The Dirigiste Divide

How governments obstruct development and access to ICTs

by Alec van Gelder

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International Policy Network
Third Floor, Bedford Chambers
The Piazza
London WC2E 8HA UK
t: +4420 7836 0750
f: +4420 7836 0756
e: info@policynetwork.net
w: www.policynetwork.net

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info@macguru.org.uk
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IPN aims to empower individuals and promote respect for people and property in order to eliminate poverty, improve human health and protect the environment. IPN promotes public awareness of the importance of this vision for all people.

IPN seeks to achieve its vision by promoting the role of market institutions in certain key international policy debates: sustainable development, health, and globalisation and trade. IPN works with academics, think tanks, journalists and policymakers on every continent.

About the author

Alec van Gelder is a research fellow specialising in technology and development policy at International Policy Network

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As the world leaps to greater heights of technological innovation – from radio to television to wireless broadband – the knowledge economy[1] has taken unprecedented steps forward in the past century. The rate of newly designed innovative and creative products and services that make the lives of millions, if not billions, more enjoyable and more efficient continues to break new ground.[2]

But technology is not just a fad that produces neat little gadgets: by some estimates, the wealth held in the form of intangible, knowledge-based assets in the world's richest economies is now well over 70%.[3] The development of higher quality, lower cost products and associated improvements in productivity have always resulted from increases in human knowledge; the development of a 'knowledge economy' not only makes this explicit but also emphasises the degree to which we are now dependent on this stock of human created capital.

Without the tools of the knowledge economy and the infrastructure that supports them, it is argued, groups that do not share the fruits of this considerable growth are mired in a so-called "digital divide", according to high-ranking officials, including French President Jacques Chirac, Senegalese President Abdoulaye Wade and UN Secretary-General Kofi Annan, and many others. This divide poses, so the argument goes, one of the most significant development challenges of the 21st century. Unlike previous efforts, it is asserted, this promise of digital technologies can and will correct decades of stagnant economic growth and leapfrog into the digital economy.

One of the proposed ways to close this so-called divide is to create and legislate mandatory contributions towards a Digital Solidarity Fund – which calls for the transfer of wealth from wealthy nations to poorer ones.[4] The funds, administered by a UN body, would then be invested in infrastructure development projects in order to assist the expansion of access to information and communication technology (ICT).

One such plan involves the bulk purchase of specific technology, such as the recently unveiled $100 laptop, developed by the Massachusetts Institute of Technology Media Lab (although it has not yet been produced at this price, despite its creator's insistence that this is what it will cost).[5]

These initiatives have been promoted in numerous meetings, including the World Summit on the Information Society (WSIS), a three-year long series of meetings organised by the International Telecommunications Union (ITU), a UN agency based in Geneva. The WSIS process was designed to reach agreements on "financing mechanisms" [and measures] "that will be taken to bridge the digital divide and hasten the achievement of the Millennium Development Goals (MDGs) with the help of the information and communication technologies (ICT)."[6]

Yet despite these high-level meetings, the new funds ventured, the new task forces created and the new promises made, progress towards bridging the gap between the haves and have-nots of the digital world has been lacklustre. While some bridges have been built and even crossed, there remains a huge disparity between countries.

Using data developed by the United Nations Conference on Trade and Development (UNCTAD)[7] to measure the rate of ICT use across countries, the most recent figures portray a distinct inequality of access to technologies that now form the backbone of the information

economy across countries. In sub-Saharan Africa, for example, only 20% of the population has a fixed phone line connection.[8] Because of their squalid conditions and no means to escape them, the poor typically invest less than $10 per year on ICTs for each family member.[9] By contrast, there is such extensive[10] coverage of such "basic" technologies in Western countries that they are usually taken for granted.[11]

As discouraging as these statistics are, they are more telling when considered in a broader context. While it is true that ICTs remain inaccessible for the vast majority of the poor, other revealing development indicators show how clean water, air quality, energy reliability, educational and employment opportunities, and the quality and reliability of other basic amenities are the genuinely important separators that divide rich and poor.[12]

With this more comprehensive view, the real "digital divide" might better be defined as the "development divide" between countries.

