

DETERMINANT OF DIGITAL DIVIDE IN INDONESIA: THE CASE OF SOUTH SUMATRA PROVINCE, INDONESIA

Mery Yanti

Department of Sociology, Faculty of Political and Social Sciences, University of Sriwijaya, Indonesia

Alamsyah

Department of Public Administration, Faculty of Political and Social Sciences, University of Sriwijaya, Indonesia

ABSTRACT

Penetration of information and communication technology in Indonesia is producing new development issue. Popularly, it is now recognized as the digital divide. In the case of Indonesia, it is urgent to explain the digital divide phenomenon because for governments it was so expensive to introduce internet in the society. Based on this fashion, this article is attempting to explain the characteristics and digital divide determinants in Lubuk Linggau city, Baturaja city, and Palembang city. We are using quantitative approach and survey design methods to organize research process. Our respondents are individuals who are aged 15 years old or more. They were selected by multistage random and simple random sampling methods. Quantitative data is analyzed by using SPSS Version 17, especially using descriptive statistics (frequency distribution and cross tabulation). The results showed that there are digital divide between cities in South Sumatra Province. Although internet began to trigger productive activity among respondents, but internet penetration in South Sumatra Province had not been yet significant. Respondents do not have economic and social reasons, but they have economic and social benefits when they used ICTs device, especially internet. Finally, we proposed the gap meaning as one of aspect of digital divide concept.

Keywords: digital divide, determinant, South Sumatera, Indonesia

I. INTRODUCTION

Information and communication technology (ICT) is always synonymous with computers, mobile phones, and internet. According to Association of Indonesian Computer Entrepreneurs (APKOMINDO), penetration of computers (desktops, laptops, and notebooks) in Indonesia has reached 4 percent of total populations of Indonesia (<http://www.swa.co.id>). This number is relatively small when compared to the mobile phone users (250 million people) (<http://inet.detik.com>) and internet subscribers (50 million) (<http://mizan.com>).

Kemp (2011) showed that Internet users in Indonesia have the following characteristics: (a) 61 percent of Internet users (netizens) are connected through mobile phones; (b) male netizens are (64%) more than women (36 %); (c) more netizens are using internet for social

networking (71%) rather than sending/receiving email (51 %); (d) Facebook was the most popular social media site in Indonesia. In terms of age, Facebook users composition was predominantly by youth (see, Table 1). Meanwhile, the site of [salingsilang.com](http://fbdir.salingsilang.com) (<http://fbdir.salingsilang.com>) shows Facebook pages that are most in demand by netizens in Indonesia (see, Table 2). Table 2 show the domination of entertainment world (celebrities, television shows, and music) favored by Facebook users in Indonesia.

While they are taking from different sources, there is a common thread that connecting Table 1 and Table 2, that is: youth and entertainment. Both of these words complement each other. Youth are identical with entertainment (leisure). Entertainment is identical with youth. Related to digital divide debates on a global level, internet subscribers data in Indonesia show that not all Indonesian people are included in “the have” (accessing and using internet). It is describing the early symptoms of digital divide phenomenon in Indonesia. It is triggering all of us to explore it further so that we have more understanding towards relationship between ICTs and Indonesian people at regional level.

Table 1 Composition of Facebook users in Indonesia by age

Age group	Total (%)
13-17	28
18-24	41
25-34	21
35-44	6
45-54	2
55-64	0
+65	2

Source: Kemp (2011)

Table 2 The most popular Facebook page among Facebook users in Indonesia

No.	Facebook page	Page category	Total of page fans	Growth of page fans (%)
1	Dahsyat	Media and entertainments (television show)	6.642.277	+0,02
2	Mario Teguh	Celebrities (public figure)	6.528.611	+0,14
3	Opera Van Java (Trans 7)	Media and entertainments (television show)	6.339.105	+0,06
4	SCTV	Media and entertainments (television)	4.999.120	+0,08
5	Vierra	Celebrities (musician group)	4.384.375	+0,04
6	RCTI	Media and entertainments (television)	4.305.484	+0,07
7	Batik Indonesia	Community, organization, and institutions	4.289.919	+0,03
8	Inbox	Media and entertainments (television show)	3.458.539	+0,06
9	Superman is Dead	Celebrities (musician group)	3.458.539	+0,03
10	Last Child	Celebrities (musician group)	3.173.092	+0,11

Source: <http://fdir.salingsilang.com>, accessed in 18 December 2012

In Indonesia, it is urgent to explain the digital divide because it is expensive for national government to introduce internet to the public. Ministry of Information and Communications, Republic of Indonesia, for example, has created MPLIK (*Car for District Internet Service Center*) program. In South Sumatra, South Sumatra province government has launched free Wi-Fi area program at several locations in Palembang (capital city of South Sumatera Province). In Ogan Komering Ulu, precisely in Baturaja (capital city of Ogan Komering Ulu region), local government has also launched free Wi-Fi area program in numerous public spaces. However, these actions do not integrate with promoting economic growth and digital divide alleviating efforts. There is notion that Indonesian government (national and local government) just follows citizens' movement who are more adaptive in adopting ICT developments.

