International Review of Management and Marketing
Vol. 1, No. 2, 2011, pp. 19-24
ISSN: 2146-4405
www.econjournals.com

Development of Communication Technologies in Turkey: A General Overview

Dilek PENPECE
Cag University, Faculty of Economics and Administrative Sciences,
Mersin, Turkey. Email: dilekpenpece@cag.edu.tr

Ozlem OZTURK
Cukurova University, Faculty of Economics and Administrative Sciences,
Adana, Turkey. Email: oozturk@cu.edu.tr

ABSTRACT: Communication is a system that senders have possibility to send message to receiver in general meaning. It is considered that as a modern Turkish economy should use communication systems largely. It is critically important to show Turkey's usage of communication technologies as a country that keeps up with new developments in the world. Communication tools that examined in this study are postal services, newspaper and magazines, fixed-line telephone and mobile phone, internet. According to examined period it is resulted that the usage of communication tools increased. It is observed that some communication tools usage decreased caused by different factors in some terms.

***Key Words*:** Communication, Communication Technologies, Turkey.

1. INTRODUCTION

It has long been recognized that communications might have a central role in development (Grace *et al*., 2004: 1). The crucial role of communication technologies in stimulating development is two-tailed. On the one hand, it allows countries increasing effect of economic growth by being able to modernize their production systems and increase their competitiveness. On the other hand, the detention of economies which are unable to adapt the new technological system becomes cumulative (Castells, 1999: 3). Turkey as a developing country shouldn't overlook the importance of communication systems.

Access to information and the ability to use information effectively enables individuals to seize life's opportunities. Work is characterized by the effective use of information to solve important problems within a globally competitive economy (Leu *et al*., 2004: 1575). Communication have crucial role in today's environment not only in working experience but also in individuals life. It is generally agreed that the percentage of communication technologies usage is an indicator of development.

2. COMMUNICATION TECHNOLOGIES

Communications technologies have pivotal role for modern economies (Falk and Abler, 1985: 24). Communication is a structural system that allows people to sharing important symbols with mutual activities in broad sense (Birdwhistell, 1970: 95). A communications system must interconnect all important centers of social, industrial, commercial, and bureaucratic activity to be effective (Falk and Abler, 1985:22). Today Turkey is considered to be one of the most important 'emerging markets' in the world (Burnham, 2007: 197). In this respect it is considered that as a modern economy Turkey should use communication systems largely.

Media that are component of traditional postal, telegraph, and telephone services are being further hybridized with high-capacity computer based systems (Falk and Abler, 1985: 24). The media typologies reveal that the media differ many different sections, for example, channel characteristics, social presence, and uses and gratifications (Hoffman and Novak, 1995: 57). We examined some of

the tools that containing mass media, interpersonal communication, and computer mediated communication in this study. Communication tools that examined in this study are postal services, newspaper and magazines, fixed-line telephone and mobile phone, internet.

Many developing countries began to take an interest in strengthening their communication capabilities in the 1950s, particularly in the fields of printing and broadcasting, telephone and telex. It is agreed that the technologies which had lifted the advanced industrial countries to heights of material wealth can accomplish the same results in the developing world (Hamelink, 1997: 2). The diffusion of information technologies to all areas of human activity is accelerating change in economies and societies (Bedia, 1999: 1). This view may not be entirely accurate because of double effect. On the other hand changing economies can accelerate the communication technologies diffusion.

The flexibility of global economy allows the overall system to link up everything (Castells, 1999: 5). As a global economy's actor Turkey in the 1980s undertook both major structural reforms of its economy and the restoration of democracy (Öniş and Webb, 1992: 1). Major steps have been applied to encourage the distribution of a modern telecommunications structure (Burnham, 2007: 198). The reforms succeeded in making the Turkish economy more efficient and much more outward oriented (Öniş and Webb, 1992: 1). With this context, Turkey that is relatively closed economy until 1980s began to follow open economy policies after these years.

