihood over reference category of being a political actor rather than uninvolved



Values are expressed as a distance from 1.0 (the 'no difference' value).

Reference categories are 'Egypt', '36-55', 'Women', 'Struggling' and 'Low education'.

Comparing the activists with the traditional political actors, however, we find much more extreme differences. Jordan and Egypt have the lowest rates of political activism and do not differ in the analysis at Stage 1, but in Iraq, Tunisia and Morocco political actors are between two and four times more likely than in Egypt to be activists rather than just following a more conventional route, and in Libya they are over 20 times as likely. Age makes a significant independent contribution to the prediction but not a large one with young people being a little more likely to be activists rather than traditional actors compared to the middle-aged At Stage 2 the pattern of country and age contributions is very similar (Libya falls a little, to 18 times as likely as in Egypt). Again income makes no significant contribution, but men are almost twice as likely as women to be activists rather than traditional actors, and having a high level of education makes an individual three times as likely to be so as those with the least education.

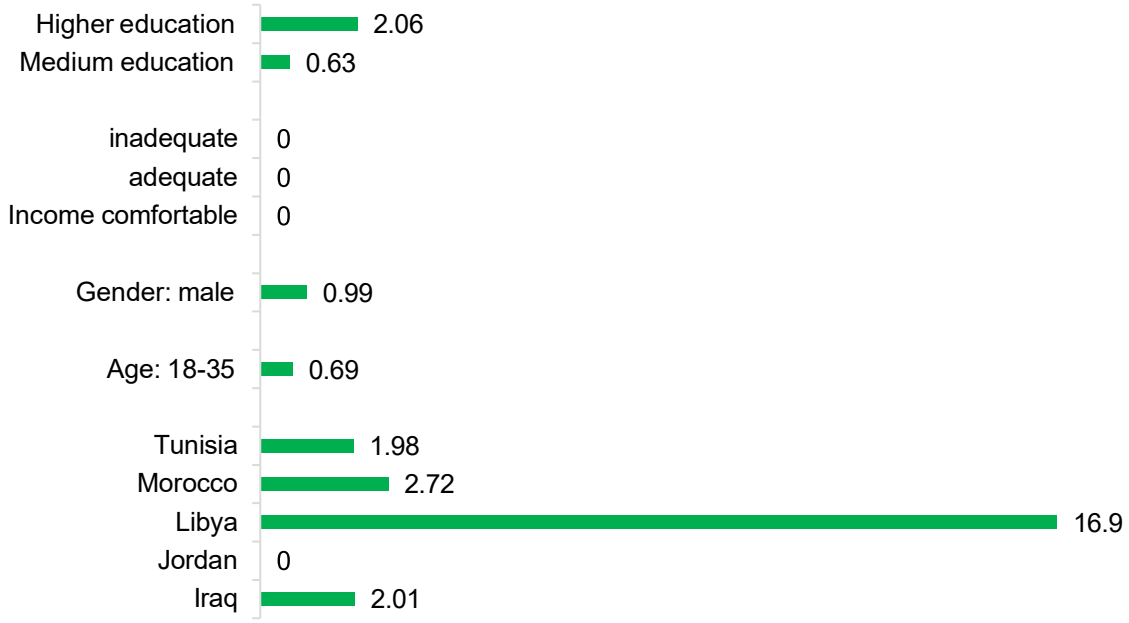
Table 4: Odds ratios for regression of traditional actors vs activists on country and demographic variables

Variable	**Activists vs Traditional (Stage 1)**	**Activists vs Traditional (Stage 2)**
Iraq	2.438**	3.012**
Jordan	1	1
Libya	20.798**	17.900**
Morocco	3.771**	3.720**
Tunisia	2.806**	2.980**
18-35	1.864**	1.688**
Men	-	1.992**
Comfortable	-	1
Adequate	-	1
Inadequate	-	1
Medium Ed	-	1.626**
Highly Ed	-	3.056**
-2 log likelihood	7,035.72	6,668.72
Cox-Snell R^2	0.19	0.24
% correctly classified (before Step 1:57.8%)	69.5	71.9
χ^2 Goodness of Fit (df in brackets)	1,300.16 (6) **	1,667.16 (12) **

* Wald statistic (elements) and χ^2: ** p<0.001

Reference categories are 'Egypt', '36-55' and, in step 2, 'Women', 'Struggling' and 'Low education'.

Figure 15: Increased likelihood over reference category of being an activist rather than a traditional political actor



Values are expressed as a distance from 1.0 (the 'no difference' value).

Reference categories are 'Egypt', '36-55', 'Women', 'Struggling' and 'Low education'

It appears that among those who are politically active, traditional political participation is more popular among the middle-aged (here 36-55) and individuals from Jordan and Egypt than among younger people and those from Iraq and Libya. (Libya, of course, was in political turmoil in 2014 [indeed, it still is] and conventional politics had broken down into civil war and sometimes complete uncertainty as to which was the legitimate government among several pretenders, and Iraq has tremendous problems of external and internal security which may be overwhelming the domestic political scene for many.) However, as shown above, in all these countries younger people are more likely to be inactive than either of the older age groups. As young people in certain countries appear to be splitting into either inactive or activist (rather than settling into the 'traditional-only' pattern adopted more by the older age groups) there is the question of why this leap from being uninvolved to activism is being made by some of the young people. We should bear

in mind, however, that the evidence we have just been considering suggests that age is not a very important discriminating variable between activists and traditional political actors when other factors are taken into account. It is also interesting to note that the two countries where young people are least likely to dominate the ranks of the activists, which had very different experiences of the Arab Uprisings - Egypt overthrew a dictator, though its more recent political experience has been discouraging, while Jordan was relatively calm, although constitutional reform was promised - also have the highest rates of 'non-politicals' - people who appear to have withdrawn from the political sphere entirely and do not even follow the news. It is possible there is political disaffection, following from unfulfilled promises and the limited options available for political action.

