

**Information - Communication Technologies and Democracy: The Analysis of the Impact of  
the Internet on Changes in Democracy Levels**

**ABSTRACT:**

**Information communication technologies (ICTs) changed the way people live in every domain of life, including political structures. This research investigates the role of ICTs, particularly the Internet, in democratic change, and argues that there is a negative democratic trend in the world after the diffusion of the Internet. The debate on the issue is two folded: While ICTs are assumed to facilitate communication, collective action, and political participation; they may result in slacktivism, manipulation, and lead to the polarization of society. In this research I claim that higher use of the Internet is not causally correlated with higher levels of democracy, and I argue that the potential negative aspects of the Internet may yield to negative impacts on democracy. This paper uses a multi-method approach. Investigating 145 countries, I use an instrumental variable (IV) approach with country and year fixed-effects. The endogenous variable is the level of Internet penetration by the World Bank and the instruments are related to when Internet use spiked in a case. To illustrate the findings, and to verify the statistical model, I analyze Turkey and Malaysia in case studies. I find that the higher uses of the Internet is negatively correlated with democracy levels.**

**I. Introduction**

The Internet changed the way people live by facilitating access to information in every domain of life, and its impact is growing day by day. Diffusion of the Internet changed communication styles, as people now rely on online networks for social communication. Online networks have been a new arena for political actions such as petitions, consciousness raising events, fundraisers, lobbying, criticisms, analyses, as well as anti and pro-government publications.

Before the widespread uses of the Internet, mass media was mainly considered as an ineffective tool in transforming the authoritarian regimes (e.g. Hafez 2008, Randall 1998, Rawnsley and Rawnsley 1998). However, diffusion of the Internet into people's daily lives sparked new debates. Organization of collective action, and democratic impacts are two of these debates. Individuals collectively fight against governments, states, or organizations around the world. These movements are influenced by institutional power imbalances and conflicts of interest that are sufficient to induce mass movements that aim to change the distribution of power, while success of such movements is heavily influenced by political climate (Jenkins, 1983). Participation does not mean marginality or irrationality on the part of the individual (Klandermans, 1984). Individuals do not abandon their own personalities to comply to the crowd as Le Bon (1897) indicated, but on the contrary, participants perceive the potential benefits in order to bear the costs of the organizational efforts (Olson, 2009). Collective action is more concerned with incorporating personal identity, lifestyle, and cultural issues (Pichardo, 1997). To achieve their goals, participating individuals need to mobilize material and non-material resources and relational goods that facilitate collective action effectively (Fuchs, 2006; Uhlaner, 2015). Communication has been one of the most important relational goods as it directly relates to mass media, legitimacy, social networks, public attention, solidarity, and moral commitment. Information Communication Technologies (ICTs) have impacted the way to mobilize the means of communications drastically.

This paper aims to analyze the impact of ICT penetration on democratic change. Democratic change means changes in the democracy levels, and it can be positive or negative. The research uses a multi-method approach outlined by Evan S. Lieberman (2005). The data

consists of 145 countries from every continent and income levels, and the time period analyzed is from 1986 to 2015. My main argument is that while the Internet had the potential to be a democratic tool, due to government intervention, manipulation, and polarization, it has rather led to an anti-democratic trend.

The outline of the paper is as following: A brief literature review follows the introduction. Although the literature that perceives the penetration of the Internet as a positive phenomenon is vast on the issue, the evidence is mainly anecdotal (e.g. Castells, 2011; Shirky, 2011), and there are few to no studies that support the arguments empirically. The literature mostly focuses on the communicative aspect of the ICTs (e.g. (Comunello and Anzera, 2012; Lim, 2012; Tufekci and Wilson, 2012; Youmans and York, 2012); however, the people who discuss the Internet and democratic change are more skeptical towards the benefits of technology (e.g. Alterman, 2011; Comunello and Anzera, 2012; Aouragh and Alexander, 2011). After the literature review, the research presents the data, models, and the results, followed by two case studies. This paper hypothesizes that higher uses of ICTs is not correlated with positive democratic change, and I claim that the global trend is the opposite, that the diffusion of ICTs has negative outcomes . The empirical results support the hypotheses, as there appears to be a negative correlation between the higher uses of the Internet and democratization, albeit the impact is small. The main mechanisms behind the negative trend are government intervention, censorship, and polarization.

## **A. Potential Impacts of the Use of ICTs**

### **i) Positive**

Collective action faces numerous obstacles. Although individuals seek out the potential benefits of a desired outcome, they still do not wish to participate due to prohibitively high costs

(Olson, 2009). Governments and regimes intimidate individuals by punishing harshly, disrupting the means of communication, and eventually making opposition and collective action coordination more difficult (Tufekci & Wilson, 2012). As stated, the literature focuses on the role of ICTs in facilitating communication and organization of collective actionably arguing that the Internet facilitates collective action by communication, and indeed it becomes the main tool for the flow of information (Comunello and Anzera, 2012; Lim, 2012; Tufekci and Wilson, 2012; Youmans and York, 2012). There are four main aspects that the literature discusses.

The first aspect is participation. Clay Shirky (2008) wrote one of the most cited works emphasizing the role of ICTs in decreasing costs of collective action. Shirky claims that individuals are less probable to participate to a movement due to the temptation to free-ride (Olson, 2009), but he argues that use of ICTs help to alleviate the free-rider problem. Zeynep Tufekci (2014) supports Shirky's claims as she argues the free rider problem fades away in most modern protests because the participators do not carry the onerous burden of the movement anymore. Instead, they share the enthusiasm created by the protests. These argument are backed by the research of Stephanie Davison (2015), in which she used surveying methods to illustrate that the Internet was used to document and organize the protest, motivate the individuals to participate and take risks. These are parallel to the arguments of Manuel Castells (2011) who argues that the Internet is now essential to generate and sustain leaderless, participatory movements that foster a culture of autonomy.

The second discussion is on the leaderless aspects of the movements that are organized through the benefits of the Internet. Dissemination of the information through social media enables the actors to form leaderless movements (Chatfield et. al, 2012) which is associated with

the spontaneous and homogeneous nature of the social media communication (Marzouki et. al, 2012). The leaderless and homogenous nature of the movement enable the movements to transgress social and cultural boundaries, social hierarchy structures, and it creates “informal economies and communicative networks” (Wasserman, 2011).

Thirdly, authors argue that the Internet creates distinctive languages, narratives and a *global communication space* “in which different publics were strategically addressed through a variety of languages” (Poell and Darmoni, 2012, p.28). According to Jurgenson (2012, p. 83). The new public space created by the dissemination of the ICTs creates an *augmented reality* which links “the power of the digital—creating and disseminating networked information—with the power of the physical—occupying geographic space with flesh-and-blood bodies”. The language discussion is particularly important when social media and mass media are compared as the new narratives of the social media can easily shape the political debate, as opposed to the mainstream media or government manipulation. This is very well demonstrated by Philip Howard and M. M. Hussain (2011). In their research, the authors present evidence that a spike in revolutionary conversations on digital platforms often preceded the major events on the ground, and the agenda setting nature of the social media played an important role in the Arab spring.

Lastly, some authors claim that the Internet changed the power structures of collective action as due to the impressive speed, effectiveness, and scale of the movements (e.g. Tudoroiu, 2014; Jurgenson, 2012). All the research examined here clearly illustrates that the ICTs can be considered as a *relational good* which facilitates collective action, and obviates the *free rider problem* (Uhlaner, 2015).

Having reviewed the existing literature, one can argue that the Internet has the potential to democratize countries. It can encourage people to participate more, and give tools to the groups who may not be able to raise their voices efficiently in the traditional structures. However, the aforementioned studies do not discuss if the tools have actually been effective, or if there are any barricades before their utilization.

### **b) Negative**

Today, the Arab Spring, which has been the main event that led to positive perception of the Internet has mostly failed, as well as the Color Revolutions. For example, Egypt experienced a coup d'état, Yemen and Syria are still in a civil war, and Ukraine's Orange Revolution has failed. While Tunisia is the only exception as the revolution is considered to be successful (Brym and Andersen, 2016; Ghannouchi, 2016), the number of successful movements is not as high as it would be expected due to the glorification of social media. Therefore, to consider the ICTs as a benign phenomenon in transformation of regimes would be a narrow understanding of the literature. Indeed, investigating political change, one would be more skeptical on the diffusion of the Internet.

The first aspect that is discussed by the scholars is the causality between the ICT use and political change (e.g. Rane and Salem, 2012; Comunello and Anzera, 2012). Rane and Salem (2012) claim that, parallel to the literature already reviewed, utilization of the Internet facilitates collective action. However, this does not mean a causal relationship between the Internet use, and success of the movement. Instead, the authors argue that success largely depends on domestic and geopolitical contexts, and there is no direct correlation between diffusion of the Internet, and democratic revolutions.

The second main argument is the focus on the mass media (e.g. Alterman, 2011; Comunello and Anzera, 2012; Aouragh and Alexander, 2011). According to these authors, the research amplifying the social media's role in dissemination of information overlooks the role of mass media, which has access to nearly every household. This is mostly because of the ubiquitous nature of television, and even if mass media is not *sexy enough* for the western audiences, it is still one of the main determinants of collective action (Alterman, 2011). This argument is rigorously examined by Wilson and Dunn (2011) in a study that they found no empirical evidence showing that the social media was central to protestors' organization and communication.

