

The Needs of Internet Literacy in An Ongoing Process of Economic Stability

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Abstract: *Internet is relatively new communication media that grows more in many decades. In many countries, especially in growing country in South Asia region, internet use is rarely low or almost non-existent. It is because internet is an integral part of telecommunications infrastructure of a society. But internet user in Indonesia is still running in its infancy. The number of Internet user is projected to grow at an even faster rate in the future. It is integrated with the macroeconomic indicator goals by 2050; Indonesia is projected to become the 6th largest economy in the world after China, US, India, Brazil, and Japan. For sure it is in line with the growing of internet user among Indonesian people because there will be communication shifting among them. The communication among Indonesian people is no longer directly but change into internet literacy. It seems that internet growing user is related to macro economy indicators through Indonesian people in latest decades, since the first time Indonesian people had been identified internet web communication.*

Keywords: *internet user, macroeconomic, internet literacy, communication*

Abstrak: *Internet adalah media komunikasi yang relatif baru namun terus mengalami perkembangan terus menerus. Di beberapa negara, terutama wilayah Asia Selatan, penggunaan internet masih sangat rendah, bahkan hampir tidak ada. Ini karena internet dianggap integral sebagai sarana komunikasi sosial saja. Namun di Indonesia, pengguna internet terus berkembang dengan pesat. Jumlah pengguna internet diprediksi akan semakin berkembang ke masa yang akan datang. Ini sejalan dengan perkembangan indikator ekonomi makro 2050 di mana Indonesia diprediksi akan menjadi negara dengan kekuatan ekonomi terbesar ke-6 di dunia setelah Cina, Amerika Serikat, India, Brazil, dan Jepang. Tentu hal ini akan sejalan dengan perkembangan pengguna internet di Indonesia karena akan ada pergeseran pola komunikasi di antara mereka. Komunikasi di antara orang Indonesia tidak lagi dilakukan secara langsung namun berubah melalui kecerdasan mereka melihat internet. Hal ini tampaknya ada hubungannya dengan indikator makro ekonomi selama satu dekade ini, di mana orang Indonesia sudah mulai mengenal internet.*

Kata Kunci: *pengguna internet, makro ekonomi, cerdas berinternet, komunikasi*

In Indonesia, internet is relatively new communication media that grows more in many decades. The number of Internet users in Indonesia also grows at a lightning speed. From 2000 to 2009, Internet users have grown from 2 million to 30 million

users, a 1,400% increase in the last 9 years. Based on Communication Ministry data, at the end of June 2011, there are 45 million internet users in Indonesia. Based on TNS research, Indonesia is the world's second largest number of Facebook users and the

third largest number of Twitter users. 87 % of Indonesians who go online have social networking site accounts.

Internet user in Indonesia is still running in its infancy. The number of Internet user is projected to grow at an even faster rate in the future. It is integrated with the macroeconomic indicator goals by 2050; Indonesia is projected to become the 6th largest economy in the world after China, US, India, Brazil, and Japan. For sure it is in line with the growing of internet user among Indonesian people. That is why the communication among Indonesian people is no longer directly but change into internet literacy. Online shopping and product offering by internet web blog are some of communication based internet that can be used. As well as Information process among people, also shifting to internet based communication. People prefer to reach information and news media by internet connection. Internet players are changing their business models out of the traditional ones. Their businesses are converging. Either bricks & mortar business are turning into the click business (kompas.com)¹, or from click business to click and mortar business (detik.com)².

The idea of our paper is to relate among media, information, and communication literacy in Indonesia. This is also strong related with economic stability in

Indonesia. This condition is quite different with 30-40 past years, which people doing their communication and sharing information directly without literacy based internet. In many perspectives, Indonesia will be the most potential information technology market in the world. The population, communication shifting, and economic growing are the main reason why Indonesian people need such as growing media, information, and communication literacy in the future.

