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Internet Matters: The Quiet Engine of the South African Economy

This article is a condensed version of the independent report Google commissioned World Wide Worx (WWW) to prepare as the first in-depth analysis of the Internet economy of South Africa in order to understand the impact of the Internet on the South African economy. The summary has been undertaken by Sara Gon to elicit the issues that the Foundation believes would be most interesting to Focus readers.

Background: A Connected Country

At the end of 2011 South Africa had about 8.5-million Internet users.¹ This represented a 25% increase over the 2010 figure of 6.8-million, fuelled by the explosion of smartphones. This growth brings Internet penetration in South Africa to about 17%. However, South Africa still lags behind the biggest Internet user bases in Africa: Nigeria with 45-million users and 29% penetration, Egypt's 21.6-million users and 26% penetration, Morocco's 15.6-million users and 49% penetration, and Kenya's 10.4-million users and 25% penetration.²

The significant level of Internet penetration is due to the use of cellphones. Physical Internet access infrastructure is less developed in these countries than in South Africa and the quality of access is relatively poor. However, this still leaves South Africa at fifth in terms of Internet users in Africa. In terms of penetration, South Africa also falls behind Cape Verde, Mauritius, Reunion, Sao Tome, Seychelles and Tunisia.²

The main reason for this is price. The rental charge for ADSL comes on top of phone line rental at about R140 a line. WWW's research shows that mobile consumers spend an average of R100 a month in total on their phones. So the rental of lines (before making calls or subscribing to ADSL) is beyond the reach of most South Africans.³ ICASA recognised the negative impact of these costs and, in April 2012, ordered that the ADSL charges paid by the Internet Service Providers (ISPs) for delivering data across the Telkom network to end users, had to be reduced by 30%.⁴

Although access to infrastructure is still largely limited to our urban areas, cellphone penetration is not. According to our research 63-million SIM cards are in use, giving us 126% SIM penetration. However, the true user base is about 40-million with penetration of 80%.³ The numbers in the rest of Africa are not as impressive, but they are catching up fast.

According to Informa Telecoms & Media on 30 September 2011, Africa became the world's biggest region for cellphone use after the Asia-Pacific, overtaking North America and Western Europe. Staggeringly, at 616-million users, it appears that more than half of all Africans are using cellphones.⁵ This also means that over half of Africa has access to voice and text communications. This opens the way for migration to Internet use.

The reality is that many African users have dual-SIM cards. In Nigeria it is common for business people and consumers to have 2 cellphones, each with a SIM card from a different provider. This is to avoid the prohibitive additional cost of the interconnect fee for making calls between different providers.

So in the next 5 years Nigeria is expected to reach 100% SIM penetration, while Egypt is expected to reach 150% SIM penetration. Despite the connection of a billion SIMS, fewer than 600-million people will actually be phone users.

Cynics argue correctly that these figures obscure the reality of connectivity in Africa and absolve governments of responsibility for fostering and promoting access. However, a positive trend also emerges. If half of Africans are using phones, more Africans than not have a communications device in their hands that they can use anywhere – giving them access to family, friends and communication on an unprecedented scale. Cellphone users are slowly being pulled into the world of Internet connectivity by the phones they use.

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Contribution to GDP Globally

The Boston Consulting Group (BCG) has done research across 20 economies showing that South Africa's Internet economy as a proportion of GDP does not compare well either with leading industrialised nations or developing countries. Across the G20 group of countries, the average contribution of the Internet economy to GDP in 2010 was 4.1% and expected to grow to 5.3% by 2016.

The average for developed markets was 4.3% growing to 5.5% by 2016. For developing markets it was 3.6% expected to grow to 4.9% by 2016.

South Africa was 1.9% in 2010, 2% in 2011 and expected to be 2.5% by 2016.

South Africa is only ahead of 2 of the economies measured – Turkey and Indonesia. It is on par with Russia but will fall behind soon.

India has one of the fastest growing Internet economies at 4.1% in 2010 and 5.6% in 2016. With Japan, it is jointly the 4th biggest Internet economy in terms of GDP.

Why is India's Internet economy different? BCG reveals that a high proportion is made up of exports, which are almost non-existent in South Africa. Imports into the Internet economy make this a negative figure in terms of contribution to GDP. India's online retail sector is expected to grow rapidly and will make up nearly half its Internet economy by 2016.