The third main point is *slacktivism*. Slacktivism can be best defined as "feel-good activism" that does not lead to any real world impact. According to David M. Cook et. al (2014), social media tolerates slacktivism. The authors elaborate on the fake, automated, and non-genuine accounts on Twitter which hinder the possibility of a reliable evaluation of the impacts of the social media by creating auto-narratives. As there is no strong public outcry against such narratives, slacktivism appears to be an accepted element in the new media. The second potential impact of slacktivism is that individuals may simply prefer not to go out and take action for a cause because they have already let go of their grievances (Bond et al., 2012).

The fourth criticism on social media is the vulnerability to government manipulation (Tufekci, 2014; Morozov, 2012). Governments increasingly restrict the Internet access every year (Freedom House, 2016). The manipulation by the governments can be in the forms of bans on certain content or websites, creation of fake information sources, and intimidating the users by oppressing people from the opposition who are active on the Internet. While the number of

people who have access to the Internet is increasing in every country of the sample, this increase is not access to a completely free Internet. This is one of the limitations of the statistical model of this paper, as the ways that people use the Internet can be manipulated by the governments, which creates an endogeneity problem. While this research tries to overcome this problem via using an appropriate research model, the issue should still be under scrutiny.

Lastly, Zeynep Tufekci (2014) claim that the Internet leads to polarization. As the individuals have access to different sets of information that they follow on various platforms, they see dramatically different comments and arguments than the people who do not think alike. While this would be a valid criticism for mass media as well, the number of sources of information on social media and mass media cannot be compared. Furthermore, it is easier on the Internet to create social bubbles that one does not see any other ideas.

Although there is research going back to mid-2000s discussing the new role of the ICTs on social movements in mobilizing people, and shaping the language of the occasion (e.g. Kelly Garrett, 2006), the Arab Spring sparked a much bigger interest on the studies of ICTs and collective action. Most of the discussions that have been reviewed so far quote the Arab Spring, while some of them specifically examine the revolutions.

The existing literature on the negative impacts of the Internet leads me to hypothesize that the higher uses of the Internet is correlated with declining democracy. Slacktivism, government manipulation, and polarization can lead to worsening democracies.

Having reviewed some of the works, it is easy to see that there are two sides of the story of ICTs. Therefore, the impact of the Internet on democracy levels remains ambiguous, even if there are assumed benefits in terms of communication. It is important to note that most of the



works do not use quantitative methods, and the evidence is mostly anecdotal. While some authors use data analysis to show that the ICTs facilitated communication (e.g. Howard et. al, 2011), the quantitative studies do not analyze the cross-country impact of the Internet on democracy levels over the last two decades. This paper scrutinizes the puzzle whether the higher uses of the Internet is correlated with improvements in democracy levels. This study is a multi-method analysis.

## **B. Data**

The sample of the data analysis consists of 145 countries from all income levels, and the time span covers from 1986 to 2016. The countries that are not included in the research are dropped mainly due to missing data.

### **B.i. Internet Use and Economic Indicators**

To measure Internet use, this paper uses World Bank Data (2016) on Internet penetration. The Internet penetration data ranges between 0 and 100 Internet users out of a hundred. The World Bank also presents time-series data for economic indicators. The World Bank Data also provides insight on the countries' income levels, and this classification (High income, upper middle income, lower middle income, low income) is used to analyze different set of countries.

### **B.ii. Democracy Indicators**

V-Dem (2016) presents the indication of democracy in a systematic manner, aligned with this research's purposes. V-Dem has different indexes of democracy such as democracy as a whole including electoral, liberal, or egalitarian aspects of democracy, or separate indexes of democracy that allow users to analyze these domains separately. This study uses polyarchy,

electoral democracy, liberal democracy, and egalitarian democracy indexes, which respectively capture the democracies in their fullest sense, electoral aspects, liberal aspects, and egalitarian aspects of democracies (Coppedge et. al, 2015). The polyarchy index takes into account extensive suffrage, freedom of political and civil society organizations, free and fair elections, free media, freedom of expression. The electoral index focuses on free civil and political organizations, free and fair elections, and the potential of elections to replace the incumbents. The liberal democracy index focuses on the ideal of liberal democracy by looking at civil liberties, constitutional protections, strength of rule of law, independence of the judiciary, and separation of powers. Lastly, the egalitarian index examines the ideal of egalitarian democracy by analyzing equal protection of rights and freedoms, and fair distribution of resources amongst different social groups. The values of all indexes range between 0 (lowest) and 1 (highest). This paper looks at four different domains of democracy as it is not sufficient to look at only one of them. The literature on collective action claims that the heterogeneous mobilization of new social movements aims to ameliorate not only materialistic qualities, but also human and social rights conditions related to group identities such as women, immigrants, and minorities or related to certain cause issues such as nuclear energy and environmental protection, and could lead to higher levels of democracy (Habermas, 1981; Gusfield, 2009; Offe, 1985; Bennett and Segerberg, 2012).

### **C. Model**

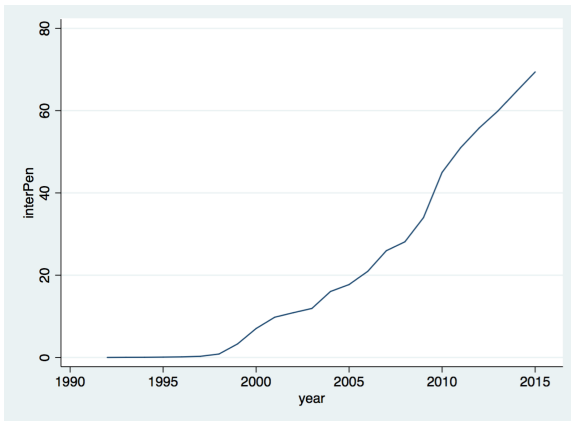
The dependent variable of this study is the measurement of democracy provided by the VDEM. The independent variable I use is the level of Internet use in percentage points. This research uses an instrumental variable approach, as OLS is not sufficient studying the concepts in

this study. While there are multiple factors impacting democratization, it is difficult to control for all of them. Furthermore, democratization can be a factor explaining the penetration of the Internet. Indeed, the elbow years are functions of policies (e.g. Petrazzini and Guerrero, 2000; Beilock and Dimitrova, 2003; Lee, O’Keefe, and Yun, 2003) and therefore they are not completely exogenous as the governments could anticipate the potential impacts. The diffusion of the Internet is not a random development in technology, or any conditions, but it is mostly privatization, and investment in infrastructure. Considering that more democratic countries initiated the changes in the Internet earlier than the others, mostly related with their economic well being, levels of democracy also have an impact on the Internet use.

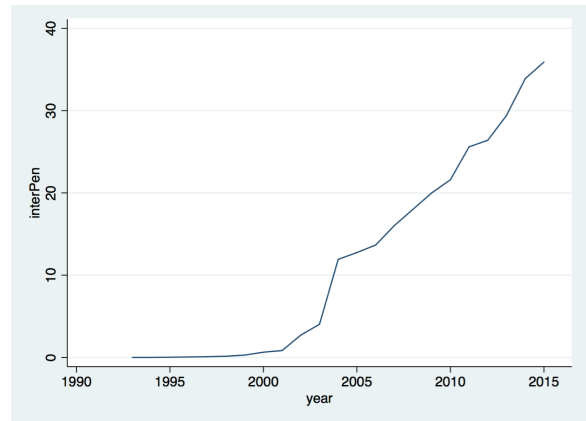
To mitigate this problem, I use instrumental variable (IV) models with country and year fixed effects. Fixed effects provide controls for differences across countries and years in observable and unobservable predictors. It gives the within-year and within-country trends (Plumper and Troeger, 2007), and therefore provides better global trend estimates. The IV model is required due to two main reasons. Firstly, instrumental variable analysis addresses endogeneity concerns, as the dependent variable may have impacts on the independent variables. Secondly, it is nearly impossible to control for every factor impacting collective action and democratization, which would lead to an omitted variable bias. However, the IV methods curb the partial or incomplete random assignment (Angrist and Pischke, 2014), and the instruments break the correlation between the covariates and the unobserved variables, yielding consistent estimates (Sovey and Green, 2011). The paper uses 2SLS estimates as they control for covariates and mitigate the omitted variable bias resulted by imperfect instruments (Angrist and Pischke, 2014). A potential problem in an IV analysis is that the IV methods discard all the variation in the

outcome except the variation generated by the instruments, and this may lead to too little variation for statistically conclusive findings (Angrist and Pischke, 2014). To overcome this problem, the research pools the two instruments generating similar outcomes used in this research and explained below, as this process creates more precise results (Angrist and Pischke, 2014).