Present study examined the role that various socioeconomic attributes of nations that may effect to internet usage, which one of the measurement was of economic growth to develop the necessary infrastructure for an internet system. Result of the present study generally confirmed the following hypothesis that nations that retard economic activity have less internet usage, holding all other variables constant. Regarding other important determinants of internet usage, result suggest that those nations with greater per capita gross national product also have higher level of internet usage (Gius & Ceccucci, 2010).

Dasgupta, Lali, and Wheeler (2001) were the first group researchers that examined internet usage in 44 nations for period 1990 to 1997. The study encompassed in very early years of internet identification, so the result indicated that per capita income people in 44 nations had negative effect on their measure of internet usage. But the next research had been published by Kiiski and Pohjola (2002) who used a data set for the period

1 www.kompas.com was an Indonesian news media online which has been reportedly many research-based teknologi and information improvement news regularly

2 www.detik.com was also Indonesia news media online

1995-2000 for over 60 nations. Based on their dependent variable from the number of internet hosts per 1.000 residents, they identified that internet growth is positively related to per capita income, telephone access cost, and years of schooling. But the most recent study and the main point to this paper was found by Chinn and Failie (2007) that looking at 161 nations in the world over the period 1999-2001, per capita income and access to electricity is very important determinants of internet usage. The greater the per capita income of a nation, the more likely the people of that nation will be internet users (Chinn & Failie, 2007).

The emergence of internet technology have created many activities among people. Including communication based internet activities among them that has been known as internet communication technology (ICT). Internet communication technology become the main reason Indonesian people also likely to be internet users. Romiszowki (1997) coined the term 'computer-mediated-communication' which is defined as any form of organized interaction between people, utilizing computers or the computer network as mediums of communication. Electronic communication is defined as any non face-to-face communication, including but not limited to telephone conversations, email, instant text messages through mobile telephones and web-based applications, video-conferencing and internet.

Recent research in fact, were Altig & Rupert (1999) said a positive relationship between growth and internet use in

significant in both statistical and economic terms. They were interpret internet use as a general proxy for constellation of factors that influence the rate at which economic adopt and absorb emerging technologies.

Communication by Internet

For the first step of the paper, let's talk about the theory of communication. Many communications experts provide theories about communication theory. But recent theory by West and Turner (2007:5) come up with the definition of communication is a social process in which individuals employ symbols to establish and interpret meaning in their environment. It's mean that the communication process is involves people and interactions. Neither it's dynamic, complex, and continually changing. But many expertise would be strongly agree that the nature process of communication also means that much can happen from the beginning of the conversation to the end.

Communication theory came up since many years later, from the Plato's Dialectic Method, shifting to communication theories on the new age which there was technology interaction and web communication among people (Littlejohn & Foss, 2008). Mark Poster (1990) said that interaction technology and web communication has change communication phenomenon among people (Littlejohn & Foss, 2008:413). Communication is no longer for interaction only. Communication shifting is going to be information sharing among people, knowledge exploration, and self individual information. Pierre Levy (1997)

said that world wide web (www) was the most provided information environment, dynamic, and flexible communication, that he gives its title as digital networks and hypertextual communication.

Chresebro (1999) said that internet is the single most persuasive, involving, and global communication system ever created by human beings with a host of untapped and unknown political, economic, sociocultural implications. But there are three of these implications aptly illustrate the unique nature of communication within a virtual reality system. First, the virtual realities created by internet, concepts such as source and receiver lost their power. Everyday face to face interpersonal communication exchanges provide a complete and immediate sociological presentation of the self. The nonverbal channels are frequently missing. Internet communication also possible to imply or actually lie about one's sociological internet users characteristics.

In computer chat rooms, people are seldom aware of the social and demographic characteristics of the people they are chatting with. While technology possible, actually few computer exchange provide a visual channel for viewing nonverbal features of other communicators. The communication channels are predominantly verbal only modes (Chresebro (1999: 10).

Seconds, the concepts of context and culture are dramatically altered during communication exchange on internet communication system. During internet communication, the environment of other is unknown, because computer transmissions

can be received from anywhere in the world, a shared sense of time and physical location, time, and physical space is reduced in even more significant ways. Third, the nation of feedback is altered in virtual reality system, functioning predominantly in an asynchronistic fashion. Compared of the other kinds of communication exchange, these exchanges are relatively simple, direct, and devoid of contextually confusing "noise".

