

CHAPTER 8

GOVERNANCE AND THE INTERNET

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It might be profitable to look upon government somewhat less as a problem of power and somewhat more as a problem of steering. Steering is decisively a matter of communication, and information is absolutely essential for communication.

—Karl W. Deutsch (1966, pp. xxvii)

The Internet's rapid rise has produced conflicting visions of its likely effects. Some are Orwellian in depicting the threat that government would control citizens through massive files recording what individuals say in e-mails. Other visions are politically utopian. For example, Stanford economist Lawrence Lau (2000) rejects Schumpeter's (1952) view of major societal changes imposing both costs and benefits, claiming that the Internet makes possible "creation without destruction" because "there are no vested interests to protect; no existing business to be cannibalized." Such an assertion holds true only if one ignores the existing institutions and practices of governance. If the Internet is to change how governments operate, then existing institutions must change or be reorganized to the point of extinction. In some developing countries, there is an additional complication: modern institutions must be created where they do not exist. Although differing in their forecasts, both Internet utopians and dystopians are technological determinists.

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Although Internet technology is much the same around the world, governments are not. Thus, the Internet's effect on governance will depend not only on a country's information technology but also on the preexisting governance practices of a state. Where institutions of governance are not yet (or are only imperfectly) bureaucratic, then radical administrative reforms are necessary before Internet technology can be used to good effect. Where governments have not been committed to openness or have practiced censorship, the Internet's capacity to promote free communication poses a political challenge.

Among the countries of East Asia, great variations exist both in access to technology and in governance. Although differences in Internet access between rich and poor countries are often recognized, there is a tendency to ignore differences in political institutions within the region. To understand the role of the Internet in governance, we must first understand how countries have been governing themselves without the Internet. East Asian economies—China, Hong Kong (China), Indonesia, Japan, the Republic of Korea, Malaysia, Myanmar, the Philippines, Singapore, Taiwan (China), Thailand, and Vietnam—constitute a category rather than a homogeneous group. Political differences between the economies resist Lee Kwan Yew's attempt to assume a common set of Asian cultural values on the region.¹

The role of the Internet in governance can be understood only in terms of the interaction of new technology with well-established governments. Propositions about e-governance based on an ideal type model of government and politics in the United States or Scandinavia cannot be applied without regard to differences in context in China or Indonesia. A major study of attempts to introduce new information technology while ignoring the realities of governmental context concludes, "Failure predominates" (Heeks and Bhatnagar 1999).

Where East Asian governments are already bureaucratized, open, and accountable, the capacity exists to use of the Internet's potential to increase efficiency and speed up and increase the interaction of citizens with government. However, where governments are still struggling to introduce compliance with bureaucratic rules and there is no readiness to open up to public scrutiny what is done within the black box of government, then proposals to introduce the Internet will have an inspection effect, challenging governors to reform existing practices as a condition of good governance and economic development as well as for effective use of the Internet.

1. Compare Yew's view with Fukuyama (2001), Zakaraia (1994), and the global barometer surveys at <http://www.globalbarometer.org>.

NATIONAL DIFFERENCES IN INTERNET USE

Before the use of the Internet can take off, the infrastructure for its use must be present: telephone lines, widely distributed computers, and so forth. Up to a point, technology can compensate for low levels of early investment in infrastructure; for example, cell phones eliminate the need for telephone lines and even offer a limited amount of Internet access. However, the availability of twenty-first century technology is a function of economic development—and economic differences between and within East Asian societies are of long standing (see Sidorenko and Findlay 2001). Before the so-called digital divide, there was the computer divide, the telephone divide, and the electricity divide.

In Asia as in the Western Hemisphere, there are today two types of digital divide. At the national level, there is a divide between economies where the overwhelming majority of citizens have access to the Internet (for example, Japan or Singapore) and economies where very few have access (such as Myanmar and Vietnam). In economies where access is high, whether individuals use the Internet reflects differences in motivation and familiarity (differences that might be found, for example, between young and old citizens).

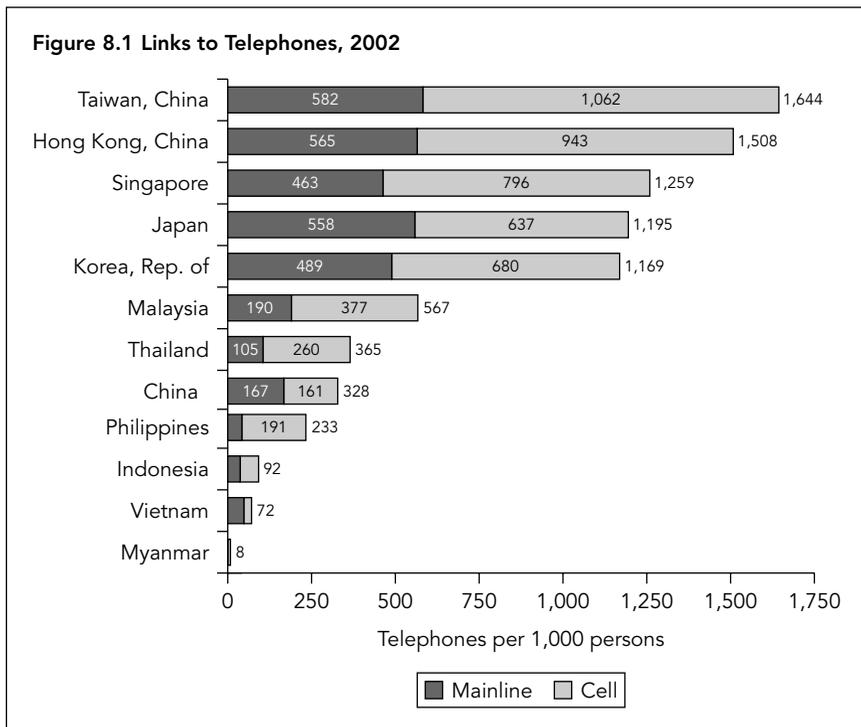
Technological Requisites and Social Multipliers of Internet Access

Personal computers (PCs) have brought computing power within the reach of hundreds of millions (and potentially billions) of Asians. Yet today, there are great cross-national differences in the availability of PCs. There are 622 PCs per 1,000 persons in Singapore; thus, many Singaporeans have access to a PC at home as well as at work or school. In Hong Kong (China), Japan, Korea, and Taiwan (China), the situation is similar; there is the equivalent of about one PC for every household. Among the bottom six East Asian countries, the number of PCs ranges from 40 per 1,000 persons in Thailand to very few in Indonesia, Myanmar, and Vietnam. Although differences in computer access exist among countries of the European Union (EU), too, the contrast between East Asian countries is far greater.