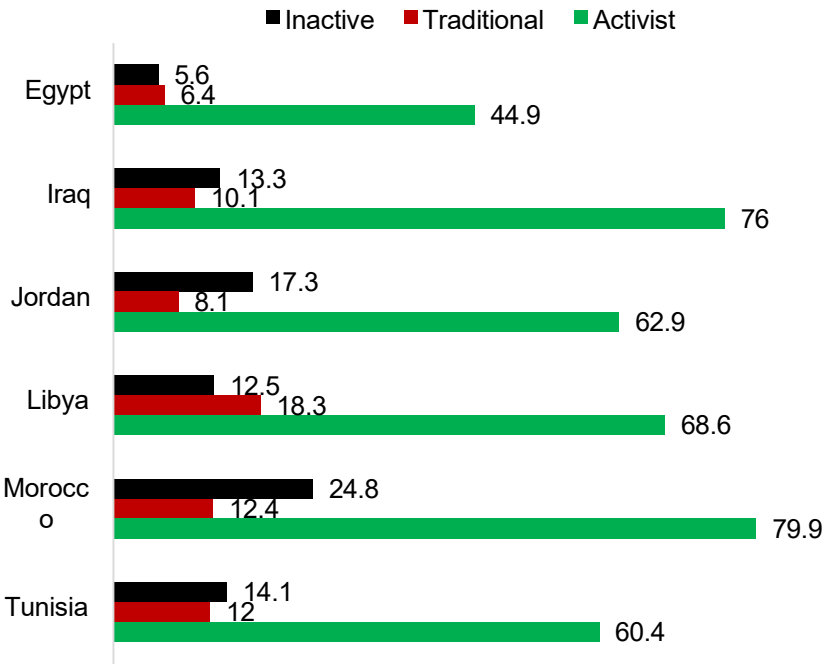
This leads to the question of whether younger people are participating more through the internet and social media and therefore less through more conventional channels, as has been argued. This is the focus of the next section.

THE POLITICAL USES OF SOCIAL MEDIA

Getting the News

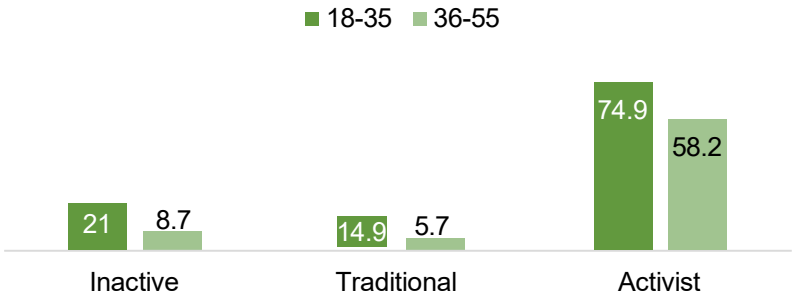
Activists are by far the largest users of social media for news, followed by the uninvolved; traditional actors use them least. Figure 16 shows the patterns across each of the countries. In Iraq, Jordan, Morocco and Tunisia, social media use for information in non-actors is higher than that of the traditional actors.

Figure 16: Political types using social media for political news (% of type in each country)



Examining the differences by age, Figure 17 shows that younger people are much more likely to get at least some of their information online than older people, among every type of political actor. (As we have seen, they are more likely to use the internet at all, for any purpose, but this is not a complete explanation; a reasonable proportion of the older age groups also use the internet.) As younger people were less likely to be traditional actors, and much more likely to be activists or else inactive, there would appear to be some correlation between type of activity and source of news; however, we should remember that a good proportion of activists are also active in more conventional ways, voting or joining parties or unions. Activists in both age groups use social media considerably more than anyone else, but young people do so even more than those in the middle age group - 75 per cent of younger people do so but less than 60 per cent of the middle group.

Figure 17: Use of social media for news by age and type of political activity (%)



Logistic regression has again been used to assess the independence of the elements correlated with social media use - see Table 5. (The inactive have been removed from the analysis because in some countries their numbers were falling below an acceptable level for the analysis when divided up between the categories of several variables.) As before, country and age have been entered at the first stage country and age in the first step; political type has been entered as Stage 2 and gender, income and education as Stage 3. The sample has a high enough expected count in each cell for the first two steps to be reliable, but the third is again indicative at best.

Table 5: Odds ratios for regression of social media use on country, political type and demographic variables

Element	**Social Media for news (Stage 1)**	**Social Media for news (Stage 2)**	**Social Media for news (Stage 3)**
Iraq	3.610**	2.979**	4.408**
Jordan	1.458*	1.776**	2.055**
Libya	7.551**	2.458**	2.078**
Morocco	5.310**	3.636**	4.002**
Tunisia	2.799**	1.764**	1.993**
18-35	2.451**	2.255**	2.002**
Activist		17.748**	16.583**
Men			1.238*
Comfortable			2.228**
Adequate			2.037**
Inadequate			1.617**
Medium Ed			2.742**
Highly Ed			5.2848*
-2 log likelihood	*7,462.03*	*5.741.52*	*5,387.80*