In addition, in Indonesia, a few scientific studies seek to explain the dynamics of relationship between government, regional development, and ICTs. Several studies focused on e-government issue (Wiratno, 2010; Quina, 2009; Bjorn & Wahid, 2008; Wahid, 2008) and does not discuss the emergence of digital divide phenomenon due to ICT penetration. Based on this situation, this article would like to explain what are the characteristics and

determinants of digital divide in South Sumatra Province, particularly in the Lubuk Linggau city, Baturaja city, and Palembang city.

II. RESEARCH METHODS

We are using quantitative-qualitative approach to explain digital divide in South Sumatera Province. Quantitative approach was interpreted into survey method and descriptive statistics. Qualitative approach was translated into logic of positivism and interpretation. Logic of positivism means that we have to build conceptual and operational definitions of variable. Interpretative refers to process where the researchers giving a subjective meaning on data. We, according to interpretative methods, do not only describe research object, but also interpret it.

We focused on the five variables, namely: digital divide, characteristics of ICT user, reason d'etre of ICT usage, the benefits of ICT usage, and constraints of ICT usage. The digital divide was defined as the difference of possessing, accessing, and using of ICT among internet users in real life and virtual life. It was measured based on the following indicators: (a) number and type of ICT device ownership; (b) kind of ICT device and location to accessing internet; (d) type of simcard usage; (e) top ten of the most visited websites; (g) type of social media usage; and (h) type of respondent activity when connected to the internet.

Meanwhile, characteristics of ICT user's variable refer to personal traits of netizens (internet user). It was measured based on the following indicators: (a) age; (b) sex; (c) education; (d) income; (e) occupation; and (f) marital status. While reason of ICT usage variable was defined as social and economic motives of netizens when using ICT devices. We build Likert scale that contains twenty questions. Social motives contain ten questions (six questions are positive and four are negative statements). Economic motives also contain ten questions (seven are positive statement and three are negative statements).

Furthermore, benefits of ICT usage was defined as perception of netizens on the social and economic benefits when using ICT. This variable was measured based on Likert scale that contains thirty questions. Social benefits have ten questions (eight are positive statements and two are negative statements), while the economic benefits have ten questions (eight are positive statements and two are negative statement).

Finally, variable of ICT constraints is respondent perception on obstacles and barriers when accessing and using ICT device. This variable was measured based on the following indicators: (a) the types of signals/network availability in the respondent residence; (b) the affordability of internet services; (c) the availability of ICT equipment owned by the respondent.

Survey research was conducted in Province of South Sumatra, especially in the Palembang city, Baturaja city, and Lubuk Linggau city. In each city, we selected one district as primary sampling unit through simple random sampling method. In each district, we selected fifty respondents randomly through the following procedures: (a) in district sample, we selected one sub-district by simple random sampling; (b) in each sub-district, we selected one neighborhood by simple random sampling; (d) in the neighborhoods level, we identified and selected a number of households by simple random sampling; (e) in the household, we identified total member of household and selected one household member randomly to become our respondent.

We have two types of data sources, namely, primary and secondary. Source of primary data are respondents who are members of the household aged fifteen years old or more. Secondary data derived from official data published by government agencies, companies, and civil society who deal with the object of study. Primary data was collected by structured interview. We used a set of questionnaire as guidance of structured interview. While the secondary data obtained through the collection of documents published by government organizations related to information technology policy and digital divide.

Quantitative data were analyzed using SPSS Version 17.00. Some descriptive statistical techniques, such as distributions of frequency and cross-tabulations, were used to analyze quantitative data. In this research, we set the individual as the unit of analysis. The results of data analysis were the basis for the researcher to draw conclusions and build theoretical propositions that constitute a scientific answer to the problem formulation that has been formulated previously.

III. LITERATURE REVIEW

a. Meaning of digital divide

According to Wikipedia website, the internet was first discovered in 1953. In this year, the first email was sent from Professor Leonard Kleinrock's computer at the University of California, Los Angeles, to a computer at Stanford Research Institute (SRI). In the mid-1990s, internet commercialization has produced tremendous impact in people's lives. Commercialization of the internet is the starting point for email (electronic mail), instant messaging, internet-based communications (Voice over Internet Protocol/VoIP), video calls, World Wide Web (WWW), which allows people to build social interaction (social networking, online shopping, online discussion) in cyberspace.

Internet produced digital divide issue in 1995 when the National Telecommunications and Information Agency (NTIA) published their report on the phone and internet access of United States of America (USA) populations. In 1996, the phrase of digital divide had become newspaper headlines in the New York Times article written by Steve Lohr. Two years later, the National Telecommunications and Information Agency (NTIA) still contains the phrase digital divide as they report subtitles. Until now, digital divide is identical with issues of access (Monroe, 2004: 6).

Meaning of digital divide as an issue of access is still felt in contemporary literature. Table 3 presents the definition of the digital divide that interprets this term from the point of view of access. According to Table 3, the digital divide is a concept that describes the sorting of the population into two categories as mutually contradictory. The first group is of those who can enjoy access to communication technology and internet-based information. The second group is of those who have not been able to enjoy access to communication technology and internet-based information. In short term, the digital divide is referred to as "the have" and "the have not".

