State of the Internet Outpaces State of Internet Legislation? : The Case of Turkey

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Abstract

It is of common understanding that ICTs play a vital role in the social, political and economic development of every country. But every country does not welcome this technology without struggles. This study looks into the particular case of Turkey. As a semi-periphery country Turkey has been in a unique position, not only geographically and economically, but also politically and culturally. As a country with a predominantly Muslim population Turkey, considered by many as the only Muslim democracy, also has aspirations to become a member of the European Union (EU). A former study by this Author (2007) analyzed the period of 1997-2004 of Internet policy development in Turkey as it unfolded within the context of then current debates regarding globalization forces and the nation-state. This paper picks up where the old one left off, and looks into the most recent influences incorporated in the patterning of Internet development in Turkey. Turkey's Internet journey, the initiatives relative to the expansion of the Internet in comparison to attempts to control and regulate Internet content does not only demonstrate how adopting the Internet has been a double-edged sword for some countries but could also on a larger scale offer insight to the discussion on the compatibility of Islam and the Western definition of democracy.

Keywords: Internet policy, Turkey, globalization, telecommunication

As the world has become more interconnected the power of the nation-state is being restructured. Information and communication technologies (ICTs), particularly the Internet have and are transforming and even in some cases destabilizing governance and power. It is of common understanding now that ICTs play a vital role in the social, political and economic development of every country. But every country does not welcome this technology without struggles. This study looks into the particular case of Turkey. As a semi-periphery country (as research suggests efforts of the state to pattern the ICT policies will be seen more directly in such countries) Turkey has been in a unique position, not only geographically and economically, but also politically and culturally. As a country with a predominantly Muslim population Turkey, considered by many as the only Muslim democracy, also has aspirations to become a member of the European Union (EU).

A former study by this author "Toward a Healthier Understanding of Internet Policy Development: The Case of Turkey" analyzed the period of 1997-2004 of Internet policy development in Turkey as it unfolded within the context of then current debates regarding globalization forces and the nation-state. Through the

application of Wallerstein's world system (1974, 1979) model to ICTs with the help of concepts borrowed from Wolcott and Goodman (2000) the study created a new conceptual model which was used to gain further insight and to anticipate nation-state behavior vis-à-vis Internet related legislation. The study illustrated how the development of Internet and Internet related policy in Turkey was primarily state led affair; how specific socio-economic and political condition, as well as its historical and cultural background were important factors to be considered.

At the time of this former study, there were no specific laws regulating the Internet. The approach to Internet policy was to handle related issue as much as possible within the context of existing laws such as the Turkish Criminal Code, the Supreme Board of Radio and Television (RTÜK) Bill, amended Press Laws. The telecommunication sector was still a state monopoly.

Much has changed since then. Internet use in Turkey has increased significantly from 12% in 2004 to 34.4% in 2008 (ITU statistics). Comscore cites Turkey as the 7th largest and most engaged online audience in Europe. The liberalization of the telecommunication sector was completed in 2008, and Turkey now has its own law for the Internet: Law No. 5651 commonly known as the Internet Law enacted May 4, 2007. The law has been openly criticized for not only limiting freedom of expression but also severely restricting citizens' right to access information. Several websites were taken or blocked in Turkey as early as in 2000, but research shows up until December 2009, 3,700 websites were blocked in Turkey (Akdeniz 2009).

This new study picks up where the old one left off, and looks into the most recent influences incorporated in the patterning of Internet development in Turkey. Turkey's Internet journey, the initiatives relative to the expansion of the Internet in comparison to attempts to control and regulate Internet content, does not only demonstrate how adopting the Internet has been a double-edged sword for some countries but could also on a larger scale offer insight to the discussion on the compatibility of Islam and the Western definition of democracy.

Some of the general findings of this paper are:

- Internet diffusion dimensions have shown significant increase in the past 5 years in Turkey. Internet use in Turkey has increased significantly from 12% in 2003 to 34.4% in 2008 (ITU statistics).

- Privatization of Türk Telekom, and the liberalization of the telecommunications sector has influenced the ICT market significantly. Type and sophistication of local access methods has seen a dramatic change. While in 2005 only 19.3% of the households who were connected to the Internet connection were ADSL subscribers in 2008 this number quadrupled to 82.1%.

- EU membership efforts continue to be the driving force behind Internet related projects and development. Especially in e-government endeavors.

- Attempts to control Internet content continue in Turkey. The passing of Law No. 5651 takes this to new level with its now infamous blocking orders that have been subject to international reaction.

  In March 2000, the European Council launched the "e-Europe Action Plan" aiming to transform the EU into an information society. The plan envisaged increasing the Internet diffusion dimensions levels within the EU member countries. A separate initiative for candidate countries to the EU was launched as the "e-Europe+ Program". Turkey joined the eEurope+ effort June 2001. In the previous analysis the influence of Turkey's ambition to become an EU member translated into policies and projects aimed at further developing the Internet in Turkey. As will be demonstrated here this trend continues into the present. Turkey has been maintaining efforts parallel to eEurope2002, eEurope 2005 action plans and currently the i2010 plan. And will most likely continue to be a part of the 2010 Digital Agenda as an initiative as well.

Internet Diffusion in Turkey

As previously (Author 2007) this paper will utilize Wolcott and Goodman's (2000) Internet diffusion dimensions to illustrate developments in regards to the Internet in Turkey. Wolcott and Goodman's (2000) framework for measuring Internet diffusion consists of the following dimensions: "pervasiveness, geographic dispersion, sectoral absorption, connectivity infrastructure, organizational infrastructure, and sophistication of use" (p. 6)

Pervasiveness of the Internet

Wolcott and Goodman (2000) measure the pervasiveness of the Internet in terms of "number of subscribers (Internet account holders) per capita" (p. 6). Previously in 2003, the ratio of Internet subscribers per capita (the number of people who had dial up, leased line and fixed broadband connection to the Internet) was 1.72%. The most recent figures from ITU indicate that the ratio has risen to 8.54% in 2009. These numbers show that Internet account holders have risen more than six fold in the past six years. This figure illustrates that Turkey has progressed within the established level, but still is not at the common level which in Wolcott and Goodman's measurement level is the most advanced level and requires the ratio per capita to be at 10% at least (see Figure 1 below).