Aid to improve ICTs?

Talk of bridging the "digital divide" may be new but the call for massive intervention in order to correct disparities of one kind or another has been a persistent feature of development theories since the 1950s. Yet measures taken on the basis of such theoretical discussions have been less than successful. Indeed, such "big pushes", like the one proposed for closing the "digital divide" may have even worked against poverty reduction and growth.

In the 1950s, development economists argued that in poor countries, rates of savings, hence rates of investment were too low for these countries to escape from poverty. Such countries were said to be caught in a 'low-level equilibrium trap,' where increases in income led to population growth rather than investment and productivity growth.[13] It was claimed that, with a large enough amount of foreign aid, the gap would be filled and thus the cycle of poverty broken.

Following this theory, billions of dollars were provided in grants and soft loans to the governments of poor countries. But this "aid" has singularly failed to contribute to sustainable economic growth.[14]

Africa, by far the largest recipient of foreign assistance with $450 billion in the past forty years alone, is a continent where such investments in "infrastructure projects" were deemed fundamental to kick-starting its course of development.[15] Dotting its landscape are vacant steel mills, run-down aluminium smelters and dams that still do not provide reliable electricity supply to a continent that currently has a lower per capita average income than it did before these grandiose projects were implemented. As for rates of savings and subsequent investment into such things as new technologies, these have actually decreased since foreign aid was dispersed through aid agencies and local governments.

Yet policymakers – dazzled by the allure of new "out of the box" innovations such as the iPod and by buzzwords like e-commerce – are poised to commit the same errors as the previous proponents of foreign aid. Investing large sums of money for a "big push" by public sector bureaucracies to improve infrastructure has not historically contributed to meaningful economic growth and is extremely unlikely to do so in the future. At best, such a push would treat the symptoms of poverty, not the root causes.

The end of the line

These projects fail for a number of reasons. In part, they fail because they do not reach the intended target groups. Government officials ensure that foreign aid primarily goes to politically friendly groups. Even where aid projects are not directly controlled by the government, programmes targeted at low-income groups are frequently captured by these cliques, who are more articulate, influential and wealthy – and who have the means to establish local "NGOs" that can carry out the projects.[16]

In part, such projects fail because they crowd out private funding. If governments heed the lofty call to connect the world's population to the Internet by 2015 and assume the responsibility for Internet service provision and subsequently charge no fees, private operators can only respond to this clear signal by exiting the market.

Without competitive market conditions, however, government-supported monopolies are less pressured to improve quality and/or reduce the costs associated with expansion and the infrastructure maintenance it requires.

The difference, in terms of increasing access to important ICTs and the maintenance that is required to support expanding infrastructure, is not trivial. Nor is it necessarily a well defined division between low-income countries and those with strong economies. Recent evidence shows that the barriers to market-based competition in the telecommunications sector are also significant in many of the Member States within the European Union.[17] Furthermore, evidence shows that in countries where competition between private providers of high-speed broadband is fiercest, there are higher rates of investment in infrastructure, higher access rates and lower costs, as compared to countries where market entry for potential competitors is constrained by state-supported firms.[18]

In Chile the expansion of access to basic telephony only occurred after the privatisation of the telecoms sector, when competition between firms caused increased coverage. This is a good example of the poor being empowered as a result of competition between private suppliers of ICT services.[19]

Privatisation and competition can result in the spread of ICTs to a much wider audience almost immediately. Soon after India's international calls monopoly VSNL was privatised in 2002, national and international call charges fell by as much as 50 %.[20] In addition, the speed of obtaining a new line went from many weeks to a few days, with direct impacts both on the general population and on those seeking to do business.[21]

The lower costs of calls, the higher availability of broadband Internet (which can be used for Internet protocol-telephony) and more responsive private-sector provision are among the most important determinants driving investments into call-centres in India. In this respect, ICTs can bring fabulous levels of wealth to poorer communities. But it is because of competitive firms that challenged the incumbent monopolist in an open market, without protection from the government, that outsourcing centres have been able to offer cost-effective alternatives to companies in higher-cost countries.