Whereas a PC can be used to play solitaire, the Internet is a tool for linking people and organizations in a communications network. When the Internet began to take off in the 1990s, access to telephone lines varied greatly between the most and least industrial countries of East Asia. Even after adjusting for purchasing power parities, charges were especially high

not only in Indonesia, Thailand, and Vietnam, but also in Japan (UNDP 2001, table A2.4). During the 1990s, the liberalization of telecommunications increased mainline telephone connections. The development of mobile cell phones has led to an explosion in connections, because a cell phone network is less expensive to build and can readily overcome geographical barriers. Today, Taiwan, China, reports that it has more cell phones than people, and leading East Asian economies have more cell phones per 1,000 persons than the United States. In developing Asian economies, cell phone usage is growing rapidly too, and in the poorest economies it exceeds access to landlines (figure 8.1).

Today, the total number of telephone connections exceeds the total population in five East Asian economies: Hong Kong (China), Japan, Korea, Singapore, and Taiwan (China). The ratio of telephones to population is better than 1:2 in Malaysia, about 1:3 in Thailand and China, and better than 1:5 in the Philippines. This level of diffusion means that, even in economies where a telephone is not a fixture within the household,



Source: International Telecommunications Union (2002).

most people will have a friend with telephone access, and telephones can be found in all but the most remote villages.

Studies of the social uses of technology emphasize, however, that it is misleading to estimate the number of information technology (IT) or Internet users from data about hardware. A computer in a school or library is used by far more people than the business executive's laptop stuffed with confidential data. Social institutions and networks can readily multiply access. In countries of the Organisation for Economic Co-operation and Development (OECD), the median citizen is able to access the Internet in many places—home, work, school, a café, or a friend's house—and the average Internet user regularly signs on from at least two places (Oxford Internet Institute 2003).

In economies at the leading or advancing edge of Internet use, such as Korea and Taiwan (China), people most frequently sign on the Internet at home, and both adults and youths may use a home computer (table 8.1). The global Ipsos-Reid *Face of the Web* (2001, module 8, p. 82) survey

Table 8.1 Opportunities for Internet Access, 2001
(percentage of population)

Place of access	Leading-edge economies ^a	Advancing economies ^b	Emergent economies ^c
Home	50	37	19
Someone else's home	46	23	25
Post office or library	47	13	14
Other government building			
Work	38	24	17
School	15	9	10
Internet café or bar	12	7	11
Computer electronic shop	15	8	9
Other fixed location	11	4	9
Mean access points	2.33	1.25	1.14
No Internet access	14	30	33
Never heard of Internet	4	11	17
Total without Internet access	18	41	50

Note: Table shows responses to the following question: "Regardless of whether or not you use the Internet, do you currently have access to the Internet?" Responses were based on a total of 18,713 interviews in 30 countries worldwide.

a. Leading-edge category included 11 economies (such as the Republic of Korea and Sweden) and 6,586 respondents.

b. Advancing category included eight economies (such as France and Taiwan, China) and 4,020 respondents.

c. Emergent category included eight economies (including urban China) and 4,060 respondents.

Source: Ipsos-Reid (2001, p. 8).

calculates that 36 percent of home computers have three or more users, 41 percent have two users, and only 23 percent have just one user.² A large portion of the population can access the Internet from public facilities, such as the library or a local post office, which in many countries was historically responsible for providing telephones. The market offers yet another point of access through Internet cafés and kiosks, and so, too, do the homes of friends.

Where Internet use is just now emerging, such as urban China, a population equal in size to that of the United States, household access is not the norm, but urbanites do have a wide variety of access points. Access at work is less important than access through the market or contacts with friends. Even though only a minority of urban Chinese sign on the Internet, they demonstrate a widespread awareness of where the Internet can be accessed: the average Chinese can identify almost as many access points as do residents in countries where the Internet is advancing. In developing countries in East Asia, there appear to be a large number of proxy users—that is, people who could ask a friend or go to a shop, a café, or a kiosk to send an e-mail for them or get them information from the World Wide Web.

The social multiplier effect of the Internet is further heightened through the two-step flow of communication (Katz and Lazarsfeld 1955; Rose 2000). Those who use the Internet as a source of political information are likely to be opinion leaders who talk about politics with other people. This multiplier effect transmits political news to many people who are not Internet users. Moreover, a document received by e-mail can be printed out, photocopied, and passed from hand to hand. In Malaysia, after Deputy Prime Minister Anwar Ibrahim was detained, activists downloaded Internet reports and sold photocopies in the streets and markets of Kuala Lumpur (Wong 2001, p. 385).

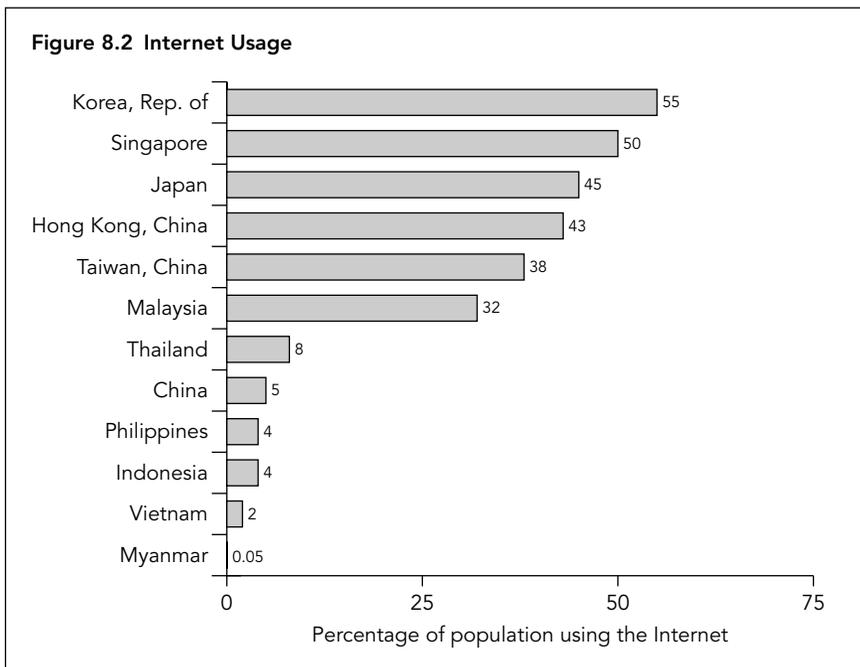
Internet Users

The supply of IT resources is a necessary but not sufficient condition for Internet use. To ascertain actual use of the Internet, it is necessary to