Looking at Internet use per capita to measure Internet growth in countries like Turkey (semi-periphery countries with a desire of upward mobility within the world-system) maybe more meaningful in terms of assessing Internet pervasiveness within a country where due to cost of services uptake of the Internet might be slower. Previously in 2003, the ratio of Internet users per capita in Turkey was 8%. Looking at the most recent ITU statistics, we see that Internet users per capita in Turkey has increased to 34.4% in 2008.

These numbers indicate that Internet use in Turkey has more than quadrupled in the past 5 years. Wolcott and Goodman (2000) consider a 10% Internet use level within a country as pervasive, allowing a range from 11% to 100% for this level. Yet looking into some of the core regions of the world-system, it would be more accurate to prescribe a range from 50% to 100% as a level 4 measurement of pervasiveness. The average Internet per capita use in the EU-15 countries was 68% in 2008 (Eurostat, 2008), in the US it was 74% (ITU, 2008), and in Japan it was 75.4%, which are all still significantly higher that Turkey. The wide range that Wolcott and Goodman (2000) employ in measuring this dimension carries the inherent risk of lumping a huge group of countries together, not allowing for accurate comparison between the developing and the developed states.

Figure 1. Internet Users in Turkey
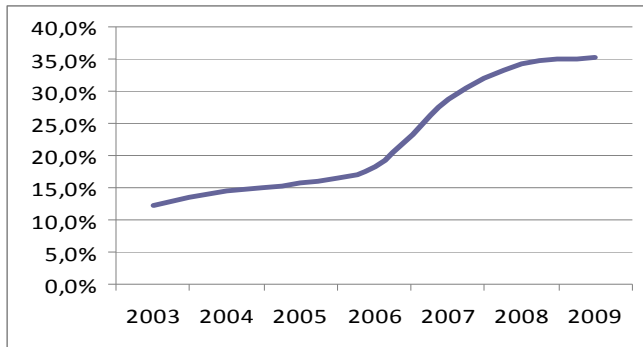
Source: ITU data

Previous analysis suggested that the gradual privatization of Türk Telekom over the years, specifically the end of Türk Telekom's monopoly over fixed-line voice transmission and infrastructure at the end of December 2003, and the further liberalization of the market to be achieved with the block sale of Türk Telekom in 2005 would influence the number of Internet subscribers in Turkey (Author, 2007). Analysis revealed that the motive behind the liberalization and the privatization of the Turkish telecommunication sector was to bring in investors, resulting in the proliferation of services and options for individuals with better prices, and make Internet use more affordable and consequently more available for everyone. More than one third of the country has access to the Internet today, many liberalization proponents would certainly link this increase to the privatization of the sector. The liberalization of the telecommunications sector of Turkey is an important milestone of the Turkish government. The existing literature on the privatization chronicle of Türk Telekom dates back to 1994. But the privatization process was not completed

until 2005, when %55 shares of Türk Telekom was sold to Oger Telecoms Joint Venture Group. Thirty percent of the shares belong to Undersecretariat of Treasure of Turkey, and the remaining 15% of shares were offered to the public.

Geographic Dispersion

The understanding behind this dimension is that "having multiple points of presence, redundant transmission paths, and multiple international access points often implies less digital divide between the rich and the poor, and the urban and the rural citizens" within the country (Wolcott & Goodman, 2000, p. 7). Wolcott and Goodman (2000) measure geographic dispersion is measured by the fraction of first-tier political subdivisions with an Internet point of presence (POP) (p. 40).

In Turkey's case, a province constitutes the first-tier political subdivision. Turkey has 81 provinces. In 2004, when Türk Telekom was still a monopoly in the market, TTNet (the national Internet backbone created by Türk Telekom) had POPs in every province, and was offering service at 141 points. The academic network UlakNet offers POP services in Istanbul, Ankara and Izmir (the three major cities of Turkey).

Geographic dispersion as a diffusion dimension is dependent on the capabilities of national Internet infrastructure. The infrastructure monopoly of Türk Telekom in Turkey is continuing, but with further liberalization this is expected to change. In order to expand Internet service to individuals as an ISP Türk Telekom had started to offer Internet connection to everybody regardless if they have an ISP account or not, by dialing 146. Users were charged local phone fees for their connection. The privatization and thus the liberalization of Türk Telekom is believed to bring further expansion of the domestic backbone and result in a more vibrant ISP market, and ultimately influence the geographic dispersion dimension of the Internet by making way for the possibility of building additional Internet infrastructure.

As the owner of the national Internet backbone TTNet, Türk Telekom has been setting the prices for the lines that it leases to the other ISPs while it operates its own ISP. The decision of the Telecommunication Authority to reduce long distance and high-speed leased lines tariffs by 50% in the year 2004 was an example of changes in the sector. Since the end to the monopoly of Türk Telekom over fixed-line voice transmission and infrastructure, the Telecommunication Authority has granted many licenses in Turkey. In June 2004, the number of ISPs was 94; 43 new long-distance telephone service providers licenses were given out; the number of providers of data transmission services over fixed lines reached 16; and 23 satellite telecommunication service providers licenses were granted (Telecommunication Authority, 2005, Licenses). No partial infrastructure establishment and operation licenses were given, and there were no providers of message services over mobile networks in 2004 (Telecommunication Authority, 2005, Licenses). At the time of writing however, we see that currently there are 109 ISPs; 19 sattelite communications

service providers, 3 satellite platform services, 51 partial infrastructure establishment and operations licenses, and 12 providers of message services over mobile networks (Telecommunication Authority, 2010, Licenses). Internet over satellite options in Turkey in the short lived history of the Turkish Internet had not been realized by 2004, because it was not considered cost effective mostly due to the low rate of PC penetration in Turkey. But in 2010, we see that there are 19 satellite communications service providers (Telecommunication Authority, 2010, Licenses). This illustrates once again how the liberalization of the sector has been beneficial for the market in general.

