

## Broadband Penetration and Participatory Politics: South Korea Case

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### Abstract

*This paper examines the potential impact of the Internet on the political process in a young democracy. Roh Moo-hyun's dramatic victory on December 19, 2002 represents a major watershed in modern day South Korean politics. The Internet enabled this upset victory. The Internet made available alternative sources of political information unfiltered by the conservative and often biased mass media. Citizens distributed worldwide could express their support for Roh Moo-hyun in the public forums on his official site and many other news and discussion sites. Rohsamo, a group of people who support Roh Moo-hyun, became the focal organizing structure around which the efforts of individual supporters were coordinated. In this paper we draw on primary and secondary data sources and relate broadband penetration to political participation. We suggest that Roh's election would not have been possible had it not been for the nationwide broadband infrastructure and low costs for household high-speed Internet access. South Korea's broadband penetration rate is four times higher than the United States, 60 times higher than the United Kingdom and twice that of Canada. As the world's leader in broadband penetration and Internet usage, the South Korean case illustrates the potential impact of widespread Internet access on the democratization process in developing countries.*

### 1. Introduction

On December 19, 2002, South Korea witnessed a real-life drama more exciting than any blockbuster. When it seemed almost impossible, Roh Moo-hyun snatched a dramatic victory over Lee Hoi-chang in a surprise upset late in the afternoon. The victory

followed a long-term struggle for a western-style democracy in South Korea and represents the consolidation of its democratization process. It was especially exciting for the "generation 386"<sup>1</sup> who had been the key players in the midst of that democratization movement in the eighties and who were also the key mobilizers of support for Roh Moo-hyun. This mobilization took place largely over the Internet; people sent short text messages through the wireless Internet and could log on for immediate access to ongoing news and debates regarding the campaign on several key web sites. In fact, many political commentators contend that the Internet played an important role during the campaign at crucial points when the candidacy of Roh was threatened [10, 52]. As the world's leader in broadband penetration and Internet usage (see Figure 1), the South Korean case can shed light on how widespread Internet access may affect democratization processes and their consolidation in developing democracies.

The Internet has been touted as being responsible for a societal shift from the industrial to the "information age". Some argue that the impact of inter-networked computers will be as dramatic as that effected by the printing press [16]. The printing press revolutionized the way in which information was disseminated, stored and retrieved. It broke the control held by the Catholic Church over religious information and enabled the widespread dissemination of Luther's ideas to the general public. It represented the first true one-to-many communication technology. Information was no longer controlled by an elite group of people,

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<sup>1</sup> Generation 386 is an acronym that stands for people in their thirties (3) who participated in the student movement in the eighties (8) and were born in the sixties (6).

but preserved in print and disseminated to a wider public. In short Eisenstein argues that the printing press enabled the transformation of a medieval to a modern society [20]. Similarly, IT (information technology), and in particular the Internet, has brought technological breakthroughs in communications. Many researchers in the fields of management science and economics have reported the impact of IT on how work is organized at the organizational and industry level and on productivity [e.g., 7, 44, 45, 54]. The impact of IT as an intra-organizational communication technology has also been reported in previous studies [e.g., 2, 47, 49]. There has also been much research on the potential impact of the Internet on the political process [For some recent reviews see 1, 18]. However, reports that demonstrated actual impact on political participation by citizens through a detailed case study are scarce. Mirroring research on the impact of technology in other areas, initial utopian perspectives were countered by more cautionary studies revealing that the Internet may serve to reinforce and amplify existing relationships and structures in the political system and have little impact on increasing civic and political participation [e.g., 6, 14, 27]. The existing empirical studies indicate that the Internet has had greatest impact in mobilizing social movements [e.g., 11, 15, 41]. However, to date there have been few published studies on whether the Internet, a potential change agent, made a real change in the political processes at a national level [See 53 for one exception].

There are several possible reasons that prior studies have failed to demonstrate a 'revolutionary' impact of the Internet. First, most studies have examined the impact of the Internet on the political process within mature democracies. The "media minimal effects perspective" argues that due to individual selective information processing, the introduction of a new communication medium will not change existing political opinions [See 38 for a review of this perspective].

Second, although most studies have indiscriminately investigated the impact of the "Internet" on the political process, the Internet in fact can exhibit diverse technological architectures and vary along several of the dimensions of communication technologies. Due to the convergence of digital communication technologies, the Internet may encompass multiple forms and functions. The Internet refers to the network of interconnected communication networks linking people to other people and institutions through diverse devices (e.g., computers, mobile devices) and enabling node-to-node transmission and communication of information. Little concern is given to the actual objective characteristics

of the "Internet" as experienced by individual participants in prior studies. A true understanding of the impact of the Internet on political processes must incorporate an understanding and "theorizing" of the objective technological dimensions of the communication medium [46]. Early studies have not differentiated between different access speeds by citizens in examining the political impact of the Internet. A 2002 Pew Internet and American Life project report indicates that roughly 21% of Internet users in the U.S. had access to broadband [26]. Since privileged socio-demographic groups are more likely to have broadband access, the mix of broadband and low-speed access in the studies could potentially wash out any strong effect of broadband access on political participation. Horrigan and Rainie [26] found that the broadband experience was qualitatively different from dialup Internet access. Specifically, broadband users were more likely to create and manage content online in addition to do more things more often online. This active participation on the Internet is particularly relevant for understanding the potential political impact of the Internet on participatory democracy [4].