2. Ipsos-Reid data are drawn from two surveys. Surveys about access to the Internet were conducted in 35 countries in November–December 2000, with a total of 20,701 interviews. In East Asia, nationwide samples were undertaken in Hong Kong (China), Japan, Korea, Singapore, and Taiwan (China); quasi-national samples with some rural coverage were undertaken in Malaysia and the Philippines; and urban-only samples were undertaken in China and Thailand. In December 2000, a second survey in 30 of these 35 countries covered Internet users in the past 30 days. A total of 7,688 interviews were conducted.

collect survey data from individuals. Cross-national comparisons place a premium on consistency in measurement between economies; therefore, this chapter cites data on Internet use from the International Telecommunications Union (ITU). The ITU figures tend to underestimate usage because they are calculated as a percentage of the total population, including children too young to have learned how to sign on and elderly people too old to bother to learn. Moreover, because Internet usage is expanding rapidly in Asia, by the time a report is in circulation the percentage of Internet users will have risen.

East Asian economies are divided between those in which Internet use is high by OECD standards and those in which it is very low (figure 8.2). On the one hand, in five economies, two-fifths or more of the population is already on-line: Hong Kong (China), Japan, Korea, Singapore, and Taiwan (China). On the other hand, there are half a dozen countries where fewer than 1 in 10 people is on-line; the median falls between Malaysia and Thailand. Because up to four-fifths of the population of China is rural, it falls in the category of countries where Internet use is low as a percentage of the population.



Source: International Telecommunications Union (2003).

Determinants of Internet Use

Many influences of Internet use correlate with each other. For example, a substantial gross domestic product (GDP) per capita is necessary to provide the money for telecommunication infrastructure, and a standard of living above poverty is necessary to have a phone and a PC. Economic determinism is inclined to treat other conditions—such as freedom from media censorship and civil liberties that are associated with using information to hold government accountable—as if they were merely by-products of a society that is modern in social and economic terms. However, political scientists argue that these freedoms are independent of economic conditions, and factor analysis confirms this. A statistical analysis of aggregate influences of Internet uses identifies two factors: the first links technological and economic resources, and the second emphasizes freedom of information and civil rights (table 8.2).

Table 8.2 Contextual Influences on Internet Use

Factor analysis of aggregate data for 12 East Asian nations				
Indicator	Modern resources: Factor 1 (percent)	Freedom of information: Factor 2 (percent)		
Variance explained	64.1	30.6		
Eigenvalue	4.5	2.1		
<i>High integrity</i>				
Tran corruption index	96	97		
<i>High technology</i>				
Personal computers	97	13		
Main phone lines	93	30		
<i>High economic</i>				
GDP per capita purchasing power parity	95	16		
Urban population	92	25		
<i>Information flow</i>				
Media freedom	12	99		
Civil rights	17	98		
Multiple regression (dependent variable, percentage of Internet users)				
Indicator	Regression statistics			
	b.	SE	Beta	t
1. Modern resources	195	76.6	87	7.3
2. Freedom of information	77	26.7	35	2.9
Adjusted R-squared 84%				

Sources: Data compiled by international intergovernmental and nongovernmental organizations. The civil rights index from Freedom House has been reversed for consistency in signs.

At the aggregate level, both modern resources and freedom of information are important determinants of Internet use. GDP per capita, urbanization, telephone lines per thousand people, and the Transparency International rating on corruption constitute the principal factors differentiating countries according to their percentage of Internet users. Second in importance is a factor combining freedom of the media and civil rights. In other words, individuals who live in a prosperous society that censors citizens will be less inclined to use the Internet, as will be citizens who live in a free society that is still at a middling level of development (table 8.2). Together, the two factors account for 84 percent of the variance in Internet users among 12 economies of East Asia.

The temporal and causal sequence of development is clear. East Asian economies with a high level of GDP per capita were early in promoting nationwide telecommunication facilities. When PCs came on the market two decades ago, these societies had an educated and prosperous population who could make use of them. Before use of the Internet became widespread, economies high in modern resources had met the preconditions for Internet access. Going on-line therefore augmented established patterns of behavior and communication. By contrast, the preconditions of access are still absent in countries where GDP per capita is low and where there are few telephone lines and computers.

In modern societies, where access is not a problem and a substantial proportion of the population is on-line, Internet use can be conceived of as a matter of digital choice. Individual attributes explain why some people use the Internet and others do not. In societies where half or more of the population is on-line (including five East Asian societies), age is the most important determinant of Internet use (OECD 2003; Oxford Internet Institute 2003).

CONDITIONS FOR INTERNET USE IN GOVERNMENT

A modern state can operate effectively only if accurate information flows freely among its institutions and only if information flows regularly between public officials and governors. The Internet is a means of communicating information accurately, instantly, and over long distances. Therefore, the instrumental question that the Internet raises is, how can public agencies use this new tool to improve the processes of governance? A modern state is also a rule-bound bureaucratic state, because the routines of policy are carried out by low-level public officials applying rules laid down by their political superiors. The

Internet—and the computer even more so—operates according to rule-bound protocols.

The use of the Internet in governance, therefore, requires that government maintain a free and open flow of information within government and between governors and citizens to whom these governors may be accountable. It also requires that public officials carry out the routine delivery of public programs according to rules laid down in public laws. On every continent, the extent to which governments meet both criteria varies, and a government that is not yet, or only imperfectly, bureaucratic and open has yet to meet the conditions for making most effective use of the Internet.