Table 3 Definition of digital divide

No.	Author	Definition
1.	Dwight (2009)	The term digital divide refers to the gap between people who have access to computers and digital information sources such as the internet, and people who do not have access to a computer and digital information sources.
2.	Thomas (2009)	Digital divide is a concept that representing the gap between people who have access to information and communications technology and those who do not have it.
3.	Schaefer (2008)	The digital divide is the gaps between people who have access to digital technology and those who do not have it.
4.	Harris (2008)	Digital divide is a metaphor that describes people who have access to technology and people who do not have it.
5.	Fink & Kenny (2003)	The gap that separates people to access, operates, and gains the impact of using information and communication technology.

Many scholarly publications had been written by using framework "the haves" and "the have not". These literatures discussing the digital divide phenomenon as a global issue and produce global digital divide terminology. These papers explain the differences of ICT's access between the countries within the region, for example, Latin America (de Munster, 2005), Southeast Asia (Tipton, 2001), Europe (Hubregtse, 2005; Lengsfeld, 2011), Asia Pacific (Samarajiva & Gamage, 2007), Sub Saharan Africa (Mutula, 2008). Other papers explain digital divide between countries in the different regions, for example, Latin America and Europe (Bagchi, 2005), the United States and Europe (Cullen, 2001), or all countries in the world as sample study (Chinn & Fairlie, 2004).

There are also scholars who describe digital divide focused on one country, for example, China (Harwit, 2004), India (James, 2004; Mistry, 2005), Egypt (Warschauer, 2003), Thailand (Srinuan & Bohlin, 2011), Nigeria (Ani, Uchendu, and Atseye, 2007), Malaysia (Zawawi, 2011), Philippines (Alampai, 2006). Unit of analysis could be using a few schools in one city in one country, for example, Valades & Duran (2007) who describe the digital divide in the education at California, USA, or some households in the village, for example, Huh (2001) when discussing digital divide in Hwengdun village, Kangwon -do Province, North Korea.

Even though they are using dichotomous framework (have and have not), the way of thinking of Fink & Kenny (2003) is slightly different from many scholars on the above. According to Fink & Kenny (2003), the digital divide is not just a difference in ICTs access, but also the differences on ability, real usage, and its impact on individuals and social groups in their social life. It is similar to Valades and Richard (2007) work, who using physical access, actual use, the availability of support for ICTs usage, and social consequences of ICTs usage as variable of their research.

Zhao and Elesh (2007) (2007) using more different framework. According to them, the digital divide does not have two categories, but four categories (see, Table 4). Because, according to them, there is two type of the digital divide (see, Table 4). Associated with this typology, they argue that (a) equal and fair internet access is not necessarily produce equality of access to social resources in the internet, (b) access to valuable social networks in cyberspace is not equal/unequal among individuals. This inequality is a reflection of social injustice in real life (offline world).

Table 4 Typology of digital divide

They have access to valuable online technology	They do not have access to valuable online technology
They have access to valuable online social networking	They do not have access to valuable online social networking

Note: Visualized by authors

Meanwhile, Stevenson (2009) suggested that USA government has intentionally produced the term of digital divide to legitimize their deregulation policy that is rooted in neo-liberalism ideology. For seventh years, beginning in 1990, the USA government was build an opinion that the responsibility of the failure/success of social and economic development in the era of information-based global economic was based on the individual level, not at the system level. It is in line with USA government actions that tend to move more close to Adam Smith (neo-

liberalism) and left John Maynard Keynes (welfare state). Thus, Stevenson (2009) said, the digital divide is not merely technical and administrative issues, but also class struggle issues.

While Warschauer (2003), starts from Egypt case, trying to expose weaknesses of "haves" and "have not" framework embraced in some literature. According to Warschauer (2003), there is several misunderstanding within this framework, that is: *first*, the term implies dichotomous division between "haves" and "have not", "connected" versus "disconnected". In fact, connectivity is a continuum, not dichotomous. *Second*, digital divide reflects inequality phenomenon. In fact, inequality is not only life in the digital world, but also being within the real social life. It means that social, economic, political, and cultural factors will sharpen the meaning of internet in individual social life significantly. *Third*, the digital divide framework reflects determination of technology in logic of thinking. It implies that the presence and absence of technology will affect the behavior and social life.

Some scholars had attempted to explain digital divide phenomenon without being imprisoned in dichotomous framework (have and have not). It is true that internet based ICTs led to digital divide phenomenon. However, ICTs can build digital equality where every person has access to communication technology and Internet-based information without looking at their social, economic, political, and cultural background. Technology can be bridging "haves" and "have not" group (Laouris and Laouris, 2008; Venkat, 2001; Tipton, 2001; Samarajiva & Gamage, 2007).

Hilbert (2011) also proposed new framework to understanding digital divide. According to him, digital divide is not about the dichotomy of "haves" and "have not" matters. It is about who (e.g., individuals, countries, etc.), which kind of characteristics (e.g., age, income, residence), connect how (limited access or effectively adopt), and to what (e.g., mobile phones, internet, digital TV, etc.). If these variables are answered and explained by a matrix, then there are many options to define the digital divide.