Third, most studies have failed to recognize the true potential of the Internet communication revolution in studying its impact on the political process. In short, most studies have focused on understanding the government to citizen communication efficiency gains and exposure to diverse information. It is only the studies that have investigated the Internet's impact on social movement organization that have investigated the many-to-many communication media potential of the Internet. Citizen-to-citizen communications will become more likely when coupled with broadband usage, as argued above.

Fourth, the existing studies have been conducted in countries where Internet use has been viewed as static and were conducted before Internet use achieved broad penetration into the populace [37]. Based on surveys, Krueger found that if people had equal access, the Internet had real potential to bring "new" individuals into the political process. It is for these reasons that the case of South Korea presents an interesting historical case study within which to investigate the realized impact of broadband access on citizen-to-citizen participation in the political process.

This study examines how the Internet could and did have an impact on the outcome of the Korean Presidential Election of 2002. South Korea is an exemplary country to study the impact of Internet on politics because of her unique features in both technology and politics. First, with the help of aggressive government IT policies, Korea has become technologically the most advanced country in Internet usage. Korea is the leading country in the world in the

use of broadband access to Internet, twice as high as that of the second highest country Canada, and four times as high as that in USA [5, 25]. (See Figure 1 for current broadband penetration rates by access technology.) Moreover, use of mobile phones equipped with access to e-mailing and Internet is widespread in Korea, where 60% of population owns mobile phones [36]. The rate of increase of broadband access to the Internet was extremely high; the number of broadband users grew by an order of magnitude at the turn of the decade between 1999 and 2000. (See Figure 2 for the rapid increase in broadband access in the year 2000.) Secondly, South Korea is a relatively young democracy. After three decades of military dictatorship, it was only 10 years ago that Koreans had the first civilian President by a democratic election. Since media impact political processes in developing countries to a larger degree than in democratically mature countries where its impact is minimal [38], the impact of the Internet on political processes may be greater and more clearly demonstrable in a democratically young country such as Korea.

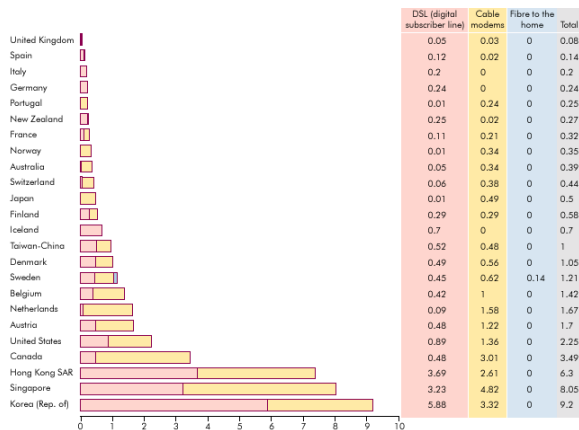
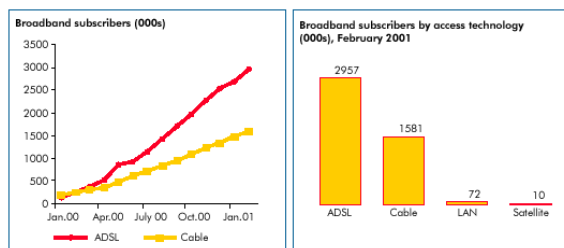


Figure 1. Broadband Penetration Index by Access Technology (Source: OECD 2002)

Broadband access in the Republic of Korea over time and by access technology



Source: Korean Ministry of Information and Communications.

Figure 2. Broadband Access over Time (Source: Korean Ministry of Information and Communications)

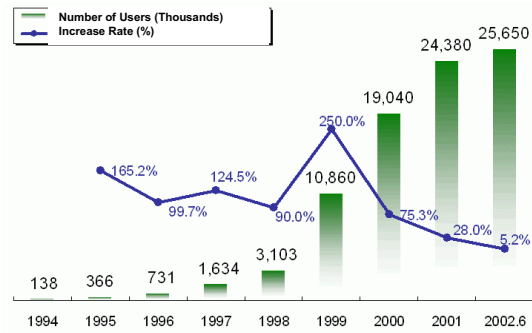


Figure 3. Number of Internet Users in Korea (Source: Korea Network Information Center)

As a result of the unique combination of the characteristics as a young democracy and government policy regarding broadband Internet access, the “Internet” played a critical role in the Korean Presidential Election of 2002. Supporters of Roh, and in particular members of “Rohsamo” – an acronym for “Roh Moo-hyun Lovers Group” leveraged the many-to-many communication capabilities of the Internet to disseminate and critically discuss political information. The Internet and widespread broadband penetration made it possible for a large number of voters to seek alternative views and political information unfiltered by mass media. As a result, Roh Moo-hyun became president against all odds, and became known in the popular press as the first “Internet President” [52].