But the main question why internet is so popular among people, because one of the most important benefits offered from the wide applications of the internet is communication. The internet managed to eliminate distances and provide people with a unique opportunity to talk, watch and have fun with their loved ones, friends or acquaintances. Chat rooms, messenger services, emails and conferencing programs are the most common uses for communicating over the internet.

Internet Information Literacy

According to Webster, literacy is the ability to read and write. Individual who can read and write printed words, are deemed literate. Internet literacy has been started by California Department of Education on 1996 who had found that computers have improved academic achievement in reading. Some of studied of literacy has been related to technology advance such as inventions of writing, the printing press, the typewriter, and the computer have made it impossible for people to accomplish these goals efficiently and effectively (Barr, 1997).

Previously, the Association of Colleges and Research Libraries (2000) defines information technology literacy skills as those associated with an individual's use of computers, softwares applications, database, and other technologies to achieve an academic, work-related, or personal goal. To distinguish information literacy from one of its component skills, technology literacy (i.e., competence in using information technology), the Association has re-defined information literacy as "a set of abilities requiring individuals to recognize when information is needed and have the ability to locate, evaluate, manage, and use effectively the needed information" (Farmer & Henri, 2008:4).

Recent definition of information technology literacy is an integration of what are commonly known as two separate literacies are: technology literacy and information literacy. Technology literacy is having ability to use technology as a tool to research, organize, and communicate information. Being technology literate alone is not enough to be a competent individual in an information society (Badke, 2008). Information workers should also be information literate-able to identify information needs, locate, and retrieve information, evaluate it and present it to others (Cochran, 2006).

METHODOLOGY

The research used comparative and study of literature method. A comparative investigation tries to understand the growth of internet user among people in South

Asia Country region, also how its numbers. As well as literature study is concerned with literary behavior of internet, related to macroeconomic condition among those countries.

Indonesia in Numbers

In late of 2010, Indonesia identified has become the 4th world most populous country in the world. With more than 245million total population, Indonesia is the 4th world most populous country after China, India, and United States. With 245million total population in Indonesia, 65,4% of the population was productive age group with 15-64years range age (<http://gs.statcounter.com>). The rest of population number was the group with age up to 14years (29.7%) and over 65years old one (4,9%). The population in Indonesia is also growing in many decades. In 1970, Indonesia total population was 122million, 5th rank world most populous. But the position has been shifted by the number of population in 1990 was 181million, become 4th rank world most populous. And now, late of 2010 Indonesia total population was 242 million.

Despite its large *population* and densely populated regions, *Indonesia* has been enjoying a stable, high real GDP growth. For the last couple years, Indonesia has been enjoying a stable, high real GDP growth. During the world crisis in 2009, when most of the countries in the region had a negative or almost zero real GDP growth (Singapore -2.10%, Malaysia - 2.20%, Thailand -2.80%, Philippine 0.90%, South Korea 0.20%, Japan -5.30%, and the

