Can the poor get richer and freer? The internet, development and democracy in Asia

J. Rudolph
Centre for Professional Studies, Singapore

L. T. Tin
Southern Cross University

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Can The Poor Get Richer And Freer?
The Internet, Development And Democracy In Asia

The combination of the Internet, development and democracy provide poor countries with new opportunities to get richer and freer. In using examples from Asia, we show that despite the Internet being no panacea it tends to have a positive effect on both development and democratisation. Due to the linkage between economic and political development, the Internet’s effect on political development will tend to be good for economic development, or vice versa. A digital divide exists, but so does a digital opportunity for developing countries, and the Internet’s unique decentralised structure makes it difficult for authoritarian regimes to comprehensively instrumentalise this technology. Essentially, all three processes (i.e. the Internet as an aspect of technological progress as well as economic development and democratisation) are interlinked with each other and tend to correlate positively. We also look at some meaningful measures, which are key in supporting the Internet’s positive effects.

Jürgen Rudolph
Centre for Professional Studies, Singapore

Lim Thou Tin
Southern Cross University, NSW

Twenty years after the creation of a rudimentary Internet and 13 years after the beginning of the World Wide Web, more than 6.7% of the world’s population were logging on. The Internet is spreading around the world faster than the telephone had among richest countries a century ago. In 1998, only 12% of Internet users were in non-OECD (Organisation for Economic Cooperation and Development) countries. By 2000, this proportion had almost doubled to 21% (Guest, 2001). The International Telecommunications Union (ITU) reports that more than 50% of the total number of Internet users in the world are in Asia (ITU, 2002). The top four locations worldwide in number of Web pages viewed per person are South Korea (90 page views per person), Taiwan (76), Hong Kong (62) and Singapore (56) (Sidorenko & Findlay, 2001).
In parts of Asia, many people live with an income lower than a dollar a day, isolating them from the economic and information benefits created by the Internet. ‘The rich get richer, and the poor get poorer.’ This opinion is held by first a group of skeptics, with whose opinions we deal in this paper. Another group of naysayers claims that the Internet’s economic effect may be similar to the tulip bubble in Holland in the 17th century.

Our paper argues that the Internet will facilitate development and democracy in poor countries. There is a linkage between economic and political development. In using a variety of examples from different Asian countries, we will show that despite the Internet being no panacea, it tends to have a rather positive effect on both development and democratisation. Essentially, we will show that all three processes vis-a-vis the technological progress, economic development and democratisation tend to correlate positively. In our conclusion, we will examine the benchmarks of the Internet’s positive impact.

A country’s gross national product (GNP) measures the total value of goods and services produced annually, but can be misleading because it does not consider differences in the cost of living. Economic development is thus better measured by purchasing power parity (PPP) as it allows for more direct comparison of living standards.

Another useful indicator of a country’s development is the Human Development Index (HDI), a United Nations-developed index, which is based on life expectancy, literacy rates, and whether average incomes are sufficient to meet the basic needs of life in a country.

In defining democracy, the fallacy of electoralism is common. A meaningful definition of democracy goes beyond the requirements of regular, free, and fair electoral competition and universal suffrage. In Diamond’s (1999) definition of (liberal) democracy, executive power is constrained by the autonomous power of other government institutions such as an independent judiciary and parliament. Civil liberties (such as freedom of belief, opinion, discussion, speech, publication, assembly, demonstration, and petition) are effectively protected by an independent, non-discriminatory judiciary, whose decisions are enforced and respected by other centers of power. The rule of law protects citizens from unjustified detention, exile, terror, torture or undue interference in their personal lives.

Diamond’s definition also encompasses associational freedom and the existence of a diverse array of autonomous associations,
movements, and groupings. Alternative sources of information must also exist, such as independent media to which citizens have ready access (Diamond, 1999).