In terms of the Internet economy, therefore, the logjams that constrain our economy from promoting ubiquitous and affordable access, and prevent us from taking a more active embrace of open competition, must be loosened. This will then ensure

that the economic benefits of the Internet are enjoyed sooner rather than later, and by the many rather than the few.

What is the Internet economy?

The Internet economy comprises:

- Access to and use of the Internet;
- Investment in infrastructure; and
- Expenditure in Internet activity in a country.⁶

These include infrastructure, money spent on online retail and advertising, and business and Government engagement on the Internet.

The Internet economy is not officially measured in South Africa so we have had to estimate it. This is because of a lack of awareness of the significance of the sector, as well as the lack of maturity of Internet use in business and government.

It is impossible to quantify the entire Internet access, presence and equipment market in SA. We have extrapolated estimates from revenue data, user numbers, average costs and related services data publicly available.

E-commerce

Business-to-Consumer (B2C) e-commerce is made up of both traditional retail conducted online and intangible products, the biggest sub-sector being the airline industry. E-ticketing and online sales came close to R9-billion in 2011.

Telkom's Internet revenue (data connectivity, leased line facilities, Internet access and related services, managed data network services and multi-media services) for the six months to the end of September 2011 was R5.114-billion

E-commerce is growing at a rate of about 30% a year. The scope for future growth is even greater given that many major consumer brands and chains have not yet devised comprehensive online retail strategies.

The total spend on online retail in South Africa in 2010 passed R2-billion, growing by 30% to reach R2.028-billion. This growth rate was maintained in 2011 with another 30% increase to R2.636-billion.

Business-to-Business e-commerce is not included in this study as it does not fall under the generally accepted definition of what constitutes the Internet economy, namely, consumption, investment and exports. We have quantified B2B e-commerce at more than R30-billion, but their expenditure is already incorporated within several sectors making up the GDP. Inclusion in the Internet economy would constitute considerable double accounting.

Internet access and presence

Telkom's Internet revenue (data connectivity, leased line facilities, Internet access and related services, managed data network services and multi-media services) for the six months to the end of September 2011 was R5.114-billion.⁷ Annualised over 12 months this amount is estimated to be R10.2-billion for 2011.

The private telecommunications operators in South Africa providing data services are Vodacom, MTN, Neotel, iBurst and Cell. WWW estimates that total data revenue generated by these providers (public and private) is R24.874-billion.

Internet Service Providers (ISPs)

In its research WWW has only included the largest ISPs, which are assumed to make up 80% of the market.

The ISPs are:

- Dimension Data (acquired by the Japanese NTT DoCoMo in 2009) through its subsidiary Internet Solutions;
- MWEB (a subsidiary of Naspers's Pay TV Division and effectively part of MultiChoice);
- Altech through its division that is strongly focused on data and connectivity services in South Africa, Altech Technology Concepts;
- Vox Telecoms (through VoxData and Vox @lantic);
- WebAfrica;
- Afrihost;
- Axxess DSL;
- Imaginet;
- OpenWeb;
- Cybersmart

WWW estimates the total ISP revenue for 2011 at R4.325-billion.

Online advertising

The size of online marketing tends only to be researched every 3 years. In 2009 WWW estimated the online advertising market was R419-million.⁸ The growth forecast for the next 2 years was 35%, indicating revenue of R760-million in 2011.

SEACOM invested R100-million in additional infrastructure to link its undersea cable to terrestrial networks.

General consensus is that conventional online media sites are matched in revenue by Google ads appearing on South African sites. Google does not provide a regional breakdown of its revenue, so the best estimate of its contribution to the market is worth R1.52-billion in 2011.

Investment in Data Infrastructure

This section only takes into account the investment made by the large telecommunications operators into major infrastructure projects and so is, by its nature, conservative.

The operators are Telkom, MTN, Vodacom, FibreCo Telecommunications (a joint venture between Cell C, Internet Solutions and Convergence Partners), Neotel, West Africa Cable System and SEACOM. West Africa Cable landed on the South African coast in 2011 and the estimated investment in 2011 was R1-billion. SEACOM invested R100-million in additional infrastructure to link its undersea cable to terrestrial networks.

The total investment by the above operators in 2011 was approximately R15.5-billion.

Government Spending

According to the *Estimates of National Expenditure 2011* published by the Government,⁹ R2-billion was budgeted for the Department of Communications for 2012/11. R1.289-billion was allocated to ICT enterprise and development,

which in turn was allocated to Broadband Infracore and Sentech for investment in broadband and fibre infrastructure.

