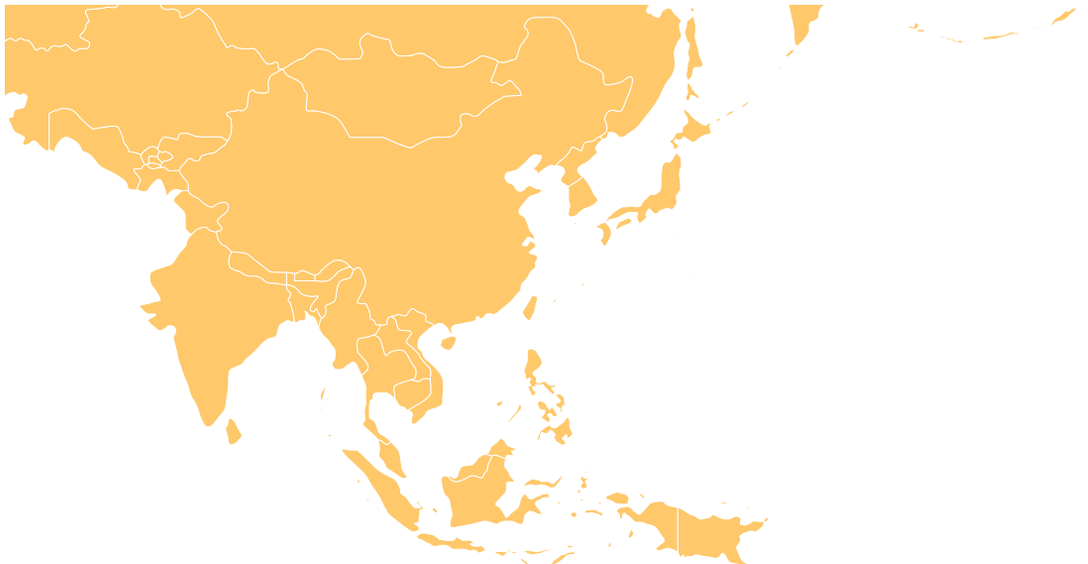

Preliminary Research on Development and Delivery of Livelihood-based e-Service for ASEAN Women

Brunei Darussalam / Cambodia / Indonesia / Lao PDR / Malaysia /
Myanmar / Philippines / Singapore / Thailand / Vietnam

SOOKMYUNG WOMEN'S UNIVERSITY

APWINC
ASIA PACIFIC WOMEN'S INFORMATION NETWORK CENTER

PRELIMINARY RESEARCH ON DEVELOPMENT AND DELIVERY OF LIVELIHOOD-BASED E-SERVICE FOR ASEAN WOMEN

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PRELIMINARY RESEARCH ON DEVELOPMENT AND DELIVERY OF LIVELIHOOD-BASED E-SERVICE FOR ASEAN WOMEN

2014. 11

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• **10 Local Consultants of 10 ASEAN Member States**

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GLOSSARY

ADB	Asian Development Bank
AMS	Asian Member State
APC	Association of Progressive Communications
CIC	Community Information Center
CLC	Community Learning Center
CBO	Civil Society Organizations
EFA	Education for All
GBV	Gender Based Violence
GAIS	Government Administrative Information Systems
ITU	International Telecommunication Union
IVR	Interactive Voice Response
JFIT	Japanese Funds-in-Trust
JICA	Japan International Cooperation Agency
KOICA	Korea International Cooperation Agency
MAFF	Ministry of Agriculture Forestry and Fisheries
MOC	Ministry of Commerce
MCFA	Ministry of Culture and Fine Arts
MEF	Ministry of Economy and Finance
MOEYS	Ministry of Education Youth and Sports
MOE	Ministry of Environment
MFAIC	Ministry of Foreign Affairs and International Cooperation
MOH	Ministry of Health
MIME	Ministry of Industry Mines and Energy
MOInfo	Ministry of Information
MOInt	Ministry of Interior
MOJ	Ministry of Justice
MLVT	Ministry of Labour and Vocational Training
MLMUPC	Ministry of Land Management, Urban Planning & Construction
MOND	Ministry of National Defence
MONASRI	Ministry of Parliamentary Affairs and Inspection
MOP	Ministry of Planning
MPT	Ministry of Post and Telecommunication
MPWT	Ministry of Public Works and Transport
MRC	Ministry of Religions and Cults
MRD	Ministry of Rural Development

MSAVYR	Ministry of Social Affairs Veteran and Youth Rehabilitation
MOT	Ministry of Tourism
MOWRM	Ministry of Water Resources and Meteorology
NII	National Information Infrastructure
NGOs	Non- Governmental Organizations
NiDA	National Information Communication and Technology Development Authority
NSDP	The National Strategic Development Plan
OCM	Office of the Council of Ministers
OI	Open Institute
PAIS	Provincial Administrative Information System
PPM	Phnom Penh Municipality
RGC	Royal Government of Cambodia
SSCA	State Secretariat of Civil Aviation
SSCS	State Secretariat of Civil Service
USAID	United State Agency for International Development
WID	Women in Development

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Herewith we would like to convey our deepest gratitude towards several individuals and organizations showing their ceaseless efforts and guidance to complete this preliminary research successfully.

First, this research was led by Myonghee Kim, Ph.D., Executive director of Asia Pacific Women’s Information Network Center (APWINC) and head researcher Young Kyu Moh, Ph.D., Associate Professor of the Division of Economics at Sookmyung Women’s University.

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Last but not the least; we would also like to especially thank ASEAN and the Ministry of Foreign Affairs of the Republic of Korea for making this project possible. Without their constant support, this project would not have been possible and we couldn’t have shared its findings with all the advocates for gender equality and empowering women.

EXECUTIVE SUMMARY

Along with the arrival of the knowledge and information society, accessibility and capacity of utilizing information and communication technology (ICT) has become indispensable today. As a result, the 2005 World Summit on the Information Society adopted Tunis Agenda for information society and agreed to enhance ICT capacities for the underprivileged including women. In ASEAN member countries, the role of ICT has become increasingly important as a primary method in improving political, economic, and society wide efficiency and effectiveness.

However, women in ASEAN countries are suffering from double hardships of ICT development differences among inter- and intra-country information gap as socially underprivileged group. Furthermore, ASEAN countries still have a long way to establish institutional system that can diagnose and suggest policy recommendation on the information gap for women.

Efficient public service delivery and institutional capacity building take central role in development strategies. Recently, the adoption of ICT in the public sector – particularly through the e-Government Services – has become a policy priority for many governments in both developed and developing countries. E-Services starts to play a significant role in development since they can accelerate public service delivery, improve government accountability, encourage civil participation in decision making processes, and many more. Because of these aspects, the role of e-Services will become more crucial role in connecting public administration to sustainable long-term growth and particularly, e-Services can increase the representation of marginalized groups in the public sector, such as women, and will eventually improve the welfare of such groups significantly.

Motivated by these facts, this research focuses on observing and analyzing the development and delivery of livelihood-based e-Services for ASEAN women as well as identifying the challenges and opportunities in utilizing e-Service to achieve greater gender equality in public service, and suggesting policy recommendations.

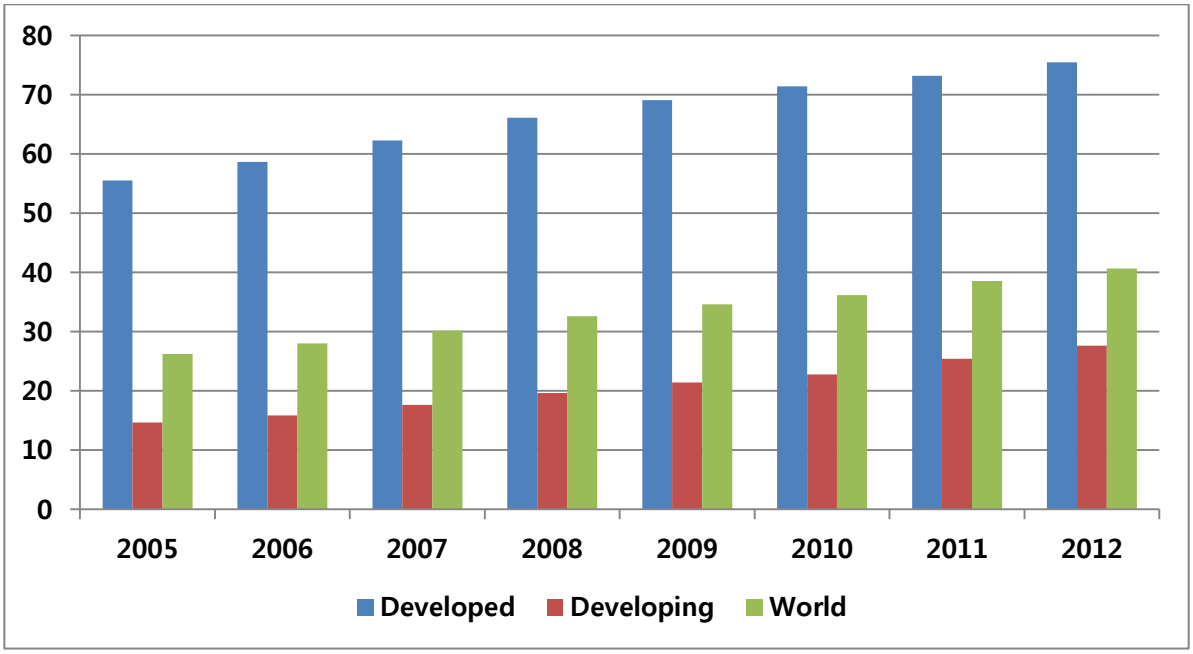
The research objectives of this report are to gain insight into the current and future role of e-Service in ASEAN member countries to enhance gender equality and economic empowerment of women through public services. Particularly, we will focus on the following issues of i) Current status of e-Services, ii) Country specific (potential) demand for e-Services, and iii) Future directions of e-Services.

