The Impact of Social Media on Social Movements: The New Opportunity and Mobilizing Structure

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This paper seeks to explain and test the formation process of social movements by addressing two overarching interrelated factors: opportunity structures and mobilizing structures. I hypothesize that social movements are caused by opportunity structures such as economic, institutional, and social contexts of a country conditioned by its access to social media. Social movements are not created by a single variable but rather by a set of variables that create an interaction effect. Discovering ways to mass organize is as essential for the occurrence of social movements as the grievances that make people want to organize in the first place. The introduction of social media into the discussion is thought to have completely changed the way people are able to organize. In order to test my hypothesis, I use data from a number of different sources for all countries in 2008 - 2012.

Research Question

Scholars have long considered under what conditions social movements are most likely to emerge. The communication revolution brought about from the rapid emergence of social media has led scholars to shift the direction of such questions to the impact of social media in social movements. Social movements have been implemented in many different forms and on different levels in order to transform societies. New studies are now looking at social media as a tool in shaping social movements’ agendas and aiding collective action both online and offline at the local or global level. The most fascinating ability of this new tool is that social media enables ordinary citizens to connect and organize themselves with little to no costs, and the world to bear witness. Social Media websites such as Facebook, Twitter, YouTube, and the various online blogs have arguably given a voice to individuals that otherwise would not be heard.

The new wave of contention inspired by the Arab Spring that spread all over the world, even to places like Venezuela more recently, has again stimulated the study of contentious politics. This new wave of protests is bringing to focus the role of social media – particularly Facebook – as a main force behind recent popular movements (Lim
While much attention has been paid to why a group of individuals decide to mobilize, many scholars have concluded that grievances alone are not enough to create movements (Buechler 2000). Recent literature has created models that combine these underlying motives for contention with social networks as the basis for movement recruitment and the path to popular mobilization (Diani & McAdam 2003). While there are studies on the connection between social media and mobilization, none have effectively merged an analysis of these forms of social action with existing theories of social movements and contentious politics. This study seeks to focus on social media as the alternative tool to the common way of movement recruitment and collective action. It also attempts to understand how ordinary citizens fueled by grievances and a desire for change come together online to challenge the status quo.

The German Sociologist, Lorenz von Stein, first introduced the term ‘social movement’ into scholarly discourse in the 1950’s (Tilly 2004). It conveyed the idea of a continuous, unitary process by which the whole working class gained self-consciousness and power (Tilly 2004). Later, some defined it as collective challenges by people with common purposes and solidarity in sustained interactions with elites, opponents and authorities (Tarrow 1994). One of the most widely accepted definitions is that of Charles Tilly (2004), who defines social movements as a series of contentious performances, displays and campaigns by which ordinary people make collective claims on others. For this study, I choose to use a definition very similar to Tilly’s where a social movement is defined as “conscious, concerted, and sustained efforts by ordinary people to change some aspect of their society by using extra-institutional means” (Goodwin & Jasper 2003). Such movements can be important vehicles for social and political change, and have the potential to transform the systems of institutionalized politics in which they occur (McAdam 2001). Social movements can give us an insight into human action and why people voluntarily cooperate and mobilize (Cameron 1974). They can also have implications in the spread of democracy, or regime change (Goodwin & Jasper 2003).

While social movements are a worldwide phenomenon, there is much variation in its occurrence. This particular study will focus on social movements worldwide from 2008 to 2012 to answer the question of under what conditions are social movements most likely to emerge by using social media as the explanatory – and intervening – variable of
interest. I hypothesize that a social movement is the effect of opportunity structures such as the economic, institutional, and social contexts of a country conditioned by its access to social media. The opportunity structures take into consideration the grievances that drive a social movement. These grievances can be derived from a change or deterioration of social, political, and or economic conditions. The mobilizing structure is the social networks and all resources necessary for popular mobilization, which in this case consists of social media as the fastest and cheapest way to mobilize. Both aspects are necessary to the emergence of social movements (Stark 2010).