There are doubtless many other areas of Government spending on Internet infrastructure and access that are difficult to directly identify in breaking down budgets.

The Internet economy as a proportion of GDP is estimated to be 2% of the South African economy. The Boston Consulting Group has estimated that the Internet economy comprised 1.9% in 2010 and grew to 2% in 2011. Thus the Internet is in a phase of rapid growth.

Much of the high-profile investment in infrastructure is in an ongoing programme of development to meet anticipated growth in demand.

The Implications of Infrastructure Development

Aside from the Telkom network, most current investment in infrastructure has come about in consequence of January 2008 High Court ruling which stated that Value Added Network Services (as ISPs and related communication network operators were known) may build or “self-provide” their own networks.¹⁰

There is almost no limit to the capacity of a fibre strand: speed and bandwidth is only constrained by the equipment on either end of the fibre line, plus what the customer is willing to pay.

This decision loosened the regulatory logjam that had created a massive pent-up demand for data services, both in terms of physical infrastructure and in terms of the services leveraging that infrastructure. Many logjams, however, remain.

There is almost no limit to the capacity of a fibre strand: speed and bandwidth is only constrained by the equipment on either end of the fibre line, plus what the customer is willing to pay. Consequently many are pinning their hopes on Fibre-To-The-Home (FTTH), which is the natural consequence of Fibre-To-The-Building (FTTB), going mainstream in the business environment.

The typical FTTB offering to corporates is a 1000Mbps connection, which is becoming the standard expectation for FTTH as well. The problem is that outside of office parks and gated communities, which have pre-planned fibre infrastructure, few have access to such fibre connectivity. A figure of R20 000 has been mentioned for an individual installation, provided the customer is near an existing fibre line.

This is a clear challenge to policy-makers and government to re-examine their approach to constraints on the Internet economy.

On an access level it raises three major questions:

- The continued delays in spectrum allocation;
- The continued regulatory moratorium on reallocating spectrum that is not effectively being utilised; and
- The lengthy process toward digital terrestrial television migration.

The latter holds back the “digital dividend” of broadcast spectrum that can be freed up for broadband access.

It also poses a challenge to major operators to lower the cost of their services, which are made up of multiple components, each of which presents an obstacle to users. These include access devices, line rental, usage constraints like data caps and the cost of *ad hoc* data.

Operators are unable to plan as a result of the failure by regulators to relax long-standing obstacles, which also add to the cost of services. One of these is in Local Loop Unbundling (LLU) – LLU is the regulatory process which is designed to provide multiple telecommunications operators use of connections from the telephone exchange to the operators' clients' premises. The physical wire connection between the local exchange and the operator is known as a "local loop" and is owned by the incumbent local exchange carrier, which in our case is Telkom. This means that the infrastructure is paid for by the taxpayer

At the entrepreneurial and enterprise level the challenge to the individual or entity, that believes that the Internet can make a difference to their effectiveness, productivity or opportunity, is to push for enablement of these opportunities.

The SME sector

A "small" enterprise is generally defined as having up to 50 employees, a "medium" enterprise from 51 to 200 and "very small" enterprises have up to 20 employees.

According to the Companies and Intellectual Property Commission (CIPC, formerly CIPRO) there are between 1.2 and 2.4 million companies registered in South Africa. But the number of active entities is between 600 000¹¹ and 675 000¹². According to several academic studies¹³ and research papers¹⁴ SMEs contribute between 57% and 57% to GDP in the economy and provide about 61% of the country's employment. If about 12.8-million people are employed, the SME sector accounts for about 7.8-million jobs.

WWW's *SME Survey 2012* (Survey) is based on 2 000 interviews with a randomly selected sample of decision-makers at SMEs. The sample was generated from available databases of more than 70 000 companies and was representative of all the major small business databases available in South Africa.

The purpose of the research was to understand the impact of various factors on the competitiveness and survival of SMEs, in particular with regard to Internet access and a Web presence. The random nature of the sample ensured that we could compare the financial health of both companies with and without a website.

According to the Survey 2012, 410 000 SMEs in South Africa have websites. This means 63% of active, formal SMEs have websites.