For e-Government and e-Service, one of the critical prerequisites is the accessibility to ICT.

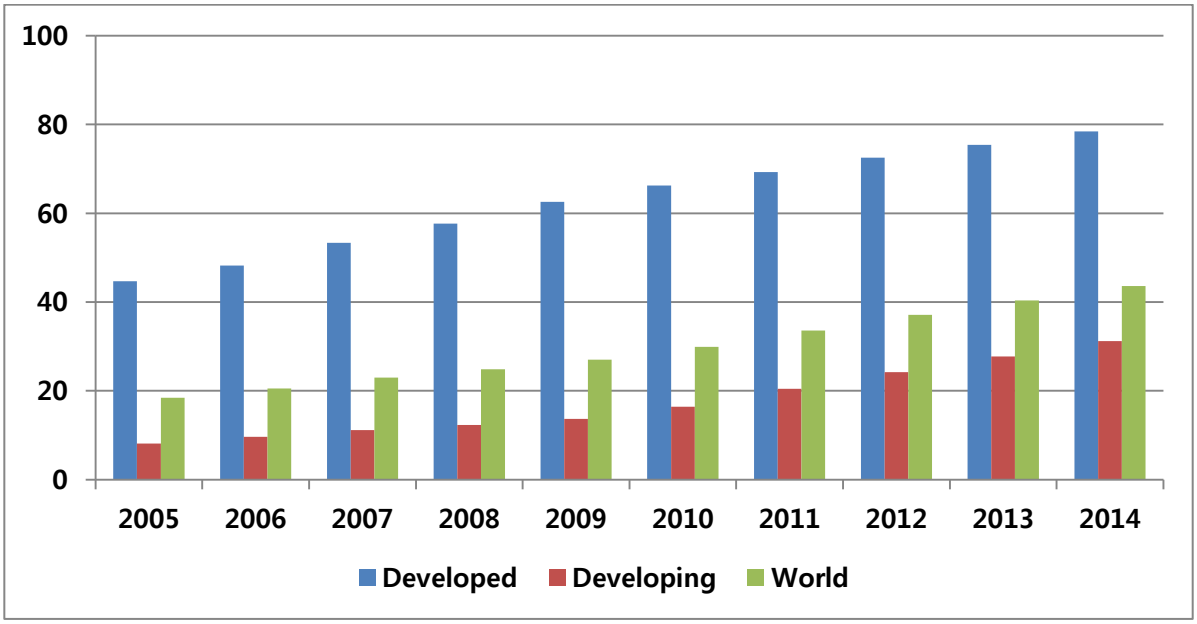
Particularly women's access to the ICT is crucial for gender equality and alleviating any existing inequality. In general, women suffer from digital divide that they have only limited access to the ICT, use less ICT than men, and women are significantly limited from accessing e-Services. This is not only confined to availability and affordability of ICT, but also by socio-economic factors such as cost, mobility, and social bias towards women's use of technology (UNPOG, 2012).

The following figures show digital divide between developed and developing countries. Even though the developing countries' access and usage of ICT are improving, the numbers are still less than half of the developed countries. Not just inter country digital divide but also intra country digital divide between men and women is a problem. It can be seen from the figure that women still have lower access to the ICT in many countries and suffer from gender gap despite improvements in the ICT.

Households with a Computer (unit: %)

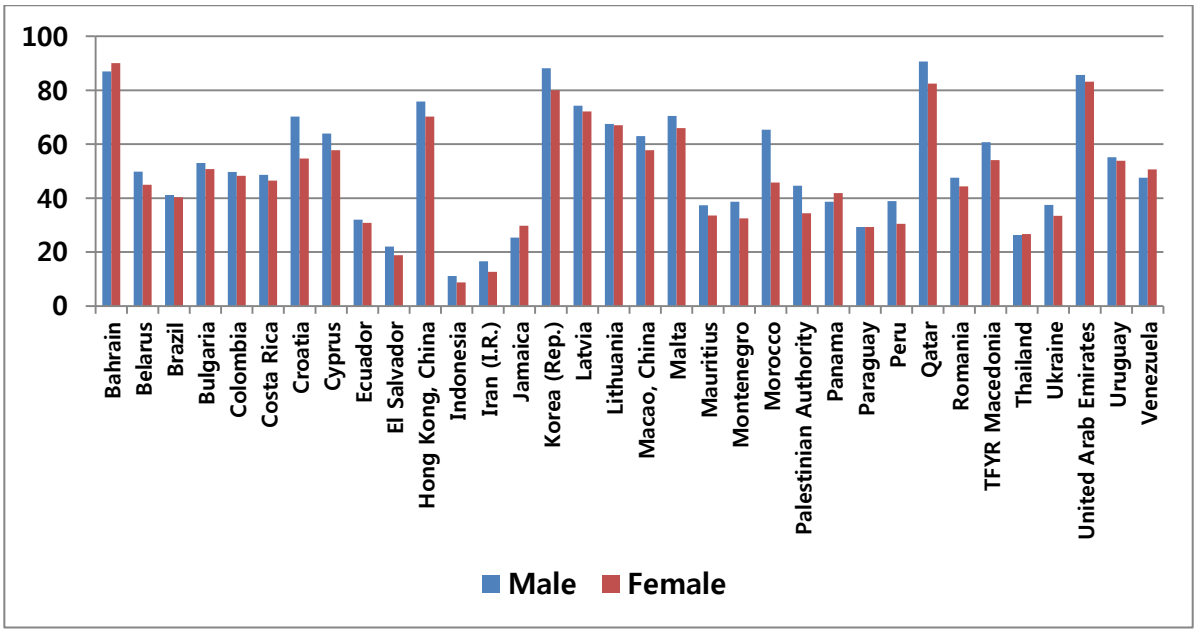


Households with Internet Access at Home (unit: %)



Percentage of Internet Users by Gender for non-OECD Countries

(Latest year available, 2010-2012)



Apart from the digital divide problem, another obstacle for e-Services for women is the gender difference in ICT utilization capacity. The use of e-Services requires a certain level of ICT utilization capacity of the user which includes basic literacy and numeracy. However, existing gender education gap prevents women from acquiring necessary technological skills and

development. One of the sad truths is that the majority of the world's illiterates are women, and far fewer women than men possess computer literacy skills (UN, 2010). This lack of women's ICT utilization capacity limits women's general use of ICT and further prevents them from receiving potential advantages of e-Government and e-Services.

Bearing in mind the problems of gender gap and e-Services we conducted a survey to measure current status of the e-Service provision of the ASEAN member countries and future needs of potential demand for e-Services. The survey consists of several parts. After collecting basic personal data, information on familiarity with the Internet was collected. This part of the survey aimed to collect a more in depth information about the participants' usage of the Internet. The questions in this part were about accessibility to the Internet, frequent places of Internet access, frequency of Internet use, purposes of the Internet use, and types of websites the participant visits the most. This part of the survey was designed to measure the citizens' accessibility and frequency of access to the Internet and the intention of the usage.

Next part of the survey measured the perception and usage status of e-Services. The question of this part of the survey were about the awareness of the existence of any government websites providing women related information or programs and if the answer was yes then participants are asked to specify the name of the website or the hosting government department. If the participant had ever visited any of the mentioned website, the survey asked whether the visit was satisfactory or not and the reasons for that. To gauge e-Service awareness of the participants, the survey asked how they think the idea that development of e-Service in daily life can improve their lives. Also, the survey collected information the participants' awareness on the existence of the government policy that supports women's e-Service use.

The last part of the survey was designed to obtain implications for future directions of e-Services and toolkit development. To have further insight in this matter, we asked questions about e-Services. The role of the e-Services can be broadly categorized into two: providing information and providing services (functions). So we asked two sets of question regarding this: information questions and functions questions.

There can be many more e-Service provided information but we selected representative information particularly related to women. The Information Questions (IQ) are:

1) Job opportunity
2) Talent pool
3) Micro-finance
4) Bidding opportunity

5) Livelihood related information (agriculture, fishery, livestock industry etc.)
6) Vocational training opportunity
7) Domestic/ Sexual violence or Abuse prevention
8) Child care
9) Maternity
10) Free health clinic
11) Immunization
12) Sanitation
13) HIV/AIDS.

Also we selected e-Service provided public services (functions) and the Functions Questions (FQ) are:

1) Online registration
2) Multiple languages
3) Mobile access options (e.g. Applications)
4) E-News letter
5) Q&A
6) Bulletin boards
7) Ombudsman
8) Downloading of online forms/documents
9) Program sign-up
10) E-learning
11) Audio/Video materials
12) Sight/Hearing accessibility for disabled person.

Upon conducting the survey, respondents were asked to check whether the information provided via e-Service is generally useful or crucial for their lives. Also, they were asked to do the same thing for the e-Service provided functions.

By analyzing survey data collected from the ASEAN countries, we found several important implications that should be taken into account when developing and providing e-Services. The first is the importance of the public relations. Many countries were mainly focusing on providing/expanding e-Services and developing ICT infrastructures but the survey suggests that people are not aware of the existing e-Services in many cases. Due to the lack of public relations, many people did not know whether the e-Services were provided and/or where to start. Expanding e-Service capacity and developing ICT infrastructure is definitely a future direction to follow but adequate public relations and education are almost equally important and efficient path to pursue.

Since active public relations can enhance people's awareness about the existing e-Services, this will improve accessibility to the e-Services without expanding capacity.

Another important implication we obtained from the survey is homogenous perception on e-Service usefulness but heterogeneous demand for e-Services among ASEAN countries. Survey respondents from all countries agree that e-Services are useful and can improve daily life. However, at the same time respondents from different countries show different future demand for e-Services depending on the different stages of ICT development and country specific environment.