Sectoral Absorption of the Internet

Sectoral absorption is defined as connectivity in various social sectors: academic, commercial, health and public (Wolcott & Goodman, 2000, p. 8).

Academic

As the Turkish academic network UlakNet website indicates, with the creation of UlakNet in 1996, and the subsequent upgrades completed in 2003, presently all universities in Turkey are connected to the Internet. In terms of primary and secondary schools in Turkey, Wolcott and Goodman (2000) indicated that there were 100 k12.tr domain names registered in 1999 (p. 44). On July 26, 2004, there were 1185 k12.tr domain names (Nic.tr, 2005) registered under k12.tr. In 2010 we see a significant increase in these numbers. As of April 7, 2010, there were 9549 k12.tr domain names (Nic.tr, 2010) (see Figure 2 below)

Figure 2. K12.tr domain names 1999-2010
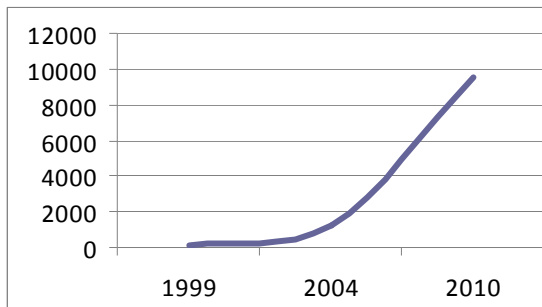
Source: Nic.tr

According to the Ministry of Education, in 2004, 20,000 schools/insitutions, and in 2007, 29,000 schools/ institutions were connected to the Internet via ADSL[1]. By the end of 2008, 33, 018 schools/ institutions had an ADSL connection, and 4870 schools/institutions were connected to the Internet via satellite. The Ministry

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[1] For further details on some of the education projects until 2004 see Author (2007)

of Education states that in 2010 all highschools in Turkey (100%); and 94% of the primary education schools currently have Internet access. This means that 12 million students are connected.

For example the E-Transformation Turkey Project includes specific actions and geared towards increasing Internet connectivity and Internet knowledge in education. More recently in 2007, Turkey launched the Education Inservice Teacher Training Program (IEITP), which is a new professional development program that aims to further the use of ICT tools in the education. E-school (e-Okul) launched in 2006, and fully effective since 2007 January, is a system aimed to record all students in formal education into the system. Transfers, tracking of records are carried out by this system.

Commercial

Data show that there has been a significant increase in the commercial domain names in Turkey from 1999 to 2005 to 2010. While there were 11,000 com.tr domain names in 1999, the number in March 2005, was 49, 064 (Nic.tr, 2005). In 2010, we see that this number has almost tripled to 145, 507 (Nic.tr, 2010).

Wolcott and Goodman (2000) indicate that 11,000 com.tr domain names for 1999 represented about 10-20 % of the commercial firms in Turkey at the time. Literature on Turkey's economic environment draws attention to the important role of the small-and-medium-sized enterprises (SMEs) within the Turkish economy. According to figures, in 2000 they constituted the 99.8 % of total enterprises in Turkey and 76.7% of total employment (OECD, 2004, p. 27). The UNDP Human Development Report Turkey 2004, stated that in 2003, 53% of SMEs in Turkey possessed Internet infrastructure; and 80 % had access to the Internet. In order to increase Internet diffusion among SMEs, the government with KOSGEB (Small and Medium Sized Industry Development Organization) founded KOBI-NET an Internet/Intranet network for SMEs in Turkey. In 2004, the network served approximately 9,000 members. At the time of writing the system has 23, 918 members.

Figure 3. Internet Access and Computer Use Among Enterprises in Turkey
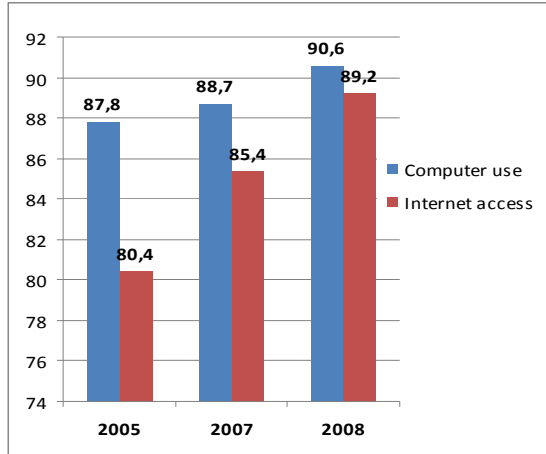
Source: State Planning Organization figures.

The most recent report by the State Planning Organization (2009) indicates that the use of computers and Internet access has increased among enterprises. In 2005 87.8% used computers, and 80.4% had Internet access. In 2007 these numbers increased to 88.7% and 85.4% and in 2008 to 90.6% and 89.2% respectively. In addition, in January 2007 94.2% of the enterprises in Turkey had broadband access, and in 2008 we see this number increase to 95.3% (State Planning Organization, 2009).

Healthcare

Wolcott and Goodman (2000) indicated that in 1999, "far fewer than 10% of health care facilities [were] connected to the Internet" and that "the health care profession apparently perceive[d] the Internet to have little value in their ability to provide care for the populace" (p. 44). Their study of Internet diffusion levels in Turkey for 1999 specified the level of Internet connectivity for the healthcare sector in Turkey as minimal (Wolcott & Goodman, 2000).

The "Turkey Health Information System Action Plan" which was in part due to the eEurope initiative, published in January 2004, by the Ministry of Health, states that as of December 2003 all 81 provincial health management offices were connected to the Internet and had formed a web-based management information system. Twenty-three out of 42 university hospitals were connected to the Internet, and out of 43 military hospitals 11 had Internet connections. As data indicate with the actual number of hospitals connected to the Internet, and the specific projects completed regarding e-health, the level of Internet

connectivity in the health sector in Turkey had progressed from a minimal level (less than 10%) to a medium level (between 10% and 90%) of Internet connectivity in 2004.