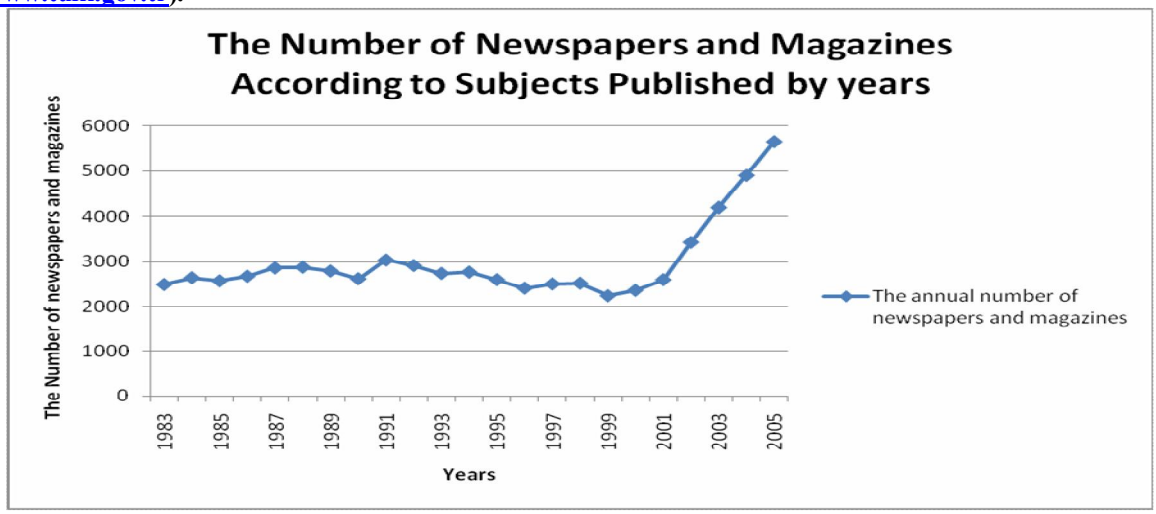
Turgut Ozal was a critical figure in Turkey's transition to a neo-liberal development model (Öniş, 2004: 113). He played a leading role first as prime minister from 1983 to 89, then as president from 1989 to 1993 (Aral, 2010:72). Ozal emphasized three fundamental freedoms: freedom of expression, freedom of religion, and freedom of enterprise (Aral, 2010: 72). The programs crafted by Ozal placed high value on expansion of telecommunications services (Wolcott and Cagiltay, 2001: 136). In consequence all of these freedoms have provided more effective use of communication technologies.

In sum, globalization is a new historical reality and enacted through the powerful medium of new information and communication technologies (Castells, 1999: 5). Period that becomes from based on open economy started with Ozal (1983) to present examined in this study.

Newspapers and Magazines

Newspaper as a mass media is a publication that appears regularly and frequently, and carries news about a wide variety of current events. The oldest structure of the modern newspaper appears to have been the handwritten news sheets that circulated widely in Venice in the sixteenth century (www.nyu.edu). Difficulties about political unrest in Turkey until 1983 sharply effected the printed media. But Turkey that seriously integrated to world in 1983 attached importance to freedom of the press. So the total number of newspapers and magazines increased. The change of related numbers can be seen in Chart 1.

Chart 1. The Number of Newspapers and Magazines According to Subjects Published by years (www.tuik.gov.tr).