Research shows that SMEs with a website are far more likely to be highly profitable than those without. Of those with a website, 27% are strongly profitable, while only 11% of those without a website claim to be strongly profitable. Only 5% of those with a website run at a loss, while 16% of those without run at a loss.

Approximately 150 000 SMEs would not be able to survive without their Web presence. With SMEs accounting for about 7.8-million jobs, as many as 1.56-million jobs would be in jeopardy if it not for the Internet. The impact of the Internet will increase significantly for two reasons: by increasing awareness of its significance on the part of business and Government, and also by rapid growth in the number of Internet users. This will be stimulated partly by the smartphone explosion currently taking place.

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The mobile networks report 63-million active accounts (a cellular penetration of 126%), which is attributable to the widespread use of dual-SIM cards. WWW research reveals true individual penetration of about 80% with 40-million South Africans using phones. It is these users that represent the future potential of Internet growth in South Africa.

About 10-million cellphones are sold in South Africa each year and by 2013 smartphones will account for half this number. Smartphone users will become Internet users, as started from 2008. New Internet users have also risen at an accelerated rate due to falling wholesale bandwidth costs and the emergence of a new generation of Internet Service Providers (ISPs).

For most companies the Internet functions as an enabling tool for communications, collaboration and transactions. It could well be described as the quiet engine of the South African economy.

WWW research shows that it takes up to 5 years before new Internet users gain the confidence and experience to become active participants in the Internet economy. So the number of experienced users will begin accelerating in 2013, and will continue to do so for the following 5 years.

Thus the Internet economy will grow to 2.5% of the economy by 2016. This compares to finance, real estate and business services that at R 565-billion makes up 21.2% of GDP. The manufacturing industry is 13.4%. The Internet economy in 2011 was almost as large as agriculture (2.2% GDP) and will approach the size of construction (+R120-billion in 2011).

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Social networks are the entry point to the Internet for many, even in the rural areas. WWW research reveals that the use of games on phones is higher among rural than urban users. Rural users are learning about their phones' capabilities in an unthreatening context. Once that confidence is developed they explore other capabilities like browsing and social networking. In 5 years time one in 4 Africans will be using smartphones.

Throughout Africa, mobile money transfer services are enabling ordinary individuals to better manage their financial lives and enter the formal economy.

A key factor in the mobile push onto the Internet is the low penetration of both computers and fixed Internet access in South Africa. Of the 12.8% of people in Africa who have access to Internet, only 3.8% have broadband. There are only about 1-million fixed line broadband subscribers and most of these are in South Africa. Only 7.9% of households in Africa have a computer; half of these are in South Africa. The total number of computers in use in South Africa, largely in business, is about 9.5-million.

This low level of broadband penetration represents a major barrier for access to online services by small businesses. Yet close to two thirds of active SMEs have an established presence on the Internet, which has been critical to their survival and growth.

While it is impressive that nearly two thirds of SMEs have websites, more impressive is that an SME with a website is significantly more likely to be highly profitable than one without. The implication is that over one third of SMEs are in danger of

making themselves irrelevant to their customers. An ever-increasing number of people are searching online for service providers. Those without a web presence are losing out on a major channel of potential communication.

Further results from the Survey show conclusively that having a website correlates with increased profitability. Seventy nine percent (79%) of SMEs with a website report that they are profitable, with 30% reporting that they are strongly profitable. Of those without a website, only 59% report profitability and only 14% of these are strongly profitable.

The most common argument from those without websites is that there are not enough people online to justify a Web presence. However, a critical mass of consumers is already online and growth is accelerating. The market is reaching the point where a company's website is the glue that holds all its marketing efforts and activities.

Forty one percent (41%) of auditors, accountants and insurance brokers can be found online. This is particularly troubling given that the major banks all have a significant online presence and have a vast array of Internet-based tools available for their customers.

Segmental variations

The Survey highlights a significant irony: the financial services sector, one of the most high-end areas of business, has one of the lowest percentages of website use.

Forty one percent (41%) of auditors, accountants and insurance brokers can be found online. This is particularly troubling given that the major banks all have a significant online presence and have a vast array of Internet-based tools available for their customers. Customers using banks' websites will increasingly expect other financial services providers to be online.

The reason for the lack of online presence is that 78% of the financial services sector currently maintain a fairly high level of profitability and so do not see a need to modernise. As the Internet becomes the single most important means of searching for a service provider, these SMEs will be at an ever-increasing disadvantage.