In 2010, we see further progress. The health sector has benefited from the application of the eEurope based projects since 2004. The development of an integrated health information system; the development of the national electronic patient record; MERNIS- the central population management system that provides a unique ID number to Turkish citizens-; the development of the electronic citizenship card pilot project (which has been initiated in the area of social security and health in 2009 and will be completed by 2010); the Pharmacy Automation systems which allows online transactions between pharmacies and the Social Security Institution; Medical Messenger (MEDULA)- an integrated electronic and payment system for health services are some of the developments in the health sector in regards to ICT development and use.

Public

Wolcott and Goodman (2000) note that, "between 1996-1999 the number of gov.tr domain names grew from just under 50 to approximately 300" (p. 45). The number of gov.tr domain names in Turkey on July 26, 2004, was reported to be 2,058 (Nic.tr 2004). In 2010 at the time of writing, we see that the number of gov.tr sites have more than quadrupled to 9, 055 (Nic.tr, 2010).

Figure 4. Gov.tr domain names 1999-2010
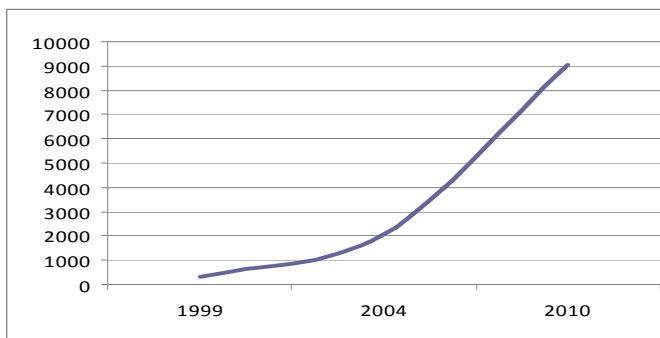
Source: Nic.tr figures

The effects of the e-Turkey initiative and the subsequent e-government projects are the key factors behind the main developments and key milestones for the e-government projects as well. The establishment of an address registration system; VEDOP- the tax administration automation project-; POLNET- the national police network-; UYAP- the national judicial network are projects-, SAIS- the social assistance information system-; SECSIS- the computer aided central electoral register system-; the launching of the e-government

gateway, "e-Devlet Kapisi" – a portal aimed to provide citizens and enterprises with a single point of access to e-government services- are some of the examples of these applications.

In comparison to the EU, a 2007 report measuring the availability of online public services we see that the Turkey had achieved a solid base-line result with 50% of public services fully available online; only 8% points below the EU27+ average. In 2007, according to this report Turkey stood at the upper end of the 2nd quartile (CapGemini, 2007).Online sophistication of public services in Turkey scored 68%, which was 7% point below the EU27+ average of 75% in 2007. Important to note is the "Global e-Government 2007" report which puts forward that Turkey ranked 9th out of 198 countries - compared to ranking 27th in 2006 (West, 2007). The first 10 in order are: South Korea, Singapore, Taiwan, the US, Great Britain, Canada, Portugal, Australia, Turkey and Germany. When compared to the results of 2006, Turkey has made a considerable leap by moving from 27th to 9th rank. Undoubtedly, Turkey's aspiration of EU membership coupled with the e-Europe and i2010 initiatives of the EU have been important factors that have accelerated e-government implementations in Turkey

Connectivity Infrastructure

The connectivity infrastructure is composed of four components: "the aggregate bandwidth of the domestic backbones, the aggregate bandwidth of the international IP links, the number and type of interconnection exchanges, and the type and sophistication of local access methods being used" (Wolcott & Goodman, 2000, p. 10).

While there has been little increase since 2004 in the domestic backbone, international IP links, the type and sophistication of local access methods has seen a dramatic change in the last 5 years.

Wolcott and Goodman (2000) pointed out that for the year 1999, most of the Internet connections were via modem. They stated that "out of 140 TTNet points of presence [POP], only 9 [were] scheduled to offer ISDN service,…and only 26 [would] offer ADSL service" (p. 48). The number of people who connected to "the Internet from home using anything other than modems" was miniscule (p. 48). The majority of Internet users in late 1999 would connect to the Internet mostly through academic institutions and Internet cafes.

Three years later, the 2002 report by Güngor and Evren (2002) published by the Telecommunications Authority stated that : Türk Telekom as an ISP in the year 2002 had a 25% share of the total ISP market in Turkey, and was the only marketer of DSL and broadband services. In 2002, ADSL service was still only offered in the three biggest cities of Turkey (Istanbul, Ankara and Izmir) and exclusively by TTNet. The number of ADSL subscribers for the year 2002 was 2,964. For ISDN service in April 2002, the number of

subscribers was 1,910. The report indicated Internet connection via the cable television network to be very low. Out of 2,200,000 potential subscribers only 7,032 were subscribed in November 2001.

In a separate report by Başaran and Özdemir (2002), the total number of Internet subscribers using Türk Telekom ISP services were recorded as 197,666 in 2001, and as 223,853 in March 2002. These figures coupled by the report of Güngor and Evren (2002) indicating the number of Türk Telekom ISP subscribers using anything other than a modem to connect to the Internet in 2002 as 11,906, reveals that only 5% of Internet connections were through means other than a modem. Thus with 95% of Internet connection via modem, Turkey's diffusion level for access methods for the year 2002 remained unchanged at level 3 (broad).

The most recent report by the State Planning Organization (2009) shows a dramatic shift in these numbers. In 2008, we see that Internet use increased to 35.6% in Turkey, and the percentage of households connected to the Internet increased to 30.9% (from 7% in 2004). OECD numbers indicate that while in 2004 only 0.7% of households overall had a broadband connection, in 2008 this number increased to 8.7%. Also in 2008, 21.2 % of households connected to the Internet had a broadband connection. While in 2005 only 19.3% of the households who were connected to the Internet connection were ADSL subscribers, in 2008 this number quadrupled to 82.1%. While in the past Internet connection via modem used to be standard norm, in 2008 the State Planning Organization report shows that only 8.1% of those connected to the Internet in Turkey preferred a dial-up connection.