The Internet's Potential for Marginal and Structural Effect on Government

The potential effect of the Internet will vary with the existing context of governance. In some cases, it will make marginal changes in efficiency and information flows, whereas in others, its inspection effect will lead to structural challenges.

Marginal efficiency gains. If a government operates according to impersonal rules, then it is bureaucratically effective. In such circumstances, the Internet has the potential to produce marginal increases in efficiency in internal administration of government and in the delivery of public services to citizens (see OECD 2003 for prescriptions). Following from the role of mainframe computers in enabling government agencies to store and process information, Internet technology can make routine the interaction of public agencies and citizens in filling out tax forms and forms that will entitle the citizens to benefits. E-mails and other Internet facilities can also greatly speed the flow of information within government and with citizens.

But the Internet can hardly transform an already computerized social security system, nor can it easily replace public employees delivering public services on a person-to-person basis, such as primary school teachers and nurses. Moreover, the prior existence of mature bureaucratic organizations institutionalizes many practices, including reliance on “closed” mainframe computer systems, that are path-determined obstacles to using the Internet to create a virtual state (Fountain 2001). Studies of the restricted use at work of the Internet compared with other IT facilities (Oxford Internet Institute 2003) imply that in OECD systems of

government the Internet is likely to be a specialized tool with real but marginal advantages in specific settings rather than a general source of innovative transformation.

Multiplying information and increasing its velocity. If a government is already open, the introduction of the Internet will increase the quantity and velocity of political information in circulation. The literature of e-democracy describes how political parties, members of Parliament, civic action groups, and individuals are making some use of the Internet to increase the flow of information between citizens and their elected representatives. Insofar as political parties and activists substitute the Internet for postal services, it has little effect. The ease of communication through the Internet may also multiply the amount of political information. Because there is already plenty of political information in circulation in free societies, this change in medium has marginal effects.

Greater information flows do not increase the time available to governors to process information. Because democratic dialogue is about expressing conflicting opinions about what government ought to do, increasing information inputs to political debate will increase the expression of conflicting views. Political decisionmakers will still need to reconcile competing demands on government, and they may find greater difficulty in doing so because of having more conflicting views fired at them with greater frequency and intensity.

Inspection. If bureaucratic records are not already systematically kept, a proposal to introduce the Internet into governmental processes will have an inspection effect. The systems analysis required for any Internet application will spotlight deficiencies in the management of government records, such as missing data, inaccuracies caused by double-counting or “massaging” of numbers to give an appearance of success, and suppression of information documenting personal favoritism or corruption. Even if paper records are ample, the fact that they have not yet been computerized for digital storage and analysis means that it could require years to make the legacy of paper forms accessible on the Internet. Moreover, if records are kept in a discursive literary format, they are not structured for on-line retrieval.

Political challenge. If a government is not open, the Internet will challenge the regime’s commitment to restricting information flows, because it offers a cheap and easy way for organizations and individuals to circulate

information that governors have previously kept within narrow circles. If governors censor and limit Web sites within their country, critics and exiles can escalate their challenge by establishing offshore Web sites accessible within that country. Paradoxically, government censorship adds to the value of unofficial and critical information by making it scarce and by encouraging its dissemination through informal networks by word of mouth as well as electronically.

Bureaucratic Processes

The greater the volume of information, the more important it is that the information be structured. The mark of a modern bureaucracy (and a prerequisite for e-governance) is a clear organizational structure—that is, a clear structure of routine information flows within and between organizations. For an organization to use the Internet for anything more than passing verbal messages between individuals, the information itself must be structured so that it can be processed, acted on, disseminated, and retrieved through information technology algorithms.

By definition, a modern state is bureaucratic: officials act according to the rule of law, and they deliver goods and services according to impersonal rules rather than on the basis of favoritism, arbitrary whim, or side payments (Weber 1948, p. 215). Bureaucracies are rule-bound hierarchies in which those at the top of an organization lay down rules that subordinate officials are expected to apply routinely and honestly. Postal charges are an example of bureaucracy in action. Postal clerks do not quote different prices or compete for trade; they charge the rates laid down by national rules. A postal clerk makes no concession in the rates for friends and family. To post a parcel, one must wrap it according to regulations, weigh it, and then apply the rules to determine the charge for its weight, format, and destination. Just as the price of a soft drink from a vending machine is the same for everyone, the rules that govern bureaucracies are impersonal—that is, they are the same for everyone. In fact, Max Weber referred to bureaucracy as offering vending machine justice.

The Internet is rule bound too: a person ordering a book or a cheap air ticket through the World Wide Web is marched through an algorithm that asks the user a series of questions, receives and processes responses according to prespecified formats, and then produces a result. Likewise, bureaucrats administering such routine services as social security benefits march claimants through a rule-based algorithm that asks a series of questions so that they can input the data necessary to calculate the cash benefit to which a claimant is lawfully entitled.

A modern state is a necessary condition for applying IT widely in public administration, because IT depends on impersonal rule-based procedures as well as educated personnel and the money to buy computers. High-tech computer systems will fail in states with low-tech administrators making decisions. In countries where whom you know or what you pay is important in obtaining public services, computer-based administration can, in principle, increase the rule of law. Computer algorithms can be installed in PCs that low-level bureaucrats can be required to use when dealing with claimants, thus greatly reducing the scope for discretion and favoritism. The Internet can be used to transmit the information from local offices to higher-ranking officials, who can use computerized information systems to flag apparent discrepancies between rule-bound behavior and what some low-level officials may be doing. Yet, for the same reason, low-ranking officials can resist the introduction of new technology that will remove the private benefits that they obtain from misapplying the law.

In East Asia, governments vary substantially in the extent to which they are bureaucratic in the modern sense. The degree of variation is illustrated by Transparency International's Corruption Perceptions Index, which combines ratings from multiple sources in order to estimate the extent to which governments follow their own laws.³ Transparency International's ratings show that some East Asian countries adhere to the rule of law as much as or more than the average EU member state. On a 10-point scale in which 133 economies are rated, Singapore (9.4) and Hong Kong, China (8.0), both rate well above the United States, and Japan is rated near the median EU member state. However, other East Asian states show a degree of evasiveness of rules that is well below the world median. Indonesia and Myanmar are in the bottom tenth of the index, and Vietnam is in the bottom quartile. On the 10-point index, all three countries have scores of 2.4 or less.