In the following sections of this paper, I identify and discuss common approaches and hypotheses on social movement in the literature, as well as explain and test my own hypotheses. I argue that discovering new ways to mass organize is as essential to the emergence of social movements as the grievances that drive them (Buechler 2000). The introduction of social media such as blogs, Facebook, and Twitter as a new way to social network, has become the new catalyst tool in the formation of social movements. I proposed new variables as measures of social, economic, and institutional well being, as well as the presence of social media in different countries in order to explain the occurrence of social movements. I used a negative binomial regression to test this model and concluded that Internet penetration, as a proxy variable for social media, is a strong predictor of protest activity.

**Literature Review: Social Movements in Context**

Study on the usage of social media in stimulating social movements has only begun to surface in the last decade. Although social media is a relatively young phenomenon in our world, works on social movement and collective action has been around as early as the 1960s, providing scholars with important information in order to understand the impact of social media as an organizational tool (Leenders & Heydemann 2012). While most of these studies have focused on specific case studies – particularly in the Middle East following the ‘Arab Spring’ – to demonstrate how social media facilitated and promoted social movements, none show a worldwide view of its impact in the mobilization process. This paper reviews the hypothesis in the literature looking at the
conditions to which people organize while focusing on social media as the best vehicle for mobilization and part of the macro-level picture of the process.

The theoretical framework for this paper was based on a number of different theories that offered a great avenue for my own analytical research and continued theoretical discussion. The first part focuses on modernization theory and relative deprivation as a departure point for the discussion emphasizing on the role of individuals’ grievances as the base condition for social movements. The second part uses resource mobilization theory, as well as social networks, and traditional media to explain the mechanisms that aid in the formation and sustenance of social movements. The third, and last part, discusses the current approach to social movements – social media – as the latest and most revolutionary tool in the formation of social movements.

1. Opportunity Structures

Samuel Huntington (1968) contributed greatly to the Modernization theory. He argues instability surfaces when institutions cannot keep up with societal and economic changes. Consequently, society will strive to replace the current institutions with ones that can meet current social and political demands. However, Ted Gurr (1968, 1970) adds relative deprivation to fill in a gap in modernization theory. Gurr argues that even if institutions are able to catch up with societal and economic changes the feeling of relative deprivation will also lead people to mass organize. Relative deprivation argues that people are motivated to organize out of a sense of deprivation or inequality brought forth by a comparison to others, or in relation to their own expectations. In this case, people will join social movements because their expectations will have outgrown their actual situation (Gurr 1968, 1970). As the gap between an individual's value expectations and value attainment grows wider, social frustration will grow. This gap is relative to the situation of an individual's neighbors. If everyone in an area is experiencing the same low level of value attainment, then relative deprivation will not develop (Gurr 1970).

Both relative deprivation and modernization theory explain the motives for social mobilization as a function of individuals’ grievances and anger. Rational choice theory also introduces individuals as rational actors who make choices based on the costs and benefits of alternative courses of action that will most likely maximize their utility (Olson
1965). More importantly, all of these theories offer some of the first explanations for social movements visually depicted in Figure 1: social, institutional, and economic contexts cause social movements.

Figure 1.

2. Mobilizing Structures: Social Networks and Media

Social, institutional, and economic contexts provide the underlying motives and conditions for social movements (Oleinik 2012). However, grievances alone or even rational thought are not enough to bring people to act collectively (Buechler 2000). First and foremost, social movements need organization and resources. Resource mobilization theory argues that resources – such as time, money, organizational skills, and certain social or political opportunities – are critical to the formation and success of social movements. Although types of resources may vary, the availability of applicable resources, and actors’ abilities to use them effectively are critical for collective action (Buechler 1993; Jenkins 1983). Resource mobilization theory was also unlike earlier collective action theories in that it was the first to recognize the importance of influences outside the social movement under study (Johnson 2000). It is also important to consider questions of repression, censorship, threat, and potential costs that might hinder individuals from participating in mass mobilization (Osa & Schock 2007).