With a broadband penetration rate of about 22% Turkey still lags behind the EU-27 countries where the rate is about at 50% (ITU, 2008). One of the main reasons behind this can be attributed to the fact that despite fully liberalized communication sector, ADSL broadband service providers, other than TTNet, only have access to 3% of the market (State Planning Organization, 2009).

It is important to draw attention to the capacity of mobile broadband technologies in the diffusion of Internet within a country. The introduction of high speed mobile Internet access in an increasing number of countries is believed to further boost the number of Internet users, particularly in the developing world (ITU, 2010). The latest figures for Turkey indicate that 89.1% of the population had mobile phones. It is projected that in 2010 Turkey would have 106.5% mobile subscribers. There are three mobile operators, Turkcell, Vodafone and Avea, dominate the mobile telephone market, and all won 3G licenses in 2008, and launched 3G services in 2009. Currently there are no reports of actual figures for mobile broadband penetration in Turkey.

Organizational Infrastructure of the Internet

This component of Internet diffusion is measured by the number of ISPs within a country. Wolcott and Goodman (2000) for the year 1999 indicated Turkey to be at level 3 for this dimension. A level 3 position according to their formulation indicates that "the Internet market is competitive, and there are many ISPs due to the existence of low barriers to entry. The provision of international links is a monopoly, but the provision of domestic infrastructure is open to competition" (Wolcott & Goodman, 2000, p. 50).

With Türk Telekom's monopoly over the Internet infrastructure in the past, the entry level of ISPs to the market in Turkey have been low. The technical barrier was low because all ISPs were required to connect through Türk Telekom's Internet backbone TTNet so they did not have to establish their own connections. And also there were no licensing fees.

It is of note here that the dual existence of Türk Telekom as both a network provider and an ISP has been problematic in Turkey. Private ISPs in Turkey have often accused Türk Telekom of creating an unfair environment for competition. For example in 2001, when the country was in deep financial crisis, Türk Telekom reduced its monthly connection fees to about $5 and yearly to $15, while increasing line prices used by private ISPs by about 240%- 400% depending on bandwidth (Seçen, 2002). The passage of Telecommunication Laws No. 4502 and 4673, which have terminated Türk Telekom's monopoly and established the Telecommunication Authority as an institution responsible for overseeing the telecommunication sector, has been an important step towards ensuring competitive rights to ISPs against Türk Telekom. Currently, there are 109 ISPs operating in Turkey (Telecommnication Authority, Licenses, 2010).

Sophistication of Use

The sophistication of use dimension does not only look into how many people and where these people use the Internet, "but also how the Internet is employed" within a country (Wolcott & Goodman, 2000, p. 11).

The State Planning Organization, titled "ICT Usage Survey on Household and Individuals 2004", indicated that "68.9 % of Internet users [in Turkey] used [the] Internet for sending/receiving e-mails, 62.8 % used for playing games/downloading images and music, 61.6 % used for reading/downloading online newspaper and news magazines and about 56 % used for finding information about education. [Only] 3.5 % of Internet users in Turkey ordered goods and services over the Internet" (2004, p. 3). These data implied that in 2004, at the individual level the use of the Internet in Turkey remained mostly at the conventional level, where the Internet is used as a "substitute for or straightforward enhancement of an existing process (e.g., email vs. post)" (Wolcott & Goodman, 2000, p. 12).

A more recent study by the same organization (State Planning Organization, 2009), shows that in the 2008, the percentage of users using the Internet for sending and receiving e-mails at 74%. But more importantly we see that with 76% what the majority of Internet users in Turkey prefer is accessing online news and information sites. In comparison to 2004, we see a drop in using the Internet for finding information about education (25.5% in 2008 compared to 56% in 2004). Some of the other top online activities by Turkish Internet users in 2008 are: engaging in chat, msn and skype (69.7%); listening and downloading music (65.2%); gathering information on goods and services (43.9%); listening to the radio or watching TV online (31.9%); posting messages to chat rooms, newsgroups, or forums (24.4%); Internet banking (15.4%); share videos, photos, and music (12.1%).

Data suggests a significant increase in e-commerce numbers for Turkey. While in 2004 only 3.5% of Internet users ordered goods and services, in 2008 this number has increased more than 5 times to 18.2%. The State Planning Organization report (2009) indicates that among the users that have ordered goods and services 30.4% of them have purchased electronic devices (such as mobile phones, cameras, radio, TV, and DVD); 25.2% of them have bought home goods (such as furniture, toys, and durable household items); 23.4% bought books, newspapers, and magazines; 18.2% purchased clothes and sports apparel; 16.5% bought computers and associated software, and 15.1% made travel and leisure plans.

A recent Comscore report reveals further insight to the dynamics of the Internet user profile in Turkey. In terms of online engagement the report indicates that with 29.7 hours per visitor per month, Turkish Internet users appear to be one of the most engaged. Canada with 43.1% is the most engaged country, followed by the US (32.5%), Turkey ranks at third place according to this report (Comscore, 2009). The report also draws attention to the fact that Internet users in Turkey skew young: nearly 40% of the Internet users is under the age of 24, and nearly 70 % are under the age of 34. In comparison, only 54% of the global online population according to Comscore numbers is under 34. This young population holds promise for the further Internet diffusion in the country.

It is important to note that the increase in the level of this dimension is tied to the measures taken to increase pervasiveness, sectoral absorption, connectivity infrastructure, and organizational infrastructure of the Internet. For individuals to use the Internet in a transformative way Internet access needs to be nationwide with high-speed and high-quality access; there need to be multiple access types; multiple ISPs; and a legal and regulatory framework that encourages innovative uses of technology. Data on pervasiveness and sectoral absorption in Turkey suggests that companies, public and private institutions are increasingly making use of the Internet in Turkey. E-government, e-health, e-commerce, and e-education application as outlined in the e-Transformation for Turkey project suggest that there is a transformation of activities by way of carrying existing processes and practices to the Internet environment.