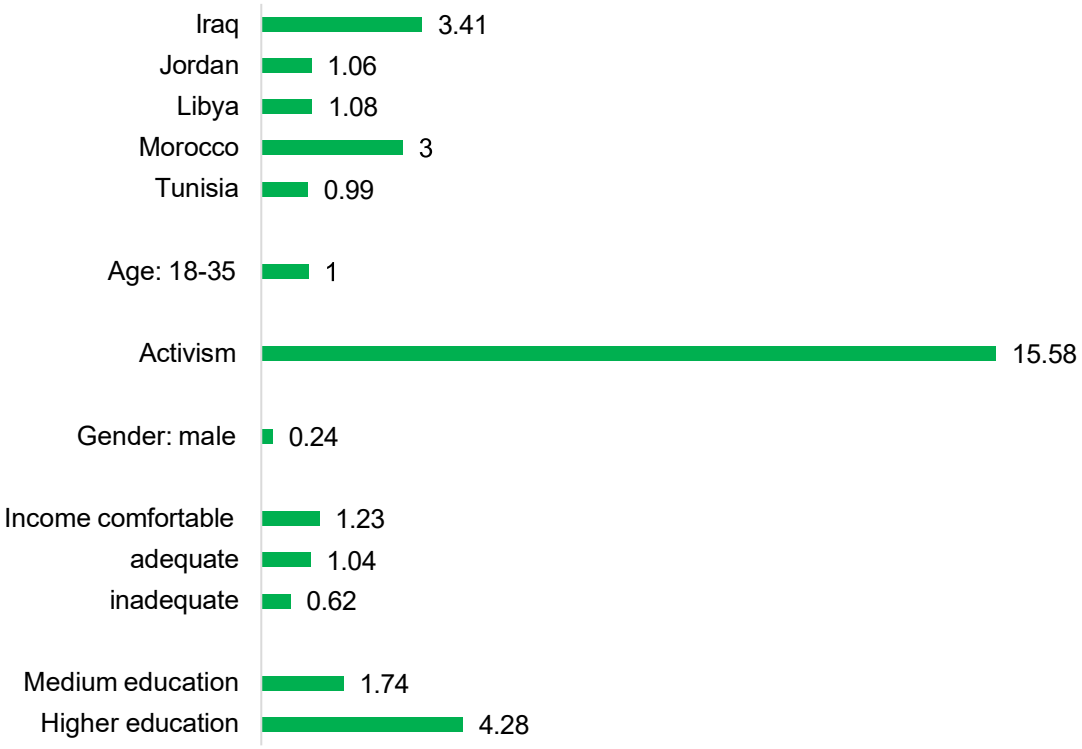
Cox-Snell R^2	*0.14*	*0.35*	*0.38*
% correctly classified (before Step 1:56.0%)	*67.4%*	*78.6%*	*80.4%*
χ^2 Goodness of Fit (df in brackets)	*935.09 (6) ***	*2,655.60 (12) ***	*3,009.72 (13) ***

* Wald statistic (elements) and χ^2: * $p<0.005$ ** $p<0.001$

Reference categories are 'Egypt', '36-55', in step 2 'Traditional Actor' and, in Step 3, 'Women', 'Struggling' and 'Low education'.

There continue to be country differences, with Egypt (the reference country) and Jordan having the lowest rate of social media use for political information and Libya, Morocco and Iraq the highest rate. Young people are nearly two and a half times as likely to use social media for political information as the middle aged. The next step it is demonstrated that activists are more than 17 times more likely to use social media for political information than traditional political actors. In the third step, it appears that all the demographic factors, (including income, unremarkably given the cost of computers and net access) have an impact upon whether an individual uses social media for political information, and some of the effects are quite large (those with higher education, for example, are five times as likely to use the social media for news as those who have little or none.) It will be noted from the last four lines of the table, however, that Stage 3 adds very little to the strength of the explanation; some of the variance now attributed to for by the additional demographic measures was already accounted for by the fact of being an activist in Stage 2. Figure 18 shows the Stage 3 results in graphic format.

Figure 18: Increased likelihood over reference category of social media use for news acquisition among activists and traditional political actors



Values are expressed as a distance from 1.0 (the 'no difference' value).

Reference categories are 'Egypt', '36-55', 'Traditional Actor', 'Women', 'Struggling' and 'Low education'

Using social media for politics

The next step is to look at those who use social media and see for what they use them. The levels of use of social media for political activities varies by country and by type of activity. Using social media for commenting on political events is the most popular type of activism across the sample - most likely because it requires the smallest amount of effort (can be done at home or on a mobile phone), and discussion of politics is one of the first steps in developing as political actors. A more committed use of the media is to find out information about event, and the most committed activity about which the survey asked (and the least common activity) is using them to organise political events. As in previous sections, the level of social media use for political activities are lowest in Egypt and Jordan, while high in Iraq and Libya. The problem here is that the numbers are beginning to be very small for multivariate analysis, given that the sample is restricted for this purpose to those who use the media for political purposes. Egypt has a large population, but it has few

internet users and fewer social media users. Although Jordan started out with a larger proportion of internet users than Egypt it appears to have a very low rate of online political activism even among the social media users, which restricts its overall numbers as well. In the samples for Jordan and Egypt there appears to be a marked disengagement from online resources.