Digital divide also can be explained through information society theory. As revealed by Webster (2003: 7-30), information society can be explained in five aspects: technology, economy, occupational, spatial, and cultural. From the aspect of technology, information society was formed by technology innovations that triggered technology diffusion between computer, information, and communications technology. Process of technology diffusion will

affect other aspects of the communities, namely economy, employment, space, and culture. At this point, the digital divide is a phenomenon that describes imperfect innovation diffusion stage. Referring to the diffusion of innovation theory proposed by Rogers (1983), the digital divide could be explained through the stage, attributes, and actors involved in diffusion of innovation process.

We can use the world system theory (Hopkins & Wallerstein, et.al., 1982) for explaining digital divide. Borrowing its logic, digital divide is manifestation of international division of labor. The “have” group is the “core” and the “have not” is the “peripheries”. Without peripheries, there is no core; there is no system of global capitalism. With the same logic, without the “have”, there is no “have not”. Without the “have”, there is no global capitalism in the sector of digital information and communications technology.

The above storyline shows how digital divide can be understood using different perspective. Each of the viewpoints has implications to explain digital divide. The next section will illustrate previous researches experience to understanding digital divide.

b. Previous researches on digital divide

Table 5 reveals that research on digital divide has always started with mapping or grouping the people who use and have ICTs access (have) and people who do not have and do not use ICTs access (have not). Generally, access was understood as having opportunity to using and accessing information and communication technology services. After that, further explanation was expanding to explaining the factors that contribute to digital divide. The researchers can use quantitative, qualitative, or qualitative-quantitative approach to studying it. Individuals, groups, or organizations might be used as unit of analysis.

Table 5 showing previous researches to explain the digital divide. It is modifying ITU (2003) framework. According to ITU (2003), digital divide was influenced by infrastructure (telephone cable and cell phones), quality of service (bandwidth and broadband), knowledge (education and literacy), and affordability (price). In fact, empirical researches, as shown in Table 5, have visualized that there are many factors affecting digital divide. From economic aspect, there is variable of income level. From political aspect, there are quality of regulation, governance, and nationalism variable. From socio-cultural aspects, there are many factors such as level of education, health, cultural value, knowledge and skills, a sense of trust

between individuals, and urbanization. Demography (young versus old; males versus females) and geographic (urban versus rural) also contribute to digital divide. From the aspect of service, there are content and network quality variable. From the infrastructure, there are variables such as availability of telecommunications infrastructure, telephone density, and electric consumption.

Indeed, their contribution to digital divide is varying from country to country, from organization to organization and from community to the others. Therefore, digital divide is not in a vacuum space. It is born, grown, and thrives in social, economic, politics, and cultural settings. How do we explain the influence of socio-cultural setting to digital divide? Answering this question is intellectual exercise for everyone who are concerned with digital divide issue in the future.

Table 5 Previous researches on digital divide

Authors	Problem questions	Research finding	Solution	Research methods	Research area
Cullen (2001)	What factors are affecting global digital divide? What kind of solutions can be taken to reduce global digital divide?	(a) because the level of education, health, income, values are different from Western culture, a lot of the indigenous population, migration, and ethnic minorities have limited access to ICT; (b) digital divide is largely determined by the availability of telecommunication infrastructure, knowledge and skills on using ICT, cultural views and attitudes towards ICT, and useful content for internet users.	(a) change the paradigm from individual connectivity to community connectivity through build internet center at the local level; (b) development local content in local languages; (c) increasing knowledge and skills of population to using ICT; (d) increasing investment in telecommunications sector;	Qualitative-quantitative approach	USA, UK, Canada, New Zealand
Huh (2001)	How do the characteristics of households that have and	(a) age factor greatly influencing computer usage; (b) there is gender	(a) needed special treatment to improve skills of female population;	Survey methods, qualitative-quantitative	Hwangdun village, Kangwon-do

	<p>using the computer? How do people using their computers? What are issues and difficulties faced by people when using their computer? What is happening in the village when Hwangdun E-village program ended?</p>	<p>gap in computers usage in Hwangdun village. Women access to ICT is lower than men; (c) prices determine household connectivity to internet services; (d) villager can utilize the internet to marketing their products, sending emails, searching for information on the web, using VoIP, using a word processing, and playing online games; (e) introducing ICT creates new social segregation: those who use and those who do not use;</p>	<p>(b) needed special prices for rural population to accessing internet services;</p>	<p>approach</p>	<p>province, North Korea</p>
<p>Tipton (2002)</p>	<p>How does the performance of new governments' agency response to ICT issues?</p>	<p>Governance attributes is the main cause of the low government institutions effectiveness to respond emerging challenges in ICT development. Among these issues are overlapping and competition authority among government agencies, agency mission formulation, policy implementation, policy coherence is low, authorities are not autonomous, ICT policy depends on the ruling party, nationalism issue, services concentrated in urban areas, human resource management and ICT-based accountability translated differently.</p>	<p>There is no policy solution offered by writer.</p>	<p>Phenomenology and survey method.</p>	<p>Thailand, Malaysia, Vietnam, Filipina, China, and Singapore</p>