For the Internet, it is consistently found that countries with more open telecommunication sectors also have more host sites, lower monthly Internet charges, a greater number of providers, and high rates of Internet penetration.[22] Studies conducted of African Internet service providers show that countries with highly liberalised telecommunications networks charge African Internet users eight times less than state-protected monopolies.[23] Furthermore, it has been found that as few as three competitors are enough to bring prices downward while maintaining sufficient profit levels to finance the investments required to improve and maintain infrastructure. [24]

While the number of Ethiopians using the Internet is very small and concentrated among the elite – 98% of Internet users have university degrees, whereas 65% of the country's population is illiterate – the annual subscription plan charged by the state-owned Internet service provider is $200. To put this figure into some context, it is roughly twice as much as the average Ethiopian's annual income.[25]

With that being said, it is difficult to imagine that the Internet alone could be of much practical use in a country that suffers from wide-spread famine almost every year. Even if connections were somehow granted to every household in poorer countries, there are clearly other elements that contribute to the wealth and utility of the Internet – the existence of and the ability to create relevant content in local languages, for instance – that are still absent and have not been given enough consideration for those connections to become meaningful.[26]

Dirigiste divide

There are, however, even more examples of government intervention that unnecessarily constrict the growth of ICTs in the world's poorest regions.[27] These barriers to creativity, innovation and technology include exorbitant taxes, tariffs, and excessive regulations that exacerbate an environment that is already hostile to investment and expansion of ICTs.

Because of these debilitating policies, it is little surprise that private investment for infrastructure improvement has remained inadequate. Nevertheless, there have been some success stories, with ICTs having positive impacts on local communities, helping them chart their own way out of poverty.

The radio is perhaps the best example. In Nepal, one of the world's poorest countries, 71% of the population finds the radio a reliable source of information[28] – far higher than in areas where the state is strongly involved, such as schools, newspapers and television. Independent radio broadcasting services have been found to be positively and significantly correlated with a range of development outcomes including life expectancy, lower infant mortality, schooling outcomes and better functioning markets.[29] In addition, radio equipment is cheap and not difficult to repair.

A more contemporary example is mobile telephony. Farmers now receive information about current market prices for their produce through their mobile phones, which gives them the ability to negotiate better deals with traders. This also puts them in a better position to negotiate with state-run marketing boards, who are famous for using their position as the sole purchaser to make farmers sell their goods cheaply.

In addition, mobile phones connect families who were previously isolated from their relatives. It is now commonplace for immigrant workers in wealthy countries to transfer a portion of their salaries back home through mobile telephone "texts", which avoid many of the transaction costs associated with conventional ways of remitting money (higher than 11% of the total value in some cases).[30]

Eager to provide their services to more markets, private operators are embracing the challenge to expand mobile telephony to poorer countries. Investments in telecommunications alone between 1993 and 2003 totalled $230 billion in poor countries, according to the World Bank.[31]

As the investment levels increase and mobile telephony firms become more established in poorer countries, they have also become bigger targets for governments who are eager to expand budgets. Whereas it is nigh-on impossible to collect taxes in the informal "black" markets that predominate in most poor countries, it is relatively easy to collect taxes from large, well-defined companies, especially when they are not based domestically and have no political power. [32]

In addition, ruling cliques see opportunities for private gain through the imposition of regulations on ICTs, which may be circumnavigated by the payment of an appropriate sized bribe to a relevant official. For instance, the construction and maintenance of base stations, including negotiating property rights and determining signal strength and mast sizes is a heavily regulated process by governments.[33] Although the signals from these stations already cover 50% of sub-Saharan Africa, these debilitating policies limit access and drive up the cost of access to cell phone networks.