There is overwhelming evidence that development and democracy are intrinsically intertwined. Economic freedom helps to establish the conditions for political freedom by promoting the growth of prosperous middle and working classes. Also, successful market economies require political freedom to provide a barrier against economic cronyism and other anticompetitive and inefficient practices (Karatnycky, 1999: 122). Even the comprehension of economic needs requires the exercise of political rights, especially those guaranteeing freedom of expression and discussion, without which informed and considered choices are impossible (Sen, 1999: 10-11).

Democratisation is hard to avoid as it seems to be exceedingly difficult to sustain authoritarian regimes for long. Waves of democratisation are contagious. The successful example of one country’s transition establishes it as a model for other countries to imitate. Once a region is sufficiently saturated with democratic political regimes, pressure will mount, compelling the remaining autocracies to conform to the newly established norm (Schmitter, 1995: 347).

Also, authoritarian governments are undermined by both their economic failure and their economic success. Economic failure obviously makes them unpopular, while economic growth leads to increased demands for political participation. Democratic progress in the 20th century has been rather impressive. Franklin Roosevelt’s four freedoms – of speech and expression, of belief, from want and from fear – are possessed by more people, more securely, than ever before.

There is also compelling quantitative evidence from a survey of post-WWII regimes that the level of economic development powerfully shapes the survival prospects of democracy, and affluent democracies survive without fail. Economic growth lays the foundation for successful democratic consolidation, and there is statistical evidence that the more prosperous a nation is, the greater the chances are that it will sustain democracy. With economic development, there is more equality of consumption, a growth of the middle class, more access to health care, more education and less illiteracy, and people are more likely to ask for increased political freedom (Lipset, 1995). On the other hand, democracy is much more likely to last when the economy grows rapidly, with moderate inflation. Research has shown that democracies are capable of implementing and sustaining economic reform (Przeworski et al. 1996; Diamond, 1999).

However, the hypothesis that economic development has to
precede political liberalisation is still in circulation. It is occasionally claimed that non-democratic systems of governance are better suited at bringing about economic development as they provide the necessary stability and discipline. This primacy-of-economic development rhetoric holds that civil and political rights introduce so many inefficiencies in government that they must be systematically infringed by a state seeking rapid economic development.

This liberty trade-off argument has been a mainstay of developmental dictatorships of all stripes. Nobel-prize winning economist Amartya Sen notes that it “is based on sporadic empiricism drawing on very selective and limited information, rather than on any general statistical testing over the wide-ranging data that are available” (1999: 6). Systematic cross-national statistical studies do not support the claim that there is a causal connection between authoritarianism and economic success. The industrialised rich nations are all democracies.

In addition to the positive correlation between economic growth and democracy, democracy has importance in itself. While democracy’s intrinsic merits may not convince authoritarian governments, there are two impressive statistical correlations. First, there is vast literature showing that democracies are generally “less warlike” as compared to other types of regimes (Diamond, 1999). Democracy produces stability, the supposed lack of which is sometimes held against it.

Second, in the history of famines in the world, no substantial famine has ever occurred in any country with a democratic form of government and a relatively free press (Sen, 1999). Democracy protects the poor. Sen argues that the “positive role of political and civic rights applies to the prevention of economic and social disasters in general.” (1999: 8)

Technological progress can be painful. When humans first learned to make fire, some undoubtedly got burnt. And the Industrial Revolution involved huge economic and social dislocations, though most people (apart from Luddites and some others) would agree that the gains in human welfare were worth the cost.

Technology clearly helps development. For instance, the decline in mortality rates that took more than 150 years in the now-developed world took only 40 years in the developing world, in large parts thanks to antibiotics and vaccines. Although it is true that technology makes the rich richer, it also makes the poor richer. Average annual incomes in developing countries doubled between 1975 and 1998, from US$1,300 to US$2,500 (in 1985 dollars
at purchasing power parity). In addition, technology makes the poor healthier, better-fed, and longer-lived (Guest, 2001). They have many more choices about how they want to live. The fact that rich countries push out new technologies at an unprecedented rate is good also for poor countries. Inventions eventually become cheap enough for poor countries to buy them. It still takes too long, but it is happening faster now than ever before.