The following tables summarize the survey results on e-Service information and functions and provide a useful insight for future demand for e-Services. As can be seen from the tables people from different countries prefer different information and functions provided through e-Services. Not just differences but the survey reveals common e-Service demand for mobile access, provision of health related information, and one-stop service or non-stop virtual government office services. Any future development plan for e-Service should reflect these areas.

In summary, the survey provides us simple but important implication for e-Services: Co-existence of homogeneity and heterogeneity should be accounted for better provision of the e-Services.

Suggested Directions for E-Service Information

Country	Category	E-Service Information
Brunei Darussalam	General	Livelihood related information, Job opportunity, Talent pool
	Crucial	Free health clinic, Sanitation
Cambodia	General	Bidding opportunity, Livelihood related information
	Crucial	Job opportunity, Vocational training, Domestic/sexual violence or abuse prevention, Child care
Indonesia	General	Job opportunity
	Crucial	Maternity, Free health clinic, Immunization, Sanitation
Lao PDR	General	Micro-finance, HIV/AIDS
	Crucial	Vocational training
Malaysia	General	Job opportunity, Talent pool, Immunization
	Crucial	Immunization, Job opportunity
Myanmar	General	Free health care, Micro-finance
	Crucial	Job opportunity, Domestic/sexual violence or abuse prevention, Talent pool
Philippines	General	Talent pool, Bidding opportunity, Job opportunity
	Crucial	Domestic/sexual violence or abuse prevention, Immunization
Singapore	General	Child care
	Crucial	Free health care, Job opportunity
Thailand	General	Talent pool
	Crucial	Job opportunity, Immunization, Child care
Vietnam	General	Child care, Free health clinic, Job opportunity
	Crucial	Child care, Free health clinic

Suggested Directions for E-Service Functions

Country	Category	E-Service Functions
Brunei Darussalam	General	Bulletin board, E-News letter
	Crucial	Online registration, Mobile access options
Cambodia	General	Online registration, E-Newsletter, Program sign-up, E-Learning
	Crucial	Downloading online forms/documents, Multiple languages, E-Learning
Indonesia	General	Multiple languages, Bulletin boards, E-News letter
	Crucial	Downloading online forms/documents, Sight/hearing accessibility for disabled person, Ombudsman, Online registration
Lao PDR	General	Q&A, Online registration
	Crucial	Mobile access options, Downloading online forms/documents, E-Learning
Malaysia	General	E-Newsletter, Q&A, Bulletin board, Downloading online forms/documents, Program sign-up
	Crucial	Mobile access options, E-Newsletter, Q&A, Bulletin board
Myanmar	General	Sight/hearing accessibility for disabled person, Bulletin board, Audio/video materials, Q&A
	Crucial	Mobile access options, Downloading online forms/documents, E-News letter
Philippines	General	E-Newsletter, Ombudsman, Bulletin board, Sight/hearing accessibility for disabled person
	Crucial	Downloading online forms/documents, Mobile access options, Online registration
Singapore	General	E-Newsletter, Online registration
	Crucial	Multiple languages, Mobile access options, Sight/hearing accessibility for disabled person
Thailand	General	E-learning, Online registration
	Crucial	Ombudsman, Audio/video materials
Vietnam	General	E-learning, Multiple languages, Audio/video materials
	Crucial	E-learning, Audio/video materials, Multiple languages, Mobile access options, Downloading online forms/documents

1. Introduction

1.1. Purpose of the Research

Along with the arrival of the knowledge and information society, accessibility and capacity of utilizing information and communication technology (ICT) has become indispensable today. As a result, the 2005 World Summit on the Information Society adopted Tunis Agenda for information society and agreed to enhance ICT capacities for the underprivileged including women. In ASEAN member countries, the role of ICT has become increasingly important as a primary method in improving political, economic, and society wide efficiency and effectiveness. Particularly due to this reason, the 10th ASEAN TELMIN, held in Kuala Lumpur, Malaysia in January 2011 produced ICT master plan up to 2015.

However, women in ASEAN countries are suffering from double hardships of ICT development differences among inter- and intra-country information gap as socially underprivileged group. Furthermore, institutional system that can diagnose and suggest policy recommendation on the information gap for women in the ASEAN region does not exist yet and this adds more burden on women. For private and public exchange and cooperation, the information capacity gap among Asian women is one of the major problems to be resolved and requires anticipative plans.

For many developing countries, efficient public service delivery and institutional capacity building takes central role in development strategies. Recently, the adoption of ICT in the public sector – particularly through the e-Government Services (hereafter e-Services) – has become a policy priority for many governments in both developed and developing countries and start to provide services in many aspects. The United Nations define e-Government as “the use of ICT and its application by the government for the provision of information and public services to the people” (Global e-Government Readiness Report, 2004). Following the definition of the e-Government, public services provided through the ICTs can be called as e-Services.

E-Services starts to play a significant role in development since they can accelerate public service delivery, improve government accountability, encourage civil participation in decision making processes, and many more. In this sense, e-Services can take significant role in connecting public administration to sustainable long-term growth. Particularly, e-Services can increase representation of marginalized groups in the public sector, such as women, they can eventually improve these groups’ welfare significantly.

Motivated by these facts, this research focuses on observing and analyzing development and

delivery of livelihood-based e-Services for ASEAN women as well as identifying challenges and opportunities in utilizing e-Service to achieve greater gender equality in public service, and suggesting policy recommendations.

The research objectives of this report are to gain insight into the current and future role of e-Service in ASEAN member countries to enhance gender equality and economic empowerment of women through public services and contribute to:

1) Improve participation of ASEAN women into the knowledge-information society
2) Improve e-Service capacity for women related government sector
3) Fortify Korean-ASEAN cooperation by sharing Korean e-Service experience and model.

To achieve the above objectives, we will focus on the following issues:

1) Current status of e-Services
2) Country specific (potential) demand for e-Services
3) Future directions of e-Services.

In addition, Korea ranked first among all UN member countries in 2010, 2012 and 2014 in the "e-Government Development Index" and "e-Government Participation Index" of the United Nations e-Government Survey, so it is worth it to share Korea's experience on e-Service experience and development plan for further insight.

1.2. Research Methodology and Report Outline

This research utilizes survey to collect data on current and future status of e-Services in ASEAN countries and to identify country specific potential demand for e-Services. Also we will use survey data to gauge future directions of the e-Services. For this, we sent out survey questionnaires on the above issues and collected data for ASEAN member countries. Also we conducted the same survey for Korea to have further insight and share Korean experience.

This report is organized as follows. Section 2 provides Korean e-Service experience and model and Section 3 presents country-wise analysis on current status of e-Services, country specific potential demand for e-Services, and future directions of e-Services for ASEAN countries. Section 4 reports overall analysis that consists of comparison and analysis of ASEAN countries and implications for future directions of e-Services and toolkit development. Concluding remarks follow in the last section.

2. Measuring the e-Service Environment

2.1. E-Government Development Index

The United Nations conducts a bi-annual e-Government survey and report e-Government Development Index since 2003. The index consists of three sub-indices on:

1) Telecommunication infrastructure
2) Human capacity
3) Availability of online services.

The survey assesses more than 190 member states of the UN (193 states in 2014). The index is a weighted average of the normalized scores for the above three sub-indices. The UN put equal weight on the sub-indices.

Recently, a research conducted by International Telecommunication Union found that every 10 point increase in broadband penetration increases economic growth rates, on average, by 1.38 % in low- and middle-income countries. It also found that there were only eight cell phones for every 100 people in the developing world a decade ago while today there are almost 90. This increase in cell phone availability enables many previously marginalized and isolated people be exposed and connected with others and participate fully in society (ITU, 2012). In this sense development and increased availability of telecommunication means are one of the most influential infrastructures for individuals as well as society.

The level of telecommunication infrastructure is one of the prerequisites for e-Government and the telecommunication infrastructure index (TII) measures that. It is an arithmetic average composite of five indicators:

1) Estimated Internet users per 100 inhabitants
2) Number of main fixed telephone lines per 100 inhabitants
3) Number of mobile subscribers per 100 inhabitants
4) Number of wireless broadband subscriptions per 100 inhabitants
5) Number of fixed broadband subscriptions per 100 inhabitants (newly added to the 2014 Survey).

The TII has remained largely unchanged since 2002, except for some replacements. The number of television sets was removed in 2008, the personal computer (PC) users was replaced by the fixed Internet subscriptions in 2012, and the fixed Internet subscriptions was replaced by the

wireless broadband subscriptions in 2014.

Human capital index (HCI) measures overall intelligence level of the public that reflects public capacity for accommodating e-Government. The HCI consists of four indicators. They are:

1) Adult literacy
2) Gross enrollment ratio
3) Expected years of schooling (newly added to the 2014 Survey)
4) Mean years of schooling (newly added to the 2014 Survey).

The UN defines the four indicators of HCI as follows. Adult literacy is measured as the percentage of people aged 15 years and above who can, with understanding, both read and write a short simple statement in their everyday life. Gross enrolment ratio is measured as the combined primary, secondary and tertiary gross enrolment ratio, of the total number of students enrolled at the primary, secondary and tertiary level, regardless of age, as a percentage of the population of school age for that level. Expected years of schooling is the total number of years of schooling which a child of a certain age can expect to receive in the future, assuming that the probability of his or her being in school at any particular age is equal to the current enrolment ratio age. Mean years of schooling (MYS) provides the average number of years of education completed by a country's adult population (25 years and older), excluding the years spent repeating grades.

The online service index (OSI) measures overall service-delivery capacity of a government. To account for recent changes and developments, the index emphasizes on:

1) Rising importance of a whole-of government approach and integrated online service delivery
2) Use of e-government to provide information and services to citizens on environment related issues iii) E-infrastructure and its increasing role in bridging the digital divide, with a particular emphasis on the provision of effective online services for the inclusion of disadvantaged and vulnerable groups, such as the poor, the disabled, women, children and youth, the elderly, minorities, etc.
3) Increasing emphasis on service usage, multichannel service delivery, open government data, e-procurement
4) Expansion of e-participation and mobile government.

