The internet: Innovation, Data flows and Markets

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Ladies and Gentlemen,

Thank you for inviting me to be one of your keynote speakers today. I come wearing two hats. My first hat is as Executive Director of the Asia Internet Coalition (AIC). The coalition was founded by eBay, Google, Nokia, Skype and Yahoo! in 2011 to promote a commitment to open access to the Internet on the understanding that Internet access and usage is both a fundamental right of human communication, no different in principle from any other mode of communication, and an essential component of economic and social development. It epitomizes the role of innovation as a driver of economic growth, job creation and new services which can serve existing and new commercial industrial sectors and contribute towards social inclusion.

With income disparities so clearly highlighted by the recent global financial crisis or the “Great Recession” as some now call it, the world is once again waking up to the fact that social inclusion needs to be a top priority. One of the important contributions of the Internet is that it empowers equally across society. From an economist standpoint that is likely to have an important influence on the way scarce resources are distributed in the future.

My second hat is as a professor and director of the Technology Research Project (previously Telecommunications Research Project) at the University of Hong Kong and co-director of the consulting company TRPC Pte Ltd here in Singapore where I now live. I may have two hats, but I have only one head, so Internet issues, ICT issues in general and trade and investment issues have to converge into it. This is just as well because we now live in a totally connected world and although we each have to specialize to a large extent we all need to keep the context holistic. Good policy making needs to keep the whole picture in mind and this is one of the many important contributions Intergovernmental and regional agencies such as APEC are making.

The Flow of Data

It’s difficult to imagine anyone having anything really original to say about the Internet. It’s simply a major, indeed overwhelming fact of life. I now think it is best seen not as an infrastructure, a ‘network of networks’ as used to be the case, what economists would call a ‘stock’, but as a ‘flow’ rather like electricity or water, with each piece of ‘data’ travelling its own route intelligently controlled by an algorithm.

This data flow is a service in its own right, when for example it consists of text messages, telephone calls, streamed video, etc. It is also an ancillary service supporting just about
every economic activity and industry sector, such as financial transfers, logistics and the
transportation of manufactured goods and agricultural products, tourism, etc.

Like money, data flows have become the life-blood of the economic system providing
information vital to each economic decision. But whereas the monetary system may justify
some form of national protection, the opposite works for data flows. Indeed, restrictions on
access to or use of data gives rise to what economists call economic ‘rents’, giving higher
economic returns to those who control the supply of the restricted resource and to those
who have access to alternative sources of information, such as insider-trading.

Disruptions or constraints on data flows impair economic efficiency because they raise the
opportunity cost of information. Those with the information can, if they have good
understanding, make more informed and better-timed decisions than those without and
businesses are more likely to invest in markets where they have good access to data and
reliable information.

The economic consequences of the lack of information are obvious, and yet for essentially
non-economic reasons the Internet and the free flow of data is often curtailed. What is
evident however, and here is the good news, is that as the opportunity costs grow even the
most restrictive regimes are realizing they have to adapt, to make exceptions, to introduce
‘free access Internet zones’, to allow competitive access and information markets arise, etc.

But something else is required, and this is where I most definitely wear my AIC hat. As
information markets grow, the rules and regulations that apply to their operation must
evolve in a way that is proportional to the scale of the challenges. Modern Internet-based
information markets work through intermediaries, Internet access providers, platform
operators, etc., the kind of companies represented by the AIC. They have self-interest to act
responsibly because their customers will go elsewhere if they do not. There is no shortage
of choice. Take copyright as an example. On the one hand a ‘smart’ regulatory regime offers
a ‘safe habour’ to those IAPs who respond to ‘take-down notices’ which is an incentive for
Internet companies to do the right thing. Comply with the law and liability falls on the
copyright violator not on the IAP or the website operator. The principle is simple and it
underpins a free and open Internet.

On the other hand, some copyright owners complain they are losing out and call for more
draconian measures. Their concerns are genuine, but in many cases they arise not because
of the activities of Internet companies but because the technological environment in which
they operate has overtaken them. No industry is immune from changes in the environment
beyond their control. If their business model was built in accordance with one environment,
it will have to change to acclimatize to another environment. What is most impressive about
the Internet environment is just how many new business models have evolved. The case of
Apple’s iTunes is one obvious example.
I would raise one other word of warning about IPRs. They are designed to protect the inventor and the innovator, but in reality the beneficiaries may not be these people. For example, a study by the Harvard Digital Media Project\(^1\) found that the artist on average receives less than 12% of the CD royalties, and 90% of artists receive nothing at all. It is the old traditional distribution networks that receive the lion’s share. The old system worked well before the Internet. Now it doesn’t. This is proving to be a huge opportunity for innovators.