It is axiomatic that technology is good for development. However, there is an ongoing debate as to how significant the invention of the Internet has been to the poor countries. Skeptics say that computers and the Internet are not remotely as important as steam power, the telegraph or electricity. In their view, information technology (IT) stands for ‘insignificant toys’, and its economic benefit will turn out to be no greater than that of the 17th-century tulip bubble (Woodall, 2000). On the other extreme, techno-evangelists have claimed the Internet as the greatest invention since the wheel, and the misleading term of the “New Economy” has been coined, implying that the old economics textbooks can be ripped up.

To the more impartial observer, the Internet has certain commonalities with the telegraph (which Tom Standage has called “The Victorian Internet”), invented in the 1830s. Both the telegraph and the Internet (like the Gutenberg press, postal services and the telephone) have brought a big fall in communication costs and increased the flow of information. This also lowers the cost of bringing together buyers and sellers, of making markets work, thus realising substantial efficiency gains in the process.

However, the Internet is bound to have a larger economic impact as the cost of communications has plummeted far more steeply than that of any previous technology, allowing it to be used more widely and deeply. Over the past three decades, the real price of computer processing power has fallen by 99.999%, an average decline of 35% a year. The cost of telephone calls has declined more slowly, but over a longer period. In 1930, a three-minute call from New York to London cost more than $300 in today’s prices. The same call now costs less than 20 cents – an annual decline of around 10% (Woodall, 2000).

In addition to plunging prices, computers and the Internet have four other noteworthy features: (1) IT is pervasive. It can boost efficiency in almost everything a firm does, from design to marketing to accounting, and in every sector of the economy; (2) IT helps to make markets work more efficiently, as it increases access to information; (3) IT is truly global. More and more knowledge can be stored and sent anywhere in the world at negligible cost. By reducing the cost of communications, IT has helped to globalise production and capital markets; (4) IT speeds
up innovation itself, by making it easier and cheaper to process large amounts of data and reducing the time it takes to design new products (see Woodall, 2000).

However, there is a danger that developing economies in Asia and elsewhere will become increasingly marginalised. Half the people in the world have never made a telephone call, and Africa has less international bandwidth than Brazil’s city of Sao Paulo. In Bangladesh a computer costs the equivalent of eight years’ average pay. The 2 billion people living in low-income economies (with average incomes below US$800 per head) have only 35 telephone lines and five personal computers for every 1,000 people, and only one in 250 Africans is online (Woodall, 2000). There is one computer for every 9,000 people in sub-Saharan Africa. In India, between one and two million people have access to a computer in a population of 950 million (World Bank, 2000).

Gleave and Suliman (2002) report that the number of Internet hosts per 10,000 people averages 4.2 for all developing countries in the world. East Asia and the Pacific average 2.4 hosts and South Asia only 0.2 hosts per 10,000 persons, respectively. In terms of personal computer penetration, East Asia and the Pacific again average slightly higher at 17.0 units per 1000 persons, while South Asia averages a mere 3.2 units.

The International Telecommunication Union has highlighted the two most critical barriers to connectivity in Asia as income levels and cost of access. Gleave and Suliman’s analysis indicates that for a per capita GDP of about US$5,000, Internet penetration rates are between 1 and 2%. Internet penetration rates climb to about 9% when per capita GDP increases to US$ 10,000. Beyond US$ 20,000 per capita GDP, the Internet penetration leaps to over 30%.

In 2001, there were an estimated 332 million Internet users, which only equalled 5.4% of the world population. Of these 332 million users, 72% were located in Europe and North America. By comparison, there were 75.5 million in the Asia-Pacific, 13.1 million users in South America, and only 2.7 million in Africa (Abbot, 2001: 107-108). Table 1 shows the number of Internet users (millions) in selected Asian countries.

There are numerous possible benefits from the information superhighway including increased employment, improved international competitiveness and increased flexibility of production. The question is then whether developing nations can benefit from it or whether they will be left behind even further.