The only sector with a lower percentage (36%) of websites is education. The failure by the sector to develop websites is an extreme perception that not enough people use the Web. Only 19% of respondents in the education sector claimed to be profitable.

Unsurprisingly the sector of SMEs with the highest percentage of website presence is the IT and telecoms sector (89%). They are fully aware of the importance of websites, as this is the space in which they do business.

Tourism is well developed with 77% of SMEs having websites. The industry recognises that its consumer base is likely to search for them online. They also understand how important it is to utilise every available channel to attract customers.

Previous surveys have shown that the larger an organisation, or the longer it has been around, the more likely it is to have a website. So a newly formed SME with an immediate online presence can give potential customers the impression that it has been established for a lot longer or that it is bigger than it is.

When customers come looking online, a company had better be there!

Contribution of websites to survival

Another core issue from the Survey was the impact a website has on a company's ability to remain in business.

Thirty percent (30%) of those companies with a website stated that their businesses would not have been possible without the website. If SMEs account for about 7.8-million jobs and 20% of those said that they would not have survived had they not had websites, WWW extrapolated that as many as 1.56-million jobs would have been in jeopardy.

Other contributions of websites

Thirty nine percent (39%) of active SMEs regard their websites as a key tool for contacting customers, while 41% regard it as key for customers to contact them.

The process of using a website to showcase the latest products available from the company was acknowledged by 39% of respondents as an important benefit.

Forty percent (40%) of SMEs have found their websites to be key contributors to their profitability.

The contribution to business growth was a benefit reported by 42%, the same as for growing revenue.

Forty percent (40%) regard a website as an important contributor to their competitiveness. Only 14% saw a website as being unimportant in competing against similar businesses.

The conclusions of the Survey together with an examination of the contribution of the Internet to the South African economy, lead us to conclude that a Web presence is a priority for the SME sector.

The policy imperatives that flow from these findings, however, go further. Given that the Internet is making a growing contribution to the economy, and that it is a critical element in the sustainability of SMEs and therefore of employment, the Government must introduce policies that promote both growth of the Internet and use of SME access to the tools of the Internet.

Growth of the Internet Economy

WWW has developed a model for forecasting Internet uptake – the “Digital Participation Curve”. It carries five year forecasts for engagement in commercial aspects of the Internet, and will be used as a formula for estimating growth of the Internet economy five years ahead.

The concept was developed after South Africa suffered the burst of its own Internet bubble. Despite tens of millions of rands by established businesses in an online presence, Internet users almost entirely ignored these offerings, which were mainly from financial and retail institutions.

Unlike the USA, South Africa never had the venture capital industry that made the bubble possible. It also did not have the flood of bizarre business models from start-ups that attracted huge attention but minimal revenue.

What South Africa had was a rapidly growing Internet user base but a complete lack of understanding of that user base. In almost every major case of online investment at the turn of the century, investors ignored a prime rule of traditional go-to-market strategies - they failed to segment the market.

The key moment in online business in South Africa was not in 2006 when online retail began to take off but in 2001 when early investments in e-commerce collapsed.

The key moment in online business in South Africa was not in 2006 when online retail began to take off but in 2001 when early investments in e-commerce collapsed. What could be learned about the makeup of the online market, which still guides online strategy a decade later? From 1999 to 2001 the number of South Africans with Internet access increased from 1.8-million to 2.8-million. Consequently, massive investment was thrown at e-commerce ventures by major institutions such as Standard Bank, Old Mutual, Liberty Life, Woolworths, Saambou and Primedia.

Online innovation brands like 20Twenty, FundsNet, MyLife, inthebag and Metropolis were expensive disasters even though they attracted fanatically loyal customers. They failed because they failed to segment the market.

WWW research suggests that although there were 2.8-million people online, only 370 000 individuals had registered with online shopping services. Those who were ready to shop online and engage with more high-end services were those people who had been online since 1996, when only 354 000 South Africans had access to the Internet.

This experienced market suggested that five years on the Internet was the key level of experience for users to participate in e-commerce in general and to engage in transactional behaviour in particular. We termed this the “Experience Curve”. This meant that the 2.8-million who had been targeted in 2001 were ready to be targeted by 2006!

While strict trend lines suggested that online retail growth would drop to 15% in 2006, our Experience Curve suggested a turnaround. This is what occurred – 30% growth was recorded in 2006. It was the amount of time spent on the Internet not penetration that dictates online retail growth.