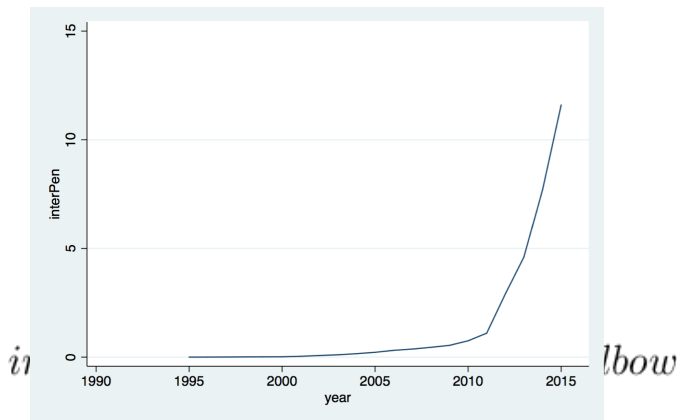
The endogenous variable of the IV regression is the level of Internet penetration. The instruments are the `elbow_year`, `centered_year`, the interaction of these two variables. As stated, elbows are not completely exogenous of the dependent variable. However, they are exogenous within countries, because the year of the diffusion of the Internet is different in every country. While democracy levels impact when was the year of change in the diffusion of the Internet, this is independent of the Internet's impact in each country. Additional controls are the dummy year and country variables for the fixed effects. `Elbow_year` is a dummy variable that takes the value 0 before the Internet use hiked drastically, and the value 1 after. `Centered_year` is a version of the `elbow_year` that is centered on the year of change. The year of hikes is assumed to be independent of the error terms for the outcomes (democracy indexes) whereas they are strongly correlated with the level of Internet use, as expected.



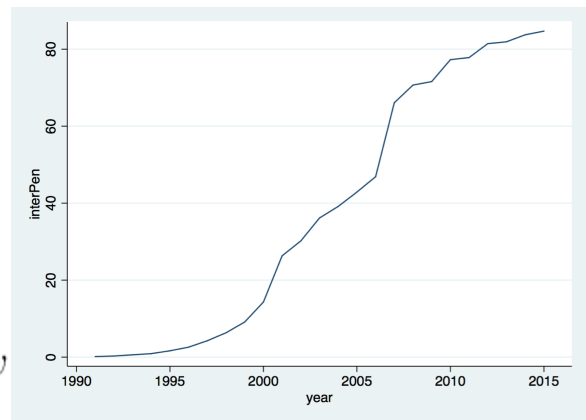
Argentina



Egypt



Ethiopia



France

Illustrations of elbow\_year variable

### C.i. Equations

All the regressions also include country fixed effects and year fixed effects as country and year dummies. All regressions are clustered for countries.

**The first stage regression model is:**

$$AdditiveDemocracy_{ct} = \delta_0 + \delta_1 inter\hat{Pen}_{ct} + \eta_{ct}$$

In this model, interPen denotes the level of Internet penetration. C and t denote country and year, respectively. Elbow and centered variables are the elbow\_year and centered\_year variables explained above.

The first stage regression results show that the instruments are statistically significantly correlated with the independent variable of this research. As an IV approach's requirement, the instruments are exogenous with the dependent variable. While the elbows determine the change in the Internet use, they do not impact the democracy levels. Therefore, the instruments are valid.

**The IV analysis equation on democratic change are:**

$$AdditiveDemocracy_{ct} = \delta_0 + \delta_1 inter\hat{Pen}_{ct} + \eta_{ct}$$

Additive democracy denotes the main democracy index that is used in this paper, which includes, but not limited to, the liberal, electoral, egalitarian, and civil liberty democracy indexes. As a component of an IV analysis, the model on the democracy index uses the predicted values of the Internet penetration as its independent variable.

### D. Results

### D.i.a. First Stage Regression: Instruments on Internet Penetration

Table 1: IV Analysis First Stage

	(1)
	<b>interPen</b>
elbow	-1.046
	(1.379)
<b>elbowXcent~r</b>	<b>3.707***</b>
	<b>(0.367)</b>
centered_y~r	2.054***
	(0.186)
N	3969
Standard errors in parentheses	* p<0.05, ** p<0.01, *** p<0.001

Table 1 presents the results of the first stage regression of the IV analysis. As stated under Section C, this research pools the instruments to overcome the probability of too little variation for statistically conclusive findings. The first stage regression shows that the interaction term of the instruments is significantly correlated with Internet penetration. Therefore, the instruments are valid, and the predicted values of the first stage regression can be used in the second stage regressions.

### D.ii.a. Democracy Indices

Table 2: Global Anti-Democratic Trends

	Only year trends	Country and year trends
	b/se	b/se
<b>interPen</b>	<b>-0.0033***</b>	<b>-0.0034***</b>
<b>s.e.</b>	(0.0006)	(0.0004)
<b>constant</b>	0.7591***	0.4286***
<b>s.e.</b>	(0.02)	(0.0042)
<b>R-sqr</b>	0.0913	0.8387
<b>* p&lt;0.05,</b>	<b>**p&lt;0.01,</b>	<b>***p&lt;0.001</b>

Table 2 shows the results of the impact of Internet penetration on the additive polyarchy index. The V-Dem codebook (Coppedge et. al, 2015) defines additive polyarchy as democracy in its fullest sense, taking into account the liberal, electoral, egalitarian, and civil freedom aspects. The 2SLS estimates indicate that one more Internet user out of a hundred is significantly correlated with a 0.0034 unit decrease in additive democracy index. While the first column only takes the year trends into account, the second column also takes country trends by using country fixed effects. The results are highly statistically significant and striking as they show that a highly celebrated phenomenon, the Internet, is actually leading to worsening democracy levels.

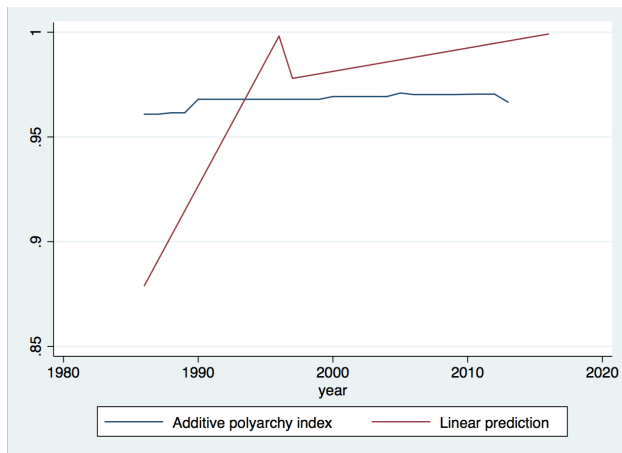
To show that the estimates not impacted by extreme values of a certain subset of the additive democracy index, Table 3 presents the 2SLS estimates on different indexes of democracy. As expected, the negative trend can be observable in all domains, and all the impacts are low to moderate impacts. It is important to note that the 2SLS estimate on freedom of



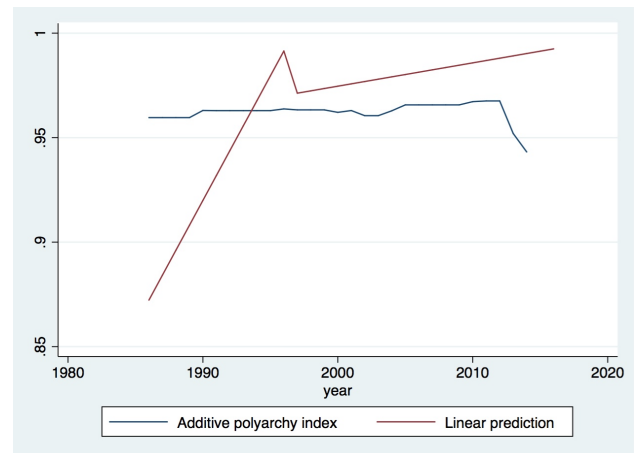
Table 3: Anti-Democratic Trends on different scales of democracy.

	(2)	(3)	(4)	(5)
	<b>Liberal Democracy</b>	<b>Electoral Democracy</b>	<b>Freedom of Expression</b>	<b>Additive Democracy</b>
<b>InterPen</b>	-0.0019***	-0.0028***	-0.0047***	-0.0034***
	(0.0004)	(0.0004)	(0.0006)	(0.0004)
<b>N</b>	4129	4129	4144	4129
<b>Standard errors in parentheses</b>	* p<0.05, ** p<0.01, *** p<0.001			

expression is larger compared to the others. In contrast to liberating, the new forms of online harassment, propaganda, surveillance, control of online resources, use of technology to outsmart protesters may yield to declines in personal freedoms such as freedom of expression (Morozov, 2012).