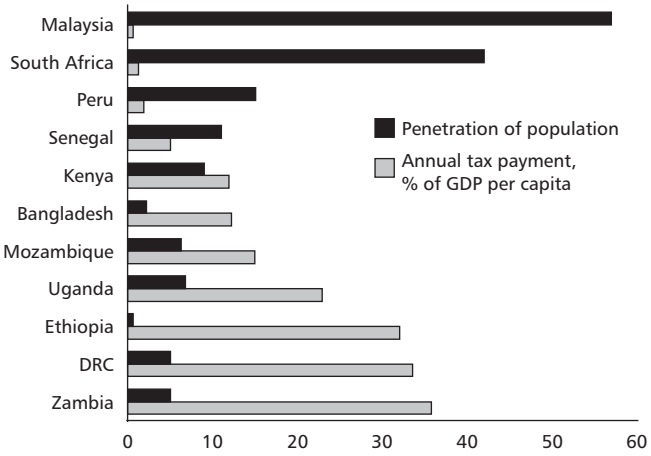
In addition, regulations and taxes drive up the cost of handsets and connections. Private handset producers have managed to develop and export durable hand-held devices for as little as $30 dollars.[34] But the full cost of owning a mobile phone is considerably more because of one-off levies, import duties and restrictions on imports of possibly even cheaper second-hand phones.

In Turkey, for instance, there is a "special communication tax" of $16.52 and an annual "wireless licence fee" of $7.39 on consumers. There is a one-time activation charge of $13.80 in Bangladesh,[35] where market penetration remains well below 10% (see chart below). Syrians must pay a 20% VAT on all phones even though firms importing handsets into the country are already faced with customs-related charges of more than 45% of the original export price.[36]

The Pakistani authorities impose a 40% tariff on all telecommunications equipment and an additional tax on SIM cards of $8.36.[37] Although mobile telephony in the country does attract a significant amount of investment, the level is surely smaller than would be the case in the absence of taxes that are prohibitive for the poor.

The chart below shows the level of taxation as a percentage of total cost of mobile ownership in a selection of less developed countries. While tariffs are relatively low in many countries, there are some notable exceptions, such as Uganda, Zambia and Ethiopia. The prospect of reducing tariffs in these and indeed in all

Figure 1 **Tax and the digital divide**



Source: GSMA, Tax and the Digital Divide, 2005

countries presents a real opportunity for policymakers positively to influence development outcomes.

Economic freedom for development

ICTs and other technologies derived from "intangible" assets are contributing substantially to growth in the world's wealthy economies. However, in poorer countries, people are held up by more fundamental challenges. Indeed, government impediments to wider use of ICTs – in the form of regulations and taxes – are symptomatic of a wider problem of excessive government interference in the economy.

A precondition of sustainable development is the strength of the institutions of the free society: property rights, the rule of law, free markets and limited government. Most if not all poor countries lack the rule of law. Most have inadequately defined and poorly enforceable property rights. Most have markets that are either rigged by the state or otherwise unfree. Most have governments that are anything but limited. That is why they are poor.

ICTs may help in some measure to improve the chances for these institutions to be established. Radios can facilitate the distribution of information about the role of property rights, the rule of law and so on, educating the poor so they can become demandeurs of change. The Internet, likewise, can facilitate information exchange among the intellectual elite, perhaps leading some to realise the way to improve the welfare of the poor is through reducing the regulatory burdens imposed on entrepreneurs, even though this may reduce their own ability to exact bribes. Whether they actually care about the poor is, of course, another matter.

But ICTs can also be a means to communicate ideas that are antithetical to the free society. So, while one may hope that their uptake leads to improvements in the institutional framework of poor societies, there is no guarantee.

On balance, it is more likely that causality will go in the other direction. When a state improves its institutions, enabling people to own property and engage in free exchange; when it upholds contracts and applies the law in a non-discriminatory manner to all; when it removes its rapacious taxes and regulations, then it will experience growth and then it will find entrepreneurs from within and without who want to invest in the development of its ICT sector – along with the rest of the economy.