Radius of Information

In principle, the Internet offers the opportunity to increase information flows between governors and citizens. The Internet can expedite the flow of information between the central government and field offices and agencies that have been set up according to new public management theories.

3. For more information about Transparency International's work, see its Web site at <http://www.transparency.org>.

In addition, government departments can set up Web sites to inform citizens of their rights and obligations, and they can use the Internet to transact routine activities such as the issue of car or television licenses as well as by post or over the counter. Unlike telephone or airlines charges, the charge for using the Internet is based on time rather than distance. Hence, the Internet is particularly efficient in countries where geography and low income combine to inhibit nationwide communication.

The openness of the Internet can promote political participation and accountability if it is used by civil society organizations such as political parties, the media, and nongovernmental organizations (NGOs) to publicize unofficial criticism of government and to voice demands for action. Writing as chief economist at the World Bank, Joseph Stiglitz (2001, p. 56) has endorsed participatory dialogues as “both helpful to and perhaps even essential for a lasting transformation of societies in low-income and developing countries.”

The extent to which the Internet is used to promote openness and accountability depends not only on technology but also on the norms and institutions prevailing within a political system. In most states of the world, including those in continental Europe, public opinion has historically been official opinion; the state determined what information could and could not circulate (Noelle-Neumann 1993). By contrast, Scandinavian governments had a tradition of openness in the flow of information long before the Internet was invented. In Anglo-American countries, there is a tension between demands for freedom of information about government and privacy values that constrain the information that government holds about individuals (Tallo 2004). Before the Internet, Asian governments were much closer to the continental European model of restricting information flows than to the openness of Scandinavia. A few were described by critics as having an “informational black hole,” restricting the circulation of information to political and economic insiders (see Haley and Tan 1996).

Today, East Asian governments vary widely in the extent to which they allow civil society organizations to circulate information freely and to hold government accountable through free and fair competitive elections. Freedom House (2003) rates five East Asian political systems as free and open: Japan, Korea, the Philippines, Taiwan (China), and Thailand; four as partly free, Hong Kong (China), Indonesia, Malaysia, and Singapore; and three as not allowing the free circulation of political information: China, Myanmar, and Vietnam (see also Hsieh and Newman 2002).

The ideal preconditions for making efficient use of the Internet are (a) that a government already follows bureaucratic rules and (b) that it is

Table 8.3 Classifying East Asian Systems of Government

Accountability	Follows bureaucratic rules	
	High	Low
High	Japan, Taiwan (China)	Indonesia, Korea (Rep. of), Philippines, Thailand
Low	Hong Kong (China), Singapore	China, Malaysia, Myanmar, Vietnam

Sources: For bureaucratic rules, placement on Transparency International's Corruption Perceptions Index. For accountability, placement on Freedom House's Index of Political Rights and Elections.

open and accountable—but this scenario is only one of four possibilities that arise when governments are classified on those two counts. This classification can be made empirically by using the Transparency International and Freedom House ratings referred to above. Doing so shows that countries distribute into four different categories (table 8.3). Two nations, Japan and Taiwan, China, meet the ideal standards; both are rated as rule-bound bureaucracies and open and accountable. In four countries—Indonesia, Korea, the Philippines, and Thailand—governments are relatively open and accountable, but there are major departures from rule-bound governance. Hong Kong (China) and Singapore are distinctive in showing a high degree of rule-bound bureaucratic governance yet allowing limited accountability and openness. Four East Asian countries—China, Malaysia, Myanmar, and Vietnam—meet neither of the ideal criteria for implementing the Internet, for they are not rule-bound bureaucracies nor are they open and accountable. The substantial contrast in governance within East Asia emphasizes that the uses of the Internet in governance today depend less on the capabilities of Internet technology and more on how governors respond to the opportunities and challenges that the Internet offers.

USES OF THE INTERNET IN GOVERNANCE TODAY

The extent to which government is affected marginally or structurally depends on the extent and composition of its policies. The failure of e-government enthusiasts to understand what government actually does leads to unrealistic claims. For example, routine activities such as writing checks for pensions are readily amenable to efficiency gains through computerization. But writing checks is a very small portion of the total cost of social security administration: the big cost is cashing the checks—and

most governments of the world do not have the money to do so for all their elderly citizens.

In the developing economies of East Asia, the range of public services to which the Internet is immediately applicable is very limited. The opportunities the Internet offers for efficiency gains by filing income tax returns on-line are of little relevance in economies where income is low and not legally subject to taxation or where negotiating the minimum tax is the standard operating procedure. Even in industrial Asian economies, the level of public spending—and thus the potential for cost savings—is lower than in EU member states. For example, tax revenue is 41.5 percent of GDP in the median state of the European Union, but only 28.8 percent in Japan and 21.4 percent in Korea. Similarly, public employment in Japan is less than half that in the United States and less than two-fifths that of the median EU member state (OECD 2000).

Web Presence

A United Nations (UN) study of e-governance, which was based on an analysis of the information and facilities that existing government Web sites offer their citizens, has benchmarked the current use of the Internet by governments around the world (UNDPEPA 2003, pp. 10 and following). The UN study has five categories of Web presence, ranging from minimal to seamless. An ideal is represented by a fully integrated capacity for cyberspace access to any combination of public agencies dealing in related ways with a common problem of citizens, such as health services. No government anywhere is ranked as having created seamless on-line access to its services.

Table 8.4 shows the other four categories of Web presence. Among East Asian governments, four—Hong Kong (China), Korea, Singapore, and Taiwan (China)—allow users to conduct a variety of transactions on-line, including calculating or paying taxes and claiming benefits from public agencies. These governments are thus in the highest group worldwide, along with such countries as Finland and the United States. However, since there is no obligation on citizens to use on-line services and many citizens carry on as before, the net cost savings are limited.