In this study, we attempt to answer the question ‘How does ubiquitous broadband access affect political processes and outcomes?’ by presenting a detailed historical case study of the Korean Presidential Election of 2002. By investigating the factors and processes that contributed to the success of Rohsamo, we hope to shed light on the impact of widespread broadband penetration and access to the Internet on the political process in young democracies. Before discussing the findings from our findings, we describe the methods we used to analyze the case. We next present our case findings, and conclude with implications for research and policy.

## 2. Methods

In this study, we adopt a historical method to focus our attention on the complex interaction among social, technical, political and economic factors that fed into the formation of a nationwide ‘information system’ that resulted in the election of Roh Moo-hyun. By adopting a historical perspective, we investigate the focal role of the Internet, and in particular broadband-based Internet, on political participation in the peculiar

context of South Korean societal conditions [3, 42]. Mason et al. [42] suggest the following steps for conducting historical research: 1) begin with focusing questions, 2) specify the domain, 3) gather evidence, 4) critique the evidence, 5) determine patterns, 6) tell the story – the account, 7) write the transcript.

The focal questions that guide our analysis of how broadband technology affected political participation are: What conditions favored the emergence of broadband technology? How was broadband technology absorbed into the everyday life of Korean citizens? Who played the key executive and technical roles in the decision to deploy broadband nationwide? How did subsequent events unfold? What were the social and political factors that affected how the events unfolded? How did political participation practices change? We gathered data from primary sources available on Rohsamo: individual contributions to ongoing discussions, summary memos and documents from offline meetings, and participation and membership statistics, as well as interviews published in online and print media sources, and firsthand accounts and personal diary accounts published in books. Data on South Korea's IT policy and political history were gathered from a variety of governmental reports. Data on the presidential campaign and election process were gathered from online and print news media sources. We use concepts from the social movements to gain an understanding of the pattern of events that emerged as a result of the interaction between the technical communications infrastructure made possible by government policy, and pre-existing political and social movements [22]. We provide this account in the following section.

### 3. Case Study of South Korea

#### 3.1. South Korea's IT Policy: The Role of Government for the Promotion of Broadband Access to Internet

South Korea has been noted for its rapid economic growth for the past decades. Background statistics on the Korean economy and demographics are summarized in Table 1. Traditional manufacturing industries such as the automobile industry were the major drivers of Korean economic development until the mid-1990s. However, after the economic crisis in 1997 in which Korea had to receive a loan from IMF and go under IMF's strict financial control, the Korean government instituted an aggressive IT policy for a new knowledge-based economy with the vision that broadband should become a universal service like telephone service. It invested more than 0.25% of the GDP to build a high-speed backbone and is also providing more than 0.2% of GDP in soft loans to

operators from 1999 to 2005 [19, 21]. The Korean government policies, which conditioned a broadband success story, are three-fold: to promote market competition in telecommunications and Internet services industries, to support small high-tech businesses, and to boost demand for computer and Internet use among the population.

**Table 1. Basic Facts of South Korea compared to Japan and USA as of 2002 [19]**

	South Korea	Japan	USA
Population (million)	47.6	127.5	284.4
Population Density (No of people/km <sup>2</sup> )	476	337	31
Nominal GDP (US\$, billion)	476	3,992	10,446
GDP Growth (%)	6.3	0.6	2.4
PPP-adjusted GDP (US\$, billion)	814	3,438	10,446
PPP-adjusted GDP per capita (US\$)	17,100	26,900	36,700

First, the Korean government promoted competition in the telecommunication sector, based on deregulation and market principles [40]. Since 1990, the Korean government deregulated basic telecommunication services incrementally. For example, the government granted licenses to multiple carriers in the local and long distance call sectors, which helped to promote the high-speed Internet access infrastructure. There were also few entry barriers in terms of regulations to the Internet service businesses, resulting in 55 Internet service providers in 2000. The competition resulted in a faster service at a lower price for broadband access: the service is installed within 24 hours of an order and the monthly access fee ranges from \$19 US (2 Mbps) to \$33 US (8 Mbps). South Korea has the lowest broadband access fee for the highest connection speed as a percentage of per capita GDP.

Secondly, the Korean government played a critical role in promoting high-tech industries, among which the IT industry is dominant, by providing tax incentives and financial support [51]. Since the economic crisis in 1997, the government under IMF supervision directed its economic policy toward an economy based on market competition with urgency and promoted small businesses and high-tech industries at the expense of inefficient chaebol conglomerates. The most notable policy was the enactment of the Special Law for the Promotion of Venture Businesses ("SLPVB") in 1997. This special law supported small high-tech businesses, if they met the government criteria for "venture businesses (VB)", by providing tax benefits, financial assistance from the

government, exceptions to general corporate laws, and R&D assistance. The main criteria for VB are whether the business is based on a patented leading-edge technology and high R&D. The Korean government has provided a half billion \$US more than 1% of GDP, to small and medium-sized businesses in 2001 [33]. Moreover, the Korean government financed 90% of venture capital, investing 0.6% of national GDP in venture businesses in 2001 [33]. As a result, the number of venture businesses increased from 2,000 in 1998 to 10,182 in 2002, of which 50% were IT businesses [33]. These new small IT businesses played a critical role in the diffusion of Internet services to consumers, by creating a high demand for faster Internet access as well as becoming a supplier for Internet services.