Norway



Australia

### D.ii.a.x Different Income Levels

Another measure to observe variation in the sample is the income levels of countries. The sample is divided into four income levels, using the World Bank measures. These levels are: High income, upper middle income, lower middle income, and low income. This analysis originates from the little change observed in high income level countries' democracy levels, as illustrated in the graphs above. In the graphs, the "linear prediction" line illustrates the "elbows" in the Internet penetration variable of the IV analysis. The graphs do not present any major change over years that is impacted by the diffusion of the Internet. As nearly all of the high

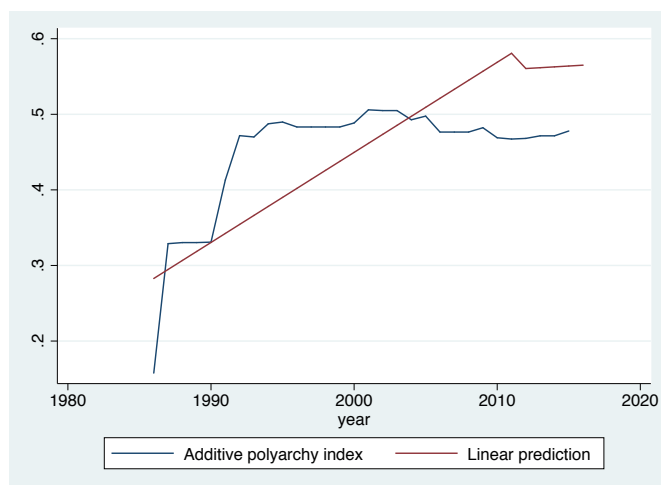
Table 4

	(1)	(2)	(3)	(4)	(5)
	<b>Global</b>	<b>Low income</b>	<b>Lower-middle</b>	<b>Upper-middle</b>	<b>High income</b>
<b>interPen</b>	-0.0034***	-0.0222**	-0.0051**	-0.0050***	-0.0022
<b>s.e.</b>	(0.0004)	(0.0072)	(0.0019)	(0.0014)	(0.0012)
<b>N</b>	4129	656	1164	1260	1049
	<b>Standard errors in parentheses</b>	* p<0.05, **p<0.01, ***p<0.001			

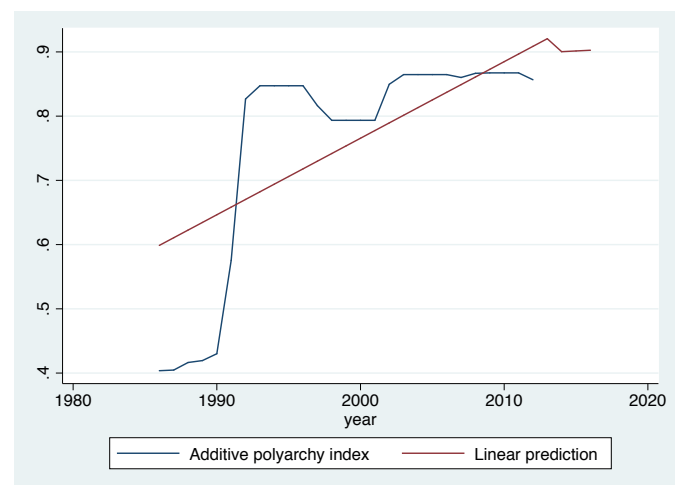
income cases in the sample exhibit the same style of graphs, this research tests if different income groups present various trends in democratic change.

The results in Table 4 show that there is no statistically significant correlation between the levels of Internet use and democracy levels in high income countries, parallel to what the graphs illustrated. However, the variation that they provide benefits the research to have more reliable estimates and standard errors on global trends.

Another interesting trend that can be observed in Table 4 is that the trend in low income countries is much stronger than any other trend in the study. One potential explanation to this discrepancy can be the late developments of the Internet in low income countries. While most of *elbows* in the study range from 1996 to 2004, some of the *elbows* for low income countries are as late as 2010s. Therefore, the short amount of period may not be sufficient to provide precise estimates. The endogeneity problem can be an alternative explanation as when the Internet started to be widespread in low income countries.



Ethiopia

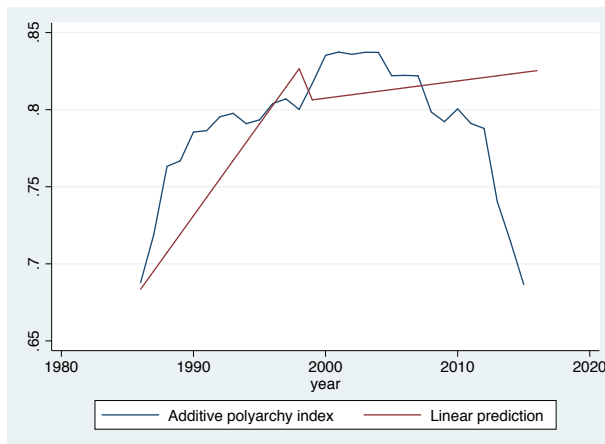


Mali

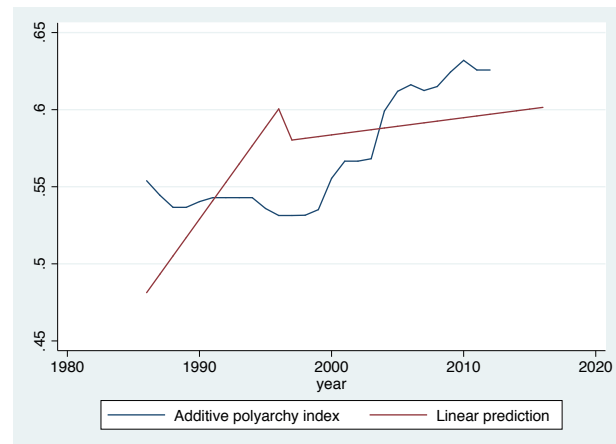
Graphs to illustrate late diffusion of the Internet

The governments were already aware of the potential dangers of ICTs, and therefore they might take necessary precautions that are indicated by Morozov (2012). Thirdly, the impacts of the disturbance term seem to be much higher in low income countries as the trends in democracy levels differ significantly over time in many low income cases. Last, the level of Internet penetration is much smaller compared to the other countries. While a future case study might be benevolent to explain the heteroskedasticity, lack of data and literature might be challenging for such research.

## E. Case Studies



**Turkey**



**Malaysia**

## Graphs of the Case Studies

This paper uses a multi-method analysis outlined by Lieberman's (2005) *Nested Analysis* approach which suggest researchers to select two cases deliberately to analyze the issue in detail to find confirmative or counter evidence. Although the *Nested Analysis* suggests to select two cases on the line to verify the findings when the results are robust, I rather use a *model building small-N study (Mb-SNA)* approach as this approach may lead me to discover different controls

Table 5: Trends for Turkey and Malaysia

	(1)	(2)
	Turkey - Democracy	Malaysia - Democracy
<b>InterPen</b>	-0.0047***	0.0021***
	(0.0006)	(0.0002)
<b>N</b>	30	27
<b>Standard errors in parentheses</b>	* p<0.05, ** p<0.01, *** p<0.001	

that can strengthen the model, or lead me to build a new model. Moreover, I would like to underline that this research's focus is on no causal relationship between higher Internet use and higher democracy levels. Therefore, even if this study's estimates are robust and satisfactory, the reasoning behind the model demonstrates “no” correlation. Thus, a Mb-SNA analysis fits to this research better than a model testing small-N analysis (Mt-SNA). I would like to use the Mb-SNA analysis to reveal, if any, missing factors that could lead me to find contrary results in the data analysis.

These cases are selected by firstly looking at their graphs. The first case study is Turkey, where experienced a large decline in democracy levels after the diffusion of the Internet. The second case study is Malaysia, where democracy levels became better just after the diffusion of the internet.

The “Linear prediction” line in the graphs demonstrate the Internet trend variable and the elbow point is at 1998 for both countries. The additive democracy index is the index used in the main regression findings of this study. The graphs and the data results in Table 5 clearly illustrate that the changes in democracy levels coincide with the increasing levels of public use of the

Internet. While Turkey experienced an anti-democratic turn, Malaysia managed to go higher on the democracy scale. Both countries are classified as upper-middle income countries by the World Bank, and they are predominantly muslim countries with similar democracy scores, therefore the disturbance originating from different income and development levels should be minimum.

### **E.i. Turkey**

If one starts investigating the anti-democratic turn in Turkey after the diffusion of the Internet, this person looks at the party and the leader that have been governing the country since 2002: The Justice and Development Party (AKP). The party was founded in 2001, and it has been the majority party in the parliament, excluding a brief three month period in summer-2015 ended with the November 1 2015 re-elections, which granted parliamentary majority to the party once more. This case study investigates that whether the Internet has an impact on the decrease in democracy levels in Turkey.

The election of the AKP in 2002 sparked hopes for some (e.g. Insel, 2003) for Turkey to achieve better democratic conditions after a period of state-focused authoritarian practices with military tutelage as the center of the regime. The state was a sacred phenomenon. The AKP's election to the parliament was a challenge to the sacredness of the state, as the AKP revealed itself as a conservative-democratic political movement, which antipodes the Kemalist agenda of the military. The AKP was the antithesis of a secular statist and its nationalist agenda with very low tolerance to religion, what the Turkish state pushed for decades. The AKP managed to present itself as a center-right party with progressive policies as a faction in the party realized "relying essentially on hard-core Islamist votes would condemn the party forever to a minority

(if not a minor party) status—hence, the AKP’s effort to broaden its appeal to the centre-right of the political spectrum. This new approach has contributed significantly to diminishing the importance of the secularist–Islamist cleavage in Turkish politics” (Ozbudun, 2006, p.555).