The digital divide is of strong concern to countries such as India, which has a large population with a high illiteracy rate. Sam Pitroda, the Indian chief executive of WorldTel, a telecom
A development company, commented that “until they solve the problem of illiteracy, they can’t solve anything” and the digital divide will remain an issue (Richman, 1999). Indeed, the poor are not only shunning the Internet because they cannot afford it: the problem is that they also lack the skills to exploit it effectively. So connecting the poor to the Internet will not automatically improve their finances. Universal literacy is thus perhaps more important than universal Internet access.

The developing countries need to be aware of the limitations of technology and not jump onto the bandwagon without putting a proper plan in place to achieve their long-term digital goal. They could overcome most of the problems associated with the digital divide through education to achieve higher literacy rates. Poor countries need more R&D and thus they need to increase their spending on higher education (but without a retreat from primary education). Private supply of higher education should be encouraged.

The Internet can of course play a major role in education as well. The Internet offers virtually free access to a huge amount of information and expert advice on subjects from engineering and plant cultivation to birth control and health care. A single Internet connection can be shared by many, giving schools access to the world’s top libraries when they previously did not even have books. Distance learning gives students the chance to be taught by better teachers (Woodall, 2000).

### Table 1:
Number of Internet Users (Millions) in Selected Asian Countries

<table>
<thead>
<tr>
<th>Country</th>
<th>No. of users</th>
<th>% of popn.</th>
<th>Date of survey</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>7</td>
<td>36.5</td>
<td>May 2000</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>0.0007</td>
<td>0.005</td>
<td>Sept 1999</td>
</tr>
<tr>
<td>China</td>
<td>12.3</td>
<td>0.97</td>
<td>June 2000</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>1.85</td>
<td>26</td>
<td>June 2000</td>
</tr>
<tr>
<td>India</td>
<td>4.5</td>
<td>0.45</td>
<td>March 2000</td>
</tr>
<tr>
<td>Indonesia</td>
<td>0.08</td>
<td>N/a</td>
<td>May 1998</td>
</tr>
<tr>
<td>Japan</td>
<td>27.06</td>
<td>21.38</td>
<td>May 2000</td>
</tr>
<tr>
<td>Malaysia</td>
<td>1.1</td>
<td>6</td>
<td>Dec 1999</td>
</tr>
<tr>
<td>New Zealand</td>
<td>1.27</td>
<td>33.25</td>
<td>May 2000</td>
</tr>
<tr>
<td>The Philippines</td>
<td>0.32</td>
<td>0.03</td>
<td>Sept 1998</td>
</tr>
<tr>
<td>Singapore</td>
<td>1.74</td>
<td>41.91</td>
<td>May 2000</td>
</tr>
<tr>
<td>South Korea</td>
<td>10</td>
<td>21.3</td>
<td>Dec 1999</td>
</tr>
<tr>
<td>Taiwan</td>
<td>4.79</td>
<td>21.6</td>
<td>Dec 1999</td>
</tr>
</tbody>
</table>
Fears that the digital divide will widen the income gap between rich and poor countries seem exaggerated and appear to be based on a misunderstanding of the nature of growth as well as of the nature of IT. IT can boost growth in rich and emerging economies. For emerging economies, however, deeper economic obstacles to development also have to be tackled. These obstacles will be discussed in the concluding section of our article.

Developing countries have huge scope to grow rapidly by buying rich countries’ technology and copying their production methods. This allows them to grow faster than developed economies, even if they start with fewer computers. As latecomers, poorer countries do not need to reinvent the computer and can in fact avoid first-mover disadvantages (Drucker, 1994). They have to open their economies to ideas from the rich world.

The diffusion of technology and knowledge across borders to poorer economies has been fast. Computers, modern telecommunications and the Internet all reduce communications costs and break down geographical borders. OECD figures show that IT spending in developing economies has been growing more than twice as fast as in developed ones over the past decade (though of course from a low base) (Woodall, 2000).

Any task that can be digitised can now be done at a distance, which creates many opportunities for developing countries. Computer programming, airline revenue accounting, insurance claims and call centers have all been outsourced to developing economies. Connectivity through global telecommunications networks is shrinking our world and transforming the way businesses are being connected with implications for both developed and developing countries.