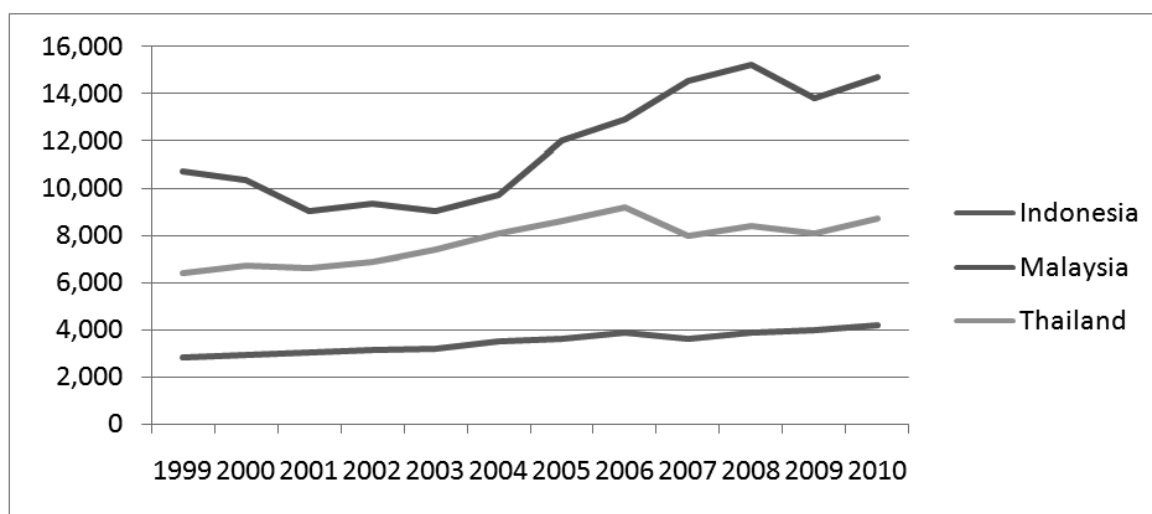
United States -2.40%), Indonesia managed to protect itself from the global economic recession and achieved a positive growth of 4.5%. Indonesia's real GDP is estimated to continue growing by 5.9%, 6.2%, and 6.3% in 2010, 2011, and 2012 respectively (Source: World Bank).

The GDP per capita in Indonesia was last reported at 1144 US dollars in December 2010, according to the World Bank. Previously, the GDP per capita in Indonesia stood at 1089 US dollars in December of 2009. The GDP per capita in Indonesia is obtained by dividing the country's gross domestic product, adjusted by inflation, by the total population. Historically, from 1960 until 2010, Indonesia's average GDP Per Capita was 543.62 dollars reaching an historical high of 1143.83 dollars in December of 2010 and a record low of 194.43 dollars in December of 1967. This

page includes a chart with historical data for Indonesia's GDP Per Capita. **(Definition of GDP - per capita (PPP):** This entry shows GDP on a purchasing power parity basis divided by population as of 1 July for the same year).

IMF economists said Indonesia had emerged strongly from the global financial crisis due to robust domestic consumption and investment, and greater exports. Last year Indonesia was the only country in the Group of 20 leading economies to lower its public debt-to-GDP ratio-a reflection of improved economic management over recent years, as well as appropriate policy responses during the crisis. But during global crisis in 1997, Indonesia had been recovered quickly after being hard by contagion from global financial crisis (Ferhani & Lim: 2010).

Figure 1. GDP per capita



(Source: www.indexmundi.com, 2010)

Many years forward, some of world fund institution predicted that Indonesia has big opportunities. Indonesia may attract much-needed foreign investment by strengthening its business environment, particularly through reform of its unreliable legal system. Indonesia also has a big opportunity to push the economic growing going faster to reduce unemployment, force to work in the informal sector, and established the national physical infrastructure. Besides, Indonesia's strategic location between the Indian and Pacific Oceans and its adjacency to major East-West trade routes make it an important economy in the region, even though Indonesia currently compares unfavorably with its ASEAN peers (Business Monitor International, 2012).

The History of Internet in Indonesia

The internet has become an indispensable tool in everyday life of human beings. Americans people can be one of the examples. Fallows said, Americans internet user go online to conduct some of their ordinary day-to-day activities, from mundane tasks to social arrangements to personal recreation (Fallows, 2004:2). There was 88% of online Americans said the internet plays a role in their daily routines. The internet invasion also happens in the world. In 2011, the number of internet users in the world is 6,93billions. And Asia has 3,88billions internet users, 56% compared to world total numbers. Many people activities depend to internet web connection to running their needs.

The history of internet in Indonesia was begun on early 1990, when some of University of Indonesia Jakarta and Bandung Technology Institute stand their internet based communication from England on June 24, 1998. The first step internet invasion to Indonesia was begun when internet operational connect to amateur radio connection in four universities, are Bandung Technology Institute, University of Indonesia, Gadjah Mada University Yogyakarta, and Surabaya Technology Institute on 1986.