Countries that adopt free institutions are more developed and also enjoy higher growth rates and continually improving standards of living as compared to countries that do not.[38] As an example, countries where economic freedoms are high also enjoy greater access to ICTs, and vice versa.[39]

It is because of economic freedom that wealthy countries are now experiencing unprecedented levels of innovation and creativity, which brings us back to where we began. For economic progress to occur, people need to be able to own and trade in property. As progress occurs, so there is a shift towards property that is intangible – because there is a shift towards knowledge-based economic activities. Ensuring that these intangible assets may be owned and exchanged therefore becomes increasingly important. Underlying all of this is the fundamental importance of the rule of law, without which no progress can be made.

The hype surrounding the digital divide has diverted attention away from the real cause of the lack of development in poor countries – the huge number of

restrictions imposed on people's ability to engage in entrepreneurial activity. If the dirigiste divide is to be bridged, the governments of poor countries must allow people the freedom to trade.

Notes

1. Some may prefer Network or Information Economy.

2. One interesting analysis argues that the rate of technical progress is "double exponential". In other words, all progress made during the 20th century would only be akin to just 20 years of progress given today's current rate of innovation. See discussion on rate of advancement here: http://www.kurzweilai.net/articles/art0563.html?printable=1

3. Over 70% of US-held assets were intangible in 2000, up from just 40% twenty five years ago. Idris, K. (2003). "Intellectual Property: A Power Tool for Economic Growth", WIPO, Geneva

4. Jacques Chirac and Abdoulaye Wade, presidents of France and Senegal, respectively, have been the biggest proponents of the creation and ratification of this fund into international legislation. More can be read of it here: http://www.dsf-fsn.org/

5. The $100 laptop project's website is: http://laptop.media.mit.edu/

6. Read more about the WSIS process, including both stages of meetings in 2003 in Geneva and, most recently in Tunis: http://www.itu.int/wsis/

7. "The Digital Divide: ICT Development Indices 2004", United Nations Conference on Trade and Development, 2005

8. "Millennium Development Goals Report 2005," United Nations, New York, 2005

9. Kenny, C (2002). "Information and Communication Technology for Direct Poverty Alleviation", Development Policy Review, 20 (2), pp 141–157

10. While statistics do no show blanket coverage for fixed telephone lines in the world's wealthiest countries, but this better reflects individual household decisions not to purchase that particular service, rather than it being that case that it being unavailable to them.

11. For an interactive map where a cross-country analysis of access to ICTs can be found, see: http://alcatel.maplecroft.com/loadmap?template=map

12. See data from, for example, United Nations Human Development Report (HDR) for a range of human development indicators: http://hdr.undp.org/statistics/

13. e.g. Nelson, R. (1956) "A Theory of the Low-Level Equilibiurm trap" *American Economic Review*, May.

14. see generally: Erixon, F. (2005). *Aid and development; Will it work this time?* London: International Policy Press; Easterly, W. (2001): *The Elusive Quest for Growth*, Boston: MIT Rress.

15. Erixon (op cit).

16. Barat, L., Palmer, N., Basu, S., Worrall, E., Hanson, K., Mills., A. (2003). "Do Malaria Control Interventions Reach the Poor?: A View Through the Equity Lens." Disease Control Priorities Project, Bethesda, Md: Fogarty International Center, National Institutes of Health.

17. Investments are highest among private competitors in the UK ($184 per capita) as opposed to Germany, where heavily-favoured by the state, Deutsche Telecom ($62 per capita). Competition is weakest in Germany and Greece, and strongest in the UK and Denmark. http://www.cellular-news.com/story/15061.php

18. BBC News: Home broadband sign-ups 'soaring', 28-11-2005. http://news.bbc.co.uk/1/hi/technology/4477492.stm

19. Interestingly, the poorest communities were among the first to benefit from the privaitsation initiative by the Chilean authorities.

20. E. Fernades, "The Race to Serve a Subcontinent" in Financial Times, 20 June, 2002.

21. Julian Morris – personal communication, based on his personal experience of setting up an office in New Delhi in 2002 around the time of the privatisation.

22. See, for instance, the OECD's policy recommendations, based on country evaluations, on how best to encourage the spread of broadband technologies and development of ICTs generally. "Broadband Driving Growth: Policy Responses".