The new technologies are spawning concepts such as “weblogs” which provide “online publications of people’s stream of consciousness” (Dawson, 2003: 4). Dawson argues that the convenience of the networks provides unmoderated discussions that are of immediate interest to the community. Other technologies like email, mobile telephony, Short Message Service (SMS), instant messaging, online forums, chat and videoconferencing are also changing the way people communicate and the way businesses are conducted. Mobile professionals now can perform remote tasks that traditionally could only be done from a land-line telephone link – such as accessing an office computer system or electronically transmitting faxes and e-mail – from any cellular coverage area in the world. Instant messaging has revolutionised the way people communicate by connecting through the Internet. Through the compilation of ‘buddy lists’ of communication partners around the world, anyone who is connected can communicate via Internet text messages. Short Message Services (SMS) are short, informal
and unintrusive messages that have become a means of sharing daily experiences and thoughts, besides being a powerful marketing tool (Bociurkiw, 2001).

As bandwidth cost continues to decrease worldwide, the opportunities for the development of new applications to support the ubiquitous network will lead to greater opportunities for entrepreneurship and economic development. Devices such as the Personal Digital Assistant (PDA) or the pen tablet PC integrate both the wireless communications technology (e.g. Bluetooth, global system for mobile communication (GSM), or general packet radio service (GPRS)) and the primary information management functions (e.g. scheduling, note-taking). This has led to improvement in personal productivity as evidenced by the increasing number of freelancers, and it has reduced the costs of business and entrepreneurship.

Collaborative software to support decision-making is now bolstered by data, audio and video technologies. Tools in this segment combine technologies such as real-time chat and text-based discussion, audio-conferencing and Net telephony, data and document conferencing, and desktop videoconferencing. These technologies can be linked over a local network or used over the Internet. They also go beyond mere cost reduction, for instance saving on costly business trips, and greatly enhance business functions (e.g. sales demonstrations, telemedicine, remote security monitoring and job interviews).

Row (1997) contends that by including functions that signify presence, gestures and emotions, virtual places can mirror the physical work world closely. The future of global connectivity hinges on web services (extensible manipulation language (XML), simple object access protocol (SOAP), Web services description language (WSDL), and universal description discovery and integration (UDDI)) that have the ability to link organisation(s) to organisation(s) in a manner that will lead to “easy information exchange, reduced programming costs, improved connectivity and collaboration with partners and customers, and more” (CIO, 2002). In other words, web services in their perfected state will allow communications between businesses to go on without human intervention which would result in lower operational costs in a globalised connected world.

Globalisation has created many opportunities for developing countries. The Internet makes it possible for a tailor in Shanghai to hand-make a suit for a lawyer in Boston, then FedEx it to him. A woman’s weaving co-operative in a remote village in Guyana is selling hammocks over the Internet for $1,000 each. Firms in Africa can now bid online for procurement contracts tendered by America’s General Electric (Woodall, 2000).
Bangalore in India is a popular example of how IT can affect emerging economies. Largely due to the power of outsourcing, India’s software industry has grown from almost nothing in the early 1990s into the most dynamic business on the subcontinent, employing 400,000 people and generating more than $8 billion in sales in 2000 (Guest, 2001).

Inequality may, in some cases, be reduced thanks to the Internet. A software programmer in Bangalore can use the Internet to work for a software company in Seattle without leaving home, and can expect to be paid a quarter of what they would earn in the US. The effect is to reduce income inequality between people doing similar jobs in different countries (The Economist, 2000; Woodall, 2000).

An even better example of a low-income country that is wholeheartedly embracing IT may be China, which has four times as many telephone lines and Internet users per 1,000 people as India, and 18 times as many mobile phone users (Woodall, 2000).