Thirdly, the government created various programs to increase demand for Internet use among the population. One of the programs was to educate socially-disadvantaged groups for Internet literacy. The “Ten Million People Internet Education” project was launched in 2000 to provide 10 million people with basic skills for computer and Internet use by the end of 2002 [43]. Recognizing that the housewives have a strong influence on household purchase decisions and are also very interested in the education of their children, the government set the housewives as its main target for Internet literacy programs. The government granted subsidies to private Internet institutes for training the housewives, providing Internet education courses at an affordable price. In 2000, 4.1 million people, including one million unemployed housewives, were educated through this initiative, which generated a nationwide Internet boom. The government also provided 100 percent of primary and secondary schools with broadband access [21]. Moreover, it also promoted e-government programs to utilize the Internet for public services. The other government action to boost Internet use demand was the introduction of the Cyber Building Certificate system in 1997 [40]. The certificate is issued to a building with high-speed Internet access by the government, giving builders an incentive to construct residential and commercial buildings with broadband accessibility for differentiating their products. This certificate resulted in the widespread diffusion of the PC-bang, an Internet café equipped with high-speed Internet access. Through the PC-bang Korean Internet users were exposed to the broadband Internet experience and became so accustomed to it that diffusion of broadband to households was accelerated [40].

### 3.2. Rohsamo: Emergence of a Movement and Subsequent Impact

**3.2.1. The Facts.** In mid-April 2000, immediately after Roh Moo-hyun’s loss in the election for the Pusan representative to the National Assembly, supporters logged on to his official web site and posted supporting messages on its electronic bulletin boards.<sup>2</sup> Thousands of people posted encouraging messages on the boards during the days following this loss; on average 3,000 people visited the homepage and 500 people posted their opinions online each day [9]. This outpouring of support triggered one well-known participant within the group to suggest that they start a new discussion group for fans of Roh Moo-hyun who shared the candidate’s vision for a Korea without regional divisions. The loss was even more shocking to those outside Pusan because of Roh’s lead in national opinion polls as one of the most promising politicians in Korea. The new fan club was soon launched through one of many available services for the free hosting of discussion groups. Within ten days, over 300 people of all ages, including teenagers and senior citizens, distributed worldwide registered as members of the group. By the end of April the free service was proving insufficient for the increased new membership. Group members soon contributed the necessary resources for independent hosting of Rohsamo by May 2000.

Rohsamo did not set out to make Roh Moo-hyun the president of South Korea. Initially it was simply a fan club – people disillusioned with the political process in Korea joined Rohsamo because they identified with Roh Moo-hyun’s new political vision for a participatory democracy beyond regional divisions rifting South Korean politics. Rohsamo’s goals shifted as membership changed throughout the two years leading up to the presidential election. The most dramatic change came during the Kwangju primaries in March of 2002. During this period over 1,000 new members registered on Rohsamo each day. Membership increased dramatically from just over 5,000 before the Kwangju primaries. Today Rohsamo has 83,088 registered members distributed worldwide in over 35 countries on 5 continents, forming a transnational advocacy network.<sup>3</sup> While Rohsamo is an online community with members distributed worldwide, local Rohsamo meetings were held frequently. From the beginning, members of Rohsamo met face-to-face in addition to exchanging political

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<sup>2</sup> Roh Moo-hyun’s official homepage was <http://www.knowhow.or.kr>. This is now the official homepage for the Blue House (South Korean government). The old pages can be viewed at <http://before.knowhow.or.kr>.

<sup>3</sup> Some members left Rohsamo after the presidential election.

information and opinions online. Regional groups set up their own forums in the online space in order to coordinate local activities that were not of immediate relevance to the entire community.

Rohsamo played a key role in critical moments throughout Roh Moo-hyun's road to presidency. Members wrote and sent handwritten letters supporting Roh and coordinated campaign fundraising activities both online and offline when internal friction within Roh's party threatened the financial viability of his continued candidacy, managing to raise approximately \$700,000 in seven days. Overseas members who could not vote themselves produced pamphlets of evocative and emotionally stirring personal testimonials supporting Roh Moo-hyun. Members coordinated to disseminate these pamphlets to travelers en route to Seoul in airports throughout Europe in order to persuade potential undecided voters to vote for Roh. When real time polls on the day of the election indicated that Roh was trailing Lee Hoi-chang, Rohsamo members sent text messages to mobilize the Roh supporters to vote. (See Figure 4 for changes in support for the two candidates over the course of the day.)