Charles Tilly criticizes previous approaches to social movement theory for placing the individual as the primary unit of social movements. Rather, he argues that the primary unit is the interaction between individuals (Tilly 1984). Individuals only participate in collective action when they recognize their membership in the relevant
collective (Wright 2001). The degree of group identification appears to be a strong predictor of collective action participation (Stekelenburg & Klandermans 2007). Such identification can only grow out of communication between individuals (Lim 2012). Thus, social movements depend on social networks that will function as an initial core made up of densely know clusters of stronger ties that then mobilize weakly linked individuals spreading discontent into a mass movement (ibid).

The theory of the public sphere, developed by Jürgen Habermas in *The Structural Transformations of the Public Sphere* (1981), emphasizes the role of communication in public opinion. He argues that the public sphere is ‘a realm of our social life in which something approaching a public opinion can be formed’, neither institutionally controlled nor dominated by private interests, as a necessary requirement for a well-functioning democracy. Rational and critical discussion between ordinary citizens on public matters is essential to the public sphere, and today the media provides the primary spaces for such discussion (Butsch 2007). Newspapers, radio, television, and the Internet, all manipulated the abilities of citizens’ engagement in the public sphere on different communicative levels (ibid). The relationship between the media and social movements are of critical importance. Gamson and Wolfsfeld described the three major purposes of the media in social movements as: mobilization, validation, and scope enlargement (Gamson and Wolfsfeld 1993). Mobilization is important not only for the participants themselves but also for their message and the grievances the collective group is rising up against. Being covered by the media is important to validate the message as relevant, and it will also lead to a scope enlargement by the public sphere that might bring in new recruits to the cause (Butsch 2007). Movements depend on the media to generate public sympathy for their challenge.

Therefore – drawing from resource mobilization theory, Gamson and Wofsfeld’s three purposes of the media, and social networks – organization and communication seem to be the key conditions for the formation of social movements found in social networks and the media. These theories provide another explanation to social movements visually depicted in Figure 2: social networks and media cause social movement.
Clay Shirky (2011) is one of the early scholars to write about social media as a new social networking tool for collective action. He argues that over the years, the world communication system has gotten denser, more complex, and more participatory. People have gained greater access to information, more opportunities to engage in public speech, and thus, an enhanced ability to undertake collective action (Shirky 2011). These increased freedoms and technology can help loosely coordinated publics demand change. Traditional organizational tools used to mobilize would make use of social hubs such as universities, coffee shops, group meetings, independent news sources, etc. to spread information. However, the rise of the Internet in the 1990’s marked a changing point for world communication. The networked population has grown from the low millions to the low billions (Shirky 2011). At the same time, the creation and adoption of social media such as blogs, YouTube, Facebook, Twitter have become a fact of life. Citizens, activists, nongovernmental organizations, telecommunications firms, software providers, governments – are all actors that engage and participate in social media sites. The work of Dorothy Kidd in “The Global movement to transform communications” recognized the role of social media in democratizing communications challenging the top-down or vertical nature of mainstream media and allowing a more reciprocal communications between ordinary citizens (Kidd 2002).

The mobilizing structures discussed in the previous section – social networks and the media – provided five key aspects to the formation of social movements. These were:
communication, organization, mobilization, validation, and scope enlargement. All of these characteristics are still relevant and important today. In fact, Shirky argues that social media replaced the old mobilization structures and became the new coordinating tool for nearly all of the world’s popular movements in the recent years, because of its ability to encompass all of these characteristics. First, “social media introduces speed and interactivity that were lacking in the traditional mobilization techniques, which generally include the use of leaflets, posters, and faxes” (Eltantawy & Wiest 2011). Facebook and Twitter are able to reach millions of people from all over the world as events are happening. The diffusion of information between different countries through traditional media outlets generally takes longer than information going through social media. The fast spread of information – especially internationally – helps with validation, mobilization, and scope enlargement. Perhaps one of the most striking features of this new method of communication is its ability to bypass the bias of official sources and the mass media, and give a voice to ordinary citizens in transforming the political landscape of their country (Clark 2012). “This is an arguments for information abundance freed from the shackles of a mass communication system that broadcast from one to many” (Downey & Fenton 2003).