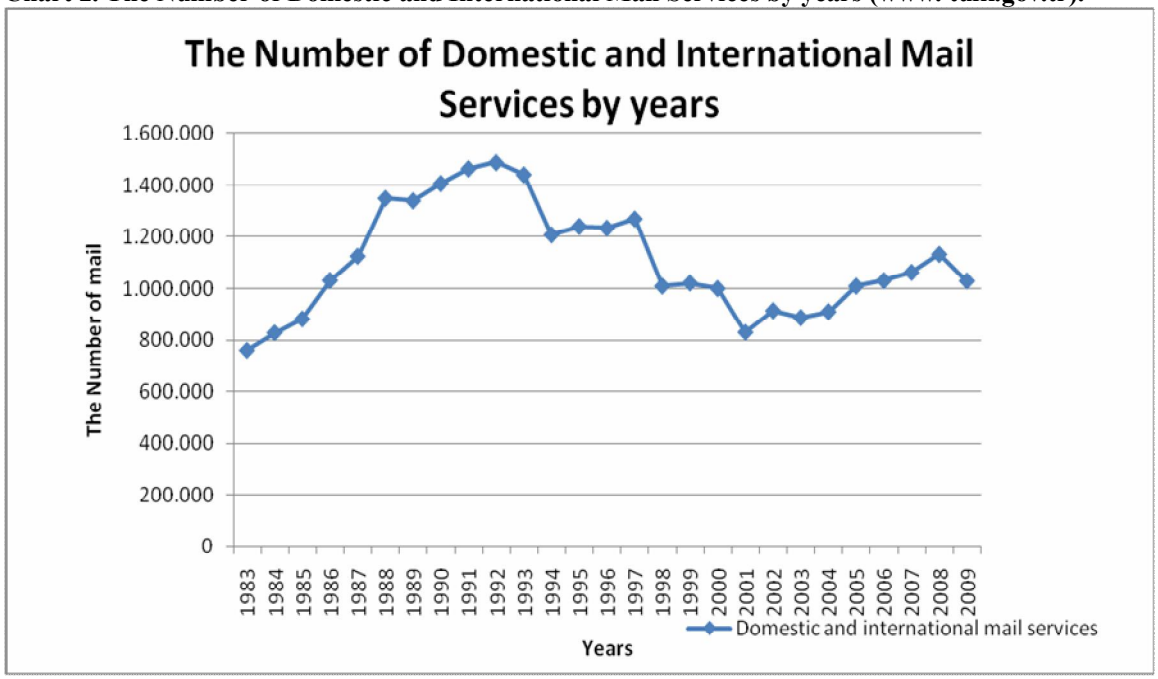


The data obtained from TUIK ended in 2005. Therefore the data until 2005 take place in Chart 1. The number of newspapers and magazines followed a constant trend until 2000s. It is considered that the total number of print media increased by providing economic stability after 2000s.

Postal Services

Postal services were established in the 1620s in France and normally government monopolies from the outset (Falk and Abler, 1985: 21). Post office that founded in 1840 as official Post Office was privatized in 2005 in Turkey. The total number of postal services can be seen in Chart 2.

Chart 2. The Number of Domestic and International Mail Services by years (www. tuik.gov.tr).



According to Chart 2 increasing number of postal services started to decline in first quarter of 1990's. The cause of decline supposed that the new technologies introduced in Turkey for example mobile phones and internet. Postal services become up-warded trend after 2001. It is supposed that the reason of this situation is the presenting diversify services by PTT (The General Directorate of Post and Telegraph Organization).