The model was proven again in 2007. Growth in Internet users remained relatively flat at 6%, online retail grew at 35%.

The Experience Curve has shown that it is not only about the experience of the digital environment but also about participation in that environment – moving from the passive concept to the active expression of that experience.

The Digital Participation Curve (the Curve)

The *Internet Hierarchy of Needs* is almost identical to Maslow’s. It starts with physical needs such as getting connected and the quality of that connection, works its way up through social needs like communication and networking, and peaks with self-actualisation through user generated content, interaction with websites and leisure shopping. It takes at least 5 years for the average individual’s Internet usage to develop from a physical Internet connection to online self-actualisation.

By the end of 2008, 3.2-million South Africans had been online for 5 years. That number grew to 3.75-million in 2011. The online market is real and it appears to have happened virtually overnight.

The Experience Curve has shown that it is not only about the experience of the digital environment but also about participation in that environment – moving from the passive concept to the active expression of that experience. This model then became the Digital Participation Curve.

Many were puzzled by what they saw as the sudden take-off of e-commerce, online banking, online advertising, website traffic and social networking between 2006 and 2009. The assumption was that we should have been entering an Internet slump in line with the Global Financial Crisis.

The long-term implications are tremendous. Since 2008 we have for the first time since the 1990s, seen a sustained increase in the rate of growth of the number of Internet users. This comes off the back of 5 factors:

- The explosion in the use of smartphones and the ability to access Internet on these phones;
- The growth in ADSL connections in SMEs. Previously an office relied on a dial-up connection, typically only one person in that office was able to use the Internet. ADSL is not only cheaper than dial-up for an office, but it also allows for everyone at that office to be connected at the same cost and at far higher quality;
- The explosion of new services and service providers, increasing competition, a reduction in prices, and building greater awareness than ever before;
- The wild popularity of social networking which is penetrating the mass market at a rapid rate;
- The explosion of local content on the Internet.

These phenomena are transforming access. But based on the 5-year lag, if the growth in the number of users began accelerating in 2008, then by 2013 the Curve must reach an inflection point – a point on the curve at which significant change occurs in the shape of the curve or a coming together of events that change our way of thinking.

All those who came on board in 2008 will become fully engaged from 2013. This will mark the beginning of the most sustained acceleration in the Curve. This means that businesses that missed out on the 2006 – 2009 Internet boom, can participate in the boom which begins next year.

Digital Participation as a marketing framework

The Curve is not just about e-commerce and selling online. It also relates to the extent to which individuals are willing to engage online with companies and organisations with which they have a relationship.

The Curve shows what proportion of the market is ready to participate in the digital economy. While not all experienced users will actually participate, they will have the propensity to do so. Actual participation will depend on peer groups and how successfully they are targeted by businesses or organisations. Social networking and social media are highly important vehicles for moving people from the propensity to participate to actual participation. However, there is no one size-fits-all strategy. Once the Curve has

been acknowledged, the market of “ready” customers must now be segmented. Segmentation will differ from product category, from every specific product and for every industry sector.

Airline tickets need minimal segmentation but specific airlines with specific value propositions need further segmentation. Electronics goods need little further segmentation for selling online, but specific product categories and products need careful and detailed segmentation. Digital content, like paid downloadable music and access to articles, needs even more detailed segmentation to explain why there is almost no propensity to purchase yet.

The Curve is not just about e-commerce and selling online. It also relates to the extent to which individuals are willing to engage online with companies and organisations with which they have a relationship. So once an entire client base begins to be represented on the Curve, the company can expect the entire client base to interact with it online. If companies are not ready to meet this need by 2013, customers may defect to providers who meet their online needs and expectations. At the very least these companies will find their brand value and image undermined by their inability to serve their customer base in the environments it expects to be served.

WWW assumes that intensified digital participation will result in an equivalent increase in data demand, and therefore in infrastructure investment to meet this demand. If we see a 15% – 30% rise in the number experienced Internet users each year over the next 5 years, we can expect an ongoing increase in the size of the Internet economy to at least double that of the general economy at around 7 – 8% a year. This will translate into the Internet economy making up a steadily increasing proportion of GDP. This means that the 2.5% forecast is not only possible but also highly likely.

Internet Contribution to GDP Growth

The Internet economy not only has an impact on the GDP itself, but also on the growth rate of the GDP. If the Internet economy adds an additional 0.1% to GDP each year, its contribution to the growth in GDP each year will be above 5%.