Thus, the relationship between social networks, the media, and social movements – shown in figure 2 – is now replaced by social media which is visually depicted in Figure 3: social media causes social movements.

Figure 3.

Critics of Shirky argue that social media, in fact has not revolutionized the popular mobilization system. Social movements have happened all over the world and in different times throughout human history, with or without social media. According to
him, it is hard to prove that in the absence of social media, recent uprisings would not have been possible (Gladwell & Shirky 2011). However, Shirky argues that the rise of the Internet and social media has not changed the fact that popular mobilization happens, but rather altered the landscape allowing individuals to play by a different set of rules. The interaction between social media and different political and economic aspects of life can also create a multiplying effect that can stimulate the creation and formation of social movements (Leenders & Heydemann 2012). Therefore social media acts more as an intervening variable in relation to social movements than a causal one.

Unlike old social hubs, social media have created massive networks that not only connect the entire world, but also give people the ability to easily publicize opinions at a low cost, and to the speed and scale of group coordination. It also compensates for the disadvantages of undisciplined groups by reducing the costs of coordination. These changes might not allow uncommitted groups to take action, however, they will allow committed groups to play by a new set of rules. The Internet and mobile technology are some of the most important ingredients changing the way news are created and disseminated today (Serafeim 2012) (Lim 2012). For instance, in social movements such as the one seen in Egypt or the Occupy Wall Street movement, the wireless communication tools were the prevalent mobile technological devices being used in capturing video and photos at these events that “aimed to make a shift in the government by providing unbiased and unedited content to the public” (Clark 2012). News are also portable due to cell phones, personalized because Internet users have customized profiles on topics that is of particular interest to them, and participatory because users have contributed to the creations of news, comments, or its dissemination via Facebook and Twitter (Serafeim 2012).

Social media has also provided new sources of information that cannot be easily controlled by authoritarian regimes (Tufekci & Wilson 2012). Shirky writes that a condition of “shared awareness” in a population that experiences discontent with its current situation creates what he calls the dictator’s or conservative dilemma – which can also happen in democratic regimes. The dilemma is created when access to new media, such as social media, increase public access to speech or assembly. A state accustomed to having a monopoly on public speech finds itself called to account for anomalies between
its view of events and the public’s. The traditional response would be censorship and propaganda; however, neither is completely effective in silencing citizens with access to social media (Shirky 2011).

As individual countries have their own popular mobilization experiences broadcasted on social media sites, information spreads throughout the world faster than other media sources are able to keep up with (Serafeim 2012). With so many benefits, these new tools found in social media act as a catalyst for popular movements around the world (Ozalp 2013). The many benefits to popular mobilization found in social media – in addition to pre-existing grievances found in economic, institutional, and social contexts – all act as a catalyst in the emergence of social movements. The following section combines the causal interactions depicted and explained in this section into one single explanatory model, and presents the hypotheses that will be tested within this model.

**Hypotheses and Theory: Elaborating the Social Media Argument**

I test the impact of social media on the formation of social movements by addressing two overarching interrelated factors: opportunity structures and mobilizing structures. I hypothesize that social movements are caused by opportunity structures such as economic, institutional, and social contexts of a country conditioned by its access to social media. Social movements are not created by a single variable but rather by a set of variables that create an interaction effect (Goodwin & Jasper 2003). Both opportunity structures and the mobilizing structure act together to create social movements. Figure 4 depicts the formation process of a social movement as I hypothesize it in this paper.

Opportunity structures provide the motivation for movement organization through its social, economic, and institutional contexts. They are underlying conditions that favor social movement by creating individual grievances. The main focus of these conditions is on the external environments of social movements. Social movements have their foundations among individuals who feel deprived of some good, resource, or service. People are motivated to organize out of a sense of deprivation or inequality brought forth by a comparison to others, or in relation to their own expectations (Gurr, 1968, 1970).
Social well being is often measured by infant mortality, or literacy rate, but it is also tied to other economic and political variables. For instance, people are also likely to mobilize when a stable situation takes a turn for the worse, such as an economic downturn (Tilly, 1984). Economic well being can be measured by GDP per capita or inflation. Social movements can also be political in nature, and in many instances the state is involved as not only the target but also the adjudicator of grievances (Tarrow 1994). When institutions cannot keep up with societal changes, people will strive to replace the current institutions with ones that can meet current social and political demands (Huntington 1968). The state may also provide some of the opportunities for individuals to mobilize such as regime instability, lessening of repression, and division among elites, which can be analyzed by measures of political effectiveness and political legitimacy. (McAdam 2001).