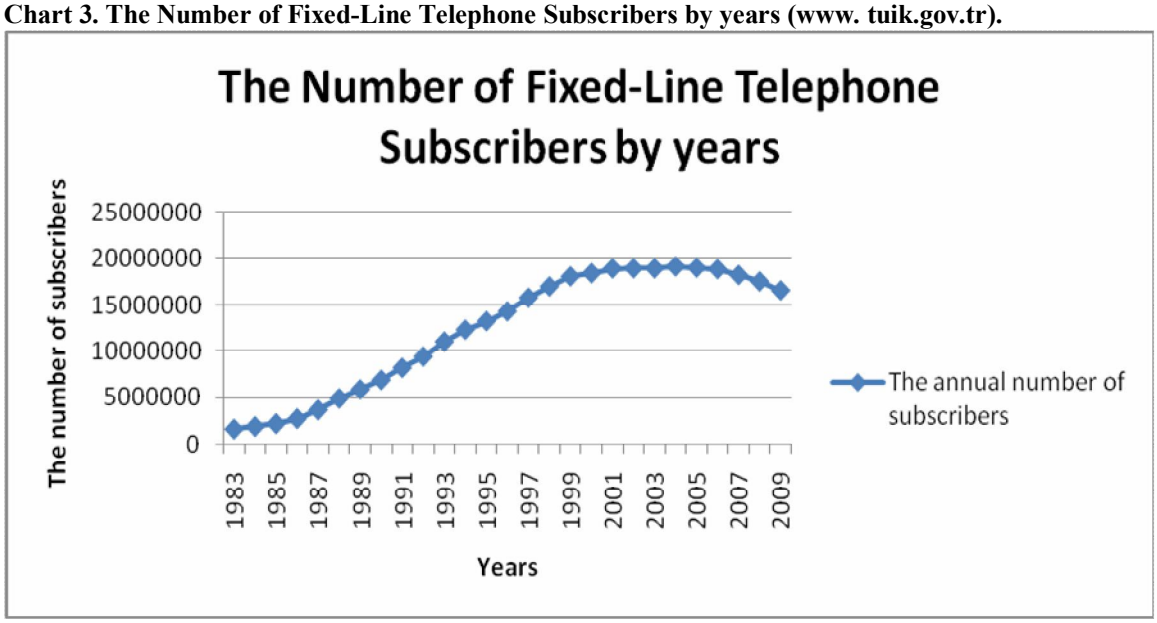
Fixed-line Telephones and Mobile Phones

Telephone has a long history demonstrating their utility in developing countries (Kenny, 2002: 141). Recent econometric studies also suggest that the quantity of telecommunications infrastructure may be connected to growth (Grace *et al*., 2004: 13). The first telephone exchange in Turkey was implemented in 1909. But the expansion of telecommunications infrastructure proceeded slowly (Wolcott and Cagiltay, 2001: 135).

The concept of mobile phones as they are also known was born in the late 1940s, in the United Kingdom and the U.S.A (www.miah-telecom.co.uk). Today's mobile phones are small enough to slip in to your pocket but also powerful enough to surf the internet, send emails (www.miah-telecom.co.uk). So this situation makes the mobile phones more appropriate for widespread.

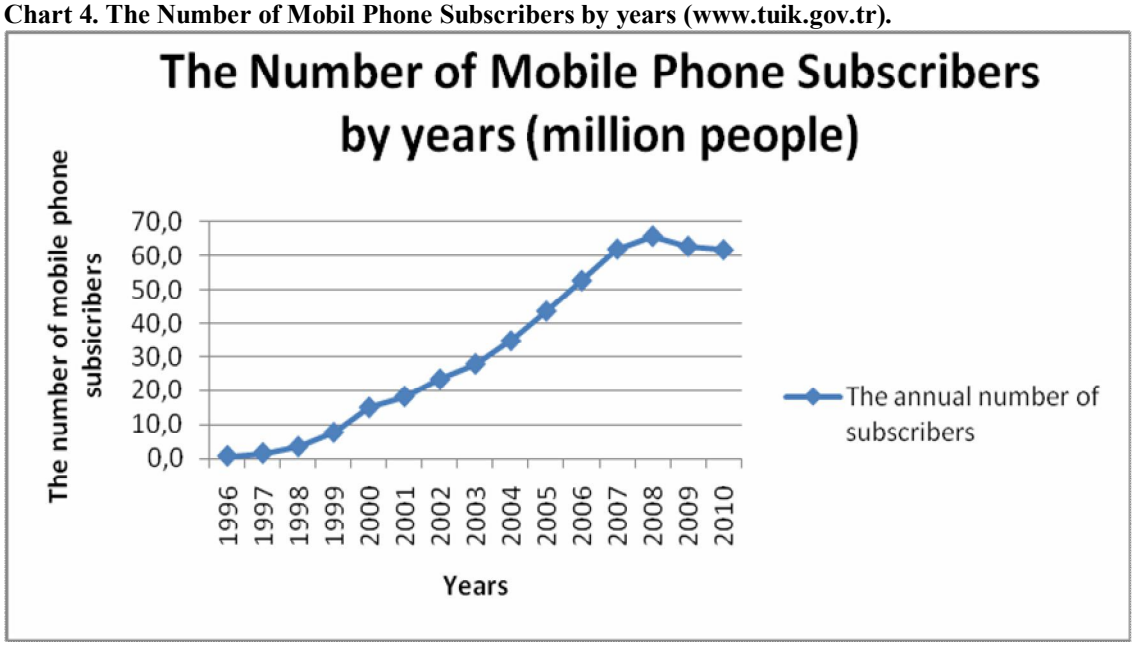
The technology of mobile phones has been adopted not only by the affluent, but also more quickly by the middle and lower-middle classes in Turkey (Celik, 2011: 147). Rapid growth of mobile phone subscribers began, effectively, in the late 1990s (Burnham, 2007: 201). Gsm based mobile communication began with Turkcell in Turkey which was the first Gsm operator that founded 1994. But the available data about Gsm usage in Turkey was founded starting from 1996. The change of fixed-line telephone and mobile phone subscribers can be seen in Chart 3 and 4.