The UN describes e-Government development into four stages. They are:

1) Emerging
2) Enhanced
3) Transactional

4) Connected.

The components of the “emerging” stage are:

1) (Unidirectional) provision of policy, law, and documents via online
2) Link with other ministries, ministerial institutions, and subdivisions
3) Provision of newsletter and information list about ministries.

The second stage is the “enhanced” and it consists of:

1) More developed unidirectional or primary bidirectional service provision
2) Provision of application forms, video and multi-language services
3) Partial online service availability for offline services.

In the more advanced stage is “transactional” and its key ingredients are:

1) Provision of bidirectional request and application services for government policies, program, and law
2) Electronic certification service for transactions
3) Electronic voting, download and upload for documents, online tax payment and certificate/license/permission service provision.

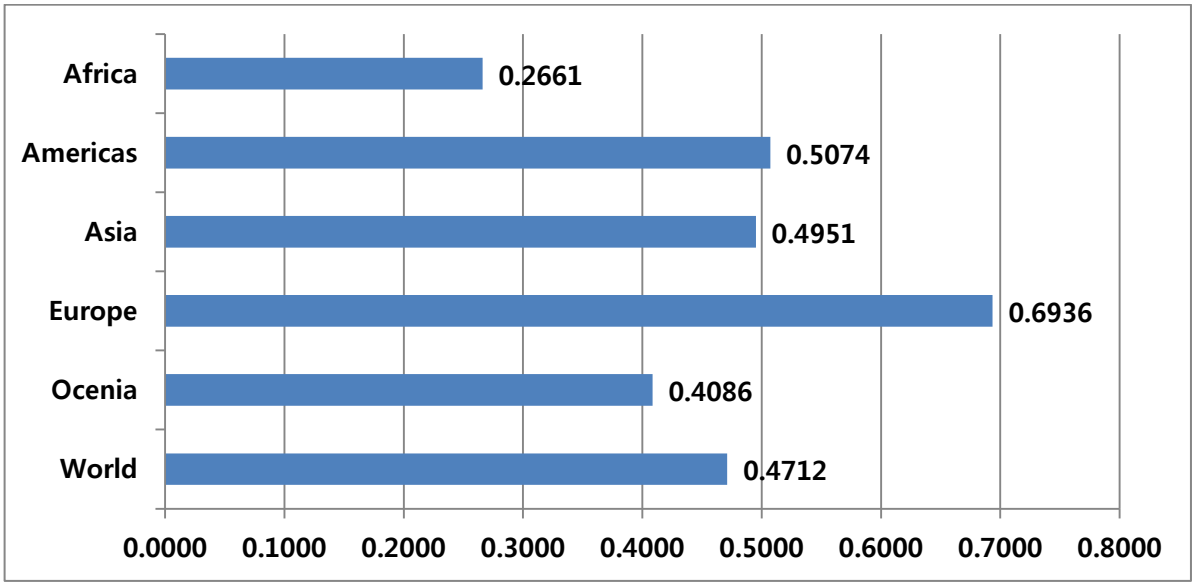
The highest stage is “connected” and its components are:

1) Communication with citizens via web
2) Provision of multi-ministry one-stop service, customized service reflecting lifecycle
3) Providing online environment for citizen participation into the policy making process.

The OSI evaluates nation’s representative portal site or official government sites for the availability of specific services through the sites. Particularly, the OSI assesses whether national portal site and health, education, public welfare, employment, public finance related official government sites are providing services required for the four stages of e-Government development. The 2014 Survey focuses on:

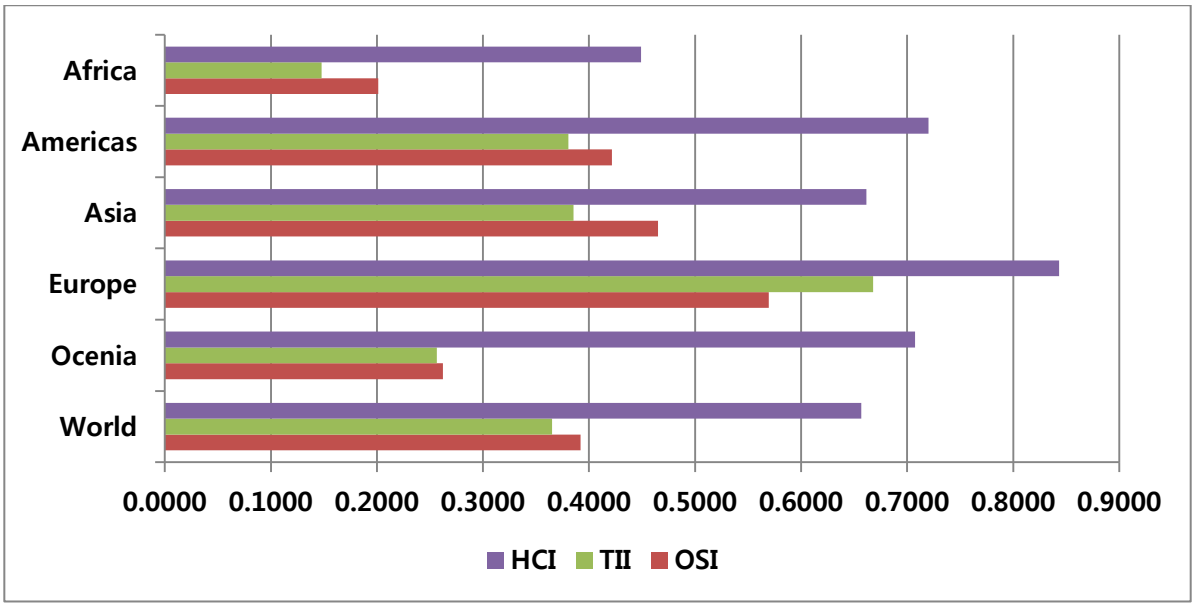
1) Whole-of-government
2) Multichannel service delivery,
3) Bridging the digital divide
4) Increasing usage
5) Open government
6) E-participation.

[Figure 2-1] 2014 E-Government Development Index by Region



Source: UN

[Figure 2-2] 2014 E-Government Development Components by Region



Source: UN

The 2014 Survey results are summarized in the Figures 2-1 and 2-2. It can be seen from the figures that there does exist regional differences in e-Government development. Compared to Europe other regions particularly Africa possesses lower indices in all aspects. In terms of the EGDI, Asia seems to have a good performance in the sense that it shows higher than the World index. However, the Asian region shows wide dispersion in e-Government capacity among

countries. While Korea and Singapore are highly ranked in the e-Government Survey many other countries in the region are ranked low and the gap between higher ranked and lower ranked countries are wide.

2.2. E-Government Development Experience in Korea[1]

The Korean government continued to pursue and establish the e-Government as a main engine to fortify its competitiveness, along with the global-leading IT infrastructure of the nation. Korea laid the foundation of e-Government by building basic computer networks across the nation and overhauling laws, regulations and policies in the 1980s and 1990s. By intensively focusing on the development of e-Government from 2000, Korea successfully implemented the e-Government system through the convergence and connection of dispersed, stand-alone systems across the government in the late 2000s.

[Table 2-1] 2014 E-Government Survey for ASEAN

Country	e-Gov't Rank	EGDI	EPI	OSI	HCI	TII
Korea	1	0.9462	1.0000	0.9764	0.9273	0.9350
Singapore	3	0.9076	0.9020	0.9921	0.8515	0.8793
Malaysia	52	0.6115	0.5294	0.6772	0.7119	0.4455
Philippines	95	0.4768	0.5686	0.4803	0.7051	0.2451
Thailand	102	0.4631	0.5490	0.4409	0.6640	0.2843
Vietnam	99	0.4705	0.4902	0.4173	0.6148	0.3792
Brunei Darussalam	86	0.5042	0.0588	0.3662	0.7815	0.3690
Indonesia	106	0.4487	0.2941	0.3662	0.6786	0.3054
Cambodia	139	0.2999	0.1961	0.1732	0.5189	0.2075
Lao DPR	152	0.2659	0.1961	0.1417	0.4941	0.1618
Myanmar	175	0.1869	0.0784	0.0236	0.5288	0.0084

Source: UN

As a result of these ceaseless effort, Korea ranked first among all UN member countries in 2010,

[1] This section summarizes materials appeared on the Government of Korea official website. See http://www.korea.go.kr/main.do for detail.

2012 and 2014 in the e-Government Development Index (EGDI) and e-Government Participation Index (EGPI) of the UN e-Government Survey. Also various e-Government systems of Korea have been exported to other countries and Korea's e-Government has been highly and widely recognized in the international community for its excellence.

The Korean government has recently initiated the "Smart e-Government Strategy" to provide seamless access to the public services without constraints of space, time, or medium through Korea's cutting-edge ICT and public services. The strategy is a part of continued efforts of the government to solve the low birthrate, aging population and other social problems and to stimulate social security, public welfare and other issues.

By pursuing and expanding e-Government capacity, Korean government has made several achievements. First achievement is the improvements in both efficiency and transparency of administrative work. The use of electronic documents has become a standard practice, and most administrative works such as personnel management, finance, and procurement are being handled electronically, thereby enhancing the efficiency of government administration. All central administrative institutions have introduced a standardized Business Process System (On-nara BPS) to record all decision-making procedures of the government. As a result, transparency in administration work processes has increased significantly.

E-Government made it possible the provision of people-focused and business-focused administrative services. With the establishment of the Civil Service Portal (Minwon24), integration of the online civil service channels and enabling notification, filing, and payment of taxes via the Internet has successfully implemented. Also various corporate activities are supported through single window for businesses (One-stop Business Support Service, G4B) along with online processing of logistics, customs clearance, and trading.