Earlier in this section, we mentioned the impressive progress in health care. There is also an important connection between health care and the Internet. “The Internet is the quickest and cheapest way yet devised of disseminating medical research. Using websites such as Healthnet, doctors in poor countries can easily and cheaply keep up to the speed with the latest developments in their field” (Guest, 2001). As current technologies get cheaper, they will spread. As the Internet keeps scientists in developing countries abreast of the latest developments in their field, they will start to produce more breakthroughs themselves. Cheaper communications mean more north-south collaboration, and indeed more south-south collaboration. “In 1995-97, American scientists co-wrote papers with colleagues from 173 other countries. Kenyans published papers with scientists from 81 other nations” (Guest, 2001).

For the Internet to make a mark beyond the top few percent of the population of developing countries, low-cost innovative IT solutions are a must. Indian scientists have produced a prototype of a battery-powered device called the Simputer – short for “simple computer” – that is expected to cost only $200 a unit. The avowed goal of the Simputer is to bring the Internet to “the masses” in India and other developing countries (http://www.simputer.org, see James, 2001: 820).

In several fishing villages on the Bay of Bengal, for example, an Internet link-up allows a volunteer to read weather forecasts from the US Navy’s public website and broadcast them over a loudspeaker. For fishermen who work from little wooden boats, knowing that a storm is looming can mean the difference between life and death. The Internet also lets them know the market price
for their catch, which helps them haggle with middlemen (Guest, 2001). The example of the Simputer also demonstrates that the Internet is a tool that helps developing countries to develop technology of their own. The makers of the Simputer used free open-software, which they downloaded through the Internet. For open-source software, the Internet is sine qua non.

A very current example of bridging the digital divide comes from Laos, one of the world’s poorest countries. It is possible to make computers for the poor in countries without an electronic power grid. Villagers in a remote village of Laos that has neither electricity nor telephone connections are being wired up to the Internet. This is accomplished through the Jhai PC, a machine that has no moving, and few delicate, parts. It can be powered by a car battery charged with bicycle cranks. Wireless Internet cards connect each Jhai PC to a solar-powered hilltop relay station which then passes the signals on to a computer in town that is connected to both the Lao phone system and to the Internet. The system enables villagers to decide whether it is worth going to the market, which is 30 km away, and to talk to relatives in the capital Vientiane or abroad. The technology is expected to be operational at the time of writing, and groups working in Peru, Chile, and South Africa have expressed interest in this technology, which aids in bridging the digital divide (The Economist, 2002).

IT may also allow developing economies to leapfrog old technologies, for example, by skipping intermediate stages such as copper wires and analogue telephones. The design and manufacture of small-scale digital exchanges for rural areas in India is another important example of how low-cost information technology developed in and for developing (rather than developed) countries can help to lessen the digital divide. The goal was not only to leapfrog from mechanical to digital switching technology but also to make the latter suitable for Indian villages (97% of which in 1980 had no telephone at all) (James, 2001: 815).

Cass Sunstein, in his book Republic.com, (2001) has argued that the Internet will lead to a fragmentation of political discourse in America so severe that it will undermine American democracy. Sunstein’s argument is not entirely new, as Mark Slouka had already six years earlier warned of the supposed anti-democratic tendencies of the Internet. Slouka argued that, instead of strengthening democracy, the Internet refracts the “information” in a million conversations. In addition, it does not empower its users, but the networks and their advertisers (Slouka, 1995). Cyber-pessimists also fear that the private sphere and corporate actors will achieve dominance over the public sphere and elected government (O’Laughlin, 2001: 598). Moreover, the Internet can be used for surveillance purposes and avail authorities of new
information about individuals that can be used in refining political control strategies (Rodan, 1998). However, contrary to the skeptics, the Internet has so far proved more of a democrat’s dream than a nightmare, as we will show in the following section.

When it comes to evaluating the democratic potential of the Internet, we essentially encounter two perspectives, a determinist and an instrumental perspective. A determinist perspective predicts that introduction of the Internet inevitably democratises government. In contrast, an instrumental perspective suggests that state authorities can wield the Internet to their own purposes, even using it to increase centralised control. We will argue that it does not appear possible to fully instrumentalise the Internet, and thus we tend more towards a determinist view. However, a government which has the political will towards (further) democratisation will get there much quicker than a government which is authoritarian in character.