Table 6: Percentage of respondents who use social media for political activities

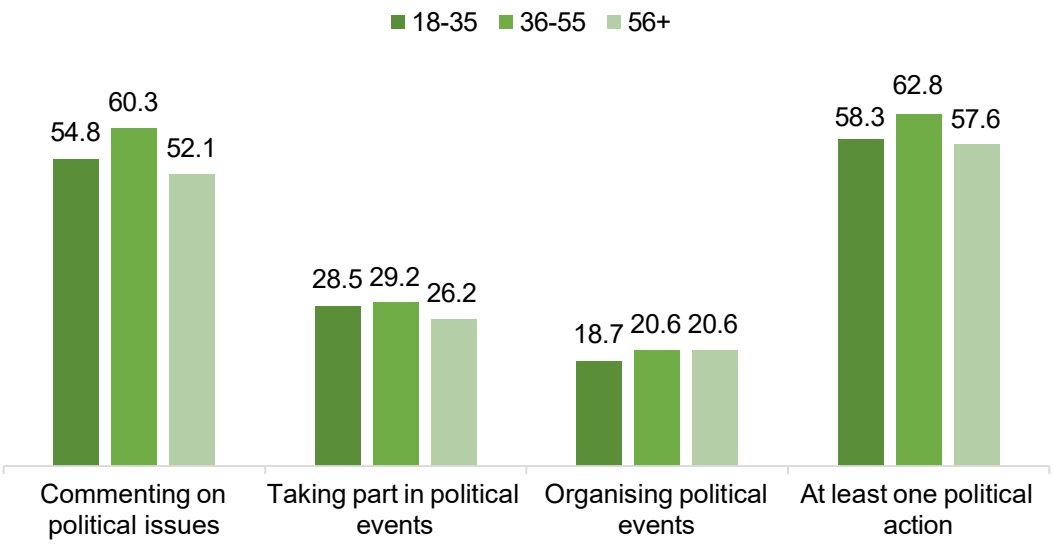
Country	To Organise Political Events	To Take Part in Political Events	To Comment on Political Issues	*At Least One Political Purpose*
Egypt	2.4	5.6	35.2	*36.1*
Iraq	20.1	29	69.1	*71*
Jordan	10.8	12.2	28.4	*29.4*
Libya	34.6	47.1	75	*79.5*
Morocco	18.1	28.7	58.4	*60.8*
Tunisia	10.8	22.4	46.3	*48.8*

N. of Social Media Users by country: Egypt N=267, Iraq N= 835, Jordan N=577, Libya N=1009, Morocco N=861, Tunisia N=649

Bivariate analysis using χ^2 as the test of significance shows that age and country both have significant impacts upon the likelihood a respondent using social media for at least one political purpose. However, when separating out the types of political social media activism, it is only age that appears to have any significant impact upon whether individuals commenting upon political issues, and only at the five per cent level significance - and it is the middle aged who are the more likely. As shown in Figure 19 the middle age group, of those using social media, are significantly more likely to be using them for commenting on political issues and are also more rather than less active in terms of taking part and organising. This appears to show that once the middle-aged respondents are using social media, they use them heavily as a political tool. However, as there are higher proportions of young people using the internet and social media, in general older people are less represented numerically

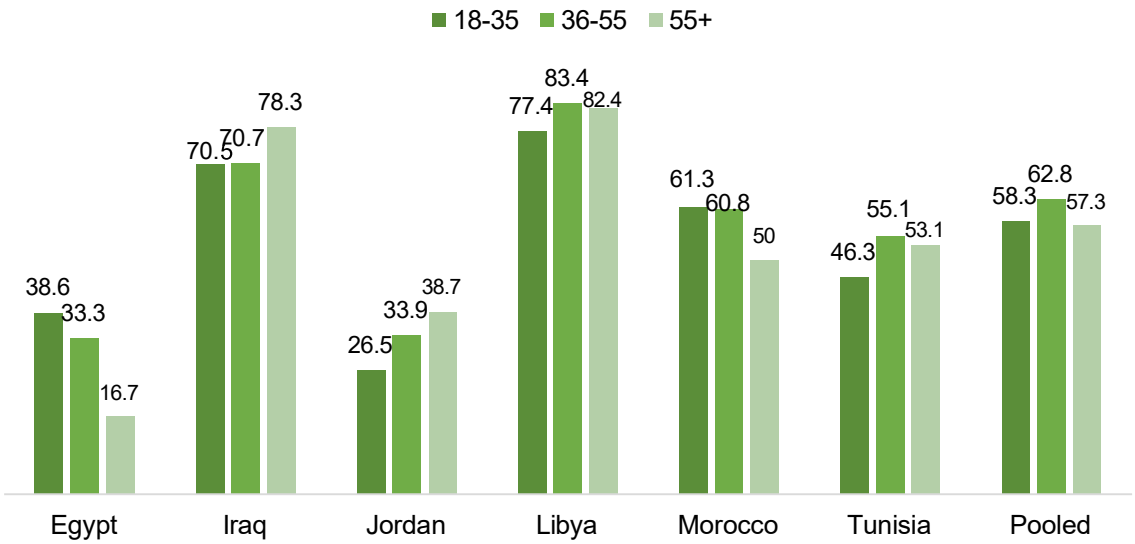
amongst online activists. The other factors (gender, income, education) all follow similar patterns as regards internet access and social media use, with wealthier, better educated men being the most likely to be using social media for political purposes.

Figure 19: Political uses of social media by age (% of social media users)



Looking among those who were involved in at least one type of political action for effects of age and country, age does not reach statistical significance. It appears that at this point in the analysis age seem to appear in the pooled data only because the countries follow different patterns and have different age compositions. Figure 20 shows general political action broken down by age groups and arranged by country. While there appear to be differences by age within each country, these differences do not follow similar patterns, nor are they statistically significant.