Internet in Indonesia is going faster for the next years after. Especially when internet dial up come up with limited access services for public on 1997. Two years after, Indonesian government was established telecommunication law on 1999 and made the great milestones of internet invasion among Indonesian people. Now, Indonesian people has become an indispensable tool in everyday life also, seems like Americans.

There are four major IT users in Indonesia, are: financial institutions, trade & business institutions, media & newspapers industries, and travel, hotel & tourist industries. The main reasons why they has been using internet as part of their business because the internet connection can be able to attract most of Indonesian web surfers, to be the most internet industry putting their profile in internet, and easier neither cheaper communication activity around the world. Of course there're so many other industries are going to improve their business by using internet for many years forwards, exceed the numbers of

household internet user that can't be mention one by one, neither government institutions (Purbo, 2011).

FINDING

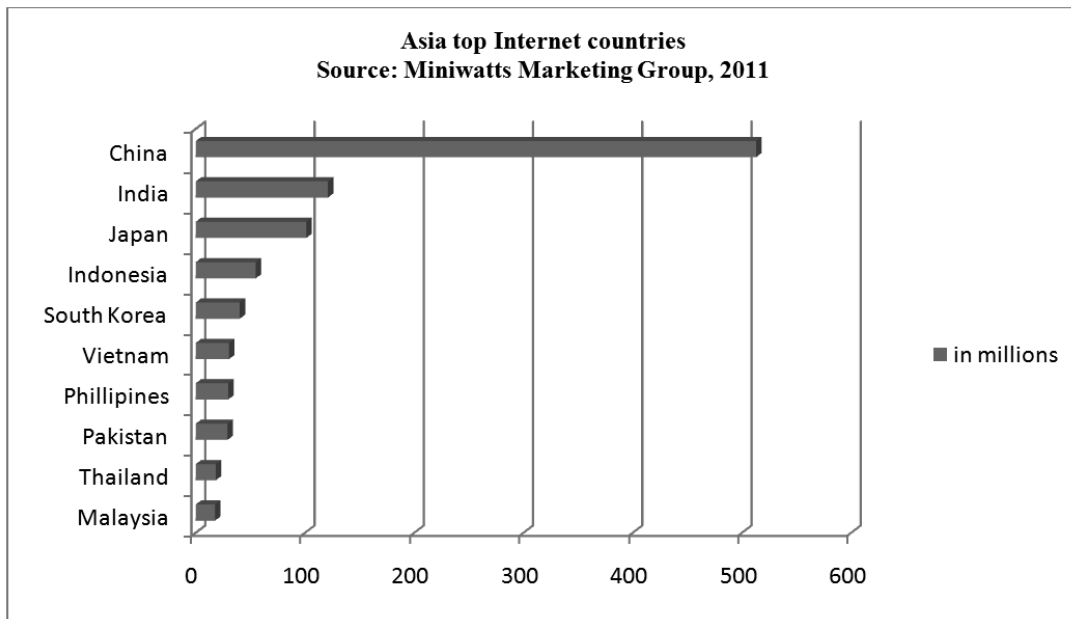
Indonesian Internet User

When Indonesian people identified internet program since mid of 1990's, Indonesia internet user has been growing massively. Based on World Bank data (2012), the number of internet user in Indonesia is growing very infancy in early 2000's. From 98.500 internet user-0,05% to total population- in 1995, it was growing faster to 1,98 million -0,93% to total population-

in 2000. In 2005, Indonesian internet user is going strong to 8,2 million-3,6% of total population-and become 22 million-9,1% to total population-in 2010 and 39,6 million total internet users on December 2010.

Miniwatts Marketing Groups shows on December 2011, Indonesia was the fourth country who occupy internet user in Asia, after China, India, and Japan. Total internet users in the world estimated on 2011Q4 was 2,267billions. China has 513 millions of internet users. India has 121millions internet users, Japan has 101,2millions internet users, Indonesia has 55millions user.