Chinn dan Fairlie (2004)	What are factors affecting the use of computer and internet penetration in the country?	<p>(a) economic variables (income per capita, years of schooling, literacy rates), demographic variables (old-young ratio, urbanization rate), infrastructure (telephone density, electricity consumption, and quality regulation) has been proved statistically affecting the level of computer use, except for the level of trade openness and telecom prices;</p> <p>(b) internet usage is almost the same, except the telephone density and old-young ratio);</p> <p>(c) global digital divide is largely determined by differences in income levels. For computer usage, telephone density and regulatory quality are in the second and the third place. For internet usage, the quality of regulation is in the second place and the level of telephone density is in the third place.</p>	Public investment in human resources, telecommunications infrastructure, and communications regulations infrastructure are mitigation strategy for digital divide.	Quantitative methods	161 countries
Harwit (2004)	How to explain digital divide in China? What are the factors that influence it?	<p>(a) 62 percent of Chinese population accessing Internet via fixed telephone line; (b) low network quality make low quality of data communication; (c) lack of infrastructure in rural areas; (d) lack of access to electricity; (e) income disparity among the</p>	There is no policy recommendation offered by writer	Qualitative methods	China

		population; (f) low literacy levels; (g) technology changes, bureaucratic interests, equitable access will continue to be a key issue in China's ICT development			
James (2004)	How to explain digital divide in India?	In rural India, poor and less educated villager gets benefit from internet. It is happening because the implementation of government programs through intermediary agent that connecting poor villager to internet run effectively. The main function of intermediary agent is converting the information from the Internet into a value suitable for poor villager who less educated, stuttering technology, and geographically isolated.	Research on the digital divide should not only focus to issues of access, but mapping out who is really gets benefits from internet.	Quantitative methods	India
Bagchi (2005)	What factors are contributing to digital divide in some countries?	(a) level of income per capita, income inequality, secondary education, trust between individuals, level of urbanization, and electrification has been significant correlation to digital divide; (b) trust between individuals, income per capita, secondary education, and the level of electrification are significant predictor to digital divide in a country; (c) income per	We can minimize digital divide through intervening factors that significantly affecting digital divide as statistical indicated in this research.	Kuantitatif	OECD and ECLAC countries.

		capita has positive effect on the digital divide, both in OECD and ECLAC. Trust between individual is significant in OECD, while in ECLAC is education.			
Zawawi, <i>et.al</i> (2011)	How to explain digital divide level in Malaysia? What are factors affecting the digital divide?	geographic location, education, income level, and age contribute to the access and ICT usage in Malaysia	There is no policy recommendation proposed by writer. However, they suggest methodological recommendation, namely: qualitative research methods need to be use to analyze digital divide.	Quantitatives methods	Malaysia
Sanz dan Turlea (2012)	How do we explain the distributions of participation among young people in using ICT? What are factors contribute to those patterns greatly?	Contribution of young people to the new media ecology through uploading their own content correlated significantly with downloading materials online. This mechanism also affects the culture of digital divide.	In order to empowering information and communication technologies, government should promote open sources and rethinking the substance of copyright. Therefore, the rules of property rights have negative effects on cultural mechanisms that are currently developing in virtual world	Quantitative and qualitative methods	Europe

IV. FINDING AND DISCUSSION

a) Characteristic of digital divide

From the ownership of ICTs device indicators, respondents in Palembang city are dominating computers, fixed telephones and mobile phones possession. In contrast, a few respondents in Lubuk Linggau city have a computer, fixed phone, mobile phones, and Android-based mobile phone. Furthermore, the largest proportion of respondents in Linggau Lubuk city does not have a computer and mobile phone. Respondents in Baturaja city have largest proportions in category do not have fixed telephone and Android-based mobile phone. In Lubuk Linggau city and Baturaja city, we still found respondents who did not have mobile phone. In contrast, all of respondents in Palembang city have mobile phones.

Majority of respondents in Lubuk Linggau city are using mobile phones and computers to access internet. There is no evidence to suggest that respondent in Lubuk Linggau accessing internet through fixed telephone as modem and Android-based mobile phone. In Baturaja city and Palembang city, respondents are accessing internet through computer, fixed telephone, mobile phones, and Android-based mobile phones. In Baturaja city, respondent who access internet through computer much more than respondent who access internet via fixed telephone, mobile phones, and Android-based mobile phones.

Where do respondent access internet? Home, office/work place, school, internet cafes, public space with Free Wi-Fi Area, and MPLIK (Mobil Pusat Layanan Internet Kecamatan/ Sub District Internet Service Center Car) are places where respondents access internet. House and cafe is still a favorite place for respondents to connect internet. MPLIK car – a program was launched the Ministry of Information and Communications, Republic of Indonesia, to improve internet accessibility of Indonesian peoples – is not a favorite place to accessing internet. Fewer respondents are using it to accessing internet.

If reviewed by city, then respondents in Lubuk Linggau city are accessing internet from home, office/work place, schools, internet cafe, and MPLIK car. Only Free WiFi area that is not used by respondent as a place to accessing internet. Respondent in Baturaja city are accessing internet from home, office/work place, schools, internet cafes, MPLIK car, and public space with Free WiFi area facility. Respondent in Baturaja city are accessing internet from home, office/work place, schools, internet cafes, MPLIK car, and Free Wi-Fi area. The

largest proportion of respondents in Baturaja, Lubuk Linggau, and Palembang city are accessing Internet from their home.