Not just improved services but the e-Government also strengthened communication with the citizens regarding government policies. Citizens can now participate in the government decision-making process more easily through a single window called "e-People," which is connected to all administrative institutions to provide comprehensive civil services and receive public suggestions. Citizens can easily request and check online for a wide range of administrative information and inquire about national records anytime and anywhere through the shared administrative information system (e-Hanarominwon).

Also the e-Government increased efficiency of information resource management. The Government Integrated Data Center (GIDC) manages all information systems of the government comprehensively, improving its capability to respond to system errors and security threats.

Enterprise Architecture (EA), a comprehensive informatization blueprint, enables design and systematic management of e-Government at the government-wide level.

Based on the past experience and to strengthen further development of the e-Government, Korean government has set up a development plan. First, the Korean government aims to achieve the world's best mobile government. It is gradually transforming the PC-based services that are closely related to citizens' life into integrated mobile services that are user-oriented. For this, identify personalized and innovative public services that can take advantage of the mobile, location-based, and real-time features of mobile devices.

Second, it plans to establish a safe and warm society. This can be achieved by first, establishing fast and efficient response systems to incidents such as missing children, crimes and disasters by using CCTVs and sensors. It can also be achieved through providing safety information of agricultural and livestock products to consumers using barcodes and RFID chips, and establish an advanced warning system that provides epidemics breakout and prevention information based on a network of nationwide hospitals and pharmacies.

The third plan is to facilitate smart work, achieving balance between work and everyday life. It plans to establish a smart work environment by adopting "'Smart Work Centers" in the public sector, and expand it to the private sector through identifying tasks adaptable to smart work and improving personnel management systems. It also plans to provide advanced administrative services through the establishment of a "digital administrative cooperation system," which supports administrative collaboration through converging advanced information technologies such as in administrative data management and video-conferencing.

Moreover, the Korean government is planning to provide customized services based on communication. This plan aims to expand citizen participation in policy-making process through social network services (SNS) such as Twitter, and provide extended communication channels between the government and citizens through real-time access to government policy information. Also it aims to provide customized services to citizens and businesses through integrated one-stop information service on tax and public fees and one-stop processing of complex civil service applications regarding business activities online.

The last plan is to establish solid and sound e-Government infrastructure. This can be achieved by reinforcing mandatory web standardization to support easy access to e-Government services by citizens in all corners of society, including the disadvantaged groups. Also the Korean government plans to improve efficiency in use of information resources through the establishment of a 'cloud computing center' in the Government Integrated Data Center (GIDC), and strengthen

security measures against hacking or virus threats by encrypting data to prepare for smart phone loss, stepping up remote control to prevent information leakage, and distributing smart phones or TV vaccines, etc.

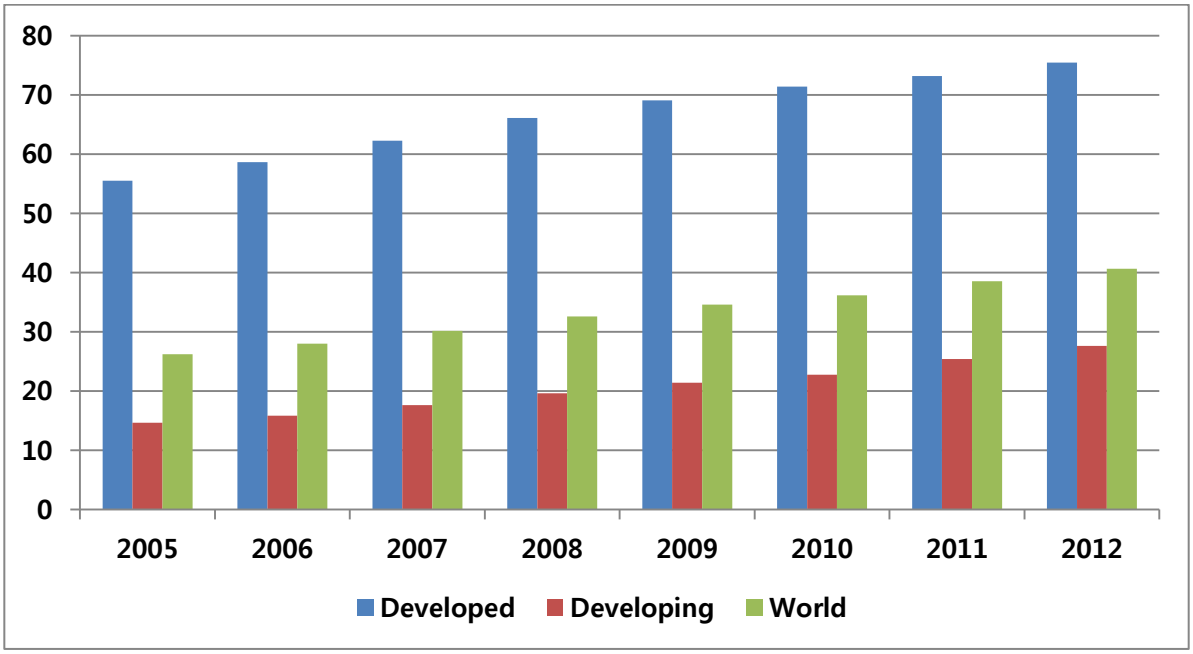
Korea has invested and takes early action on developing e-Government and e-Services and the outcomes are stated above. However, I am not claiming that all the ASEAN member countries should follow Korea's footsteps. Taking the same step and approach toward e-Government is not desirable and is problematic. Rather, each country should account for their current status and differences in infrastructure. Also countries need to set up their own plan and follow based on different capacity and needs for e-Government.

2.3. E-Service and Gender Inequality

One of the critical prerequisites for e-Government and e-Service is the accessibility to ICT. Particularly women's access to the ICT is crucial for the gender equality and alleviating any existing inequality. In general women have only limited access to the ICT and use less ICT than men and women are significantly limited in accessing e-Services. This digital divide is not only confined to availability and affordability of ICT, but is also by socio-economic factors such as cost, mobility, and social bias towards women's use of technology (UNPOG, 2012). The UN is focusing more on the digital divide by emphasizing e-infrastructure in assessing e-Government readiness. The accessibility to the ICT takes increasing role in bridging the digital divide, with a particular emphasis on the provision of effective online services for the inclusion of the disadvantaged and vulnerable groups, such as the poor, the disabled, women, children and youth, the elderly, minorities, etc.

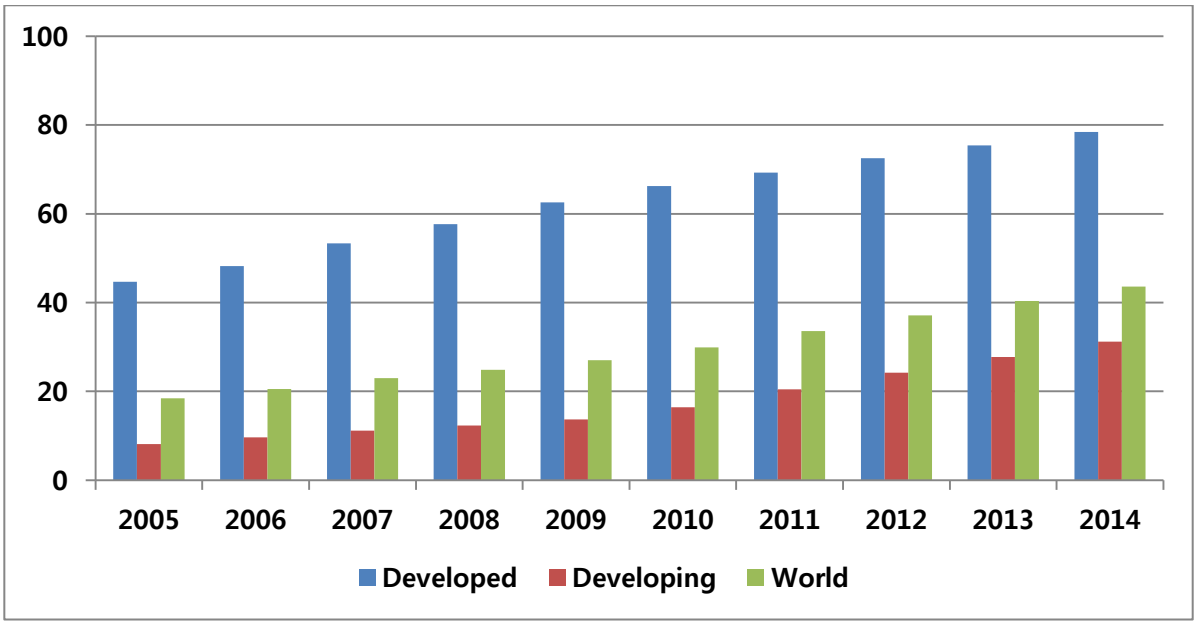
Figures present digital divide between developed and developing countries. As can be seen from the figures, developing countries have significantly low percentage of household with a computer, household with Internet access at home, and individuals using the Internet. Even though developing countries' access and usage are improving, still the numbers are less than half of the developed countries.