On the personal level, data imply that at the individual level the use of the Internet has progressed in Turkey to a transforming level.[2]

The continuing trend of Internet related legislation aimed at increasing specific Internet diffusion dimensions demonstrates that Turkey is actively involved in patterning legislation and regulation to attain further progress in dimension levels. A comparison between the figures provided by Author (2007) for the year 2004, and the updates presented by this paper reveal Turkey's ongoing dedication to the furthering of Internet adoption within the country. Furthermore we still see that Turkey's relationship with the EU, and its quest for membership continue to be the primary driving forces restructuration and reform.

Internet Related Legislation in Turkey

The previous section aimed to offer an overview on the state of the Internet in Turkey on various levels. This section will briefly consider how the Internet was regulated prior to the enactment of Law 5651 in 2007, which has become to be known as the Internet Law in Turkey[3]. (Table 1presents legislation pertinent to Internet regulation in Turkey prior to 2007).

Internet Content Regulation Prior to Law No. 5651

Newspaper archive research, as well as the existing literature on the development of Internet in Turkey, suggests that up until 2001, the approach to Internet policy in Turkey has been to handle Internet related issues as much as possible within the context of existing laws. In terms of Internet censorship history, we see that websites were taken down or blocked as early as 2000 (Akdeniz 2009).

Regulation No. 99/13681 was the only legislation passed until 2001 directly related to the Internet. This regulation, which was passed in 1999, states that Internet cafes are not to be opened within 200 meters of public schools if they allow game playing on the Internet.

The Turkish Police used the existing laws and regulation in dealing with Internet cases. As stated on the official website of the General Police Force, for crimes that include fraud and swindling, provisions stated in Articles 503-507 and 316-368 of the Turkish Penal Law No. 765 are applied. Cases on illegal use of computer software are prosecuted under Intellectual Property Rights Law No. 5687. Publication of illegal materials are covered under the following articles of the Turkish Penal Law No. 765: (1) Articles 125-200: these articles involve provisions on crimes committed against the character and the nature of the state; (2) Articles 480-490: these cover personal insult, cursing and libel situations; and (3) Articles 426-427: these encompass offensive and sexually explicit materials such as pornography (Turkish Police, 2005).

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[2] "The use of the Internet by certain segments of users results in new application or changes in existing processes and practices, although these innovations may not necessarily stretch the boundaries of the technology's capabilities" (Wolcott & Goodman, 2000, p.12).
[3] For details on legislation pertaining to the Internet prior to 2007 refer to Author (2007).

The only articles within the Turkish Penal Law No. 765 that directly address ICTs are Articles 525/a, 525/b and 525/c, which are labeled as the "Information Technologies Crime Section" of the Penal Law. Crimes involving unauthorized communication, illegal entry to computer system and services, and illegal listening along with computer sabotage, which includes the hindering or stopping of computing through the use of Logic Bombs, Time Bombs, Trojan Horses, viruses and worms are undertaken by these articles. Articles 525/a, 525/b and 525/c were added to the Turkish Penal Law on June 6,1991, which indicates that a concern for crimes committed in the digital environment existed among the authorities in Turkey prior to the first Internet dedicated connection in 1993.

June 2001, is the turning point for Internet related legislation and regulation in Turkey, when the government introduced a law that would regulate Internet publications according to legislation applied to traditional mass media. On June 7, 2001, the Turkish government introduced a draft law, Law No. 4676. Article No. 14 and Article No. 26 of Law No.4676 were the two specific clauses that related to Internet publications. By putting Internet content under the jurisdiction of RTÜK Law with the passing of Law No. 4756, May 21, 2002, the Turkish government demonstrated that it had concerns regarding trans-border information flows. Content on the Internet is also subject to the provisions of the Press Law No. 5187. This Press Law was passed in 2004, in an effort to further harmonize existing Turkish legislation with EU norms and criteria, and was considered by authorities as an improvement to the previous press law, Law No. 5680, which contained restrictions and provisions that were deemed as violations of freedom of the press, freedom of expression and opinion. Though this new law might be regarded as an improvement, wee see that restrictions for the sake of "national security, public morality, indivisible integrity of the state" (Press Law No. 5187, 2004, Article 3) still existed.

The Penal Law No. 765, in Turkey was also replaced in 2004 with a new Penal Law that became effective June 1, 2005. This new law came as a result of a reform package aiming to bring the Penal Law closer to the norms of the European Union. The Penal Law No. 765 had been internationally criticized over the years for its punishments and restrictions on human rights issues in Turkey. The new Penal Law was welcomed and regarded as a serious commitment on Turkey's part to the EU accession requirements and human rights in general, but in regards to freedom of expression and thought the State is demonstrating that it is reluctant to surrender its sanction power. The infamous Article 159 of the previous law, on which most of the media prosecutions and the handful of Internet related prosecutions were based, still exists in the new law, only the article number has changed from 159 to 302. The same situation exists for Article 312, which has been renamed as Article 216. Article 312 has been widely used in prosecuting writers in Turkey who support minority issues such as Islamic and Kurdish politics.

Table 1. National Internet Related Regulatory and Legislative Framework Prior to 2007

Legislation	Implication	Date
Turkish Penal Law No. 765	Provisions regarding ICT crimes specifically (Articles 525/a; 525/b; 525/c); Protection against fraud and swindling (Articles 503-507 and 316-368) Protection of the character of the State (Articles 125-200) Control of sexually explicit material and pornography (Articles 426-427) Protection against personal insult, cursing and libel (Articles 480-490) Provision on the press in aim of protection of the State (Articles 146, 153, 155, 159, 311, 312, 312/a)	1926, various amendments
Law on the Crimes Committed Against Atatürk No.5816	Internet Content Control	1951
Constitution of the Turkish Republic No. 2709	Internet content control (Articles 22, 25, 26, 27, 28, 29)	1982, various amendments
RTÜK Law No. 3984	Restrictions on Internet content	1994, amendment 2002
Intellectual Property Rights Law No. 5687	Protection of computer software	1995
Regulation No. 99/13681	Regulation of Internet cafes in Turkey	1999
w No. 4502	Establishment of Telecommunication Authority as the regulator of the telecommunication sector Terminating Türk Telekom's monopoly by Dec. 31, 2003	2000
Law No. 4673	Telecommunication contract and licensing power transferred to Telecommunication Authority	2001
Law 4756	Amendments to RTÜK Law 3984 and Press Law No. 5680	2002
E-Signature Law No. 5070	Facilitation of E-government and e-commerce	2004
The Right to Information Act,No. 4982	E-government, transparency of government	2003, in effect April 2004
Press Law 5187	Restrictions on Internet content	2004
New Penal Law No. 5237	Provisions regarding ICT crimes specifically (Articles 243-245); Protection against fraud and swindling (Articles 142, 157-160, 197-211) Protection of the character of the State (Articles 300-306) Control of sexually explicit material and pornography (Articles 226) Protection against personal insult, and protection of personal information and privacy (Article 125, 129, 132, 134, 135) Restrictions of the press in order to protect the State (Articles 216, 302, 306, 310, 319, 320)	2004, in effect June 2005