ICTs devices are also used to calling and sending short message system (SMS). The results showed that Telkomsel is the most desirable product respondents in Palembang. In Baturaja city and Lubuk Linggau city, XL is used by respondents for calling and sending SMS more often uses products. Flexy card is used only by a handful of respondents in Palembang city and Baturaja city. Indosat product also quite interests respondents in Palembang, Baturaja city, and Lubuk Linggau city. Proportions of Indosat user is far below for Telkomsel product. AXIS, Three, Fren used by a few respondents in Palembang city, Baturaja city, and Lubuk Linggau city. Esia only used by a few respondents in Palembang city. While Ceria used by a few respondents in Palembang city and Baturaja city. We need to reaffirm the fact that Telkomsel products still dominate the simcard market in Indonesia.

Which kind of simcard does the respondent use to access internet often use? Research data shows that (a) Flexy, Esia, Ceria, and Axis user in Palembang city, Baturaja city, and Lubuk Linggau city more than Telkomsel user. It means that respondent using different simcard to make call, sending message, and using internet; (b) all respondents in Palembang city, Baturaja city, and Lubuk Linggau city used their simcard to accessing internet occasionally. If it is associated with the previous narrative, then the respondents tend to prioritize their computer as a device to connecting internet; (c) the proportion of respondents who have not used their mobile phones to connect to the internet are very few. This fact is in line with previous findings that instead of computer, mobile phone is a device commonly used by the respondent to access internet.

If they are connecting to internet, which kinds of web pages do respondents most frequently visit? The data shows that (see, Table 6) Facebook (social media) is the most popular web pages visited by respondents in Palembang city, Linggau Lubuk city, and Baturaja city when connected with internet. The second and third position is Google (search engine) and Yahoo! (search engine). The fourth and fifth position is Twitter (social media) and Youtube (free video repository).

Table 6 The most popular website by city

No.	Website	Regions			Total (%)	Type of website
		Lubuk Linggau	Baturaja	Palembang		
1	facebook.com	1%	29%	20%	49%	social media
2	google.com	5%	19%	17%	41%	search engine
3	yahoo.com	2%	15%	12%	29%	search engine
4	twitter.com	0%	9%	12%	21%	social media
5	youtube.com	1%	15%	1%	17%	repositori video
6	vivanews.com	0%	5%	1%	6%	news
7	tokobagus.com	0%	1%	4%	5%	online trading
8	gmail.com	0%	2%	3%	5%	mail
9	detik.com	1%	2%	2%	4%	news
10	kompas.com	0%	1%	3%	4%	news

Sources: primary data

According to Table 6, Facebook, Google, Yahoo!, and YouTube user in Baturaja city more than user of these website in Palembang city and Lubuk Linggau city. In Palembang city, Twitter user, Kompas (newspaper) visitor, and TokoBagus.com (online trading site) more than user/visitor these website in Baturaja city and Lubuk Linggau city.

In Lubuk Linggau city, there is no respondent who used Twitter, visited news sites (vivanews.com, kompas.com), and participated in online trading site (TokoBagus.com), and used Gmail. The largest proportion of respondents in Lubuk Linggau city used Google as search engine. It indicates that the patterns of Internet usage in Palembang, Linggau Lubuk city and Baturaja city are still limited to social media, searching for information in search engines, watch/download/upload videos, read news, communication via email, and buying and selling online (online trading). It shows that the population began to connect with the virtual world and have unlimited access to the world's citizens and resources on the Internet.

Furthermore, which kind of activities do respondent most frequently do it? We divided into several categories: (a) seeking information/news; (b) using social media; (c) documents upload/download; (d) images upload/download; (e) videos upload/download; (f) songs upload/download; (g) chats; (h) email receiving and sending; (i) online shopping; (j) selling goods online; (k) marketing goods online; (l) distributed social activities invitations; (m) distributed personal activities invitations; and (n) playing online games.

In Lubuk Linggau city, respondent ever do all kinds of those activities, except distributed social activities and personal activities invitations. The largest proportion of respondents in Lubuk Linggau city is using social media and game online. In Baturaja city, the largest proportions of respondents in the Baturaja city are using social media. The next position is chatting and searching for news/information. Similar to these cities, respondent used internet to searching for news/information and social media in Palembang city is much more than another category.

In Baturaja city and Palembang city, the proportion of respondents who used internet for online shopping, online selling/buying, distributed social activities and personal activities invitations, receiving and sending email is larger than Lubuk Linggau city. This fact shows that Internet has begun to trigger productive activity among respondents in Palembang and Baturaja city.

However, in general, the above narrative shows that internet penetration in South Sumatra Province, particularly in Lubuk Linggau city, Baturaja city, and Palembang city, is not yet significant. If we compare it to others countries that move on to e-Voting, e-Learning, e-Government, e-Library, e-Business, and so forth, then internet development in South Sumatra has not been integrated into people's daily lives. Cyberspace (digital word/virtual world) is the world that has not been reflected people's lives in the real world (real world). Cyberspace is about entertainment. It is not about productivity.

b. Determinant of digital divide

1. Characteristic of ICT's user

ICT user characteristics are personal traits possessed by internet users. It is measured on the following indicators: (a) age; (b) sex; (c) level of education; (d) monthly income; (e) occupation; (f) marital status, and (g) the amount of household members. Personal attributes of internet users is expected to produce respondent differences when accessing and using ICTs devices. Before proving the claim is true or false, the author will explain the characteristics of respondents in Lubuk Linggau city, Baturaja city, and Palembang city.