Grievances alone are not enough to bring people to act collectively (Buechler 2000). Social movements develop when individuals are able to collectively organize (Wright 2001). Mobilizing structures are the mechanisms that facilitate collective action, focusing mainly on the social networks and resources available in order to organize and mobilize people into a cause. Traditional methods of mobilization require knowledge, money, media, labor, solidarity, legitimacy, and internal and external support from some
power elite (McAdam 2001). These traditional methods focus mainly on available resources and continuity of leadership.

The political use of social media such as Facebook, Twitter, YouTube, blogs, and cellphones have changed the traditional way of organizing social movements by providing more sources of knowledge (without media bias), reducing costs of coordination, and increasing the speed of information exchange (Shirky 2011).

One of the most revolutionary aspects of the use of social media in mobilizing is that it trivializes the need for elite support. Through the use of social media, individuals are able to connect with each other and organize at an incredible low cost. More than that, it is also a resource that is available to most people, which means even uncommitted individuals might have an opportunity to join the cause (Shirky). Social, economic and institutional contexts provide the source of grievances as the motivation for action, but it also needs the presence and use of social media in order to facilitate collective action.

Using the hypothesis outlined in this section I will test the following assumptions. First, countries with a higher penetration rate of social media and/or Internet are more likely to have social movements. Second, countries with lower indicators of social, economic, and institutional well being are more likely to have social movements. Further, I will also add two additional control variables that will help me explain the role of traditional media and mobile technology within in context of social media. The following section will outline the method and data used to test my hypothesis.

**Data and Method**

In order to test whether social movements are caused by opportunity structures conditioned by social media I test a negative binomial regression. Negative binomial regressions are used for modeling count variables such as the dependent variable I am using for my models. I regress measures of social movements on measures of economic, institutional, and social well being, as well as access to social media, media freedom, and mobile technology. Table 1 reports the central tendencies for all variables.
Table 1.
Variables central tendencies

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>Median</th>
<th>Standard Deviation</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protests</td>
<td>1073.5</td>
<td>204</td>
<td>3659.6</td>
<td>63482</td>
</tr>
<tr>
<td>Facebook</td>
<td>21.9</td>
<td>18.4</td>
<td>18.2</td>
<td>70.8</td>
</tr>
<tr>
<td>Internet Penetration</td>
<td>33.2</td>
<td>25.9</td>
<td>28.3</td>
<td>95.8</td>
</tr>
<tr>
<td>Life Expectancy</td>
<td>68.5</td>
<td>72.15</td>
<td>10.7</td>
<td>54</td>
</tr>
<tr>
<td>Inflation</td>
<td>6.5</td>
<td>4.9</td>
<td>6.5</td>
<td>72.4</td>
</tr>
<tr>
<td>GDP per capita</td>
<td>12,661.9</td>
<td>4,433.8</td>
<td>18,707.5</td>
<td>114,025.6</td>
</tr>
<tr>
<td>Political Effectiveness</td>
<td>0.9</td>
<td>1</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Political Legitimacy</td>
<td>1.1</td>
<td>1</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Press Freedom</td>
<td>49.5</td>
<td>51</td>
<td>23.6</td>
<td>88</td>
</tr>
<tr>
<td>Mobile Subscriptions</td>
<td>85.8</td>
<td>89.6</td>
<td>42.2</td>
<td>198.94</td>
</tr>
</tbody>
</table>