[Figure 2-3] Households with a Computer (unit: %)



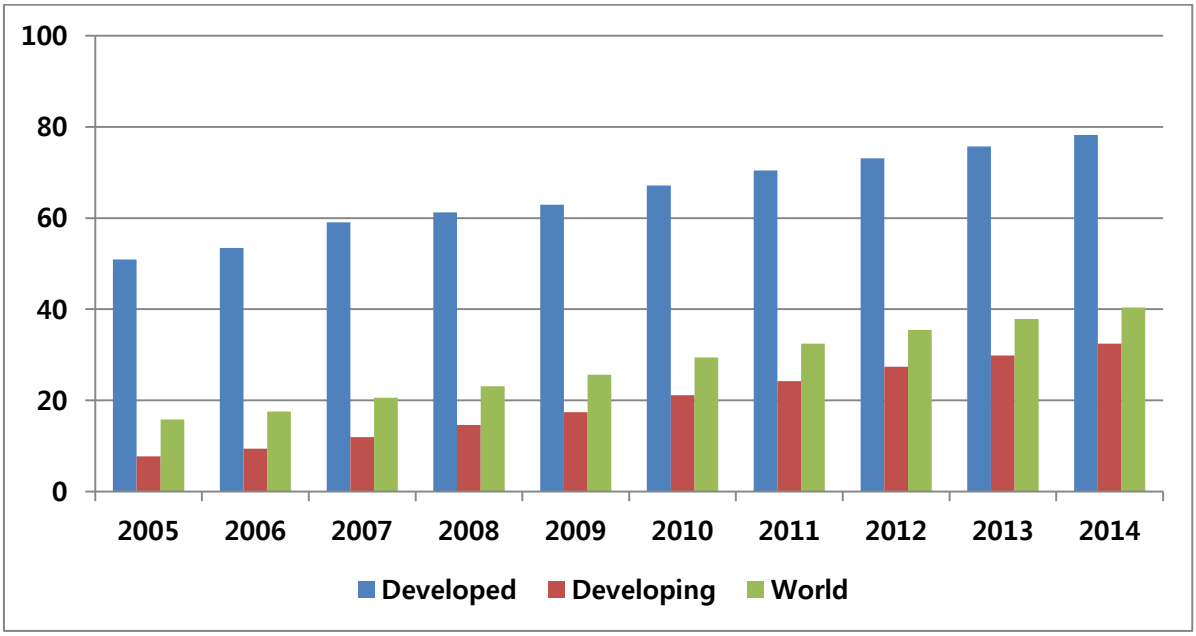
Source: ITU

[Figure 2-4] Households with Internet Access at Home (unit: %)



Source: ITU

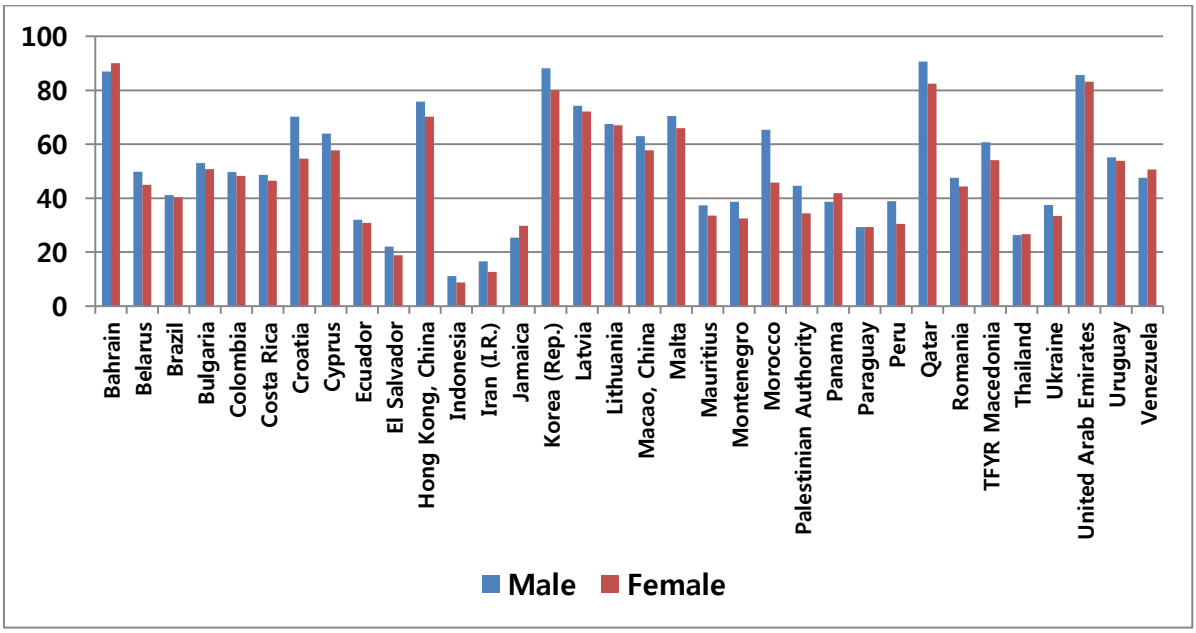
[Figure 2-5] Individuals Using the Internet (unit: %)



Source: ITU

The digital divide between men and women can be seen from the Figure 2-6. It shows that women still have lower access to the ICT in many countries and suffering from gender gap even in the ICT.

[Figure 2-6] Percentage of Internet Users by Gender for non-OECD Countries (Latest year available, 2010-2012)



Source: ITU

The use of e-Services also requires certain level of ICT capacity of the user. This ICT capacity includes basic literacy and numeracy. However, existing gender education gap prevents women from acquiring necessary technological skills and development. One of the sad truths is that the majority of the world's illiterates are women, and far fewer women than men possess computer literacy skills (UN, 2010). This lack of women's ICT capacity limits women's general use of ICT and further prevents them from receiving potential advantages of e-Government and e-Services.

Due to this and other reasons, UN's e-Government Development Index includes Human capital index (HCI) and it measures overall intelligence level of the public that reflects public capacity for accommodating e-Government. The HCI components were indicators on adult literacy and gross enrollment ratio before 2014. Starting 2014 UN newly added expected years of schooling and mean years of schooling to fortify HCI. This newly advised HCI is intended to measure ICT capacity and environment for implementing e-Services.

2.4. Survey Questionnaire

We conducted a survey to measure current status of the e-Service provision of the ASEAN member countries and more importantly to future needs of potential demand for e-Services. The structure of the survey is as follows.[2]

The first two questions are screening questions. They ask whether the survey participant knows how to use and is actually using the Internet. If the participant's answer is no for either question, then the survey ends. This is only to include those who are actually exposed and use Internet and can have access to the e-Services. Second set of questions are personal data selection questions. These questions collect nationality, age, marital status, children, education level, occupation and monthly household income (in US dollar).

After collecting basic personal data, the survey starts to collect information on familiarity with the Internet. This part of the survey aims to collect more in depth information about the participants' usage of the Internet. Questions in this part are about accessibility to the Internet, frequent places of Internet access, frequency of Internet use, purposes of the Internet use, and types of websites the participant visit most. This part of the survey is designed to measure citizens' accessibility and frequency to the Internet and intention of the usage.

[2] See Appendix for details of the survey.

Next part of the survey consists of questions on the perception and usage status of e-Services. The survey provides the definition of the e-Service and asks survey conductors to give specific e-Service examples in their countries to improve survey quality and to help participants' in answering questions. This part of the survey questions are about the awareness of the existence of any government websites providing women related information or programs and if the answer was yes then participants are asked to specify the website name or hosting government department. If the participant ever visited any of the mentioned website, the survey asks whether the visit was satisfactory or dissatisfactory and asks reason for that. To gauge e-Service awareness of the participants, the survey asks how they think the idea that development of e-Service in daily life can make their life better. Also the survey collects information on the existence of the government policy that supports women's e-Service use.

The last part of the survey is asking two important things: information and function about e-Service to women. If a government provides e-Services to women with various types of information and functions, we ask respondents which of them are generally and/or crucially useful. This part of the survey is crucial in gauging what kind of information or function is most frequently used by women and what information or functions of the e-Service will be crucial in the future so that we can focus on developing services and meet women's needs.

To obtain meaningful data and extract appropriate statistical inference, each country's local researchers conducted 100 surveys and collected data. Overall analysis results are presented after the country-wise analysis.

3. Country-wise Analysis[3]

3.1. Brunei Darussalam[4]

3.1.1. Current Status of e-Services

Electronic services or e-services constitute the delivery of services mediated by technology[5] via channels like the internet, mobile phones, telephones and public kiosks and differ from traditional websites which offer only descriptive information.[6]

In Brunei, while banks offer e-Banking and e-Payment facilities, e-Services in the government sector are still at its infancy. A budget of more than $900 million in the Eighth National Development Plan 2001-2005 was allocated to develop an e-Government framework for the country in a "new public management" and "reinventing government" drive to streamline and improve the efficiency of government and its delivery of services to the public[7]. To date, government websites offer mainly descriptive information. There is still room for Brunei to improve its G2B (Government to Business) and G2C (Government to Citizens) components of e-Government and to improve its rankings in terms of e-Government readiness.

Another initiative to improve connectivity and deliver telephone and broadband services, the FTTH or Fiber-To-The-Home project was implemented with the aim to connect up to 80% of residential premises with high speed broadband (HSBB) internet access by 2014[8], replacing the older copper cable with fiber optic cables. This was carried out by Telekom Brunei Berhad (TelBru)[9], a leading service provider for fixed lines, internet and broadband services, leased lines and data services. As of November 2013, TelBru has connected close to 12,000 homes in Brunei.

In terms of ICT penetration at the individual level, Bruneians are getting increasingly connected as internet penetration continues to rise, recorded at 60.3% in 2014 by the Global Information

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[3] Country-wise analysis for each country is independently conducted by local researcher. Local researchers also conducted e-Service survey that provides key information for overall analysis and implications for finding future e-Service demand.