Chart 3. The Number of Fixed-Line Telephone Subscribers by years (www. tuik.gov.tr).



Total number of related items increased from 1983 to 2009 as shown in Chart 3. It is assumed that items were stagnant between 1999 and 2004 by reason of the widespread usage of mobile phones. The increasing competitions in mobile phone sector and decreasing price resulted with decline in fixed-line telephone subscriber. Turk Telekom was reluctant about competition with private sector. We supposed that the decline is accelerated by alternatives that enable to use with non-fixed telephones.

Chart 4. The Number of Mobil Phone Subscribers by years (www.tuik.gov.tr).



According to Chart 4 the usage of mobile phone in Turkey tend to rise continuously until 2009. The number of Gsm subscribers decreased in 2009. Although the fall that was not significant according to numeric data was scotched the continuous increase. It is supposed that the reason why the decline was existed is the transition of number portability system in Gsm sector. Some individuals that have many Gsm cards is canceled the subscription and started to use only one card. Another reason for subscription cancellations is the usage of affordable tariff in all directions presented by Gsm operators.

Internet

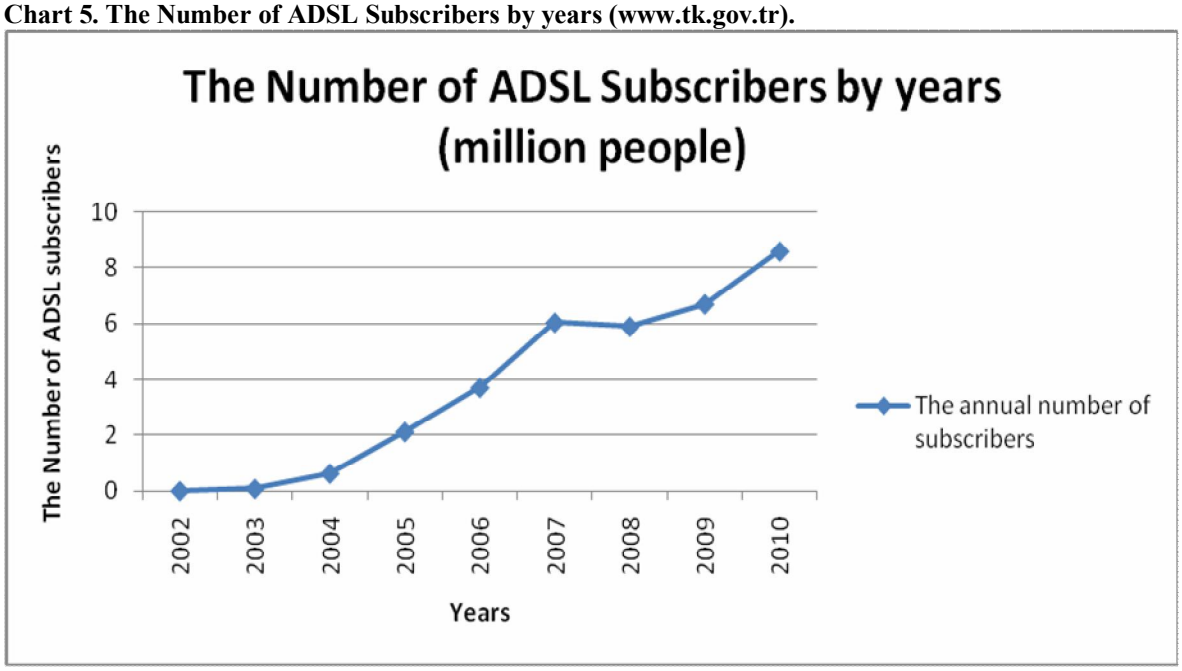
The global economy is entering a "digital age" and information has become the primary resource for economic development (Grace *et al*., 2004: 1). In this age, the critical organizational form is networking. A network is simply a set of interconnected nodes and has no centre. Relationships between nodes are necessary for the functioning of the network for the circulation of money, information, technology, images, goods, services, or people throughout the network (Castells, 1999: 6). Over the course of the 1950s, computer and telecommunications technologies were integrated, and networks were created that linked computers among each other and to terminals. These networks found wide application as a number of technological advances increased the capacity, accessibility and compatibility of both computing and telecommunication facilities (Hamelink, 1997: 2).