Organisation for Economic Co-operation and Development, 09-10-2003

23. Africa Internet Forum, (1999). "Internet Economic Toolkit for African Policy Makers," available on-line at http://infodev.org/projects/finafcon.htm. The most recent figures indicate that there are less than 24 million Internet users in Africa: http://www.Internetworldstats.com/stats.htm

24. Hesselmark, O., (2003). "Internet prices in Africa. A comparative study." Stockholm. Access at: http://www.schoolnetafrica.net/fileadmin/resources/Internet_prices_in_Africa.pdf

25. ibid.

26. Kirkman, G. (1999). "It's more than just being connected". Development E-Commerce Workshop, 16–17 August, 1999, The Media Laboratory at the Massachusetts Institute of Technology, Cambridge, Massacheusetts, USA.

27. See Djankov et al (2001) for a full discussion on a cross-country analysis on the barriers to market entry imposed by different counties: Djankov, Simeon D., La Porta, Rafael, Lopez de Silanes, Florencio and Shleifer, Andrei, "The Regulation of Entry" (August 2001). Harvard Institute of Economic Research Paper No. 1904, KSG Working Paper No. 01-015; World Bank Policy Research Working Paper No. 2661

28. Kenny, C (2002). "Information and Communication Technology for Direct Poverty Alleviation", Development Policy Review, 20 (2), pp 141–157

29. Djankov, S., et al (2001) "Who Owns the Media," Background paper for World Bank World Development Report 2002. Washington, DC: World Bank

30. "Global Economic Prospects 2006: Economic Implications of Remittances and Migration," 2005, Washington DC, World Bank.

31. "The Real Digital Divide" The Economist, 10 March, 2005.

32. Informal sectors are often larger, in terms of GDP, than the official sector. Some informal sectors take as much as 65% of GDP in some cases. *Doing Business*, World Bank. http://www.doingbusiness.org

33. Besides mobile companies having to generate their own power for masts in Nigeria, government-issued levies increased anyway from 1000% to 5000% over the previous year for building permits and other multiple taxes.

34. Motorola, for instance, has now introduced a mobile handset that can be produced for less than $30. See: http://news.bbc.co.uk/1/hi/technology/4446966.stm.

35. "Tax and the Digital Divide", GSM Association, 09-2005

36. Deloitte, August 2005

37. http://www.dailytimes.com.pk/default.asp?page=2005%5C11%5C24%5Cstory_24-11-2005_pg5_4

38. See, for instance, Barro, R. (1991). "Economic Growth in a Cross Section of Countries", The Quarterly Journal of Economics, Vol. 106, No. 2, pp 407–443. See also, Gwartney, J., Lawson, R. (2005). "Economic Freedom of the World Annual Report". Fraser Institute

39. See, for example, the Fraser Institute's Economic Freedom of the World Index and ICT Development Indices developed by UNCTAD

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Rich countries enjoy a phenomenal rate of technological progress and their wealth is now dependent on knowledge-rich technologies, including information and communication technologies (ICTs).

Because wealthy countries have highly developed ICTs, some argue that increasing access to these technologies will make poor countries wealthy.

In reality, the same barriers that prevent poor countries from becoming wealthy also prevent the poor from accessing ICTs. Attempting to correct for the so-called 'digital divide' by subsidising the provision of ICTs is unlikely to be successful.

The digital divide is actually part of a larger 'dirigiste divide' which results from the governments of poor countries imposing all manner of restrictions on entrepreneurial activity, from lack of respect for property rights to a failure to uphold the rule of law.

Without markets, underpinned by strong, transferable property rights, free trade, and the rule of law, entrepreneurs cannot make the investments that are required to expand provision of ICTs.

By contrast, where those institutions are strong, countries experience rapid growth and ICTs are made more accessible to a wider proportion of the population.

ICTs that have managed to help the poor in some way – such as mobile phones – tend to be victimised by governments through rapacious taxes, tariffs and onerous regulations, which inhibit investment and competition.

If the poor really are to join the knowledge economy, policymakers must eliminate the barriers to economic development. The rest will follow.

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