Figure 20: Political Users of Social Media by Age and Country (% of social media users)



Due to the low expected cell count for the oldest category, the extent to which it can be included in more complex analysis is limited, so it was removed from the next stage in analysis. Though the previous discussion has highlighted that older people on social media are just as likely to use it for political reasons as their younger compatriots, this includes a very small number of actual respondents. The next stage of analysis explores whether there are differences between the youngest and middle aged respondents when controlling for other demographic factors.

Using a binary regression in a two-step process similar to the earlier analyses, country continues to be the largest influence upon political activism online vs other social media users. Jordan has the lowest rate of participation in political activism, lower than Egypt. Tunisians are slightly more likely to use social media for political activism, followed by Moroccans; of social media users, those in Iraq and Libya are the most likely to be using social media for political activism. With the oldest age-group removed from the analysis we find that a significant age difference emerges in the use of social media for political purposes. It appears that holding country patterns constant, middle-aged social media users are slightly more likely to be using it for political activism than the youngest ones. Once the issues surrounding access and use are controlled for, it appears that the middle aged respondents are using the tools they have available.

The second step of the binary regression indicates that when gender, income, and education are included, both country and age effects change. When controlling for

other demographic variables, patterns in Jordan and Egypt become the same while the patterns in all other countries become less like those in Jordan and Egypt (though only slightly). Controlling for other variables eliminates the difference between the two age groups. Income does not seem to have an impact upon political activism amongst social media users, but gender does, with men slightly more likely to be politically active on social media than women and people with a middle level of education level slightly less likely than those with no education or high levels. However, the results of Stage 2 should be interpreted with caution because of low sample size.

Table 7: Odds ratios for regression of social media use for political purposes on country and demographic variables

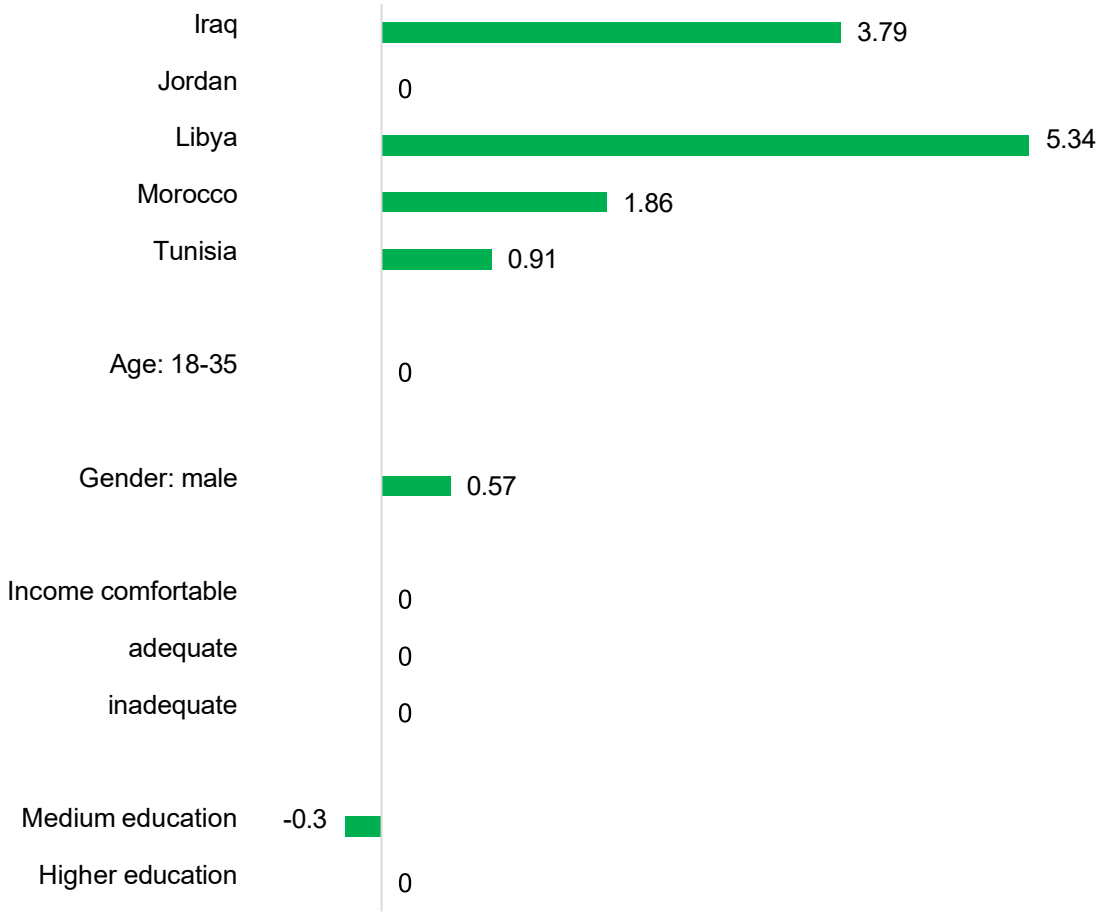
Element	Political use of SM (Stage 1)	Political use of SM (Stage 2)
Iraq	4.052***	4.793***
Jordan	.691*	1
Libya	6.881***	7.339***
Morocco	2.689***	2.858***
Tunisia	1.679**	1.906***
18-35	.860*	1
Men		1.568***
Medium Ed		.696*
Highly Ed		1
Comfortable		1
Adequate		1
Inadequate		1
-2 log likelihood	4,726.42	4,644.58
Cox-Snell R^2	0.12	0.14

% correctly classified (before Step 1:59.6%)	67.9%	69.0%
χ^2 Goodness of Fit (df in brackets)	510.50 (6) ***	592.35 (12) ***

*p<.05, **p<.01, ***p<.001

Reference categories are Stage 1: 'Egypt', '36-55'. Stage 2: also 'Women', 'Struggling' and 'Low education'

Figure 21: Increased likelihood over reference category of social media use for political purposes



Values are expressed as a distance from 1.0 (the 'no difference' value).