Source: Author's own data.

Turkey's track of human rights violations, such as restrictions to freedom of expression and thought manifested through journalist prosecutions and imprisonments are some of the obvious examples of the state's attempt to control and preserve the Turkish official identity and culture through the years. Minorities such as Kurdish and Islamic have traditionally found no inclusion in the expression of the Turkish official culture. EU harmonization efforts have brought international attention to minority issues in Turkey and have resulted in minor changes. Kurdish minority cultural rights were extended to include broadcasting in Kurdish. More recently though Kurdish and Islamic minority issues are beginning to be openly discussed. In Turkey's case, the desire of EU membership translated into policies towards increasing Internet dimension diffusions nationally. However, the sanctity of the State and of the military, allegiance to Atatürk and Kemalist principles, and Kurdish minority issues continued to be some of the historical, cultural and political concerns influencing control of content not only in traditional media but on the Internet as well up until now. This became most evident in March 2007, when Turkey blocked access to YouTube, the popular video-sharing website, when a video clip including defamatory statements and images about Atatürk was published on the site. The video also contained scenes disparaging the Turkish flag, The video clip in question was deemed illegal under Law No.5816 on Crimes Against Atatürk and also Article 300 of the Turkish Penal Law. YouTube has been blocked on and off. Yet as of May 2008, Turkish Internet users do not have access to YouTube by regular means.

The next section will look into Law No. 5651 which has served since 2007 as the basis of mass blocking of websites in Turkey.

Law No. 5651

The workings of Law No. 5651 go back to August 2006 when the Ministry of Justice announced that it was working on a draft bill aimed to combat Internet crime. Akdeniz and Altiparmak (2008) in their assessment of the Law No. 5651, describe the parliamentary discussion, the framework, as well as the enactment in detail.

Law No. 5651 on the Regulation of Publications on Internet and Suppression of Crimes, was enacted May 4, 2007, and promulgated on May 22, 2007 by then Turkish President Ahmet Necdet Sezer. Certain parts of the law came into force the next day, while articles 3 and 8 went into force that November.

Many, such as Reporters Without Borders, reported this development as the "bill censoring online content that insults Atatürk is signed into law" and drew attention to the fact that this bill furthered Turkey's already questionable restrictions of freedom of speech and censorship. Most recently the Organization for Security and Cooperation in Europe (OSCE)'s Representative on Freedom of the Media Miklos Haraszti,

asked Turkish authorities bring Turkey's Internet law in line with OSCE commitments and other international standards on freedom of expression (OSCE Press Release, 2010).

Let us first consider some of the provisions of Law No. 5651 [4]. Article 3 introduces an information requirement through which content, hosting and access providers are required to provide name, tax number, trade record number, residence, e-mail address and telephone numbers on the front page of their websites. Any content, hosting and access provider who fail to provide this information are subject to fines by the Telecommunication Communication Presidency (TIB).

Article 4 states that content providers are responsible for content they generate on their website, but are not liable for third party content they link to. But if it can be inferred through the presentation style that the content provider embraces the content and is deliberately linking to it, then the content provider can held responsible.

Article 5 asserts that hosting companies are not to be held responsible to control and monitor the content they store. They are also not obliged to seek facts or circumstances of illegal activity. They are however obliged to take down illegal or infringing content once served with a notice from the Telecommunications Authority.

Article 6, pertains to access and service providers. According to this provision access providers are required to take down any illegal content published by any customers as soon as they are made aware of the available content in question by the TIB. Article 6 (1) (b) goes on further to say that access providers are required to retain traffic data for a period of at least six months up to 2 years maximum. Under article 6 (1) (c) access providers who are going to terminate their commercial activities are required to hand over these retained traffic data to the Telecommunications Authority three months in advance of the ceasing of activity. According to Article 7, all mass use providers such as Internet cafes need to obtain an official activity certificate from a local civilian authority. In addition these providers are required to filter and block any content that can be deemed as illegal.

Of all the article of the Law No. 5651 , Article 8 has been the one that has caused much of the reaction. This article directly deals with Internet access control. Under article 8 (1) access to websites are to be blocked if there is sufficient suspicion that certain crimes are being committed on that website. More specifically the article states that the following acts as out forth by the Turkish Penal Code No. 5237:

- Incitement of suicide (article 84)
- Sexual exploitation and abuse of children (artcicle 103 (1))
- Facilitation the use of illegal drugs (article 190)
- Facilitation of procuring of substances dangerous for health (article 194)

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[4] For the complete text of the Law, see http://www.tbmm.gov.tr/kanunlar/k5651.html.

- Obscenity (article 226)
- Prostitution (article 227)
- Gambling (article 228)

Article 8 (b) also states crimes specified in Law No. 5816 dated July 25, 1951 Crimes Committed Against Atatürk as legal basis for blocking a website. Article 8 (4) grants the TIB administrative blocking orders ex-officio. These orders can be issued by the TIB in regards to crimes listed above when the content and the hosting providers are located outside Turkish jurisdiction. Article 8(10) states that any director or directors of hosting and access providers who fail to comply with the blocking orders could be subject to criminal charges and could face imprisonment between 6 months and 2 years.