Figure 2. Asia top internet countries



Telecommunication device is also growing very well. The number of social media user has also boosted by internet user in Indonesia. There was more than 38million facebook user -2nd numbers after United States- and 6,2million Twitter

user-6th of the world with 2,41% user and 3rd in Asia after Japan and India. Also in Blackberry, Indonesia has 3 million users which 6% from total user in the world. Based on Boston Consulting Group research, Indonesia in 2015 will have triple internet

user that fuelled by media companies and phone carrier. SIM card user will be twice to total population. But between 2011 and 2012, number of internet users in Indonesia is going to be expected reach to 175,18 millions, or average 21% growing annually (Business Monitor International, 2012).

Indonesians are very enthusiastic to access social networking. Thus, number above excludes visitation from public computers such as internet cafes or access from mobile phones. In other wise, BMI Reports (2009) shows that there was estimated 210 millions mobile phone subscribers by end 2009, has 5 times internet users. Indonesia is also among the highest in the world in consuming mobile browsing intensity, 661 pages per month/ per person.

Indonesian Access to Internet

Since the internet has been recognized by Indonesian people several years ago, Indonesian government has set up many technologies tools access the Internet service easily.

a. Wired Internet

Broadband wired Internet connection is still pricey for most Indonesians. The cheapest unlimited Internet access service available from PT Telkom with a connection speed only up to 1Mbps. PT First Media offers unlimited Internet access service with connection speed varies from 1.5Mbps to 10 Mbps, however, these services are only available for users in Jakarta area (<http://coolfounders.com>). The price

is about \$72 per month till \$226 per month, rarely expensive price for most Indonesian.

Due to its expensive price, there were a limited number of broadband wired Internet subscribers in Indonesia. As of June 2010, PT Telkom, the largest broadband wired Internet service provider, has only about 2 million subscribers in 378 cities in Indonesia. Meanwhile, PT First Media has a target to reach 260 thousand subscribers by 2010. But the number of wired broadband Internet subscribers is projected to have a significant growth in the near future, especially there will be charge regulation to make its price cheapest.

b. Wireless/Mobile Internet

Mobile user are the biggest number of internet in Indonesia. As of 2009, there were about 159 million mobile cellular subscriptions in Indonesia, 15 million of them are mobile cellular subscriptions with broadband access (Source: ITU). In less than five years, about half of total Indonesia population (120 million) will use Internet from mobile access. Young Indonesians, aged 8 – 24 years old, have the highest level of mobile phone ownership in the region, at 80% penetration (Source: Monetizing Indonesia Internet & Mobile). Indonesia also ranks among the highest in the world for mobile browsing intensity: 633 pages per month/person (Source: Opera).

There are three primary reasons why mobile is really big in Indonesia:

price, infrastructure, and culture. Wireless/mobile Internet service is much cheaper compared to wired broadband. Subscribers can get a Blackberry Internet service for as low as \$7.7 per month. Unlike wired Internet infrastructure, mobile infrastructure is much more developed in Indonesia. The infrastructure covers 90% of Indonesia's population and offers fast connection through 3G networks.

Starting June 2010, a WiMax or 4G connection is also available for subscribers in Jakarta area. Many young Indonesians spend most of their free time hanging out with their friends outside their home. In addition, bad traffic condition is a daily menu for most Indonesian workers, forcing them to spend a significant amount of their

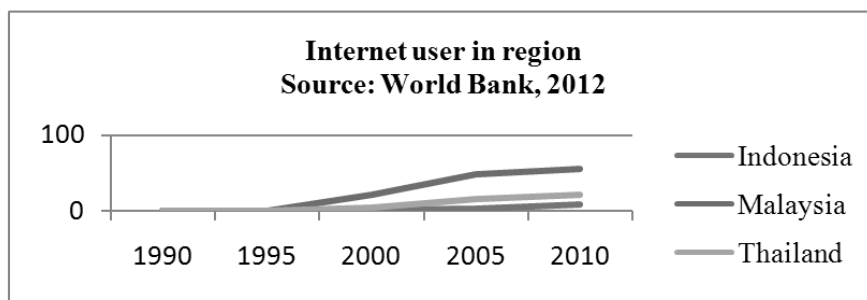
time on the road. Mobile Internet access is becoming a must to have, not a nice to have anymore.

c. "Warung" Internet

The remaining Indonesians access the Internet in Warung Internet or Internet Kiosk. Those who can't afford to pay for monthly subscription fee will go to Warung Internet and pay an hourly fee. According to a study conducted by Yahoo and Taylor Nelson Sofres (TNS) Indonesia, about 53% of Indonesians access the Internet in Warung Internet.