I measure Social Movements by the number of protests in every country. Data for the dependent variable comes from the Global Database of Events, Language, and Tone (GDELT), which consists of a count of all demonstrations, rallies, violent protests, and riots in all countries for 2008-2012 (http://gdelt.utdallas.edu). These civilian demonstrations and collective action focus on leadership change, policy change, civil rights, and regime or institutional change. The data report the number of occurrences in each state. Although the data ranges from 0 to 63,482, most cases range from 0 to the 10,000s. Figure 5 shows the distribution of the data.
I measure social media in two different ways. First, I use the number of Facebook accounts worldwide. Among all of the existing social networks (Twitter, YouTube, Facebook, Tumblr) I use Facebook to represent all social media outlets primarily because it is the leading social networking service, and also due to the availability of data on other social networking websites (Clark 2012). The data comes from the Internet World Stats for the percentages of Facebook users in all countries in 2012 (www.internetworldstats.com), and it ranges from 0.05 percent to 70.9 percent. Due to the availability of data I am only able to find the number of Facebook accounts for 2012. Therefore, in order to have a larger scope of the effect of time on social movements, I will also be using the Internet penetration rate from 2008-2012 worldwide as a proxy variable for all social networking websites in order to test a time-series model. The data comes from the World Bank dataset (data.worldbank.org), and it ranges from 0.16 percent to 96 percent.
I measure economic well being using inflation and GDP per capita data from the World Bank dataset for all countries in 2008-2012 (data.worldbank.org). I use data on inflation as measured by the consumer price index, which reflects the annual percentage change in the cost to the average consumer of acquiring a basket of goods and services that may be fixed or changes at specified intervals, such as yearly. The inflation rate ranges from -13.2 to 59.2. GDP per capita is the gross domestic product divided by the midyear population. The data is in current U.S. dollars and it ranges from US$ 185.2 to US$ 114,210.8.

I measure institutional well being by using a time-series dataset for the State Fragility Index and Matrix from the Integrated Network for Societal Conflict Research (systemicpeace.org/inscr/inscr.htm). The Fragility Matrix scores all countries in 2008-2012 on both effectiveness and legitimacy in four performance dimensions: security, political, economic, and social. Each of the Matrix indicators is rated on a four-point fragility scale: 0 “no fragility,” 1 “low fragility,” 2 “medium fragility,” and 3 “high fragility”. For the purposes of measuring the institutional context of a country I use data on both political effectiveness and political legitimacy from this data set. The scale on both variables range from 0 to 3.

I measure social well being by using data for life expectancy from the World Bank for all countries in 2008 - 2012 (data.worldbank.org). Life expectancy is measured by the number of years a newborn infant would live if prevailing patterns of mortality at the time of birth were to remain the same throughout its life. The data ranges from 29.9 years to 83.91 years.

I measure media freedom using a press freedom score from the Freedom House dataset for all countries in 2008-2012 (freedomhouse.org). 0 indicates best freedom score, and 100 indicate worst. The data ranges from a score of 9 to a score of 97. Finally, I measure mobile technology using mobile subscriptions data from the World Bank dataset for all countries in 2008-2012 (data.worldbank.org). Mobile cellular telephone subscriptions are subscriptions to a public mobile telephone service using cellular technology, which provide access to the public switched telephone network. Post-paid and prepaid subscriptions are included. It is measured per 100 inhabitants in every country, and it ranges from .72 to 199.6.
Results

I test three different regression models in order to avoid coliniarity by including highly correlated terms into one regression. The first model includes Facebook – as the independent variable of interest representing social media – as well as all other control variables. This first model includes all countries in 2012. Due to the availability of data I am only able to find the number of Facebook accounts for 2012. Therefore, in order to have a larger scope of the effect of time on social movements, the second model includes Internet penetration – as a proxy variable for social media – in order to test a time-series model from 2008-2012 worldwide. This second model doesn’t include the variable life expectancy and GDP because they are highly correlated with the variable for Internet penetration. Therefore, the third model includes life expectancy and GDP without Internet penetration. The results of all three models are in Table 2.

The results show that the percentage of Facebook users in every country is not a statistically significant predictor of protest activity. However, the second model indicates that Internet penetration is a strong predictor of protests. This may be due to the higher number of observations in the time-series model, as well as the larger scope of Internet penetration in representing all Social Media websites.