The first microprocessor was manufactured by Intel in 1971, and only four years later the first computer based upon the microprocessor was marketed. This has often been identified as the beginning of the digital age (Hamelink, 1997: 2). Internet is a worldwide network of computers that makes vast amounts of information available (www.unctad.org). The World Wide Web, sometimes referred to as WWW, W3, or simply the "Web," is an Internet-based global information initiative begun at the European Laboratory for Particle Physics (CERN) in Geneva, Switzerland (Hoffman and Novak, 1995: 52).

The existence of the Internet is not a spontaneous and arbitrary event. It has appeared and become a central part of our lives because of the nature of the workplace and other social institutions (Leu *et al*., 2004: 1577). These new information and communication tool allow us to identify important problems, quickly gather information, and evaluate the information we locate, synthesize that information into a solution, and then communicate the solution to others (Leu *et al*., 2004: 1577). Internet provides lots of facilities that other communication tolls have for example sending mail, calling, reading newspapers etc. It also involved advanced communication facilities for instance video conversation before 3G technology in Gsm sector. Because of the fact that the video conversation in Gsm sector is relatively expensive in Turkey, internet is used for video conversation widespread.

The first connection in Turkey BITNET was established between Ege University in Izmir and the European Academic and Research Network (EARN) via Pisa, Italy in 1986 (Wolcott and Cagiltay, 2001: 138). While Turkey had the dial-up connection until 2002 the ADSL that means asymmetric digital subscriber line began in the same year. Therefore data used in this study was initiated from 2002 to 2010. The total numbers of related item is shown Chart 5.

Chart 5. The Number of ADSL Subscribers by years (www.tk.gov.tr).



The total number of related items was continuously increased from 2002 to 2007 as shown Chart 5. The relative decrease in was seen in 2008. It is considered that the reason of this fall caused

by economic crises existed in 2008. The other reason can be originate from new technologies like connection the internet via Gsm operators.