Reference categories are 'Egypt', '36-55', 'Women', 'Struggling' and 'Low education'

So comparing those who use social media for political purposes with other users, the regression picks out country as the only significant discriminating variable (with some slight indication that gender and education may also contribute but with no suggestion of any effect of income or age). Iraq and Libya are the two high scorers, followed by Morocco and then Tunisia, with Egypt and Jordan at the bottom. This may suggest that personal characteristics are not important once we limit the comparison to people who already use the internet and the social media – that use of these is affected by a range of demographic variables as well as country but there is no further effect once we limit the analysis to users. Alternatively, however, there may just not be enough cases in the analysis to support more than one determining variable; we are pushing the limits of the analysis to extract patterns because, despite the overall size of the survey sample, the subclass at which we are looking is very small. Numbers are definitely too small to pursue the analysis any further and compare organisers with those who are in some sense more passive in their political activism.

Younger people are more likely to use social media for information about politics, but they are also more likely to be amongst either the inactive or among the activists (see above) than to undertake 'traditional' political activities such as voting or taking out membership of political parties or trade unions. Thus it seems fair to argue that using social media for information does increase certain types of political action- specifically the types engaged in by younger members of the sample, including 'offline' activity such as demonstrating and protesting (again, see above). Use of social media as an information source appears to contribute to politicising young people or is at least associated with it. Older people are more likely to participate in traditional political activities. Jordan and Egypt, and to an extent Tunisia and Morocco are more likely to have traditional actors than activists, while Iraq and Libya have many activists. This is possibly related to the political situation at the time of the survey where Egypt has just undergone a military coup, Tunisia was struggling with initial stages of liberal democracy (and the professional politicking which goes along with), meanwhile Iraq was being invaded by IS and Libya continued to be involved in a civil war.

CONCLUSION

Previous research has tended to agree:

- that it was young people who drove the Arab Uprisings and formed the majority of those who took part – though 'young' is liberally interpreted to include people in their thirties and we are not talking here just of adolescents and people in their early twenties,
- that the internet encourages political discussion, debate and, ultimately, action and protest among those in MENA who are not attracted by more conventional form of politics, and
- that, specifically, the easy access to net-borne communication provided by 'Social Media' brings in people who might otherwise not have become politicised.

Much of the received wisdom, however, rests on qualitative studies which provide great illumination but not a representative sample. It has also tended to focus on Egypt and Tunisia and on the large cities where protests and demonstrations were most visible to outside researchers and journalists. A quite plausible story has grown up of a revolution of young educated people fomented and organised through non-hierarchical contacts on the internet (ignoring the role of organised labour in at least some of the countries on the one hand and the discontent of the middle classes in their middle years on the other). Specifically, the received picture identifies as important the growing use of social media tools (the 'Facebook Revolution) which made web-facilitated contact easy and interesting for non-technical people. The ArabTrans survey suggests that there is indeed some truth in this picture but that the whole story is a good deal more complicated.

Those who took part actively in the Uprisings or have taken 'off-line' action since then (demonstrations, boycotts, occupation of buildings, signing petitions) are indeed younger than the population average in four of the six countries, but the oldest age group is actually the largest in Tunisia in proportional terms and even more in Libya (Figure 13). Those who took part via social media are undoubtedly younger, if only

because there is a strong age bias in all countries in the use of the internet at all and social media tools is particular. Web and social media users also tend to be better educated than the average, somewhat more affluent and disproportionately men. This does not mean, of course, that older people, the less educated, the less affluent and women are not involved at all – for example, across the six countries nearly 14 per cent of social media users were over the age of 55 – but the numbers incline in that direction. Also, there are factors specific to countries; five of the six countries have about the same rate of internet use, for example, but the sixth, Egypt, has less than half as many (Figure 1).

We cannot comment on the proposition that tools such as Facebook attract more people to use the internet and help with politicisation. It is certainly true that virtually everyone who uses the web uses social media tools – over 95 per cent in five of the six countries and 75 per cent even in Jordan, the outlier in this respect (Figure 5). It is not clear whether users find social media easy or the ease of using Facebook turns non-users into users; this is the kind of question which qualitative research can answer best.

Rates of conventional political participation (voting, party or union membership) vary by country but are all over 50 percent. Iraq (over 70%) and Egypt (over 60%) have the highest rates; Libya (54%) has the lowest. followed by Jordan (46%). Rates of 'offline activism' (e.g. protests, demonstrations) vary a great deal by country; they are at their highest in Libya (64.5%) and their lowest in Egypt (17.5%) and Jordan (12%) – see Figure 10.

People use the social media for a number of things – contacting friends and family (average 40%) and getting information about social and cultural events (average 38%) are the most popular. Use of social media to get political news is not high – 17 per cent of the population in Jordan, the highest, only 5 per cent in Egypt, 7 per cent in Libya and 8 per cent in Tunisia and Morocco (Figure 8). As a percentage of internet users (Figure 9) the numbers are of course much higher and show a different pattern; Jordan is still the highest with 37 per cent, but Egypt comes second at 31 per cent; the lowest is Libya, with 11 per cent. It is also noticeable that even in countries where substantial minorities say they never follow the news the numbers of internet users

in them who say this are smaller, and sometimes *much* smaller. Political activism online (from commenting and debating to actually organising) is very uncommon as a percentage of population in Egypt (6% - but there are few who use the next in Egypt) and in Jordan (10% - and Jordan has a higher proportion of internet users). The high points are Libya (49%) and Iraq (36), and in Iraq there are more activists on line than off.