The AKP pursued a more populist, market oriented, and a pro-Western agenda during its first years (Dagi, 2008), which induced the democratic reforms (Onis and Yilmaz, 2009). The AKP managed to eliminate the military tutelage, and defended policies that would provide better equality for the people living in Turkey. While these policies mostly focused on the religious experiences which had been oppressed before 2002, the reforms did not indicate any proclivity for an Islamist transition. However, a decade later, there has been dramatic changes in the AKP’s political career: an authoritarian - majoritarian turn. Onis (2013; 2015), who approached the issue more optimistically in 2009, argues that “the changing domestic and external context seems to have resulted in a shift in the AKP’s understanding of “globalism” to a more Asian style “globalism”” (p. 113). He continues: “What is central in the context of the present essay is that the very rise of the AKP from the periphery of Turkish politics to a dominant, hegemonic position in its very center has created a highly unbalanced and lop-sided political structure.” (p.113). Therefore, the disproportional electoral outcomes resulted in nothing but another party exhibiting authoritarian behavior in Turkish politics.

The AKP did not achieve its electoral success through anti-democratic experiences. The AKP’s extraordinary electoral success is due to several domestic and external developments such as the weakening of the military’s role in politics, economic growth, inefficient leftist or rightist strong opposition (Taskin, 2008), clientelistic judicial ties along with the politicization of the judiciary, domination of media, and the Euro-crisis. However, as the AKP’s domination became

clear, the party started to exhibit behaviors associated with competitive-authoritarian regimes such as media oppression, unfair treatment of opposition parties, use of state resources in favor of the incumbents, which ensured their electoral gains. Today, it does not seem that Turkey will be in the route of democratization especially in the midst of the discussions on a new political system that would make the President Recep Tayyip Erdogan, who is the de-facto leader of the AKP and the founder of the AKP, only executive branch in the country with excessive appointment powers on the judiciary. The authoritarian practices of the AKP government mostly aim guaranteeing its electoral domination.

Reviewing the literature on democratic change in Turkey, one should notice that the discussion barely includes the role of the Internet. While some (e.g. Kaya and Cakmur, 2011; Corke et. al, 2014; Akser and Baybars-Hawks, 2012) discussed the role of the mass media in Turkish politics, and generally concluded that the mass media has been marked by a high degree of political parallelism which indicated that many media outlets are government dependent, social media and the Internet had been barely examined before the month-long, countrywide uprisings in June 2013, called the Gezi Uprisings. Parallel to the Arab Spring literature, reflections on social media activism surged after the mass movements (Tugal, 2013; Demirhan, 2014; Kuymulu, 2013; Hacıyakupoglu and Zhang, 2015; Gole, 2013). The literature widely discusses the communicative aspect of social media, and the discussions are similar to the works reviewed so far. For example, Tugal (2013) elaborates on the participatory aspect and the identity of the uprising, and lastly, Gole (2013) treats the social media as a new source of information. Clearly, the uprisings contributed to the perception of the ICTs as a benign phenomenon. However, there is no indication of improving democratic conditions in none of the works.



In contrast, one can easily observe the anti-democratic patterns that Morozov (2012) illustrates: new forms of online harassment, propaganda, surveillance, control of online resources, use of tech to outsmart protesters, and post-protest clean up with emerging technology. In 2008, Turkey passed a law on Internet censorship, which authorized a regulator agency to ban websites that are not obeying the laws, or the crimes outlined by the law. By 2015, 80,000 websites had already been banned (Akgul and Kirlidog, 2015). When I examine the practices after the 2008 law, I observe the practices outlined by Morozov (2013). Firstly, as a form of online harassment and propaganda, Duygu Ozsoy (2015, p. 535) claims that the online trolls invoke “social fear of returning to the pre- republic religious and traditional values”. The use of trolls by the government is not refuted by the government party, but in contrast, the AKP announced that they would train 6,000 social media army to defend the party’s interest on the Internet (Kayaoglu, 2013). Secondly, subjects of the Turkish government experience severe surveillance. By 2016, there had been launched more than 2,000 lawsuits against people who were claimed to be insulting President Recep Tayyip Erdogan online (RT, 2016). Thirdly, the AKP exercises its control over online resources by banning and restricting access. Freedom House (2016) classified Turkey’s Internet access as “not free”, and Turkey’s online freedom score has been declining from 45 to 61 since 2011, while 0 is the most free, and 100 is the least free. Freedom House points out that the Internet access in certain areas in the Southeast Region of Turkey that experience police raids were repeatedly suspended. Social media websites such as Twitter, Facebook, and Youtube were temporarily banned in a number of occasions - most of which were right after an unpopular event occurring in the country -. The restrictions on social media is not limited to that, as Turkey accounts for the 90% of all content that was restricted on

Table 6

<b>Turkey</b>	(1)	(2)
	Freedom of Expression	Additive Democracy
<b>InterPen</b>	-0.00907***	-0.00469***
	(0.00088)	(0.00059)
<b>N</b>	30	30
<b>Standard errors in parentheses</b>	* p<0.05, ** p<0.01, *** p<0.001	

Twitter. Lastly, Turkey has the highest number of arrested journalists in the world (81 journalists in 2016, while the second highest is China with 38 journalists: Committee to Protect Journalists, 2017).

The negative impacts of the Internet is not only correlated with government's prohibitions. In line with Tufekci (2014), this research questions the cooperative aspect of the Internet. The Turkish does not present any cooperation or unification, but rather the Internet contributes to the polarization within society. The electoral dominance of the AKP brought its strong divisions between the supporters and the opponents, and therefore, the interaction between the two groups of the population is not high. The low interaction causes the groups to access strikingly different sets of information, leading to polarization. Tolga Yazici (2014) presents various examples to show that how the Internet use in Turkey is abused, and the social structure is polarized. His research clearly shows that the strikingly different sets of online information led the society to blame each other.

All in all, the discussion of the ICTs and the level of democracy in the literature do not present any contrary evidence. While Turkey experienced a brief period of democratization after

the election of the AKP, it is clear that the regime has taken measures to prevent potential positive effects of the Internet, and the Internet use in the country resulted in more slacktivism and polarization. The AKP government took the potential risks of the Internet very seriously, and took measures against Internet freedom to be able to protect its electoral dominance. Turkey's interventions in the Internet freedom can be one of the explanations in the decline of democracy levels, as one of the variables in the V-Dem index (Coppedge et. al, 2015) is the Internet freedom, and it is particularly strong on the freedom of expression index.

The qualitative analysis of Turkey yields no contrary findings to the data analysis. To test some highlights of the Turkey case study, this research runs the data analysis on Turkey's freedom of expression index separately, and the findings show that the decline in the freedom of expression index is nearly the double of the overall decrease in the democracy levels. However, the V-DEM codebook (Coppedge et. al, 2015) indicates that the freedom of expression index only accounts for the 1/4 of the additive democracy index, meaning that there are declines in indexes of other domains of democracy.

It is also important to note that Turkey is a case reflecting the endogeneity of the Internet and the democracy levels. While this research analyzes the impact of the Internet on democracy levels, Turkey shows that the anti-democratic experiences also impact the levels of Internet freedom. While this research tries to overcome this problem by using an instrumental variable method, the endogeneity should still be kept in mind. It is also important to note that the independent variable of this research is not the Internet freedom, but the number of people using the Internet, which is not a component of the democracy indexes.

#### **E.ii: Malaysia:**

“We didn't think it was important. It was a serious misjudgment. We thought that the newspapers, the print media, the television were important, but young people were looking at the text messages and blogs” (New Straits Times, 2008). This is the statement of the former Prime Minister of Malaysia, Abdullah Ahmad Badawi after winning the elections in 2008, but losing 12.51% of the votes, and losing its 40 year-long monopoly on Malaysian politics.

Malaysia is an interesting case in the studies of democratization, as well as Singapore, as these two countries are the two countries that “developed over a long period, became wealthy, and remained dictatorships until now.” (Przeworski and Limongi, 1997). Although the country has progressed, and characterized as a *competitive authoritarian* regime (Levitsky and Way, 2010), Malaysia is still not a perfect democracy. However, the data analysis shows that Malaysia has been experiencing an increase in its democracy levels since the hike in the use of the Internet. Although Sani (2008) discussed the existing problems of the Malaysian political system, the following analysis shows that there is a trend towards democratization in Malaysia. This case study analysis tries to elaborate on the Malaysian experience that is contrary to the global trend, and aims to find, if any, additional variables that could potentially lead to a change in the statistical model to present different results.

According to Ufen (2009), the competitive authoritarian electoral regime started to be under pressure after the 1998 Asian financial crisis. The oppression helped the ethnically fragmented opposition parties to broaden their base by becoming representative for all alienated groups (Case, 2010), enabling them to challenge the incumbent political leaders. While the electoral challenge was already observable in 2004 (Case, 2004), the 2008 elections have been seen as a turning point by the literature (Mohamad, 2008; Moten, 2009; Azizuddin and Sani,

2009). Although Sani (2008) discussed the existing problems of the Malaysian political system, the literature seems to agree on the point that there is a trend towards democratization in Malaysia.