Hereby internet user data as percentage of population, means people with access to the internet per 100 inhabitants, comparison with peer region of South East Asia.

Figure 3. Internet User in Region



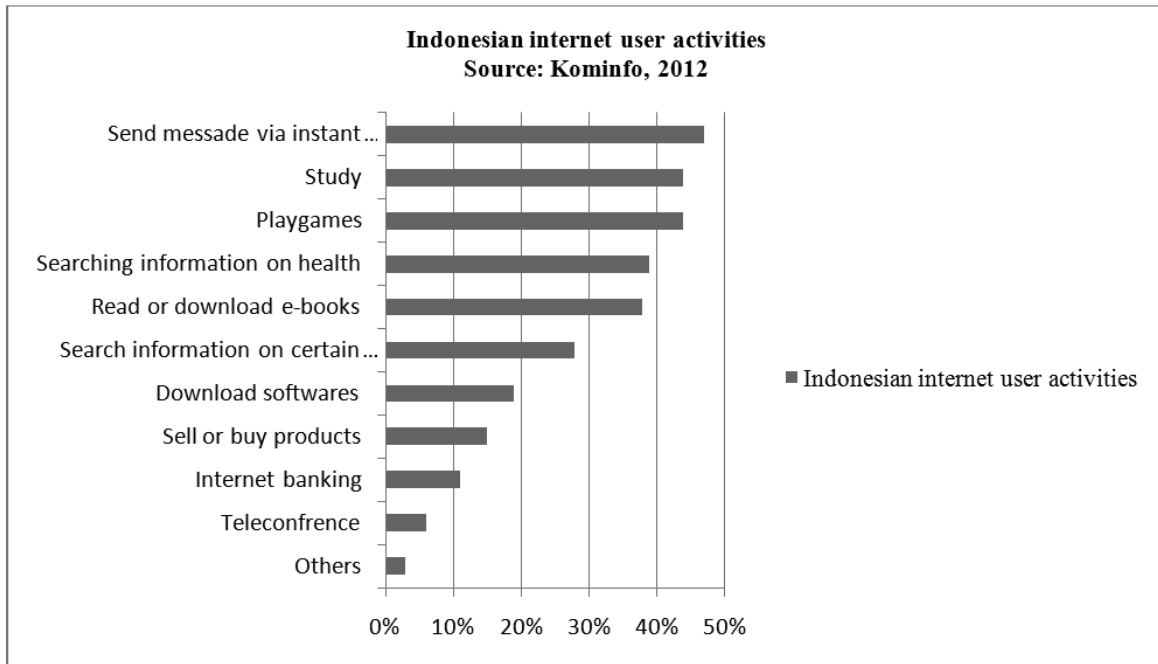
The most favourable question through the great phenomenon of fast growing internet user in Indonesia was, what do Indonesian do online or access their internet connection? This question was in line with the internet technology that more widely available and had multifunction among people activities. The Ministry of Communication and Informatics apparently has the answer. Most Indonesian people do

their access internet for social networking sites (Kominfo, 2011). From the media perspective, the massive use of new media and social media may represent a response to the lack of public space (Habermas, 1989) which should have provided by the conventional media. Maybe it's the main reason why for most of Indonesian people who had internet usage, interest in the internet seems to have been shaped around

the use of social media in that has become a cultural trend (Nugroho, et.al., 2012). The public interest which is not accommodation

in traditional media spills over into social media in blogs, wikis, facebook, etc., among others.