[4] Written by Dr. Sophiana Chua Abdullah, Researcher, Centre for Strategic & Policy Studies (CSPS)/ Prime Minister's Office, Brunei Darussalam

[5] Rowley, J. (2006) An analysis of the e-service literature: towards a research agenda. Internet Research, 16 (3), pp.339-359

[6] Jeong C.H. (2007). Fundamental of Development Administration. Selangor: Scholar Press. ISBN 978-967-5-04508-0

[7] http://www.bt.com.bn/focus/2008/07/03/e_government_in_brunei_where_do_we_stand_now

[8] http://www.bt.com.bn/business-national/2014/03/22/ftth-2014-target-80-minister

[9] http://www.telbru.com.bn/

Technology Report produced by the World Economic Forum (WEF)[10]. The indicators used for measurement include the number of mobile phone subscriptions, number of individuals using the internet, number of households with a personal computer, number of households with internet access and subscriptions for fixed and mobile network, and the use of social networks at the individual level. In 2012, Brunei ranked top in Asia in terms of Facebook usage[11] and second after Singapore in terms of iPad friendliness.[12]

The role of social media as an enabling environment for e-Services should not be underestimated. Organizations in the government and private sector have expanded their web presence through their official websites as well as through social media platforms such as Facebook, Twitter and Instagram. In the social media sphere, there are also many support groups, especially for health related issues such as cancer awareness and breastfeeding. In recent years, there is a marked increase of small businesses selling online via social networks. Most of these small businesses are owned by Bruneian women. Not only can they reach a wider range of customers, locally and abroad, but also many of them do not need to rent physical shop space to sell their goods and services.

However, there is a fine line between casualness and formality when using the social media platform for e-Services. The government and private sector organizations still need to strengthen their official websites in offering not only descriptive information but also provide functions or e-services which best serve the community.

3.1.2. Country Specific (Potential) Demand for e-Services

In an initiative to identify e-services perception and usage of ASEAN women and their needs to promote their livelihood, the Asia Pacific Women's Information Network Center (APWINC) of Sookmyung Women's University of Korea with the support of ASEAN and the Ministry of Foreign Affairs (MOFA), Korea, recently invited member countries of ASEAN to participate in a project entitled 'Development and Delivery of Livelihood-based e-Service for ASEAN Women'.

As with its ASEAN counterparts, Brunei's contribution was in terms of a recent survey on 100 Bruneian women and an analysis report based on the survey. The study first involved administering a questionnaire prepared by APWINC to a random sample of the local female

[10] http://www.bt.com.bn/business-national/2014/05/07/060514-kjs-gitrindvuse
[11] https://www.facebook.com/permalink.php?story_fbid=207771319329282&id=244617012290086
[12] http://www.brusearch.com/news/112050

population. The condition was that the respondent must be at least 18 years old and knows how to access and use the internet. The questionnaire was disseminated mainly via email, Facebook and face-to-face. Snowball sampling was used to reach out to a more diverse range of Brunei women. The majority of the questionnaires were self-completed.

3.1.3. Future Directions of e-Services

The study identified some existing websites for Bruneian women – see Table 1. Most of these sites, if not all, on women-related issues hold descriptive information with no interactive e-services.

There are many women associations and welfare bodies in Brunei representing the interests of women from all walks of life and line of work. For example, The Council of Women of Brunei Darussalam (CWBD)[13] is an overarching body for thirteen member associations. Most of these associations have yet to establish a strong web presence and develop up to the scale of providing e-services to the Bruneian women communities.

In waiting for such e-services to become available, many Bruneian women have resorted to creating support group sites via social media for health-related issues such as breastfeeding and cancer awareness.

[Table 3.1-1] Examples of e-Service Areas

Application Areas	Current e-Services
General Policy Outreach	- International Women's Club of Brunei: http://www.iwcbrunei.org/ - Women Services, Community Development Department (JAPEM), Ministry of Culture, Youth and Sports: http://japem.gov.bn/perkhidmatan/women.htm
Women's Health	- eBunda: http://eBunda.org - Brunei Breast Cancer Support Group: http://pinkribbonbrunei.blogspot.com/ https://www.facebook.com/pages/Brunei-Breast-Cancer-Support-Group/118950751450862 - Brunei Breast feeding support group on facebook: https://www.facebook.com/groups/bruneibreastfeedingmo

[13] http://www.mwbd.org/

	mmies/ - Brunei Women's Health on facebook (closed group) https://www.facebook.com/groups/kesihatanwanitakitani/ - On Raising Sons on Facebook (closed group) https://www.facebook.com/groups/raisingsons/
Women's Economic Participation	- The Council of Women in Brunei Darussalam (CWBD) http://www.mwbd.org/ with its member associations[14] - PERTIWI: Pertiwi Association - WI: Women's Institute of Brunei Darussalam - PANDU PUTERI: Girl Guides Association of Brunei Darussalam. - BAKTI: Welfare Association of Wives of the Brunei Darussalam Armed Forces. - BISTARI: Welfare Association of Wives of Brunei Darussalam Government Officers - PKP : Women Welfare Association of Belait District - PGGMB: Brunei Malay Teachers' Association (Women Section) - PSW : Women Graduates Association - PERGANITA: Confederation of Women Welfare Association of Tutong District - BAKANITA: Welfare Association of Women of Lambak Kanan National Housing - PERBEKAL: Youth Association of Kampong Lambak (Women's Section) - PEWAJA: Women Association of Kampong Junjongan - PNI: Nurul Islam (Women Islamic Sisters) Association
Gender Policy Monitoring	Statistics from Brunei Department of Economic Planning and Development (www.depd.gov.bn/) and Authority for Info-communications Technology Industry (www.aiti.gov.bn/)

There were many recommendations elicited from the survey:

1. A need for a one-stop agency for the public, and not just for women, for a host of government e-services such as enquiries, renewal of licenses, registration, payments in areas such as vehicle road tax, driving licenses, insurance, health checks and appointments and immigration services.
2. A need for a dedicated e-services platform or single portal on women e-services in Brunei with ubiquitous and reliable access.
3. A need for the portal to be informative, interactive, user friendly, updated, efficient, secure, with quick response times.

[14] http://www.mwbd.org/#!members/c1pid and http://www.mwbd.org/#!members-info/c1huv

4. A need to promote and raise awareness of existing websites on women-related issues.
5. To learn from practices outside Brunei e.g. Singapore Health Promotion Board[15] and Australian Breastfeeding Association[16] and the UK Women's Aid.[17]
6. A need to periodically evaluate such e-Services and look for areas of improvement.
7. A recommended list of e-services for women and the public in general:
   - Health – Cancer awareness for women, online access to health clinics, appointments, doctor's consultations, breastfeeding, vaccines to prevent cervical cancer, when to do tests, support groups for rare illnesses such as polycystic ovarian syndrome (PCOS)
   - Women community support groups – fundraising, to help families in need, where to seek help or report on domestic and sexual abuse, and where to find religious events and activities.
   - Leadership programs for women
   - Busy mothers – tips, daycare centers, immunization for babies, health clinics
   - List of women-related NGOs, community based activities for women
   - Small businesses - to support women entrepreneurs on areas such as obtaining finance, writing business proposals, keeping accounts, and tips on how to sustain their businesses in the face of competition

There is thus a strong need for e-services to address the different needs of Bruneian women, especially in the areas of health, welfare and development. There is much that can be done to develop a spectrum of women-related e-services to serve the female community in Brunei.

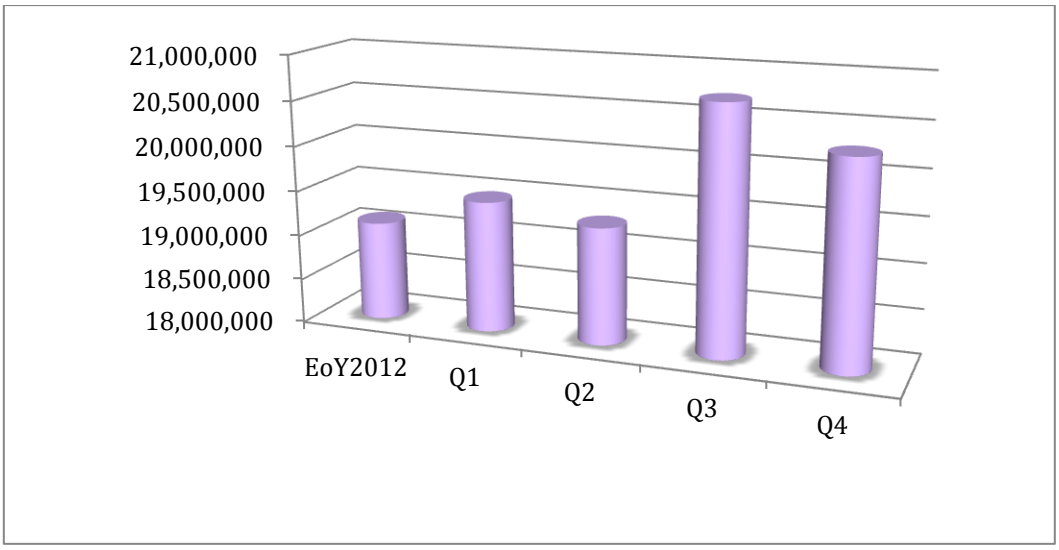
[15] http://www.hpb.gov.sg/
[16] http://www.breastfeeding.asn.au/
[17] http://www.womensaid.org.uk/

3.2. Cambodia [18]

3.2.1. Current Status of e-Services

The worldwide growth of Information and communication technology advances Cambodia into a digital age. Cambodian was claimed to be the first country in the world that has more mobile phones than fixed phones or landlines, with the average of 1.3 mobile subscriptions (Simon, 2012). In 2013, the number of mobile subscribers has reach to 20 million, exceeding the total number of population by around 5 million. The number of mobile phone subscribers increase significantly from 19 to 20.2 million subscribers, between 2012 and 2013, which surpassing the total population by around 5 million (Telecommunication Regulator of Cambodia, 2014).