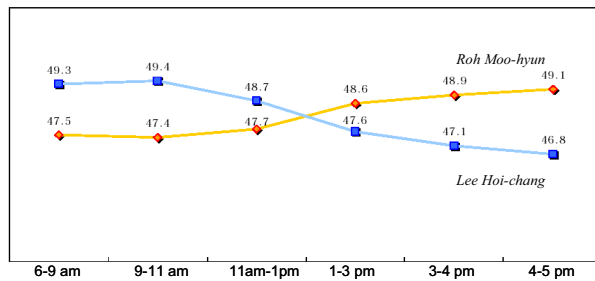


Figure 4. Candidate Support by Time of Day (Source: KBS Media Research Exit Polls)<sup>4</sup>

**3.2.2. Understanding Rohsamo as a Social Movement.** A social movement is defined to be a “collective, organized, sustained, and noninstitutional challenge to authorities, powerholders, or cultural beliefs and practices [22, p. 3]. Rohsamo’s emergence mirrors many aspects of social movements. Rohsamo did not emerge out of a vacuum. The initial group of organizers of Rohsamo were past members of the eighties student movement, mostly from the generation 386, and had been active in political discussions groups and offline organizations. In essence Rohsamo grew out of abeyant structures such as these. The emergence of this movement was enabled by a shift in the communication infrastructure towards low-cost

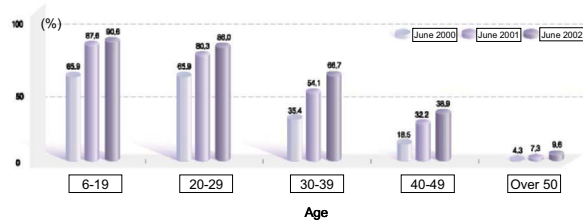
high-speed many-to-many communications through the broadband infrastructure implemented by government mandate as described above.

The political process approach argues that social movements gain momentum when shifts in economic and social conditions provide an opportunity for such movements to recruit and actively retain participants [McAdam 1982, cited in 22, p. 12]. The South Korean government’s IT policy resulted in the creation of a communication infrastructure to which the vast majority of the population was connected at high-speed, and which an increasing proportion of people were using almost daily for a variety of purposes ranging from news to games and social uses. The unique policy governing participation in online forums coupled with the general public reticence in expression personal opinions regarding politics fueled increased online expression of political expression. In short in South Korea, participants in online membership-based forum need to provide their social security number when registering an online ID. Although their offline identity remains confidential in the public online discussion forums and hence enables anonymous participation, people are not able to register multiple online screen names to misrepresent the group consensus. The generation 386ers were also more likely to participate in online forums and turn to alternative online media due to the biased coverage of political news by conventional news media outlets in Korea. In addition to being more likely to use the Internet as shown in Figure 5, due to their relative deprivation in terms of political information outlets, they were more likely to browse for alternative sources of information on the Internet and join Rohsamo.<sup>5</sup> The lowered costs to participating in Rohsamo also enabled a wider population to participate, increasing the “biographical availability” of potential movement sympathizers [22, p. 65]. In other words, the Internet lowered the participation costs and barriers, and enabled micro-contributions unfettered by time and distance [50]. It was due to these lowered barriers that people were able to mobilize so rapidly in the wake of Roh’s National Assembly loss in April 2000.

<sup>4</sup> Multi-stage strata and cluster sampling was used to sample respondents around 199 voting booths across the country.

<sup>5</sup> There is some indirect evidence of this relative deprivation in the results of media satisfaction surveys, that indicate that nearly half the population is dissatisfied with the print news media; one of the most cited reasons for this dissatisfaction being that the media is biased [34].





**Figure 5. Percentage of Internet Users by Age Group [35]**

Roh’s charisma as a leader and political revolutionary played no small part in the impact of the Internet on the political process. It was people’s identification with Roh Moo-hyun as an anti-establishment and anti-chosun<sup>6</sup> politician that was a key factor that led people to react strongly to his loss [8, 31]. Roh became a public figure in the court proceedings investigating corruption in the previous Korean establishment in the late 1980s [28]. The moral shock they experienced led them to self-recruit and self-organize to form Rohsamo after encountering one another online through Roh Moo-hyun’s homepage discussion forums. The initial messages contain a sense of moral obligation to support Roh Moo-hyun and strong emotional and empathic identification with Roh Moo-hyun as a person and what people perceived he stood for, namely an anti-establishment politician who braved the consequences of standing by his convictions.

Rohsamo members met face-to-face in a variety of offline local meetings and forged affective ties and a sense of collective identity in order to increase participants’ commitment to the Rohsamo mission. Rohsamo today has 26 regional groups and 41 interest groups under the rubric of the Rohsamo association as a whole [29]. The increased identification they felt with the movement as a result of Roh’s charisma, and the affective ties formed online led people to actively express their support for Roh to others offline. One taxi driver reported that he made a point of telling all his cab customers about Roh Moo-hyun, and the need for Korean politics to go beyond regionalism [30].