Article 9 provides measures on content removal and the right to reply. Under this provision, individuals who allege that their personal rights are infringed due to content published on a website, are able to contact the content provider- or hosting company if the content provider cannot be contacted- and ask for the infringing content to be removed. Furthermore individuals are also, with article 9 (1), able to ask the content or hosting provider to publish their reply on the same page the infringing content was published.

Article 10 of Law No. 5651, provides information about the administrative structure and role of the TIB. This agency was established in August 2005 within the Telecommunications Authority and became fully functional in 2006. With the passing of Law No. 5651, this organization became responsible for monitoring Internet content and executing blocking orders issued by judges, courts, and public prosecutors. As listed in Article 8, TIB has the authority to issue administrative blocking orders in regards to websites hosted abroad if they are in violation of the crimes included in Article 8. Article 10 (4) states that TIB also determines the nature, timing and procedures concerning Internet content monitoring. Further stated in the subsection of this article –in Article 10 (4) (d) TIB as an agency is required to establish a hotline where any potentially illegal content or activity as included in Article 8 can be reported. Those wishing to report violation of the Internet Law can do this via email, telephone, SMS, or directly at the website of the hotline (http://www.ihbarweb.org.tr). No doubt, the role of citizen activists in censorship is an interesting aspect of Internet restrictions in Turkey. The creation of the hotline can be construed as a democratization of censorship.

As Akdeniz (2009) states the hotline apparently became very popular in a short time. He notes that as of October 1, 2008 there were 25, 159 notifications made to the hotline. A total of 6566 domain names according to Akdeniz's report were involved. The majority (55%) of them were about obscenity, 11% about crimes committed against Atatürk , another 11% about the sexual exploitation and abuse of children, and 10.7% about prostitution (Akdeniz, 2009).

Akdeniz notes in his article that TIB did not publish any information with regards to the blocking statistics and decisions in its 2009 report. A more recent report by TIB dated March 1, 2010, provides only overall percentages of the nature of the hotline notifications. No actual numbers are provided, and the official statistics page noted in Akdeniz (2009), at the time of writing linked to the opening page of the TIB. The statistics section specific to notification only contains the March 2010 dated report of overall percentages, with no detail on how many actual notifications were made and how many decisions were executed numerically. According to said report, as of March 2010, 62.52% of notifications were about obscenity, 12.84% about sexual exploitation and abuse of children, 10.62% prostitution, 8.31% crimes committed against Atatürk , 3.45% about gambling, 1.37% incitement of suicide, 0.57% gambling, and less than 1% constituted notification about gambling, facilitation of procuring of substances dangerous for health and facilitation the use of illegal drugs.

A separate report by the Information and Communication Technologies Authority (BTK) indicates that 130,700 complaints were received by the TIB between November 2007 and October 2009 (Information and Communication Technologies Authority, 2009).

Since Law No. 5651 came into force in November 2007, several websites have been blocked through both court orders and blocking orders directly issued by the TIB. It was revealed that as of May 11, 2009, 2601 websites were blocked in Turkey (Akdeniz 2009). While a total of 433 websites were subject to blocking in May 2008, over 2600 websites were blocked the following year till May 2009 (Akdeniz 2009). The March 2010 report by the TIB does not contain any specific numbers on how many websites are blocked but rather chooses to offer information on the nature of the decisions. As of March 2010, 69.35% of websites were blocked due to obscenity, 25.55% due to sexual exploitation and abuse of children, 3.64% due to gambling, 1.13% due to prostitution and less than 1% for crimes against facilitation of procuring of substances dangerous for health, crimes committed against Atatürk , facilitation the use of illegal drugs and the incitement of suicide.

TIB's decision to withhold actual statistics on blocking measures certainly contributes to the suspicion that the number of blocked websites are increasing in Turkey. Akdeniz (2009) speculates the number of websites blocked in Turkey at 3700 as of December 2009. Engelliweb.com a citizen based website dedicated to compile an open list of blocked websites in Turkey, at the time of writing estimates that 6400 websites are blocked as of May 2010.

ICTs could also offer opportunities for governments to enhance their sovereignty. Through the transparency that ICTs provide, governments can increase their credibility. Turkey, with its ongoing e-government efforts, such as the passing of the Right to Information Act in 2003 and the e-Transformation Turkey initiatives, projects the image that it is making efforts to enhance citizen participation in government

practices. Compatibility with EU criteria is one of the main motivations behind Turkish Internet legislation. However, by imposing restrictions on content, and thus on freedom of expression and speech, we see that Turkey may not be ready for the full liberalization of thought.

By putting Internet content under the jurisdiction of RTÜK Law with the passing of Law No. 4756, May 21, 2002, the Turkish government demonstrated that it had concerns regarding trans-border information flows. Content on the Internet was also subject to the then newer Press Law passed in 2004 (Law No. 5187) which was considered by authorities as an improvement to Law No. 5680, which contained restrictions and provisions that were deemed as violations of freedom of the press, freedom of expression and opinion. Though this latter law might be regarded as an improvement, restrictions for the sake of "national security, public morality, indivisible integrity of the state" (Press Law No. 5187, 2004, Article 3) still existed. The new Internet Law, Law No. 5651 furthers this discussion to a new level with its infamous blocking orders that have created international reaction especially in regards to freedom of information, expression and thought. One should remember that Turkey's already fragile human rights violation record has historically been an issue both diplomatically and in Turkey's efforts to gain EU membership.

Economic and political concerns of a country will no doubt extend to and influence national ICT policies. After all, to what a user has access and why depends on the specific legal, economic, political and social conditions that surround the user as demonstrated here. A final note: many agree that Turkey's EU journey could offer insight to the discussion on the compatibility of Islam and the West, especially considering the rise of Islamic politics in Turkey since 1999. Turkey's initiatives relative to the expansion of the Internet could signal at some level to the Western world the compatibility of Islam and democracy, and to the Muslim world that a relationship with the West is possible. But in doing so, it is central that Turkey recognizes that "development" and "progress" technologically, economically, politically and socially cannot come through Internet legislation that condones blocking measures or filtering tools on the Internet.

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