In view of the age, respondents in Linggau Lubuk city was dominated by people aged 36-40 years old. In Palembang city, predominantly respondents aged is 15-20 years old and >55 years old. In Baturaja city, predominantly respondents aged is 15-20 years old and 21-25

years old. This data show that in term of demographic structure, respondent's distribution is quite diverse.

From total number of respondents (150 peoples), 60.4 percent are male and 39.6 percent are female. Male respondents in Baturaja city and Lubuk Linggau city are much more than female. While the composition of male and female respondent in Palembang city is balanced.

In terms of income, respondents in Baturaja city have monthly income to <Rp1 million. In Lubuk Linggau city, the largest proportion of respondents have monthly income to Rp1 million-Rp2 million. In Palembang city, respondents predominantly have incomes to Rp2 million-Rp3 million.

Meanwhile, in terms of education, the majority of respondents in Palembang city, Linggau Lubuk city, and Baturaja city was dominated by those who completed high school education or equivalent with high school. We found respondents who did not finish elementary school only in Lubuk Linggau city. Respondents graduated from university are found only in Palembang city.

In view of occupation, majority of respondents in Lubuk Linggau city are traders. In Baturaja city, respondents are students, civil servants, and employees of private companies. In Palembang city, the majority of respondents are students and civil servants.

In view of marital status, majority of respondents in Lubuk Linggau city are married. There are respondents who are not married and divorced but their proportion is less. In Baturaja city, majority of respondents are not married. There are respondents who were married, but it is not a bit. There are no respondents, who are divorced in Baturaja city. In Palembang city, majority of respondents are married. Small proportion of respondents is divorced.

Furthermore, in view of number of household members, majority of respondents in Lubuk Linggau city had three to four family members. In Palembang city, majority of respondents' household size reaches four. In Baturaja city, members of respondent household are five peoples.

If personal attributes of respondents were tabulated with several indicators of ownership, access, and ICT's usage, then we obtained the following facts: *first*, youth have

predominantly computer and mobile phone ownership. However, all of aged group have computer and mobile phone in their home. This indicates that ICTs device owned and used by all age groups. *Second*, sex does not influence computer and mobile phone ownership. Although men have computer and mobile phone much more than women, but the gap proportions of ownership is not too wide. *Third*, social media and searching for news/information is favorite activity respondent in Palembang, Baturaja, and Lubuk Linggau city. If it were tabulated with the age group of respondent, then we found that young people (age groups 15-20 years old, 21-25 years old, 26-30 years old) most often do those two activities. The older respondent connected to internet rarely. This fact suggests that the age difference causes different patterns of internet usage in real life. *Finally*, in addition to age, level of education also affects patterns of internet usage. Field findings suggest that the higher level of education, the more likely a person to using internet.

2. Reason of ICT's usage

ICTs usage among respondents who live in Palembang city, Linggau Lubuk city, and Baturaja city is not economic oriented. Only 10.7 percent (8.7 percent strongly disagreed and 2.0 percent strongly agree) of respondents who had economic motives when using ICTs. Meanwhile, 55.4 percent of respondents stated that they use information and communication technology without economic motives.

If respondents do not have economic motives, then do they have social motive when using ICTs devices? The answer is that they did not have a social motive too. Respondents who have social motives are only 8 per cent (6.7 per cent disagreed and 1.3 percent strongly agree). The largest proportion of respondents, reached 44 percent (0.7 percent strongly disagreed and 43.3 percent disagreed) states that they do not have social motives.

What can be interpreted from this fact? *First*, ICTs usage among respondents who live in Palembang city, Linggau Lubuk city, and Baturaja city can be seen as irrational actions because they do not have a clear reason d' etre (not have economic motive and social motives). *Second*, ICTs is not a necessity in their everyday life. It means that the digital world is not congruent with the real world. Penetration of ICTs is still limited to the outer skin of cultural layer (equipment and supplies) and did not seep into the cultural heart of the community (values and norms). *Third*, ICTs have functions mainly as entertainment tools. ICTs do not integrate into production process of various sectors of development. *Fourth*, in

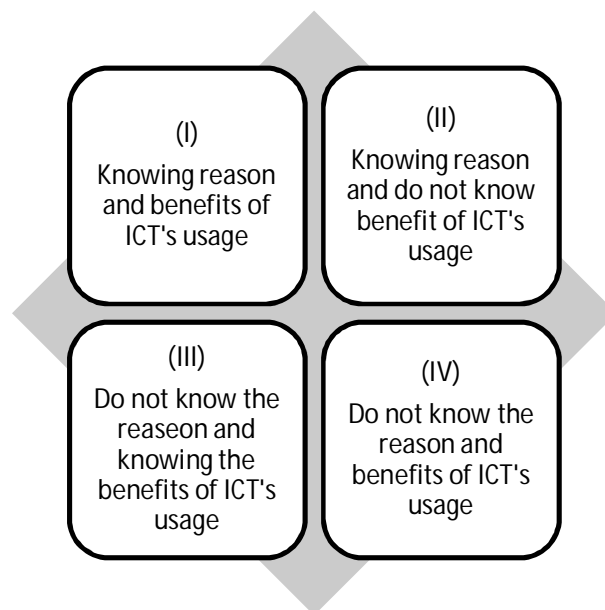
line to digital divide discourse on global level that more focused on ownership, access, and ICTs usage, and based on our finding, we suggest the gap meaning as part of digital divide concept.