The Internet has vastly increased the amount of information available to a quickly-increasing number of ordinary persons, who now have access to millions of public documents, academic papers, think-tank reports, scientific studies and political speeches which previously, only small numbers of people could easily obtain. For instance, there are an estimated one million human rights-related web pages (Abbot, 2001: 101). Due to these gargantuan and still rapidly growing amounts of web-based information, even in authoritarian regimes, people may find that they are able to challenge decisions, corrupt practices and undemocratic attitudes more easily, as the Internet provides them with both the ammunition to attack these practices and the means to mobilise against them (Ferdinand, in International IDEA, 2001: 9).

Certain governments have been able to limit political discourse online. Chinese citizens, for example, are encouraged to get on the Internet, but access to overseas sites is strictly controlled, and what users post is closely monitored. The banned *Falun Gong* movement had had its website shut down altogether. By firewalling the whole country, China has been able to reduce the Internet’s democratising influence.

However, even in China, things may never be quite the same again. There is a growing number of cases, where the Internet has provided otherwise unavailable information in China. To provide but one example, after a fireworks explosion in a school in Southern China, the local government initially tried to explain it away as the work of a madman with a bag of explosives. However, as local people knew that children were making fireworks to earn money for the school, the Internet chat rooms started buzzing. The issue
went all the way up to the Chinese Prime Minister Zhu Rongji, who first supported the initial local government line but later had to retract it and announced there would be a fresh investigation of the incident by the central authorities (Straathof, in International IDEA, 2001).

More generally, filters and firewalls can be defeated by dialing out to an overseas Internet access-provider, and geolocation can be fooled by accessing sites via another computer in another country. Moreover, e-mail can be encrypted. Writers can distribute their work through the Internet outside repressive regimes. Burmese dissidents, for instance, use the Internet to communicate with the rest of the world. The most untraceable re-mailers (e.g. MixMaster) use key cryptography that allows unprecedented anonymity both to groups who wish to communicate in complete privacy and to whistle-blowers who have reason to fear prosecution if their identity became known (Akdeniz, 2002).

In the Internet age, seizing printing presses and jamming broadcasting frequencies is no longer a defence by authoritarian regimes against the flow of information. The Soviet Union’s inability to control the flow of electronic information was seen as crucial to its demise. In the demise of regimes in Eastern Europe and the coordination of students leading up to the Tiananmen Square massacre in China, attempts by authorities to insulate locals from editorials and reports by the international media proved futile while dissidents had access to fax machines and satellite television (Rodan, 1998; Kalathil & Boas, 2003). The international diffusion of fax machines, camcorders, PCs, mobile phones, global television services, and above all, the Internet, will make it progressively more difficult for authoritarian regimes to control the political thought, expression, and behaviour of their citizens.

In the final years of the Suharto regime in Indonesia, the Internet became a focus for first, rumblings of discontent, and then plans for active resistance against Suharto, which eventually resulted in the President’s fall from power in 1998 (Ferdinand, 2001; Kalathil & Boas, 2003). Anti-Suharto protesters coordinated their message through interactive forums such as news groups and chat rooms. E-mail discussion lists, often based outside Indonesia, became essential to political communication between critics of Suharto’s regime inside and outside the country. E-mail lists helped non-governmental organisations share information with each other (Hill & Sen, 2001; Kalathil, 2001). The online news groups were a constant reminder that censorship could be circumvented and much that could not be said in the formal media could be circulated on the Internet. “This technological faculty of the Net to interconnect across the world was actively used in the final days of the Suharto regime by the student demonstrators”
Another peaceful Southeast Asian regime change and the downfall of another corrupt president were also aided by information communication technologies (ICT). In January 2001, President Estrada of the Philippines was overthrown after a momentous week of mounting popular protest. In early 2001, the Philippines had roughly 2.5 million mobile phone users and they averagely sent up to 50 million text messages per day. In the week of Estrada’s resignation, however, this rose to 80 million. Many of these messages served to organise mass public demonstrations at short notice, so that the authorities could not respond in time, even if they had wanted to. Estrada outwitted an attempted impeachment, but was overthrown in a bloodless coup after hundreds of thousands of protesters massed in Manila to demand his removal. The crowds were raised with the message: “Full mblsn tday Edsa”, short for “full mobilisation today at the Edsa shrine in Manila”. “Opposition leaders sent it to every mobile number they knew. Recipients buzzed it to every number stored in their handsets. Within minutes, millions knew what was afoot” (Guest, 2001). When Filipinos threw out an even worse president, Ferdinand Marcos, in 1986, it took months to organise rallies. But in 2001, “the messages were unstoppable, and their senders were untraceable. Most were using prepaid cards to charge their phones, which allowed them to remain anonymous” (Guest, 2001).