Figure 4. Indonesian internet user activities



However, ICT infrastructures is the basic infrastructure for all online media. There will be no internet usage when there's no ICT infrastructure which encompasses hardware, bandwidth or frequency, and some level of services. The ICT infrastructure is provided jointly by the state and the private sector to ensure wide coverage. Of course it's all need such a big investment by the state to provided the most proper ICT infrastructure to its publics. But, even thought the density of internet user in Indonesia is still lower than the average among other ASEAN countries, with only 6,61 users per 100 citizens, most of whom are broadband internet consumers (BPPT, 2008), in 2010 Indonesia reported had the highest ratio for the ownership of

internet access devices. The number was most increased level of gadget ownership and the sharpest decline in the cost of services (include internet data package) in South-East Asia, even amidst the economic recession (<http://idsirtii.or.id>, on April 25, 2012).

The cable infrastructure has been costly to provide because of Indonesia's archipelago geographic condition. And it has been mostly confining the urban internet user, particularly on Java and Bali islands. Unfortunately, the number of broadband internet connection has double since 2006 but the broadband services remains prohibitively expensive or otherwise unavailable to many Indonesians (Freedom House, 2011). However, the number of

ISP permits granted by the Directorate General of Post and Telecommunications at the Ministry of Communication and Informatics has been increasing since the year 2000 (Kominfo, 2011).

In November 2009, President Susilo Bambang Yudhoyono officially declared the beginning of the construction of optic fiber project for the Palapa Ring Network in the southern part of Eastern Indonesia that will link Kupang and Mataram. Palapa Ring Network is a national optic fiber network (at 320 Gbps) that will reach 33 provincial capitals and 440 cities or regencies throughout Indonesia. As many as 31,824 villages in Indonesia will have access and afford telecommunications system by the end of 2010. And there was two main telecommunication projects extend telecommunications and broadband Internet services to remote areas. He project was provision of national WiMax services in 2010. These two projects boosted the number of Internet users in Indonesia even further.

CONCLUSION AND SUGGESTION

Conclusion

Considering its high economic and Internet user growths, Indonesia has a great potential for Internet business. Moreover, the Internet business there is still in a very early stage with a limited number of local players and products or services offered. There will be potential growing of internet user in Indonesia, which in line with internet usage trends and communication

culture behaviour.

World finance institution has been predicted that Indonesia is going stable with recent economic, especially when Indonesia's strength against global crisis past view years. Indonesia was emerged strongly from the global financial crisis due to robust domestic consumption and investment, and greater exports, instead the number of internet literacy is growing massively. Investment volume to internet technology is going increasing, reflected by number of permits granted in Indonesia better than ever.

Economic forecast of Indonesian global condition is made Indonesia has a great potential for many business sectors, internet technology especially. With the number of total population and potential market internet user, internet technology is going to be the best part of communication media. The communication behaviour among Indonesian people, create potential market of internet usage. Internet connection by mobilephone, household personal computer, even internet business office interconnection, are made the internet is growing massively. Strong economic capability each person, has create the communication based internet so familiar among them. Even they are so consider about pricy tariff of internet, communication based internet trends in Indonesia can not shifting by another one. People –specially urban people- are likely to communicate by internet because it is relatively more cheapest than various communication tools. Internetconnection by social media

is also boosted by communication culture among them, as well as internet literacy that has been grew so well. This kind of communication behaviour was the strongest reason why Indonesian people are more likely usage internet based communication trough their daily life.

Suggestion

The research finding to Indonesian economic growth that was reflected to its high and potential internet user growths however it was not mentioned many circumstances of other conditions. We have argued that Economic forecast of Indonesian global condition is made Indonesia has a great potential for many business sectors, technology especially. But regulators must balance the overall cost and benefits before deciding to increase the internet users in Indonesia. On another note, there is some emerging debate in the internet growth indicators regarding the increasing macroeconomic implication.

This paper can be seen as part of initial steps to better understand yhe economic implication of the internet. As data become available and other theories of internet market can be conducted.

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