The models also indicate that GDP, political effectiveness and legitimacy (as indicators of economic and institutional well-being) are the three strongest indicators of protests. While it may seem intuitive that lower GDP would lead to protest activity, the relationship is actually the opposite. Political effectiveness shows the expected negative relationship, while political legitimacy shows a positive relationship to protests. This could be related to reasoning that democracies, which are generally regarded to have higher political legitimacy, higher GDP per capita, less censorship, and more freedoms, are a compliant environment for the emergence of social movements.
Table 2. Results of the three models

<table>
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<tr>
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<tbody>
<tr>
<td></td>
<td></td>
<td>with Internet Penetration</td>
</tr>
<tr>
<td>Facebook</td>
<td>.027 (.017)</td>
<td>.031 (.011) **</td>
</tr>
<tr>
<td>Internet Penetration</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Life Expectancy</td>
<td>.038 (.024)</td>
<td>.020 (.017)</td>
</tr>
<tr>
<td>Inflation</td>
<td>.024 (.035)</td>
<td>.030 ^ (.019)</td>
</tr>
<tr>
<td>GDP per capita</td>
<td>.733 *** (.230)</td>
<td>.454 ^ (.258)</td>
</tr>
<tr>
<td>Political Effectiveness</td>
<td>-.147 ^ (.200)</td>
<td>-.340 ^ (.191)</td>
</tr>
<tr>
<td>Political Legitimacy</td>
<td>.190 (.157)</td>
<td>.373 ** (.140)</td>
</tr>
<tr>
<td>Press Freedom</td>
<td>.001 (.010)</td>
<td>.014 ^ (.008)</td>
</tr>
<tr>
<td>Mobile Subscriptions</td>
<td>-.013 ** (.005)</td>
<td>-.006 (.004)</td>
</tr>
<tr>
<td>Constant</td>
<td>-.140 (2.161)</td>
<td>5.361 (.763)</td>
</tr>
<tr>
<td>N</td>
<td>129 744</td>
<td>717</td>
</tr>
</tbody>
</table>

Standard errors in parentheses  
^ p value = <.1; **p value = <.01; *** p value = <.001

Lastly, while press freedom shows to be slightly significant in the second model, mobile subscriptions is significant only in the first model. Both of these show unexpected relationships to the ones hypothesized in this paper. The first model indicates that the lower the number of mobile subscriptions, the more likely a country is to experience
protest activity. This may be due to the nature of the data itself, since all mobile subscriptions also include phones that do not have access to the Internet. The second model shows that press freedom is a slightly significant predictor of protest activity. The relationship shown is a positive one, meaning the more press freedom will lead to more protests.

Conclusions and Implications

This paper focused on the relationship between social media, as an organizational tool and pre-existing social, economic, and institutional conditions for the emergence of social movements across the globe. Although the Facebook model does not show a relationship between Facebook and protests, the Internet penetration model does prove that social media is a statistically significant predictor of protest activity. The model also provides support for some of the other relationships derived by theory on social movements.

In this paper both Facebook and Internet penetration served as a representation of all social media outlets. Perhaps a better way to operationalize this variable would be through a measure of all Facebook, Twitter, YouTube, and Blog accounts; however, data on membership to these websites are not readily available to researchers due to certain infringements on these accounts. Since social media in general is such a new phenomenon in the world, it is also possible that there is a delay problem to this study in which the results have not completely reflected onto the data yet. For that reason, it would be interesting to see the growth in each of these numbers every year from the past decade and compare the results on the number of social movements across the globe.

In addition to considering new variables and measures of the model, one must also consider the direction in which new studies will take. The Arab Spring has inspired sparked social movements in many other countries both in and outside the region. While current data on social media limit researchers, future availability of these numbers might allow studies on social media as not only an organizing tool, but also as a spreading mechanism. Further exploring the use of mobile technology for both social media and social movements might also aid in explaining the formation and diffusion of social
movements today. The role of researchers will be to provide a better understanding and explanation in order to empirically test new and improved models for social movements. A solid understanding of the macro-level process of social movements is also important in order to predict and perhaps even induce such events.
Bibliography