Thus overall there is some truth in the story that young people and more highly educated ones were and are disproportionately represented in many categories of political activity in the MENA countries, though there are often quite high proportions of older or less educated people as well, and in some categories one of the older age groups actually dominates in terms of proportionate share, some countries. (Income does not appear to have much of a direct effect at all once country, education and age have been taken into account, except where access to the internet in the first place is concerned). The internet and specifically the social media do appear to play a quite large part in the political activity of these countries, though the majority of the action is still 'off line'.

What emerges most strongly in this analysis is that the differences between countries in intensity and pattern of activity are very substantial and sometimes difficult to explain. That war-torn Libya and invaded Iraq are different from the others is quite evident and not surprising; although there were uprisings there in 2011, they were driven by quite different processes than those which played themselves out in the other four. However, it is difficult to understand why the patterns of activism, online activism and use of social media so low, and disengagement so high, in Jordan, Egypt and to some extent Tunisia. Egypt and Tunisia were supposed to be the heralds of the Arab Uprisings, yet their political engagement is similar to that of Jordan, which had only very limited uprisings. It is also unclear why it is only in Libya that the largest grouping of activists is those who work both on and offline.

REFERENCES

Abbott, P., Sapsford, R., Diez-Nicolas, J. and Teti, A. (2016). *Methods Handbook for the Arab Transformations Research Project.* Aberdeen: University of Aberdeen.

Abbott, P. and Teti, A. (2016a). 'A Political Economy of the Drivers of the 2014 Uprisings in Egypt', in A. Teti and P. Abbott *Work Package 2: Literature Review for Arab Transformations*. Aberdeen: University of Aberdeen.

Abbott, P and Teti, A. (2016b) *Building Decent Societies: Economic and Political Cohesion in Egypt, Jordan and Tunisia.* EU Policy Brief II. Aberdeen: University of Aberdeen.

Aday, S et al (2013) 'Watching From Afar: Media Consumption Patterns Around the Arab' Spring. *American Behavioral Scientist* 57(7), 899–919.

Arafa, M. and Armstrong, C. (2016) 'Facebook to Mobilize, Twitter to Coordinate Protests, and YouTube to Tell the World: New Media, Cyberactivism, and the Arab Spring'. *Journal of Global Initiatives: Policy, Pedagogy, Perspective*. Vol. 10: No. 1.

Assaad, R. and Roudi-Fahimi F. (2007). *Youth in MENA: Demographic Opportunity or Challenge?.* PRB – Population Reference Bureau, Washington, DC / Cairo.

Beissinger, M. R. et al (2012). *Who Participated in the Arab Spring? A Comparison of Egyptian and Tunisian Revolutions* (Doctoral dissertation, Department of Politics, Princeton University).

Breuer, A; Landman, T; and Farquhar, D. (2015). 'Social media and protest mobilization: evidence from the Tunisian revolution'. *Democratizatio*n, 22:4, 764-792.

Castells, M. (2012). *Networks of Outrage and Hope: Social Movements in the Internet Age*.
London: Polity Press.

Castells, M. (2013). *Communication Power*. Oxford: Oxford University Press.

Cincotta, R., & Doces, J. (2012). 'The age-structural maturity thesis: the impact of the youth bulge on the advent and stability of liberal democracy'. *Political Demography: How Population Changes Are Reshaping International Security and National Politics*, 98-116.

Cottle, S. (2011). 'Media and the Arab uprisings of 2011: Research notes'. *Journalism* 12(5) 647–659.

Cuconato, M. & Waechter, N. (2012). 'The Interplay of Youth Cultures, the Web 2.0 and Political Participation in Europe. New reflections after the Youth Quake in Northern Africa and the Middle East.' In: P. Loncle, M. Cuconato, V. Muniglia, & A. Walther (Eds.), *Youth Participation in Europe. Beyond discourses, practices and realities* (pp.143-158). Bristol & Chicago: Polity Press

Deibert, R. (2015) 'Cyberspace Under Siege'. *Journal of Democracy*, Vol. 26, N. 3, 64-78.

Diwan, I. (2013). 'Understanding revolution in the Middle East: the central role of the middle class'. *Middle East Development Journal*, Volume 05, Issue 01.

Dhillion, N. & Yousef, T. (2009). *Generation in Waiting: The Unfulfilled Promise of Young People in the Middle East.* Brookings Institute Press, Washington, DC.

Dencik, L. and Leistert, O. (2015). *Critical Perspectives on Social Media and Protest. Between Control and Emancipation*. Rowman and Littlefield, London and New York.

Dugan, K. B. (2008). 'Just Like You: The Dimensions of Identity Presentations in an Antigay Contested Context.' In: J. Reger, D. J. Myers and R. L. Einwohner (Eds.), *Identity Work in Social Movements*, 2008, University of Minnesota Press, pp. 21-46.

Eissa, T. and Cho, G. (2015). 'Lightweight Anti-Censorship Online Network for Anonymity and Privacy in Middle Eastern Countries'. *The International Arab Journal of Information Technology*, Vol. 12, No. 6A.

Fuchs, C. (2013). 'Societal and ideological impacts of deep packet inspection Internet surveillance'. *Information, Communication & Society*, vol. 16 issue 8.

Goffman, E. (1974). *Frame Analysis: An Essay on the Organisation of Experience*. Boston, MA: Northeastern University Press.

Goldstone, J. A. (2015). 'Demography and Social Movements'. *The Oxford Handbook of Social Movements*, 1, 146.