The protesters’ ability to organise at short notice and in overwhelming numbers was key. Since the authorities could not keep track of all the messages, let alone use them to target individual opponents or respond to the challenges, their only option would have been to close down the mobile phone networks, a step which obviously was not feasible (Ferdinand, 2001).

These few examples must suffice and should show that the Internet and other ICT most certainly can play an important role in (further) democratisation. However, a word of caution is in order, as there are still relatively few academic studies on the Internet’s democratising effects and as we are still in the early stages of the Internet-based phase of the information revolution.

Conclusion

We have found positive correlations between three key relations, i.e. democracy and development, development and the Internet, and democracy and the Internet. Among many other arguments with regard to the linkage between democracy and development, we have seen that there is compelling quantitative evidence from a survey of post-WWII regimes that the level of economic development powerfully shapes the survival prospects of democracy, and affluent democracies survive without fail.
We have argued that the Internet holds plenty of potential for developing countries. There are some impressive examples of developing countries coming up with cheap and innovative technology that, against all odds, connects the poor and provides them with important practical information, thus immediately improving efficiencies. A digital divide exists, but so does a digital opportunity, as catch-up by the lagging economies is possible and there may even be an advantage for latecomers (Sidorenko & Findlay, 2001).

Lastly, we have argued for a more determinist perspective as the Internet’s unique decentralised structure makes it extremely difficult to comprehensively instrumentalise this technology. For those, who are less convinced by our determinist perspective, it is important to note that if they accept the arguments that (a) there is a linkage between development and democracy, and (b) there is a linkage between the Internet and development, then it follows that the process of democratisation is intrinsic to the Internet.

UN Secretary-General Kofi Annan has said that the “new technologies that are changing our world are not a panacea or a magic bullet. But they are without doubt enormously powerful tools for development” (quoted in Reuters, 2001). Indeed, IT is not a panacea that allows governments to avoid pursuing sound policies, which are necessary to reap the full benefits from IT. Some of these policies would include: stable fiscal and monetary policies; deregulation; free trade – opening up markets to foreign trade and investment; liberalising telecommunications; protecting intellectual property rights; improving education; ensuring an effective legal system; and ensuring efficient financial markets. Those economies that get left behind should blame themselves, not technology. And, taken as a whole, the developing world has one great competitive advantage that rich countries can never match. They can call on five times as many brains, and the gap is getting wider.

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JÜRGEN RUDOLPH, PhD, has studied Sociology, Business Administration, Musicology, Philosophy, Social Pedagogics, Social Work and Social Anthropology at universities in Erlangen (Germany), Aberdeen (Scotland), Louisville (Kentucky, USA) and in Singapore. He also holds an MA and MBA. Among other positions, he has been a Research Fellow at the Social Research Centre, Nuremberg, Germany, and Lecturer at the Department of Sociology, University of Erlangen-Nuremberg, and is currently the Managing Director of the Centre for Professional Studies, Singapore. Email: juergen@professionalstudies.com.sg

LIM THOU TIN is Principal Consultant at Decision Modelling Systems in Singapore. He holds a Bachelor’s degree in Business Administration from the National University of Singapore and a Master’s degree in Information Systems from Central Queensland University. He is currently pursuing his doctoral studies with Southern Cross University with research interests in Leadership, Organizational Culture, the Internet and Knowledge Management. Email: limtt@singnet.com.sg