Interactive Web sites enable citizens to get answers to frequently asked questions on-line and to download official forms. Moreover, this information is available 24 hours a day, 7 days a week, providing flexibility to citizens and preventing the need for shift work in public offices. The three countries offering interactive Web services differ substantially in the extent to which citizens are on-line. The governments of Malaysia and the

Table 8.4 Web Presence of East Asian Governments

Category of Web presence	Definition	Economies in category
Transactional	Users can pay for services or conduct financial transactions with the government on-line.	Hong Kong (China), Korea, Singapore, Taiwan (China)
Interactive	Users can download official forms, contact agencies, and make appointments and requests.	Japan, Malaysia, Philippines
Information platform	Many government agencies have Web sites with substantial amounts of information, the Web sites are regularly updated, and there are links between Web sites.	China, Indonesia, Thailand, Vietnam
Minimal	Major government agencies have formal Web sites, but the information provided is limited, basic, and not regularly updated.	Myanmar

Source: UNDPEPA (2003).

Philippines are ahead of their citizenry in being oriented to the Internet, whereas the government in Japan has yet to make on-line transactions truly user-friendly.

Four East Asian nations are in the median UN group, which uses the World Wide Web as a platform for providing information to citizens without any interactive features. They are China, Indonesia, Thailand, and Vietnam, and their position is consistent with their lower level of economic development and Internet use. Only one East Asian government, Myanmar, makes a minimal amount of information available on-line.

Establishing an information platform is a precondition for introducing an interactive Web site, and an interactive Web site is a precondition for a transactional Web site. Therefore, it is realistic to regard the current Web presence of governments as temporary rather than fixed evidence of a digital divide. For example, Japan can be expected to increase the transactional element in its e-governance services, and countries with information platforms can be expected to introduce interactive elements. However, the frustrations of national governments trying to upgrade their transactional services to provide a seamless Web facility for citizens caution against assuming that East Asian countries with a well-developed set of services will be able to move further. EU countries have found that there are many

“back office” problems in creating links between different computerized databases, some arising from technological difficulties, some from inter-departmental jealousies, and others from data protection laws that prevent the linkage of records held by different government agencies about a single individual (Kubicek, Millard, and Westholm 2003).

Singapore is the paradigm of a government using the Internet to increase the efficiency with which it delivers bureaucratic services to citizens. Its Web site, www.ecitizen.gov.sg, offers electronic assistance about every phase of the life cycle. The site map offers dozens of clickable headings of individual and family interest, starting with children and parenthood, through teenage and youth, courtship and marriage, and the elderly and aging, plus it includes guides to family support and family resources. The site also offers links to agencies dealing with programs about arts and heritage, recreation, sports, defense, safety and security, elections, law, employment, education, health, housing, travel, and transport. In turn, each main section has many subdivisions. As a backup, citizens who have trouble finding what they want on-line are offered help-line telephone numbers.

The Singapore government’s Web site is distinctive not only because of its detail but also because of the conditions that make its creation possible. The government is fully bureaucratized; its administration has a very high level of honesty; it is a city-state without barriers from geography or federalism; it regulates many social activities and delivers many services to citizens; and GDP per capita is similar to that of France, Germany, or the United Kingdom rather than that of the median East Asian country. Insofar as Singapore has lessons to offer, they may be to OECD countries on other continents. For example, in 2000, 40 percent of Singapore taxpayers filed their personal income tax return over the Internet, compared with 28 percent of U.S. taxpayers and a far smaller proportion of Europeans.

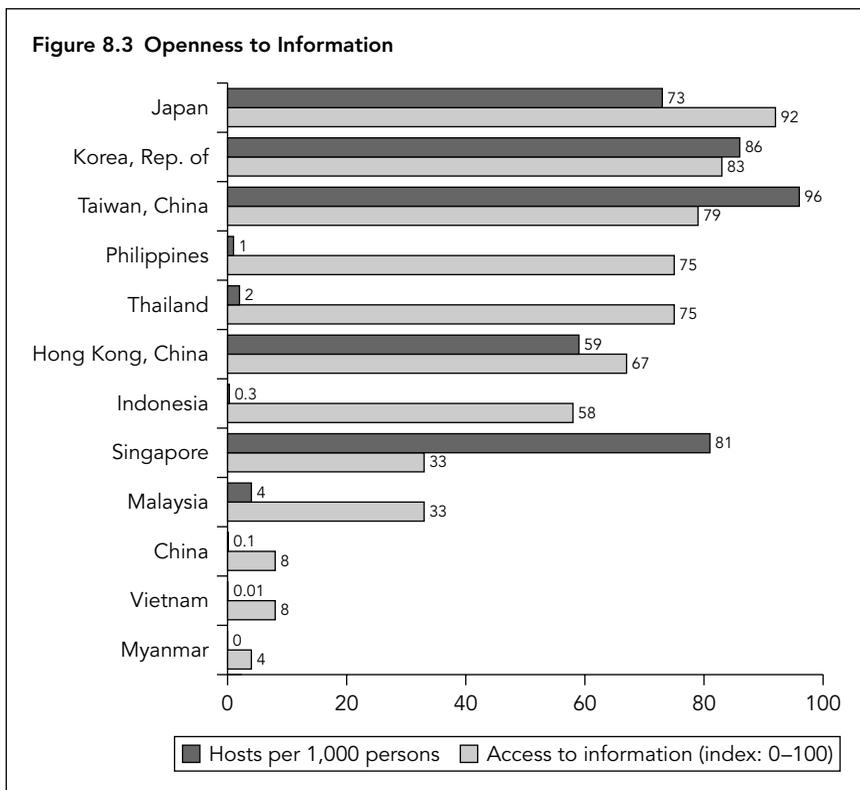
When a country is far below Singapore’s level of bureaucratized governance, an attempt to introduce Internet technology into public administration is likely to be of little use. For example, cash transfers cannot be made to citizens if a government is so poor that it has no income maintenance programs. Even a seemingly straightforward initiative, such as computerizing payments to school teachers in an African country, turned into a disaster when many teachers went months without a salary because the paper-based personnel records on which the system depended for input were inaccurate (Cain 1999, pp. 141 and following).

Bigger problems arise when a dissociation occurs between paper records and informal decisionmaking practices. In such circumstances, a Web site can give a glowing picture of the national economy or falsely

precise demographic details, when the reality is different (see, for example, Huang 1996; Rose 2002b). In a country such as China, with bureaucratic controls, *guanxi* relations create differences between what is documented on paper and what happens in practice.