Hirschkind, C. (2012) 'Beyond secular and religious: an intellectual genealogy of Tahrir Square'. *American Ethnologist*, 39(1), pp. 49–53.

Hoffman, M., & Jamal, A. (2012). 'The youth and the Arab spring: cohort differences and similarities'. *Middle East Law and Governance*, 4(1), 168-188.

Howard, P. and Hussain M. (2011). 'The role of digital media'. *Journal of Democracy* vol. 22 n. 3, July.

Hussain, M. and Howard, P. (2013). 'What best explains successful protest cascades? ICTs and the fuzzy causes of the Arab Spring'. *International Studies Review* 15, 48-66.

International Labour Organization (2015). *Global Employment Trends for Youth 2015: Scaling up investments in decent jobs for youth* / International Labour Office – Geneva.

Ippolita (2015). *In the Facebook Aquarium: The Resistible Rise of Anarcho-Capitalism*. Institute of Network Cultures, Amsterdam.

Keller, J., and Nabli. M. (2002). *The Macroeconomics of Labor Market Outcomes in MENA over the 1990s*.Working Paper 71. Cairo: Egyptian Center for Economic Studies.

Khamis, S. (2011). 'The Transformative Egyptian Media Landscape: Changes, Challenges and Comparative Perspectives'. *International Journal of Communication* 5, 1159–1177.

Kuebler, J. (2011). 'Overcoming the Digital Divide: The Internet and Political Mobilization in Egypt and Tunisia'. *CyberOrient*, Vol. 5, Iss. 1.

LaGraffe, D. (2012). 'The Youth Bulge in Egypt: An Intersection of Demographics, Security, and the Arab Spring'. *Journal of Strategic Security* 5, no. 2: 65-80.

Loader, B. (2008). 'Social Movements and New Media'. *Sociological Compass, 2*(6), pp. 1920-1933.

Lotan, G; Ananny, G; and Pearce, B (2011). **'T**he Revolutions Were Tweeted: Information Flows During the 2011 Tunisian and Egyptian Revolutions'. *International Journal of Communication* 5, 1375–1405.

Lovink, G. (2013). 'A World Beyond Facebook: Introduction to the Unlike Us Reader', in Geert Lovink e Miriam Rasch (eds.), *UnLike Us Reader: Social Media Monopolies and their Alternatives,* Institute of Network Cultures, Amsterdam.

Margetts, H., John, P., Hale, S., & Yasseri, T. (2015). *Political Turbulence: How Social Media Shape Collective Action*. Princeton University Press.

Markham, T. (2014). 'Social media, protest cultures and political subjectivities of the Arab spring.' *Media, Culture & Society*, 36(1), 89-104.

Mellor, N. (2014) 'Who Represents the Revolutionaries? Examples from the Egyptian Revolution 2011'. *Mediterranean Politics*, 19:1, 82-98

Morozov, E. (2011). *The Net Delusion: The Dark Side of Internet Freedom*, Public Affairs, New York.

Mourtada, R. and Salem F. (2011) *Arab Social Media Report*, Vol. 1. Dubai, UAE: Dubai School of Government.

Murphy, E. C. (2012). 'Problematizing Arab Youth: Generational Narratives of Systemic Failure'. *Mediterranean Politics*, 17:1, 5-22.

Noakes, J. & Johnston, H. (2005). *Frames of Protest: Social Movements and the Framing Perspective*. Maryland: Rowman & Littlefield Publishers Inc.

Nordas, R. and Davenport, C. (2013). 'Fight the Youth: Youth Bulges and State Repression'. *American Journal of Political Science*, Vol. 57, No. 4, October 2013, Pp. 926–940

Norris, P. (2001). *Digital Divide: Civic Engagement, Information Poverty, and the Internet Worldwide*. New York: Cambridge University Press.

Rheingold, H. (2002). *Smart Mobs: The Next Social Revolution*. London, UK: Perseus.

Snow, D. (2001). 'Collective Identity and Expressive Forms.' *Center for the Study of Democracy*. UC Irvine: Center for the Study of Democracy. Retrieved from: http://escholarship.org/uc/item/2zn1t7bj

Terranova, T. and Donovan, J. (2013). 'Occupy social networks: the paradoxes of corporate social media for networked social movements', in G. Lovink and M. Rasch (eds.), *UnLike Us Reader: Social Media Monopolies and their Alternatives,* Institute of Network Cultures, Amsterdam.

Urdal, H. (2007). 'The Demographics of Political Violence: Youth Bulges, Insecurity and Conflict' in *Too Poor for Peace? Global Poverty, Conflict and Security in the 21st Century,* eds. L. Brainard and D. Chollet, Brookings Institution Press, Washington, DC, pp. 90-100.

Warschauer, M. (2004). *Technology and Social Inclusion: Rethinking the Digital Divide.* Cambridge, MA: The MIT Press. -

Weber, H. (2013). 'Demography and democracy: the impact of youth cohort size on democratic stability in the world'. *Democratization*, 20:2, 335-357

Wilson, C., and Dunn A. (2011). 'Digital media in the Egyptian revolution: descriptive analysis from the Tahrir data set.' *International Journal of Communication* 5. http://ijoc.org/ojs/index.php/ijoc/article/view/1180/682.

Yousef, T. (2003). 'Youth in the Middle East and North Africa: Demography, Employment, and Conflict'. In Ruble B. A. et al. (eds.), *Youth Explosion in Developing World Cities.* Comparative Urban Studies Project, Woodrow Wilson International Center for Scholars, Washington, D.C.

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