An average growth of about 8%, suggested by the Curve, indicates that the Internet economy can be expected to reach R79-billion by 2015, a contribution of close to 2.4% to the GDP and of 5.71% to the growth rate of the GDP.

A boost for the Internet economy would translate into a boost for the overall economy. Government must invest more into the Internet economy so that the benefits spill over directly into the overall economy.

South Africa should not be seen to be falling behind, or to not actually fall behind, in the roll-out of technologies that make the Internet more efficient and effective.

Conclusion and Recommendations

Government and policy makers

Governments have a central role to play in ensuring universal access to Internet services, an enabling environment for infrastructure development and competition, and a policy framework that allows for the lowering of costs, the promotion of digital literacy and innovation.

Government and regulators must apply the greatest urgency to removing obstacles in the way of Internet access. The following steps must be taken:

- Allocate spectrum for high-speed wireless access, in particular 4G or Long Term Evolution (LTE), according to the ability to make such access available to the highest proportion of the population in the shortest possible time;
- Ensure that licensing of new broadband technologies, e.g. LTE, be treated with urgency. South Africa should not be seen to be falling behind, or to not actually fall behind, in the roll-out of technologies that make the Internet more efficient and effective;
- Harmonise contradictory, conflicting or constraining national, provincial and municipal laws regulating communications infrastructure roll-out;
- Immediately withdraw spectrum allocation from the entities that have “owned” it for many years without using it, and reallocating such spectrum;
- Refine the broadband policy framework developed by the Department of Communications to ensure that the definition of universal access takes into account the need for Internet access in every home, rather than at a community level;
- Ensure that the roll-out of high-speed technologies such as Fibre-to-the-Home and LTE is not constrained by regulatory delays and unrelated priorities or agendas that result in inaction;
- Assist in the lowering of the costs of access devices and equipment by lowering or removing duties and taxes on these products;
- Remove all the bottlenecks in the way of digital terrestrial television migration, and provide a clear framework for utilising the “digital dividend” of broadcast spectrum that will be freed up as a consequence of this migration;
- Provide more incentives for investing in Research and Development;
- Provide greater funding for centres of technological excellence and entrepreneurship;
- Reduce the red tape and paperwork required to leverage these opportunities;
- Provide easier and more transparent access to Government tenders, both in terms of initial tender opportunity and the eventual tender award;

- Make as many Government services as possible online.

Communications Industry

The cost of access to the Internet is a major obstacle in the way of ordinary individuals participating in the Internet economy. Major operators and suppliers should:

- Simplify their communications offerings, enabling consumers and businesses not only to compare these offerings, but also integrate these services more effectively into their own budget frameworks;
- Lower the cost of core services, such as line rentals or connection costs, to ensure that these do not become a barrier to entry and ongoing usage;
- Lower the cost of access equipment that is unobtainable on the open market, such as data modems, and for which profit margins are often artificially high due to unavailability on the open market;
- Focus on reducing usage constraints such as data caps and cost of ad hoc data usage which, for example, represent the major obstacle to smartphone users taking advantage of Internet access on their handsets;
- Reach out to undeserved areas regardless of leniencies provided by licencing requirements;
- Support digital literacy efforts of Government;
- Support SMEs in their efforts to leverage the Internet economy with programmes similar to Woza Online;
- Enhance Internet security and the sense of being

protected by acting aggressively with regard to digital crime and fraud, and introduce additional programmes to prevent recurrences of harm to the public;

- Educate the public on Internet specific security in order to enhance consumer confidence.

SMEs and entrepreneurs

SMEs and entrepreneurs can leverage the opportunity represented by the Internet in a number of ways:

- Create an online presence with a website;
- Adopt and invest in new technology, such as cashless payment options, custom relations management and supply chain management tools;
- Become educated in the opportunities available on the Internet, such as access to Government tenders available from some departments.

If leveraging public and business services is constrained by cost and lack of access, business and entrepreneurs must demand accountability from their elected representatives at all three levels of government.

Individuals

Individuals can help to build the Internet economy through attitude - good digital citizenship, respect for copyright laws, supporting local artists and content, and buying goods and services online when it is more cost-effective and convenient.

Individuals have a responsibility to become better educated about what the Internet can do for them and how they can best leverage it.

NOTES

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