3. Benefits of ICT's usage

Although respondents did not have economic reasons and social reasons when using information and communication technology devices, but they get the benefits when using ICTs devices. We found that 40 percent (28.7 percent agreed and 11.3 percent strongly agree) of respondents agreed that ICTs provide economic benefits to its users. Only 35.4 percent (20.7 percent strongly disagreed, 14.7 percent disagreed) of respondents said that ICTs usage do not provide economic benefits. In line with these data, 40 percent (24 percent agreed and 16 percent strongly agree) of respondents stated that ICTs usage provide social benefits to them. Only 32 percent (20 percent strongly disagreed and 12.2 percent disagreed) of respondents said that ICTs usage do not provide social benefits to its users.

This reality confirms the gaps meaning among respondents when using ICTs devices. On the one side, they do not have a reason d' etre. On the other side, they know and feel the economic and social benefits when using ICT. According to Oxford Dictionary Online (<http://oxforddictionaries.com>), reason can be interpreted as a cause, explanation, or justification for an action or event. While benefits can be defined as gains from something. Based on this meaning, reason is the cause and benefits are the result. Borrowing the logic of Johari window, the gap meaning in digital divide can be visualized as follows:

Figure 1 The gap meaning as component of digital divide



4. Constraints of ICT's usage

A constraint in using information and communication technology was defined as perceived obstacles and hurdles by ICT users when accessing and using ICT equipment. This variable is measured on the following indicators: (a) the types of signals/networks available for respondent (LAN or wireless [GPRS, EDGE, 3G, HSDPA, CDMA]), (b) the affordability of internet services (credit price), and (c) the availability of ICT equipment owned by respondent.

Respondents who live in Palembang city are feeling strong signals for all types of existing mobile phone network only, namely: GPRS (general packet radio service), EDGE (enhanced data rates for GSM [global system for mobile communication] evolution), 3G (third generation technology), HSDPA (high-speed downlink packet access) and CDMA (code division multiple access). In Lubuk Linggau city, respondent perceptions on mobile phone network are very diverse. Numerous respondents said that it is strong, but another said that it is weak, or no signal. In Baturaja city, all kinds of mobile phone networks are strong, except CDMA networking. Difference in quality of mobile phone network will affect the quality of ICT usage that have internet feature.

In term of respondent expenditure on internet cost, they consider Speedy (internet service delivered by Telkom, Inc.) as affordable. Respondent feel the same thing when using internet

through telecommunications provider. This situation shows that cost or price is not a significant obstacle for respondents to access internet through their ICT device. In other words, respondents have ability and willing to pay the costs incurred for using ICT devices.

In terms of availability of ICT devices, a few respondents in Lubuk Linggau city have one computer (desktop, laptop, notebooks). In Palembang and Baturaja city, the largest proportion of respondents has also one computer. However, in these two cities, numerous respondents have two and three computer. For mobile phones, respondents who live in Palembang, Baturaja, and Lubuk Linggau, have one to four mobile phones. If the nuclear family consisting of father, mother, and two children, then each member of the household most likely have their own mobile phones. Meanwhile, respondents who live in Palembang city and Baturaja city only use fixed telephone and Android mobile phone. In Lubuk Linggau, there is no respondent who using Android mobile phones. It is concluded that the ownership of ICTs device is not a serious problem contributing to digital divide in those cities.

V. CONCLUSION

There are several conclusions that have been produced by this research, namely: *first*, there are differences in the ownership of information and communication technology, and the way, place, type of activity when accessing the Internet, the simcard in mobile phones and to accessing internet, web pages visited between respondent in Palembang city, Linggau Lubuk city, and city Prabumulih. There are also respondents who use the Internet to conduct business online, although their proportion is small. It shows that Internet penetration in South Sumatra province, especially in Lubuk Linggau City, Baturaja City, and Palembang City, is not too significant. Cyberspace (digital word) is the word that has not been reflected people's lives in the real world (real world). Internet has begun to trigger a productive activity among respondents who live in Palembang city and Baturaja city.

Second, ICTs devices are owned and used by all age of groups and genders. However, respondent use it more often to connecting digitally through social networking sites and search for news/information in the internet. *Third*, respondent do not have economic or social motives when using ICTs. It is means that ICTs usage is irrational actions (not economically and socially motivated). ICTs do not become a necessity of daily life and serves only as entertainment. *Fourth*, even if respondent did not have the economic and social reasons for using ICTs, but they feel the economic and social benefits resulting from ICTs usage. These

symptoms indicate difference of meaning among users that should be seen as part of digital divide concept. *Fifth*, cost and ownership of ICTs does not constraint people to using it. Respondents have ability and willing to pay the costs incurred for utilizing ICTs devices.

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