There are multiple factors leading to expansion of rights and freedoms, and more electoral competition. According to Ufen (2009), Malaysian government and economy had been subject to clientelistic relations, and the patronage helped the government to keep the country in a non-crisis environment during the 1998 Asian Economic Crisis. Furthermore, the harsh response by the government towards any protestors, and imprisonment of the oppositional leaders kept the opposition fragmented and prevented any multi-ethnic party in electoral competition, which consolidated the government party's domination over politics for the time period. However, the clientelistic and authoritarian response seems to backlashed in 2000s due to two reasons. Firstly, people experienced an *everyday insecurity* (Mohamad, 2008) as the costs of living were going up, the economic situation was not shining anymore. People believed corruption was one of the main problems leading to the economic difficulties. Secondly, when Anwar Ibrahim, a figure from the opposition, was released from prison, he managed to unify the multi-ethnic opposition and masses that were alienated by the same political system that imprisoned him, and oppressed their movement (Case, 2010). The opposition could create a balanced, multi-cultural image that not only appealed to certain ethnic groups, but also appealed to tactical voters, and acted as a rainbow coalition of democrats, liberals, Islamists that failed to upset the incumbent party in 1999 elections (Mohamad, 2008) As Surain Subramaniam (2011, p. 49) analyzes the issue, there is now a "higher level of voter choice differentiation", especially for the non-Malay. In addition, the empowerment of the opposition parties enabled the parties to be

in charge in some of the federal states, which in turn enable them to establish the “necessary levels of institutional density to create sufficient amounts of institutional capital among themselves to govern effectively.”

Investigating the role of the Internet, one should first signify the Malaysian government’s free Internet initiative to promote Multimedia Super Corridor (MSC) Malaysia special economic zone and a high-technology business district, competing with its regional rival Singapore. This program was inaugurated with the proposition that the Internet would not be subject to censorship in 1996 by the Prime Minister of the time, and it aimed to establish a knowledge-based society with aims of transforming Malaysia into a modern state by 2020 (Jeong, 2007). Although the pledge had been implemented until 2015, and no political content had been systematically targeted, the regulatory agencies started to block access to political and international content (Freedom House, 2016). Nevertheless, the Internet access in Malaysia remained free throughout the period of improved democratic conditions.

In this relatively free online environment, the role of ICTs in democratic change has been one of the subjects examined by the literature. The literature mostly focuses on the Internet’s role in the unification the opposition as an effective tool, and creating an *optimal multi-ethnic coalition* (Moten, 2009; Abbott, 2001; Ufen, 2009; Subramaniam, 2011). Unlike the mass media in Malaysia, the opposition could find a space to appeal to the voters, and construct a *optimum multiethnic consensus*, which Mohamad (2008) identifies as a necessary character for the opposition to deny the 2/3rd majority of the incumbent party (Mohamad, 2008). As Subramaniam (2011) points out, operation of the opposition was not a hidden transcript of the certain ethnic groups, but rather they embraced the role of democracy advocates through the act

of sharing their ideas, which led to the citizens to engage with the political cycle more, and therefore increased the turnout. The opposition could use the Internet to disseminate daily news, self authored opinion pieces, regular campaign updates, and so-called intelligence information to shake the authority of the incumbents (Mohamad, 2008). Moreover, the Internet helped the opposition to cut the costs as the opposition could do their propaganda online instead of using the expensive that was already controlled by the incumbents. Therefore, the Internet played out as a valuable tool in an environment that the opposition had been systematically denied to access to mass media. These impacts of the Internet and the new civil society pushed the democratization, that had been occurring gradually, to gain a momentum by pushing and challenging the existing political and institutional barriers that provided privileges to the elites (Ufen, 2009; Subramaniam, 2011).

### **E.iii. Case Findings**

The Turkey and Malaysia case studies do not present contrary findings to the data analysis. The Turkish case is a clear demonstration of how the Internet can lead to negative outcomes. The literature shows that the potential positive communicative impacts of the Internet were alleviated by the government. On the contrary, the subsets of information accessed by different groups in the society have appeared to be strikingly different, which contributed to the polarization in Turkish society. The AKP's actions not only barricade the potential for an Internet based democratization, but it also directly causes Turkey to have lower democracy scores as the

Internet freedom is one of the factors that the researchers take into account during the coding process (Coppedge et. al, 2015).

However, the Turkish case also reflect the endogeneity of the variables in this research. The Internet and democracy in Turkey clearly reflect that the government imposed regulations is causally correlated with declining democracy levels. This study treats the diffusion of the Internet as a random factor by using the *elbow\_year* variable; however, higher penetration of the Internet does not mean higher access to the means that the Internet provide. On the other hand, there is no indication that the Turkish government had planned to implement these policies before the *elbow* year of 1998. Moreover, the measure of the Internet use does not take the Internet freedom into account, which minimizes the impact of endogeneity. However, the elbow variable would not be a good instrument if the Internet use started to increase when the governments had already planned how to regulate and restrict the Internet access.

On the other hand, Malaysia presents a case that the diffusion of the Internet did contribute to the increases in democracy scores. However, the case study reveals that the Internet is not a direct factor on better democracy scores. Instead, it relies on two main conditions: Firstly, the government's pledge to the freedom of the Internet. As the discussion presents, the Internet's role has facilitated the opposition's empowerment through freedom it provided. The second condition is the necessary social and economic conditions. While the opposition was mistreated, the economy did not perform well either. Therefore, the Internet acted as a catalyzer in strengthening the opposition. The two prerequisites for the Internet's impact demonstrate that the Internet itself does not causally lead to better democracy scores, but it may provide benefits to a movement under necessary conditions.



## F. Limitations

The first limitation is the endogeneity problem, which is mitigated by the instrumental variable approach. Besides the statistical model, it is plausible to claim that the predictions on the impacts of the Internet were much more vague when the governments or the private sector initiated the investments on the Internet, and therefore our instruments introduce a level of randomness into the analysis. However, if such a change were to occur now or in the future in any of the cases, this might create significant endogeneity problems. The case studies illustrate the endogeneity problem. Both studies do not present any finding demonstrating the governments' perceptions of the impacts of the Internet when the Internet started to become commonly used in Malaysia and Turkey. On the contrary, a *competitive authoritarian* state, Malaysia, could not anticipate the potential problems that can be caused by the Internet, and initiated the free Internet, which empowered the opposition movement. Therefore, it is reasonable to claim that the *elbow* variable still remains random and exogenous to the democracy levels, although one should be aware of such endogeneity question.

The second limitation of the model is the heteroskedasticity between different income groups. The data clearly shows that the variance caused by the error term is different on low income countries compared to the others. While the difference is not as big, there still appears some heteroskedasticity between middle income countries and higher income countries. Therefore, I clustered the IV regressions for countries. In both clustered and non-clustered regressions, the estimates are statistically significant at the 99% significance level, albeit the Z-scores of the clustered regressions are smaller than the non-clustered regressions. While I

initially planned to include an additional case study on a low-income country, the late diffusion of the Internet makes it harder to evaluate the impacts, and to conduct a case study. The late development can be the reason of dramatically different results, albeit more consistent results can be obtained in the future.

Lastly, it is important to note that the Internet freedom is not a component of the independent variables and the instruments. The additive democracy index takes the Internet freedom into account; however, this research and the instruments of the data analysis mostly focus on the levels of Internet users.

### **Discussion:**

In every country, ICT use has been increasing continuously. Moreover, the new technological developments facilitate the accessibility of ICTs, making them cheaper and more widespread. While these findings do not indicate a positive correlation between the Internet use and democracy levels, shall we be pessimistic with regards to the future? This is a difficult question to answer. However, even the authors that are favorable towards the use of the Internet have pessimistic views. For example, Manuel Castells (2015) claims that governments are afraid of the Internet as they realize the dissemination of power to the people via the Internet. Indeed, efforts to prevent Internet use have been increasing. The data (Freedom House, 2016) shows that blocking the Internet is widespread, and it has been 6 years in a row that the Internet freedom has declined globally. The Freedom House also states that 67 percent of the Internet users are living in countries that where criticism of the government or the elites is subject to censorship; 27 percent of the people live in countries where social media activities, something as little as merely liking something, may result in the person to be arrested. Today, the governments not only attack

the Internet, but also aim the messaging applications such as WhatsApp and Telegram to block uncontrolled communication. The Freedom House further states that the governments censor more diverse content, and only 24% of the world's Internet population has free access to the Internet, and only 14 of the assessed countries registered overall improvements. The clear increase in restrictions on the Internet use indicates that a research on the impact of levels of Internet freedom on collective action and democracies would be an intriguing subject.

Another engaging subject is that the Internet was celebrated for revolutions in the 21st Century, specifically the Arab Spring revolutions. However, most of the revolutions have failed now. While some countries are in the middle of civil wars such as Syria and Yemen, some others experienced transfer of power from a person to another without any structural changes such as Egypt, and many political structures did not change at all, as in Ukraine. Besides the revolutions, some other movements such as the Gezi Uprisings in Turkey in June 2013, or the Umbrella Uprisings of Hong Kong in 2014 did not contribute to the democracy levels. On the contrary, the Turkish government have been more authoritarian, and imposed further restrictions on the Internet, and the statements of the AKP have become more polarizing. Therefore, a future research on the role of the Internet in political participation would be enlightening. Although I initially intended to examine the relationship between social media and collective action, I realized that measuring collective action activity is challenging, and therefore dropped this analysis for the future.