3. CONCLUSION

With the regulations includes the passage of a telecommunications liberalization law in 2000 which was intended to open up markets to competition and which established an independent regulator for the telecommunications sector the communication tools become more effective (Burnham, 2007: 198). Examined data in this study that consist of newspapers and magazines, postal services, fixed-line telephone and mobile phone, internet are resulted the fact that the communication tools increased related periods. It should not ignore that economic crises effect the use of all communication tools in 2008. The cause of observed decline would be the crises. We considered that all examined communication tools effects the diffusion of each other.

REFERENCES

Aral Berdal (2010) "Dispensing with Tradition? Turkish Politics and International Society during the Özal Decade, 1983-93", *Middle Eastern Studies*, Vol.37, No.1, pp.72-88.

Bedia Arjun S. (1999) The Role of Information and Communication Technologies in Economic Development – A Partial Survey, *Discussion Papers of Development Policy*, No.7 ZEF Bonn.

Birdwhistell, R. L. (1970) *Kinesics and Context Essays on Body-Motion Communication*, USA: Penguin Books.

Burnham James B. (2007) "Telecommunications policy in Turkey: Dismantling barriers to growth", *Telecommunications Policy*, Vol.31, pp.197-208.

Castells Manuel (1999) "Information Technology, Globalization and Social Development", *UNRISD Discussion Paper*, No. 114, pp.1-23.

Celik Burce (2011) "Cellular telephony inTurkey: A technology of self-produced modernity", *European Journal of Cultural Studies*, Vol.14, No.2, pp.147-161.

Falk Thomas and Abler Ronald (1985) "Intercommunications Technologies: The Development of Postal Services in Sweden", *Geografiska Annaler*, Vol.67, pp.21-28.

Grace J., Kenny C., Qiang C. Z., Liu J. and Reynolds T. (2004) "Information and Communication Technologies and Broad-Based Development *A Partial Review of the Evidence"*, Worldbank Working Paper No.12, USA.

Hamelink Cees J. (1997) *New information and communication technologies, social development and cultural change* ,United Nations Research Institute for Social Development, No. 86, Switzerland.

Hoffman Donna L. and Novak Thomas P. (1995) ""Marketing in Hypermedia CMEs: Conceptual Foundations", *Journal of Marketing*, Vol.60, No.3, pp.50-66.

Kenny Charles (2002) "Information and Communication Technologies for Direct Poverty Alleviation: Costs and Benefits", *Development Policy Review*, Vol.20, No.2, pp.141-157.

Leu Donald J, Kinzer Charles K.,Coiro Julie L. and Cammack Dana W. (2004) *Toward a Theory of New Literacies Emerging From the Internet and Other Information and Communication Technologies*, In R. B. Ruddell& N. Unrau (Eds), Theoritical Models and Processes of Reading, Fifth Edition, Intenational Reading Association:Newark, DE. (http://www.readingonline.org/newliteracies/lit_index.asp?HREF=/newliteracies/leu).

Öniş Z. and Webb S. B. (1992) *Political Economy of Policy Reform in Turkey in the 1980s*, Policy Research Dissemination Center, Working Papers, WPS 1059.

Öniş, Z. (2004) "Turgut Özal and His Economic Legacy**,** Turkish Neoliberalism in Critical Perspective", *Middle Eastern Studies*, Vol.40, No.4, pp.113-134.

Wolcott Peter and Cagiltay Kursat (2001) "Political Economy of Policy Reform in Turkey in the 1980s", *The Information Society*, Vol.17, pp.133-141.

http://www.unctad.org/en/docs//iteipc20031_en.pdf (19.05.2011).

http://www.miah-telecom.co.uk/ (19.05.2011).

http://www.nyu.edu/classes/stephens/Collier's%20page.htm (19.05.2011).

http://www.tuik.gov.tr/Kitap.do?metod=KitapDetay&KT_ID=0&KITAP_ID=158 (09.05.2011).

http://www.tuik.gov.tr/VeriBilgi.do?tb_id=54&ust_id=15 (09.05.2011).

http://www.btk.gov.tr/Yayin/istatistikler/istatistikler.htm (09.05.2011).