**3.2.3. What Changes did Rohsamo Effect?** After an initial flurry of activities on initiating Rohsamo, the group was not a site of significant activity. It was itself an abeyance structure. It was only through the open primaries of Kwangju that Rohsamo became energized and witnessed a heightened sense of excitement and frenzied activities. Rohsamo members coordinated through the forums in order to participate in the open

<sup>6</sup> Chosunilbo is the major print newspaper dominating the print mass media in Korea.

primaries. Rohsamo members experienced a sense of cognitive liberation as a result of participation through the Internet and Rohsamo. Following a relatively long period of low rate of participation, the Rohsamo public forums saw a dramatic increase in daily participation rate. (See Table 2) Rohsamo members were jubilant on the day of the Kwangju primaries. People traveled to Kwangju to participate in the open primaries, the first in Korean political history. People cried openly in rejoice when Roh Moo-hyun won the Kwangju primaries. The sentiments were echoed on the outpouring of messages on the public forums of Rohsamo online. The Kwangju primaries represented a turning point in Rohsamo history. It showed Rohsamo members that they could have a significant impact on political outcomes. The event triggered a dramatic increase in membership. From a membership base of approximately 7000 before the Kwangju primaries, it increased to 49,000 members by July 2002. On average 1,000 new members registered on Rohsamo every day following the Kwangju primaries for a brief period. The sense of self-efficacy and cognitive liberation was so great in fact that Rohsamo members were strongly against candidate consolidation in November 2002 even when the prospects of Roh Moo-hyun winning without doing so were increasingly bleak. On an average day in November when this debate was rampant, there were on average 360 posts per day, with a single post registering a maximum of 3,051 unique views. See Table 2 for an estimate of activities over time.

**Table 2. Estimates of Rohsamo Online Activities over Time**

Period	Total # Posts	Estimated Posts per day	Avg. Views per Post
April 2000 – June 2001	15,423	33	10s
~ December 2001 <sup>7</sup>	10,289	61	1s ~ 10s
~ March 2002 (1st wk) <sup>8</sup>	11,060	235	1s ~ 10s toward March
March 2002 <sup>9</sup>	14,358	478	100s

<sup>7</sup> A total of 177,380 visitors logged on to the forum during this six month period. This information is not available for all bulletin boards because they used different web bulletin software. However this does not represent the number of unique visitors, but rather the number of unique sessions.

<sup>8</sup> A total of 46,862 visitors logged on to the forum during this period.

<sup>9</sup> A total of 93,308 visitors logged on to the forum during this period.

~ August 2002	52,361	233	10s	-
~ 12.19.2002	27,194	247	100s	
			10s-1000s	

Rohsamo members' sense of self-efficacy was at a heightened state on the day of the election on December 19, 2002. There were over 1,500 posts on the Rohsamo forums on that single day. People monitored the exit polls broadcast through TV, and instigated Rohsamo members who were reading the messages to call friends and acquaintances who supported Roh Moo-hyun to turnout to vote. Figure 7 shows the trend in voting time during the day. Rohsamo members believe that their active solicitation for voter turnout organized through Rohsamo forums played a key role in Roh's dramatic comeback as shown in Figure 4; a plausible albeit unproven claim given that the age group more likely to vote for Roh as shown in Figure 6 voted later during the day.

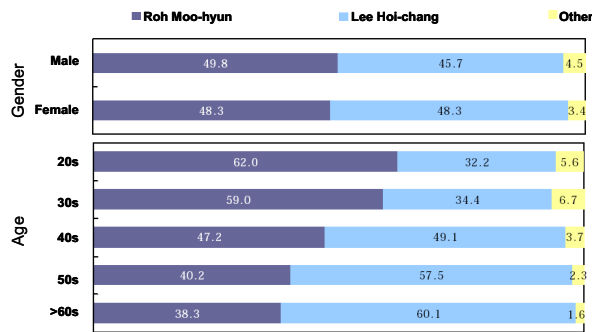


Figure 6. Candidate Support by Gender and by Age (Source: KBS Media Research Exit Polls)

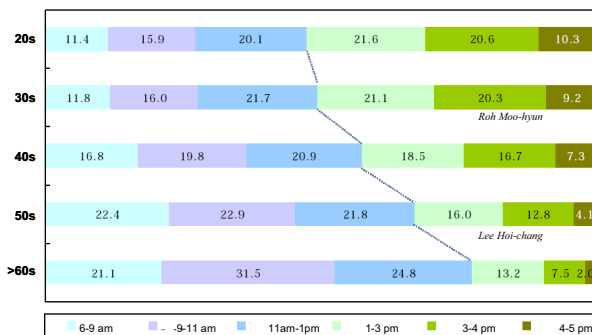


Figure 7. Voting Time by Age (Source: KBS Media Research Exit Polls)

Rohsamo also introduced tactical innovations in political and social mobilization online. They combined both online and offline activities globally. Their internal decision making process was a microcosm of participatory democracy in practice [30]. All members voted on a decision following open deliberations in the forums for a given period of time.

Opinions were refined in this process in order to effect changes to the decision on which people were to vote.