In line with the current global atmosphere, the impact of technology on government policies would be another interesting research subject. The governments are aware of the potential impacts of the Internet thus policy-makers adopt varying practices in respond to the

diffusion of ICTs. While it is not a focus of this research, it is clear that different practices of governments lead to striking differences in the democratic outcomes in subject countries. Therefore, an investigation of policy patterns and their impacts would contribute to the findings of this study.

Lastly, the discussion of the ICTs and civil conflict would present interesting findings. While the literature is vast on the interaction between social media and non-violent collective action, violent conflict is not as much investigated. However, the world is plagued by civil wars leading to deaths and displacement of millions of people. Relatedly, Pierskalla and Hollenbach (2013) show that the availability of cell phone coverage in Africa significantly increases the probability of violent conflict occurrences in the continent. Although there is no study examining the impact of ICTs, cell phone coverage is a plausible proxy variable, and therefore it is plausible to think that the Internet might also have similar impacts on civil conflict.

### **CONCLUSION:**

In this paper, I analyze the anecdotal arguments about the impacts of ICT use on collective action, communication, and democracy. The research uses country-referenced panel data across the globe from the World Bank, and V-Dem from 1986 to 2015, the level of Internet use, and democracy. The research mainly examines the additive democracy index which takes into account the other domains of democracy, whereas it also shows that the different domains are correlated with each other. The results show that the increasing use of the Internet is not benevolent, as there is no correlation between higher levels of Internet use and higher democracy levels; but on the contrary, there is evidence that the Internet leads to worsening democracy levels as a global trend.

The research uses a multi-method analysis. While the quantitative analysis present the main findings of my research, the qualitative case studies aim to verify the validity of the statistical model, and also seek to find any other plausible explanations that could impact the model. The data analysis is an instrumental variable analysis which analyze the level of changes in democracy before and after the diffusion of the Internet. While Turkey case study presents findings that the Internet use caused declining levels of democracy, Malaysia shows that the ICTs can only be benevolent when there are certain underlying social and economic conditions.

The findings of this research are parallel to Morozov's (2014) pessimistic approach to the diffusion of the Internet. The ICTs create an illusion that they benefit organization of social movements; however, the social media is tolerant towards new forms of online harassment, propaganda, surveillance, control of online resources, use of technology to outsmart protesters, and post-protest clean up with emerging technology. The anti-democratic practices on the Internet result in declining democracy levels, and polarization in the society. On the other hand, Malaysia case study shows that the Internet can be a component of better levels of democracy in case it is free. Therefore, this research signifies the importance of the fight for free and non-restricted use of the Internet.

#### REFERENCES:

- Abbott, J. P. (2001). Democracy@ internet. asia? The challenges to the emancipatory potential of the net: Lessons from China and Malaysia. *Third World Quarterly*, 22(1), 99-114.
- Akgul, M., & Kirlidog, M. (2015). Internet censorship in Turkey. *Internet Policy Review*, 4(2), 1-22.
- Akser, M., & Baybars-Hawks, B. (2012). Media and democracy in Turkey: Toward a model of neoliberal media autocracy. *Middle East Journal of Culture and Communication*, 5(3), 302-321.
- Alterman, J. B. (2011). The revolution will not be tweeted. *The Washington Quarterly*, 34(4), 103-116.
- Angrist, J. D., & Pischke, J. S. (2014). *Mastering'metrics: the path from cause to effect*. Princeton University Press.
- Aouragh, M., & Alexander, A. (2011). The Arab spring| the Egyptian experience: Sense and nonsense of the internet revolution. *International Journal of communication*, 5, 15.
- Azizuddin Mohd Sani, M. (2008). Freedom of speech and democracy in Malaysia. *Asian Journal of Political Science*, 16(1), 85-104.

- Beilock, R., & Dimitrova, D. V. (2003). An exploratory model of inter-country Internet diffusion. *Telecommunications policy*, 27(3), 237-252.
- Bennett, W. L., & Segerberg, A. (2012). The logic of connective action: Digital media and the personalization of contentious politics. *Information, Communication & Society*, 15(5), 739-768.
- Bond, R. M., Fariss, C. J., Jones, J. J., Kramer, A. D., Marlow, C., Settle, J. E., & Fowler, J. H. (2012). A 61-million-person experiment in social influence and political mobilization. *Nature*, 489(7415), 295-298.
- Brym, R., & Andersen, R. (2016). Democracy, women's rights, and public opinion in Tunisia. *International Sociology*, 0268580916629622.
- Case, W. (2004). New uncertainties for an old pseudo-democracy: the case of Malaysia. *Comparative Politics*, 83-104.
- Case, W. (2010). Transition from single-party dominance? New data from Malaysia. *Journal of East asian studies*, 10(01), 91-126.
- Castells, M. (1996). *The network society* (Vol. 469). Oxford: Blackwell.
- Castells, M. (2011). *The rise of the network society: The information age: Economy, society, and culture* (Vol. 1). John Wiley & Sons.
- Chatfield, A. T., Akbari, R., Mirzayi, N., & Scholl, H. J. (2012, January). Interactive effects of networked publics and social media on transforming the public sphere: a survey of Iran's leaderless' social media revolution'. In *System Science (HICSS), 2012 45th Hawaii International Conference on* (pp. 2552-2562). IEEE.
- Committee to Protect Journalist. (2016). *2016 prison census: 259 journalists jailed worldwide*. Available at: <https://cpj.org/imprisoned/2016.php>
- Comunello, F., & Anzera, G. (2012). Will the revolution be tweeted? A conceptual framework for understanding the social media and the Arab Spring. *Islam and Christian-Muslim Relations*, 23(4), 453-470.
- Cook, D. M., Waugh, B., Abdipanah, M., Hashemi, O., & Rahman, S. A. (2014). Twitter deception and influence: Issues of identity, slacktivism, and puppetry. *Journal of Information Warfare*, 13(1).

- Coppedge, Michael, John Gerring, Staffan I. Lindberg, Svend-Erik Skaaning, Jan Teorell, David Altman, Michael Bernhard, M. Steven Fish, Adam Glynn, Allen Hicken, Carl Henrik Knutsen, Kyle Marquardt, Kelly McMann, Farhad Miri, Pamela Paxton, Daniel Pemstein, Jeffrey Staton, Eitan Tzelgov, Yi-ting Wang, and Brigitte Zimmerman. (2016). V-Dem [Country-Year/Country Date] Dataset v6.2. Varieties of Democracy (V-Dem) Project.
- Coppedge, Michael, John Gerring, Staffan I. Lindberg, Svend-Erik Skaaning, Jan Teorell, with David Altman, Michael Bernhard, M. Steven Fish, Adam Glynn, Allen Hicken, Carl Henrik Knutsen, Kelly McMann, Pamela Paxton, Daniel Pemstein, Jeffrey Staton, Brigitte Zimmerman, Frida Andersson, Valeriya Mechkova, and Farhad Miri. (2016). *V-Dem Codebook v6*. Varieties of Democracy (V-Dem) Project.
- Corke, S., Finkel, A., Kramer, D. J., Robbins, C. A., & Schenkkan, N. (2014). Democracy in crisis: Corruption, media, and power in Turkey. *Freedom House*, 1-20.
- Dagi, I. (2008). Turkey's AKP in Power. *Journal of Democracy*, 19(3), 25-30.
- Dalton, B., & Cotton, J. (1996). 10 New social movements and the changing nature of political opposition in South Korea. *Political Oppositions in Industrialising Asia*, 272.
- Demirhan, K. (2014). Social media effects on the Gezi Park movement in Turkey: Politics under hashtags. In *Social Media in Politics* (pp. 281-314). Springer International Publishing.
- Eraydin, A., & Taşan-Kok, T. (2014). State response to contemporary urban movements in Turkey: A critical overview of state entrepreneurialism and authoritarian interventions. *Antipode*, 46(1), 110-129.
- Freedom House. (2016). *Freedom House, Internet Freedom*. available at: <https://freedomhouse.org/issues/internet-freedom> [accessed 6 April 2017]
- Fuchs, C. (2006). The self-organization of social movements. *Systemic practice and action research*, 19(1), 101-137.
- Ghannouchi, R. (2016). From Political Islam to Muslim Democracy: The Ennahda Party and the Future of Tunisia. *Foreign Aff.*, 95, 58.
- Göle, N. (2013). Gezi-anatomy of a public square movement. *Insight Turkey*, 15(3), 7.
- Gusfield, J. R. (2009). *New social movements: From ideology to identity*. Temple University Press.