Data, the Internet and Innovation

A closely related and highly topical issue is the role of data centres, traffic flows and intermediary liability. The growth of data centres has been accelerated by the growth of the market for cloud computing. According to a Cisco estimate, cloud data centre traffic is set to grow 2010-2015 at a 66% CAGR,\(^2\) and by 2020 possibly more than a third of all digital information created annually will be stored in or pass through a cloud.\(^3\) Worldwide, the shift to cloud computing could create nearly 14 million new jobs by 2015, with a majority of these new jobs potentially being in large emerging economies.\(^4\)

But in some developing economies at least two roadblocks threaten progress. The first is the lack of clearly defined data protection laws. The Internet intermediaries responsible for investing in DCs will hesitate to put money into markets where their liability for the data traffic passing through their facilities is uncertain. For the same reasons, the big DC users, the multinational and regional commercial companies, are reluctant to allow their data to be stored in facilities in jurisdictions where data protection laws are weak, or to allow their data to cross borders into such jurisdictions.

The second roadblock is where economies mandate the location of DCs within their jurisdiction as a condition of commercial presence. Such mandates send exactly the wrong signal about how open their markets are and therefore actually deter investment. Companies who freely enjoy the experience of commercial operations in an economy are always more inclined to invest in those economies than in economies where they experience operating restrictions.

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1 Digital Media Project [http://www.ftc.gov/bcp/workshops/techade/pdfs/Gasser2.pdf](http://www.ftc.gov/bcp/workshops/techade/pdfs/Gasser2.pdf)


There is an expression “the Internet Economy”. It used to refer to Internet business, such as online search and the sale of web-portal content and advertising. But this is outdated because no sector of the modern economy is left untouched by the Internet. A report by the Mckinsey Global Institute (May 2011) concluded that the use of the Internet in all kinds of business, private and public consumption accounted for 7% of GDP growth 1995-2009 in the 13 economies examined, and 11% 2004-2009. In other words, and as expected, the impact of the Internet on GDP growth was growing.

The report also found that 75% of its impact was on traditional industries, like retail, finance or travel, and just last week, BCG released a study entitled “Cultural Boom” which found that the Internet provided a "shot in the arm" for the Australian media sector, with online media driving growth. Jobs in the media sector are projected to grow from 105,000 in 2011 to 120,000 by 2015, with the online sphere creating half of those extra jobs. In fact, the Internet has stimulated, rather than reduced interest in other media. Online Australians watched more broadcast TV, listened to more radio, and spent more time reading newspapers than they had three years earlier.

Data and Trade

Findings like these that show how the Internet is having net positive effects upon industrial innovation, jobs and markets are not new. As far back as 2000 researchers found from the trade statistics that not only does the Internet stimulate trade but “the effect of the Internet on trade has been stronger for poor [read ‘developing’- JU] countries than for rich [read ‘developed’ - JU] countries.” This apparently surprising conclusion was validated by another World Bank study in 2004.

Internet access appears to stimulate exports from poor[read ‘developing’-JU] countries to rich [read ‘developed” – JU] countries. Moreover, the analysis suggests that regulatory policies affecting telecommunications and Internet development indirectly affect trade, further emphasizing the importance of deregulating potentially competitive services in the telecommunications industry.

We can speculate about the reasons. One possibility is that Internet offers developing economies access to markets that were previously inaccessible to them. With its global reach and high visibility, the Internet reduces the entry barriers to trade and the costs of

doing business. Internet offers price comparisons so that consumers are able to purchase goods at the lowest price from anywhere in the world and from the convenience of their homes. Internet offers ‘track and trace’ and thereby reduces risk. Internet offers flexible means of payments even for economies with poorly developed financial systems, and so on.

Conclusion

No one today is in any doubt about the importance of the Internet for innovation in products and services and in the means of delivering those to markets globally. Despite this restrictions on Internet access and usage continue in many economies. These are policies born of another era, an era when globalization was still in its infancy. The Internet did not create globalization: business process outsourcing, ‘offshoring’ of manufacturing, international supply chains, business networks, the globalization of finance, all these trends were in full swing. But Internet was an important enabler, and from a global mode of communications it has transformed into a global mode of production, distribution and consumption.

Nothing is immune from its impact. Many business models will need to change or disappear entirely, and IPR policies based upon them will need a revamp. Perhaps the most contentious issue here will be how to harmonize across borders and how to accommodate the globalization of law enforcement in a way that is equitable and acceptable to nations. Definitions of criminality for example already vary widely between jurisdictions. A degree of proportionality is certainly called for.

Promoting policies that keep the Internet open and the cross-border flow of data secure is a fundamental issue, and one of growing relevance to the global economy. Economies that are slow to change will be slow to benefit. I am reminded of the very heated debate in the late 1990s in APECTEL when developing economies complained their intra-Asian Internet traffic had to trombone through the USA and pay high interconnection charges. The answer coming from the US at that time was “well, if you freed up your Internet and had more competitive local telecom markets you would generate sufficient traffic to warrant your own Internet exchanges.” The message was poorly received by some, but it was in retrospect the right message. Now Asian economies are developing IXs. The same applies today with the Internet and the free use it in all spheres of civil society.

The real benefit to the economy and to trade is not growth per se, but the likelihood that growth will be more broadly based – and therefore more sustainable – and more socially inclusive. Sustainable and socially inclusive growth is one the cornerstones of the MDG. Now at least we have the means to achieve those goals if we are sensible, less ideological and more rational about the policy choices we make.

Thank You