Increased Openness through a Wider Radius of Information

Great variability occurs within as well as across continents in the extent to which governments allow political information to circulate freely and as a right. The UN study of e-governance created an Information Access Index, which combined ratings of the extent to which a government conducted its activities behind an opaque screen and allowed citizens to hold it accountable (figure 8.3). The index correlates highly with an alternative



Sources: For access to information, UNDP/PEPA (2003, pp. 27, 62) and, for Hong Kong (China), Myanmar, and Taiwan (China), Freedom House's Media Freedom Index, as reported in Karlekar (2003). For hosts per 1,000 persons, International Telecommunications Union (2003).

measure, the Media Freedom Index, which is compiled by an NGO, Freedom House, on the basis of an assessment of national media laws, political and economic influences on reporting news, harassment of journalists, and confiscation of media facilities.

There are extreme variations in openness between Japan and Myanmar, the countries that are, respectively, most and least open to information (figure 8.3). More than half of all East Asian governments allow information to circulate with few or limited restrictions. Although there is a correlation between political openness and high Internet use, the link is limited. Countries that are above average in political openness include Indonesia, the Philippines, and Thailand, all of which are low in Internet use. In a complementary manner, Malaysia and Singapore are well below the median for political openness but average or well above average in Internet use (see figure 8.2).

In addition to information from the government, the Internet can distribute information about the government without official restrictions. The number of Internet hosts registered in a country is a rough indicator of the quantity of information available electronically in the national language, because sites with a national suffix are less likely to use English than are those registered with an address such as .com, which lacks any geographical reference point.⁴ This observation is particularly true of sites with political relevance, such as Web sites of political parties, Web sites of national newspapers, and Web sites operated by civil society institutions and NGOs.

Every East Asian economy except Myanmar has tens of thousands of host sites—more than enough to provide many sources of information to the avid searcher. Japan boasts more than 9 million host sites and Taiwan, China, more than 2 million. When population differences are taken into account, there is almost one Web site for every 10 people in Taiwan, China, and one for every 12 people in Singapore.

Critics of government can use Internet sites to help organize opposition to the government. Criticisms can be expressed more fully and freely on the Internet than in state-controlled broadcasting, and the cost of setting up a Web site is far less than that of printing a newspaper; circulation can be nationwide and instantaneous. Because the barriers to Web entry by NGOs are low, a great diversity of opinions can be found. Whereas the claims of established civil society organizations to representativeness can

4. Note that the World Bank (1998, p. 297) assumes that all Internet hosts without a country identification in their electronic address are in the United States, an assumption significantly inflating U.S. preeminence on the Web.

be verified, the representativeness of a floating population of Internet users cannot. Even if Web sites claim to be the “voice of the people,” they cannot show evidence of electoral legitimacy. The challenge facing political organizations is not only to appeal to “nerd potatoes” who do not budge from their video display units, but also to mobilize Internet users to take an active part in politics.

A striking example of electoral mobilization was the Korean parliamentary election in 2000, when a civic group posted on its Web site information about the tax evasion and draft-dodging records of 86 candidates. The press had not printed this information. The site received more than 1 million hits on election day, and 58 of the candidates named there were defeated, including some previously favored to win (Cairncross 2001, p. 159).

In Indonesia, Internet access is very limited, but the privatized postal service has established *warpostrom* (electronic mail kiosks) and *wartel* (telecommunication kiosks) at post offices and public places in more than 100 cities and towns throughout the country. After the Asian financial crisis hit in 1997, hundreds of Web sites sprang up to criticize the regime and organize opposition. When President Suharto left office in May 1998, a Jakarta observer described the transfer of power as “the first revolution using the Internet” (quoted in Hill and Sen 2000, p. 119). In the subsequent 1999 election, all contestants, the media, and the National Electoral Commission made extensive use of World Wide Web facilities.

The government of China is distinctive in trying to use the Internet’s inspection effect to advance structural changes in governance and the economy while containing Internet-transmitted structural challenges to the monopoly power of the Communist Party (see Hughes and Wacker 2003; Kluver forthcoming). Jiang Zemin, while president of China, said that the Internet is “the engine for the development of the economy and society in the 21st century” (quoted in Sussman 2001, p. 2). To that end, the Chinese government has invested tens of billions of dollars in developing the infrastructure of an Internet-based information society in which there is a steady flow of administrative information between government agencies at the center and between central ministries in Beijing and regional and local officials. The impersonal, rule-bound character of the Internet is seen as reducing the discretionary capacity of low-level officials to exploit those under them and to hide their actions from their hierarchical supervisors. It is also seen as the means of garnering more accurate information about economic activities, information that can be used not only by the central planning system but also by the central tax-collecting authorities. In the words of Zhu Rongji, the former prime minister, in

Chinese e-government, the emphasis is not so much on the *e* but on the *government*, because of the need for a structural “transformation of government in terms of management systems, management values, management patterns, and management methods” (Zhang and Gao 2003).

Concurrently, the Chinese government is seeking to prevent the Internet’s use for disseminating political criticism and organizing opposition. To create a “Great Fire Wall” against the spread of unofficial political comment, the government has imposed restrictions on foreign Internet providers, temporarily shut down Internet servers in China, traced individual users to their log-on address, and hacked into Web sites critical of the regime. Possession or distribution of political materials derived from foreign Web sites can be punished with a prison sentence (Wong 2001, p. 382). In effect, the Chinese government is seeking to turn the Internet into an *intranet*—that is, a network delimited by boundaries maintained by the state security service (Dai 2000, pp. 145 and following). However, the amount of government funds and effort devoted to surveillance and control is very small by comparison to public expenditure on giving tens of millions of Chinese access to the Internet.

In seeking to shape the transnational Internet to its domestic political agenda, China faces both technological and social challenges. As Franda (2002, p. 194) notes, “With more than 200,000 different routes around the major nodes of the Internet, attempts by Chinese authorities to program blockages in large numbers of routes would render Internet service almost unusable.” Long before the arrival of the Internet, residents of mainland China communicated with diaspora Chinese through a transnational “bamboo” network based on kin, friends, and business partners (Fukuyama 1995, chapter 8; Weidenbaum and Hughes 1996). The Internet gives electronic substance to this network. As Lin (2001, p. 227) says, “No longer is social capital constrained by time or space; cybernetworks open up the possibility of global reaches in social capital. Social ties can now transcend geopolitical boundaries, and exchanges can occur as fast and as willingly as the actors care to participate.”