- Hacıyakupoglu, G., & Zhang, W. (2015). Social media and trust during the Gezi protests in Turkey. *Journal of Computer-Mediated Communication*, 20(4), 450-466.
- Hafez, K. (2008). The role of media in the Arab world's transformation process. *Bound to Cooperate: Europe and the Middle East II*, 2, 321.
- Habermas, J. (1981). New social movements. *Telos*, 1981(49), 33-37.
- Howard, P. N., & Hussain, M. M. (2011). The role of digital media. *Journal of democracy*, 22(3), 35-48.
- Insel, A. (2003). The AKP and normalizing democracy in Turkey. *The South Atlantic Quarterly*, 102(2), 293-308.
- Jeong Chun Hai @Ibrahim, & Nor Fadzlina Nawi. (2007). *Principles of Public Administration: An Introduction*. Kuala Lumpur: Karisma Publications. ISBN 978-983-195-253-5
- Jenkins, J. C. (1983). Resource mobilization theory and the study of social movements. *Annual review of sociology*, 527-553.
- Jurgenson, N. (2012). When atoms meet bits: Social media, the mobile web and augmented revolution. *Future Internet*, 4(1), 83-91.
- Juris, J. S. (2012). Reflections on# Occupy Everywhere: Social media, public space, and emerging logics of aggregation. *American Ethnologist*, 39(2), 259-279.
- Kaya, R., & Çakmur, B. (2010). Politics and the mass media in Turkey. *Turkish Studies*, 11(4), 521-537.
- Kayaoglu, B. (2013). AKP'de Twitter Seferberligi. *Al-Monitor*. Accessed on April 06, 2017.
- Kelly Garrett, R. (2006). Protest in an information society: A review of literature on social movements and new ICTs. *Information, communication & society*, 9(02), 202-224.
- Kelly, S., & Cook, S. (2011). Freedom on the Net 2011. *A global assessment of internet and the digital media*. Freedom House. Available online at <http://www.freedomhouse.org/uploads/fotn/2011/FOTN2011.pdf>, updated on, 14(04), 2011.
- Klandermans, B. (1984). Mobilization and participation: Social-psychological expansions of resource mobilization theory. *American sociological review*, 583-600.

- Kuymulu, M. B. (2013). Reclaiming the right to the city: Reflections on the urban uprisings in Turkey. *City*, 17(3), 274-278.
- Le Bon, G. (1897). *The crowd: A study of the popular mind*. Fischer.
- Lee, H., O'Keefe, R. M., & Yun, K. (2003). The growth of broadband and electronic commerce in South Korea: contributing factors. *The Information Society*, 19(1), 81-93.
- Levitsky, S., & Way, L. A. (2010). *Competitive authoritarianism: Hybrid regimes after the cold war*. Cambridge University Press.
- Lieberman, E. S. (2005). Nested analysis as a mixed-method strategy for comparative research. *American Political Science Review*, 99(03), 435-452.
- Lim, M. (2012). Clicks, cabs, and coffee houses: Social media and oppositional movements in Egypt, 2004–2011. *Journal of Communication*, 62(2), 231-248.
- Marzouki, Y., Skandrani-Marzouki, I., Béjaoui, M., Hammoudi, H., & Bellaj, T. (2012). The contribution of Facebook to the 2011 Tunisian revolution: A cyberpsychological insight. *Cyberpsychology, behavior, and social networking*, 15(5), 237-244.
- Mohamad, M. (2008). Malaysia—democracy and the end of ethnic politics?. *Australian Journal of International Affairs*, 62(4), 441-459.
- Morozov, E. (2012). *The net delusion: The dark side of Internet freedom*. PublicAffairs.
- Moten, A. R. (2009). 2008 general elections in Malaysia: democracy at work. *Japanese Journal of Political Science*, 10(01), 21-42.
- New Straits Times*. (2008). 'Internet served a painful lesson'. 26 March, p. 2
- Offe, C. (1985). New social movements: challenging the boundaries of institutional politics. *Social research*, 817-868.
- Olson, M. (2009). *The logic of collective action* (Vol. 124). Harvard University Press.
- Öniş, Z., & Yilmaz, Ş. (2009). Between Europeanization and Euro-asianism: Foreign policy activism in Turkey during the AKP era. *Turkish Studies*, 10(1), 7-24.
- Öniş, Z. (2013). Sharing power: Turkey's democratization challenge in the age of the AKP hegemony. *No. 2, 1013*, 103-122.

- Öniş, Z., & Kutlay, M. (2013). Rising powers in a changing global order: The political economy of Turkey in the age of BRICs. *Third World Quarterly*, 34(8), 1409-1426.
- Öniş, Z. (2015). Monopolising the centre: The AKP and the uncertain path of Turkish democracy. *The International Spectator*, 50(2), 22-41.
- Özbudun, E. (2006). From political Islam to conservative democracy: the case of the Justice and Development Party in Turkey. *South european society & politics*, 11(3-4), 543-557.
- Özsoy, D. (2015). Tweeting political fear: Trolls in Turkey. *Journal of History School (JOHS)*, 12, 535-552.
- Petrazzini, B. A., & Guerrero, A. (2000). Promoting Internet development: the case of Argentina. *Telecommunications Policy*, 24(2), 89-112.
- Pichardo, N. A. (1997). New social movements: A critical review. *Annual review of sociology*, 411-430.
- Pierskalla, J. H., & Hollenbach, F. M. (2013). Technology and collective action: The effect of cell phone coverage on political violence in Africa. *American Political Science Review*, 107(02), 207-224.
- Plümper, T., & Troeger, V. E. (2007). Efficient estimation of time-invariant and rarely changing variables in finite sample panel analyses with unit fixed effects. *Political Analysis*, 15(2), 124-139.
- Poell, T., & Darmoni, K. (2012). Twitter as a multilingual space: The articulation of the Tunisian revolution through# sidibouazid. *NECSUS. European Journal of Media Studies*, 1(1), 14-34.
- Przeworski, A., & Limongi, F. (1997). Modernization: Theories and facts. *World politics*, 49(02), 155-183.
- Randall, V. (1998). *Democratization and the Media*. Taylor & Francis.
- Rane, H., & Salem, S. (2012). Social media, social movements and the diffusion of ideas in the Arab uprisings. *Journal of international communication*, 18(1), 97-111.
- Rawnsley, G. D., & Rawnsley, M. Y. T. (1998). Regime transition and the media in Taiwan. *Democratization*, 5(2), 106-124.
- RT. (2016). Turkey's Erdogan files \$32k lawsuit against opposition leader who called him a 'dictator'. Accessed on April 6, 2017

- Sani, M., & Azizuddin, M. (2009). The emergence of new politics in Malaysia from consociational to deliberative democracy. *Taiwan Journal of Democracy*, 5(2), 97-125.
- Shirky, C. (2008). *Here comes everybody: The power of organizing without organizations*. Penguin.
- Shirky, C. (2011). The political power of social media: Technology, the public sphere, and political change. *Foreign affairs*, 28-41.
- Sovey, A. J., & Green, D. P. (2011). Instrumental variables estimation in political science: A readers' guide. *American Journal of Political Science*, 55(1), 188-200.
- Subramaniam, S. (2011). Assessing political dynamics in contemporary Malaysia: Implications for democratic change. *ASIANetwork Exchange: A Journal for Asian Studies in the Liberal Arts*, 19(1).
- Taşkın, Y. (2008). AKP's Move to "Conquer" the Center-Right: Its Prospects and Possible Impacts on the Democratization Process. *Turkish Studies*, 9(1), 53-72.
- The World Bank, World Development Indicators (2016). *Internet Penetration*, Atlas method [Data file]. Retrieved from <http://data.worldbank.org/indicator/IT.NET.USER.P2>
- Tudoroiu, T. (2014). Social media and revolutionary waves: The case of the Arab spring. *New Political Science*, 36(3), 346-365.
- Tufekci, Z., & Wilson, C. (2012). Social media and the decision to participate in political protest: Observations from Tahrir Square. *Journal of Communication*, 62(2), 363-379.
- Tufekci, Z. (2014). The medium and the movement: Digital tools, social movement politics, and the end of the free rider problem. *Policy & Internet*, 6(2), 202-208.
- Tugal, C. (2013). 'Resistance everywhere': The Gezi revolt in global perspective. *New Perspectives on Turkey*, 49(1).
- Ufen, A. (2009). The transformation of political party opposition in Malaysia and its implications for the electoral authoritarian regime. *Democratization*, 16(3), 604-627.
- Uhlaner, C. J. (2015). Relational goods and overcoming barriers to collective action. *Decyzje*, (24), 171-190.
- Wasserman, H. (2011). Mobile phones, popular media, and everyday African democracy: Transmissions and transgressions. *Popular Communication*, 9(2), 146-158.

- Wilson, C., & Dunn, A. (2011). The Arab Spring| Digital media in the Egyptian revolution: descriptive analysis from the Tahrir data set. *International Journal of Communication*, 5, 25.
- Yazici, T. (2014). The Role of Online Social Networks in Social Movements: Social Polarization and Violations against Social Unity and Privacy of Individuals in Turkey. *World Academy of Science, Engineering and Technology, International Journal of Social, Behavioral, Educational, Economic, Business and Industrial Engineering*, 8(8), 2702-2706.
- Youmans, W. L., & York, J. C. (2012). Social media and the activist toolkit: User agreements, corporate interests, and the information infrastructure of modern social movements. *Journal of Communication*, 62(2), 315-329.