#### 4. Conclusion

As South Korea is the world's leader in broadband Internet access with 67% household broadband penetration, twice as high as the second leading broadband country and 4 times as high as USA, she has become a test laboratory for the impact of the Internet on society. We presented the case of the South Korean Presidential Election in 2002 to examine the impact of the Internet on political processes. Broadband Internet access played a critical role in the upset victory of Roh Moo-hyun. The Korean government through aggressive policies including deregulation of telecommunication and Internet service sectors, financial support for small IT businesses and education of socially-disadvantaged group with basic skills of computer and Internet use, facilitated high broadband penetration among citizens. The qualitative difference in the broadband Internet experience enabled the emergence of Rohsamo, a voluntary group of supporters of Roh Moo-Hyun on the Net in 2000. Rohsamo played a critical role in Roh's campaign and contributed no small part to his subsequent upset victory, defying the expectations of mainstream political observers. The case illustrates that the political impact of the Internet was made possible in this particular case through the mobilization of a social movement in the form of Rohsamo. Coincidentally in South Korea, the demographic group with the higher proportion of Internet users was also the demographic group who identified with and supported Roh Moo-hyun. This group effectively leveraged the Internet to muster support for Roh Moo-hyun. In short, the case suggests that broadband Internet access can be a new tool for political mobilization. The interaction between the economic and societal conditions and the nationwide broadband technical infrastructure may at times result in consolidation of democratic processes in a relatively young democratic country as witnessed in South Korea.

#### 5. Reference

- [1] Agre, P.E., *Real-time politics: The Internet and the political process*. The Information Society, 2002. **18**(5): p. 311-331.
- [2] Argyres, N.S., *The impact of information technology on coordination: Evidence from the B-2 "Stealth" bomber*. Organization Science, 1999. **10**(2): p. 162-180.
- [3] Bannister, F., *The Dimension of Time: Historiography in Information Systems Research*. Electronic Journal of Business Research Methods, 2002. **Volume 1**(Issue 1): p. 1-10.



- [4] Barber, B.R., *Three scenarios for the future of technology and strong democracy*. Political Science Quarterly, 1998-99. **113**(4): p. 573-589.
- [5] Belson, K. and M. Richtel, *America's broadband dream is alive in Korea*, in *New York Times*. 2003: New York. p. C1.
- [6] Bimber, B., *Information and political engagement in America: The search for effects of Information Technology at the individual level*. Political Research Quarterly, 2001. **54**(1): p. 53-67.
- [7] Brynjolfsson, E., L. Hitt, and S. Yang, *Intangible Assets: How the Interaction of Computers and Organizational Structure Affects Stock Market Valuations*. Brookings Papers on Economic Activity: Macroeconomics, 2002. **1**: p. 137-199.
- [8] Choi, M., *Press Reformation: Why does Roh Moo-hyun fight Chosunilbo?*, in *Roh Moo-hyun: Common Sense or Hope (Korean)*. 2002, Haengbokhan Chaek (eBook Edition: Wisebooktopia): Seoul, Korea. p. 248-264.
- [9] Chung, H., *Roh Moo-hyun Fan Club*, in *Sisa Journal*. 2000.
- [10] Clifford, M.L. and I. Moon, *The Web Site That Elected a President*. BusinessWeek, 2003. **3821**: p. 30.
- [11] Culnan, M.J. *The lessons of Lotus Marketplace: Implications for consumer privacy in the 1990's*. in *The First Conference on Computers, Freedom and Privacy*. 1991. Burlingame, CA.
- [12] Cumings, B., *The abortive abertura: South Korea in the light of Latin American experience*. New Left Review, 1989. **173**.
- [13] Dahl, R.A., *Polyarchy*. 1971, New Haven, CT: Yale University Press.
- [14] Davis, R., *The Web of Politics: The Internet's Impact on the American Political System*. 1999, New York: Oxford University Press. xvii, 225.
- [15] Deibert, R.J., *International Plug 'N Play? Citizen Activism, the Internet, and Global Public Policy*. International Studies Perspectives, 2000. **1**(3): p. 255-272.
- [16] Dewar, J.A., *The Information Age and the Printing Press: Looking Backward to See Ahead*. 1998, Rand. p. 30.
- [17] Diamond, L., *Developing Democracy: Toward Consolidation*. 1999, Baltimore: Johns Hopkins University Press.
- [18] DiMaggio, P., et al., *Social implications of the Internet*. Annual Review of Sociology, 2001. **27**: p. 307-336.
- [19] Economist Intelligence Unit, *EIU Country Data: South Korea, Japan, USA*. 2003, Economist Intelligence Unit.
- [20] Eisenstein, E.L., *The Printing Press as an Agent of Change: Communications and Cultural Transformations in Early Modern Europe*. 1979, Cambridge, UK: Cambridge University Press. 2 v. (xxi, 794 ).
- [21] Goguen, N., *South Korea: Living Laboratory for Broadband*. 2003, Sandy and Dave's Report on The Broadband Home.
- [22] Goodwin, J. and J.M. Jasper, *The Social Movements Reader: Cases and Concepts*. Blackwell Readers in Sociology. Vol. 12. 2003, Malden, MA: Blackwell Publishers. xii, 394.
- [23] Habermas, J., *Between Facts and Norms*. 1996, Cambridge, MA: MIT Press.
- [24] Han, S.-J., *Modernization and the rise of civil society: The role of the "middling grassroots" for democratization in Korea*. Human Studies, 2001. **24**(1-2): p. 113-132.
- [25] Herz, J.C., *The bandwidth capital of the world*, in *Wired*. 2002. p. 90-97.
- [26] Horrigan, J.B. and L. Rainie, *The Broadband Difference: How online Americans' behavior changes with high-speed Internet connections at home*. 2002, Pew Internet & American Life Project: Washington, DC. p. 91.
- [27] Kaid, L.L., *Effects of political information in the 2000 presidential campaign*. American Behavioral Scientist, 2003. **46**(5): p. 677-691.
- [28] Kang, J., *Roh Moo-hyun: The person*. 2002, Seoul, Korea: Ihnmul & SasangSa.
- [29] Kang, R., *Introduction to Rohsamo Regional and Interest Groups*. 2002, Sept. 5, <http://re.nosamo.org>.
- [30] Kang, R., *Rohsamo Vision*. 2002, Sept. 5, <http://re.nosamo.org>.
- [31] Kim, D., *Roh Moo-hyun and Anti-Chosun*. 2002, Seoul, Korea: Shiwa Sahwe.
- [32] Kim, S., *The Politics of Democratization in Korea: The Role of Civil Society*. 2000, Pittsburgh: University of Pittsburgh Press.
- [33] KISDI, *Role of Government and Market for Revitalizing Venture Businesses (in Korean)*. 2002, KISDI.
- [34] Korea National Statistical Office, *2000 Report on the Social Statistics Survey*. 2000: Seoul, Korea.
- [35] Korea Network Information Center, *2002 Korea Internet Statistics Yearbook*. 2002: Seoul, Korea.
- [36] Korean Ministry of Information and Communication, *2002 Korea Internet White Paper*. 2002, Informatization Planning Office, Internet Division. p. 69.
- [37] Krueger, B.S., *Assessing the potential of internet political participation in the United States: A resource approach*. American Politics Research, 2002. **30**(5): p. 476-498.
- [38] Lawson, J.C.H., *Building the Fourth Estate: Democratization and the Rise of a Free Press in Mexico*. 2002, Berkeley, CA: University of California Press. xiv, 287.