Although the great majority of Chinese-speakers live in China, 95 percent of Chinese-language Web sites are hosted outside the country. Moreover, many in mainland China have electronic contacts outside the country. A cross-national survey found that 30 percent of Chinese Internet users used e-mail to communicate with other countries, compared with about 20 percent of Internet users from Japan, Korea, and Taiwan (China) (Inoguchi 2002, p. 17). A Chinese Academy of Social Sciences study of Internet users (3,159 respondents in five cities) found that 15 percent of time was spent accessing overseas Chinese Web sites, and 9 percent

accessing foreign-language Web sites. Most Chinese Web users trust both domestic sites and overseas Chinese Web sites, and about half trust foreign-language Web sites (Guo and Bu 2001, pp. 9, 12).

DYNAMICS OF DEVELOPMENT

So rapidly is the Internet developing in East Asia that any cross-sectional comparison between economies gives an ephemeral picture. The current digital divide is an artifact of economies at different stages in a dynamic process familiar in the diffusion of innovations: some economies are leaders and others are laggards in adoption (Rogers 1995; Rose 2002a). In leading economies, after everyone who wants Internet access has achieved it, the increase in users will level off. By contrast, in lagging countries, there is much greater scope for an increase in users, especially since the expansion of the Internet, like that of a telephone, depends on network effects. Metcalfe's (1996) law—the value of a network rises with the square of the number of participants—implies very rapid diffusion of Internet access after usage takes off, and East Asian countries that are not high in use today—for example, Malaysia and Thailand—have the potential for catching up quickly (Rose 2004).

The supply of Internet facilities is no problem in East Asian societies such as Korea and Singapore. Internet users are already in the majority among people age 15 to 65, and public agencies are already providing a substantial number of transactional and interactive services on-line. The percentage will slowly increase as the oldest generation, disproportionately nonusers, is replaced by young cohorts who are now the heaviest Internet users. But the substantial minority of nonusers includes many people who do not exercise their proxy capability to ask others to use the Internet, because they do not find it useful. In societies where a majority use the Internet today, leveling off in the number of users will occur insofar as the remainder are excluded not by cost or technophobia but by indifference (Oxford Internet Institute 2003).

To increase e-government where Internet use is already high, policy-makers must find ways of increasing demand. Governments cannot engage in cut-price marketing of taxes or give loyalty points for using public services. Ways must be found to make e-government services more convenient for citizens. The next structural advance to encourage demand would be creating a one-stop seamless web of public services available by the Internet, thus integrating institutions separated by internal walls within government. The obstacles to creating a seamless web of public

services are formidable, involving both organizational barriers within government and popular habits of individuals who continue to rely on the post, telephone, and face-to-face contact, as they did for decades before the Internet was widely available. In industrial countries, e-governance requires limiting investment to the extent that it pays off in better services, lower administrative costs, or both. With technology and organizational capacities now available, efficiency gains are likely to be marginal.

In developing countries, supply is the problem. A significant portion of the population living in places without Internet access is excluded. To secure takeoff in Internet use in these countries, government initiatives can help overcome structural barriers to Internet access. Such initiatives can build on existing public facilities—for example, having the post office provide Internet services for a fee; providing free access through public libraries, and using schools not only to train youths in the use of PCs and the Internet but also to make electronic facilities available after school hours for the whole community. Provided retailers are not overregulated, markets can expand use too. In urban areas, Internet kiosks and cafés can be established. In places where the idea of the Internet is novel, local entrepreneurs can, like village scribes of old, offer to send messages, fill in forms, or locate information on the Internet. Whereas a home PC is used by only a few family members, public access facilities give hundreds of times more people the opportunity to use the Internet in the course of a month.

Insofar as government and market initiatives increase effective demand, developing economies of East Asia will face two challenges to governance. First, there will be an inspection effect when go-ahead, technologically oriented public officials and their advisers try to introduce the Internet into public administration. Second, introducing new technology will reveal the extent of deficiencies in bureaucratic procedures required for structuring, inputting, and retrieving information electronically.

In countries where closed rather than open government has been the norm, the Internet will challenge governors to make more information available about the process of governance. One challenge can be to increase transparency by opening up to Internet scrutiny the process of allocating large and costly public contracts. A similar challenge would be to reduce sloth by allowing citizens who claim entitlements and bureaucratic superiors to exercise electronic surveillance of counter-level bureaucrats. Where governments have been hesitant to be accountable to citizens for their actions, activist civil society groups can use the Internet to publicize their criticisms of governance and to organize meetings.

Differences between systems of East Asian government (table 8.3) and Internet users (figure 8.2) emphasize that the potential effect of the

Internet on governance will be variable within the region. Where Internet usage is high and the government follows bureaucratic rules and is open, the effect is likely to be marginal. It is likely to be limited to increasing the efficiency of an already bureaucratized system and being open to the input of demands for better services from citizens. Where Internet usage is high but the government is not open, then, in addition to efficiency gains, the Internet will improve the quality of information that citizens receive, because it will be more diverse, coming from unofficial as well as official sources. This access can encourage popular challenges to nonaccountable officials. Where the government is not rule bound and Internet usage is low, then the growth in Internet usage will have an inspection effect within the government, calling attention to the inadequacies of its bureaucratic procedures. It will also create channels for citizens to obtain information critical of the government and to mobilize and put pressure on government to reform by introducing more efficient and equitable procedures. Where Internet usage is low and governments are neither open nor rule bound, there is a diffuse challenge of how to break a low-level equilibrium trap that holds back political and economic development.

In a global context, the Internet can be seen as part of the process of liberalization and development promoted through such diverse agencies as the World Trade Organization and the millennium goals of the United Nations (UNDESA 2003). Just as the World Trade Organization treaties emphasize transnational movement of goods and services, so the Internet emphasizes the transnational movement of information of all kinds. Just as the World Bank (1997) emphasizes the need for modern and transparent institutions of governance to promote economic development, so the inspection effect of the Internet spotlights bureaucratic deficiencies and the absence of rule-bound behavior and offers means for governors to undertake bureaucratic modernization within government and for citizens and institutions of civil society to challenge governors to do so.

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