- [39] Lee, A.-R., *Exploration of the sources of student activism: The case of South Korea*. International Journal of Public Opinion Research, 1997. **9**(1): p. 48-65.
- [40] Lee, H., R.M. O'Keefe, and K. Yun, *The Growth of Broadband and Electronic Commerce in South Korea: Contributing Factors*. The Information Society, 2003. **19**: p. 81-93.
- [41] Leizerov, S., *Privacy advocacy groups versus Intel: A case study of how social movements are tactically using the Internet to fight corporations*. Social Science Computer Review, 2000. **18**(4): p. 461-483.
- [42] Mason, R.O., J.L. McKenney, and D.G. Copeland, *An historical method for MIS research: Steps and assumptions*. MIS Quarterly, 1997. **21**(3): p. 307-320.
- [43] Ministry of Information and Communication, *White paper on information and communication (in Korean)*. 2000, MIC: Seoul.
- [44] O'Mahony, S. and S.R. Barley, *Do digital telecommunications affect work and organization? The state of our knowledge*. Research in Organizational Behavior, 1999. **21**: p. 125-161.
- [45] Orlikowski, W., *Improvising Organizational Transformation Over Time: A Situated Change Perspective*. Information Systems Research, 1996. **7**(1): p. 63-92.
- [46] Orlikowski, W.J. and C.S. Iacono, *Research commentary: Desperately seeking "IT" in IT research - A call to theorizing the IT artifact*. Information Systems Research, 2001. **12**(2): p. 121-134.
- [47] Orlikowski, W.J. and J. Yates, *Genre repertoire: The structuring of communicative practices in organizations*. Administrative Science Quarterly, 1994. **39**: p. 541-574.
- [48] Shin, D.C., C.-M. Park, and J. Jang. *The growth of democratic political sophistication in South Korea: Exploring its recent trends*. in *Annual Meeting of the American Political Science Association*. 2002. Boston, MA.
- [49] Sproull, L. and S. Kiesler, *Connections: New Ways of Working in the Networked Organization*. 1991, Cambridge, MA: MIT Press.
- [50] Sproull, L. and J. Patterson, *Computer Support for Local Communities*. 2000, New York University: New York.
- [51] Sung, S.-M., *Korean Venture Business: Evaluation and Outlook (in Korean)*. 1 ed. 2001, Seoul: Bi-Bong. 291.
- [52] Watts, J., *World's first internet president logs on: Web already shaping policy of new South Korean leader*. The Guardian Unlimited, 2003: p. 16.
- [53] Winters, J.A., *The political impact of new information sources and technologies in Indonesia*. Gazette: The International Journal for Communication Studies, 2002. **64**(2): p. 109-119.
- [54] Yates, J., *Co-evolution of information processing technology and use: Interaction between the life insurance and tabulating industries*. Business History Review, 1993. **67**(1): p. 1-51.