[Figure 3.2-1] Mobile Phone Subscribers



Source: Telecommunication Regulator of Cambodia

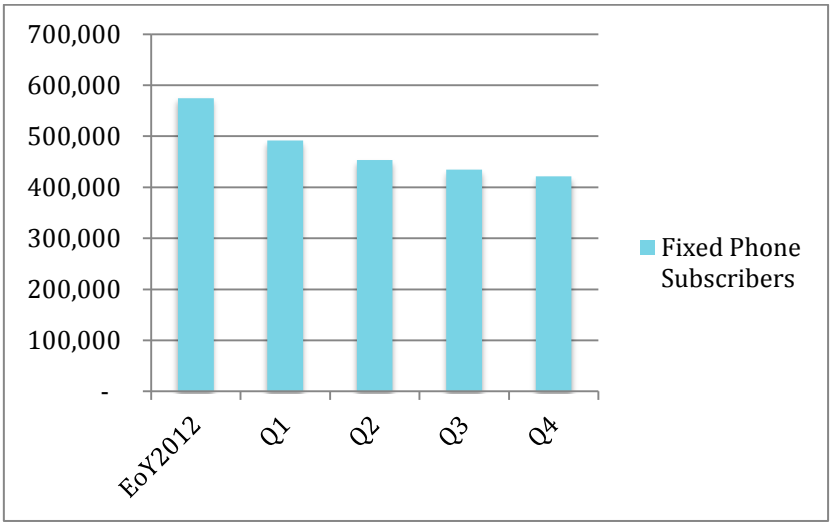
In contrast, the number of fixed phone subscribers has a sharply drop from 574,524 to 420,942 subscribers (Telecommunication Regulator of Cambodia, 2014).

There is a growing up of number of people using mobile phones since the low price of mobile phones in Cambodia plus having many beneficial functions (Sokhean, 2014). While the number of mobile subscribers increasing, the number of Internet users is also jumped. Internet users per

[18] Written by Ms. Huot Sovanneary, National Sociologist, Emergency Food Assistance Project-Additional Financing, Cambodia

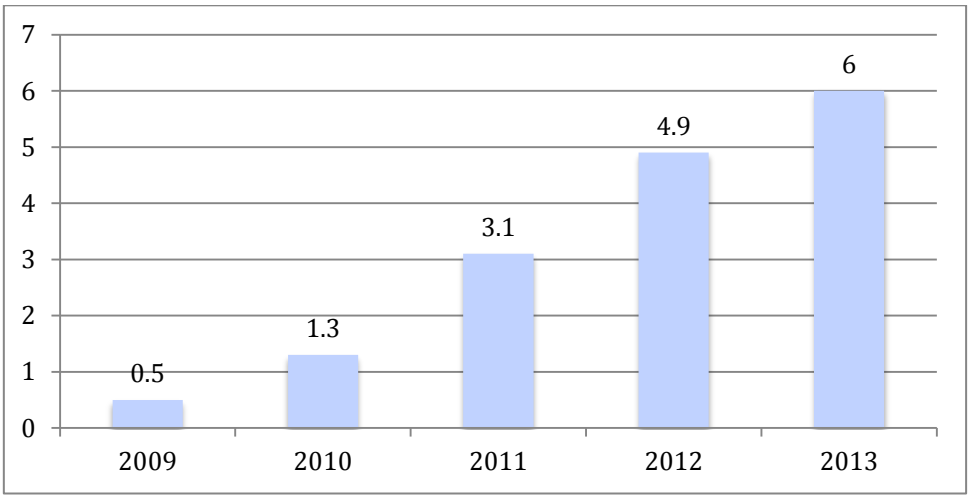
100 people increase remarkably from 0.5% in 2009 to 6% in 2013 (World Bank, 2014). In that fact, Cambodian opposes the rank of 15th country in the world in terms of mobile's sharing of Internet activity (Simon, 2012).

[Figure 3.2-2]: Fixed Phone Subscribers



Source: Telecommunication Regulator of Cambodia

[Figure 3.2-3] Internet User per 100 People

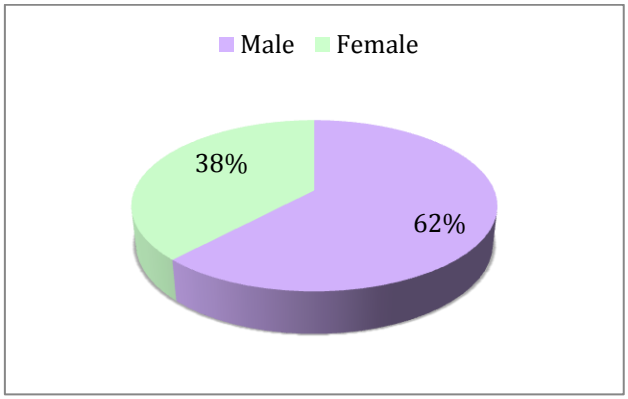


Source: World Bank data Indicator

The expansion of Internet service and the availability of functional mobile phones have brought the rapid growth of online social media like Facebook, Twitter, WhatsApp, YouTube and so on in Cambodia. Notably, there are approximately 81% of Cambodian users accessing Facebook using

their mobile devices. According to Immanuel (2014), Facebook has been found as the most popular Social Media in Cambodia. In total, there are around 1,420,000 users actively online every month, of which 38% are females.

[Figure 3.2-4] Facebook Users



Source: Greek in Cambodia

[Table 3.2-1] The Top Facebook Pages in Cambodia

	Facebook Pages	Number of Fans
1	Music	860.000
2	Art	740.000
3	Fashion	740.000
4	Travel	720.000
5	Sports	700.000
6	Movies	680.000
7	Game	620.000
8	Reading	620.000
9	Beauty	600.000
10	Auto Motor	560.000
11	Drinking & Beverages	560.000
12	Politic	540.000
13	Restaurants	460.000
14	TV Shows	440.000
15	Gardening	440.000
16	Cooking	420.000

Source: Greek in Cambodia

The development of Information and Communication Technology (ICT) has brought rapid change in social, economic, political and cultural transformation. It is changing the way of people's life and also changing the way of government's work. Many governments have been harnessing ICT to better their services for their people. The Royal Government of Cambodia, by being aware of the potential of ICT, since 2000, has been issuing the policies to adopt and promote the use of ICT in government agencies and in other sectors and has included "promoting extensive use of Information Technology in all aspects of governance and government" in the National Strategic Development Plan (NSDP) 2006-2010.

A. Information Communication and Technology Policies

The Royal Government of Cambodia has put lots of effort in enhancing the status of ICT services in Cambodia. A number of policies and sub-decrees have been drafted and enacted.

The objectives of National ICT Policy:

- Provide citizen and key stakeholders a clear ICT legal framework.
- Provide awareness rising on the role and potential of ICT to the national level in the empowerment of people and in enhancing governance with the emphasis on sustainable development.
- Create a culture of lifetime learning to maximize the existing potential of Cambodian people and accelerate innovation to develop a knowledge-based system.
- Reduce the wide gap in living standards between the population living in the capital and those in the provinces, which is closely linked to the existing digital divide of information accessibility (development of basic infrastructure on a nationwide level).
- Increase the competitiveness of national industry with the establishment of an adequate business environment, and improve the quality of life and the access that Cambodian people have to convenient services through the promotion of the application and implementation of appropriate ICT.
- Encourage the development of the national ICT industry by facilitating the widespread adoption of ICT applications and implementation of ICT development.

National Information Communication and Technology Policy

In achieving the development goals of ICT in NSDP and in boosting the socio-economic development, human development, poverty alleviation and in bridging the digital gap in the country, the Royal Government of Cambodian (RGC) has committed to the development of a National Information and Communication Technology (ICT) Policy with its vision of upgrading Cambodia to become a globally competitive, knowledge and information sharing based society,

being able to provide ICT base solutions to improve the sustainability of socio-economic development. To achieve the said vision, ICT policy has mission in integrating ICT activities in and providing a conductive legal and regulatory framework for the public and private sectors to improve social and economic motivation and the infrastructure investment in e-commerce capacity building. The goals of the National ICT policy focuses on creating and providing a national framework and policy for enabling the contribution of ICT towards the achievement of national development goals; providing universal services and accessibility to information and communication facilities for the global competition and productivity; and transforming Cambodia into a knowledge-based society by proper implementation of ICT (National ICT Policy, 2009).

ICT Policy in Education, Ministry of Education, Youth and Sport (MoEYS)

Cambodia is still at the emerging state for most of the dimensions of ICT in education, although it started to develop the plans and policies in education policy since 2004. The Ministry of Education, Youth and Sport (MoEYS), in 2004, with the technical assistance from UNESCO and financial support from Japanese Funds-in-Trust (JFIT), was the first ministry that initiated the formulation of educational ICT policy and strategies in Cambodia. In 2005, MoYES started to implement the policies and strategies on Information and Communication Technology in Education in Cambodia. This policy introduces various initiatives to facilitate greater integration of information and communication technology to improve the effectiveness of education at all levels and to produce the technologically literate, productive and critically thinking workforce for the country.

There are three main goals of formulating the policy and strategies on information and communication technology in education:

1) Increased access to basic education for all, both formal and non- formal by using ICT as one of the major tools for learning, teaching, searching and sharing information;
2) Improved quality of basic education and promoted independent and lifelong learning, especially for post-primary education; and
3) Availability of workforce with the ICT skills needed for employment and use in a knowledge-based society to ensure that Cambodia can compete and cooperate in an increasingly interconnected world (MoEYS, 2004).

The Ministry's articulation of the policy for ICT in education focuses on four main areas: a). Provide access to ICT for all teachers and students, especially at secondary level, ensuring that ICT is used as an enabler to reduce the digital gap between Cambodian schools and other schools in neighboring countries; b). Emphasizes the role and function of ICT in education as a teaching and learning tool in different subjects, and as a subject by itself. Access to information on the

Internet and increased communication, via email, between schools and individuals can play an important role in the professional development of educators. In addition to radio and television as a teaching and learning tool, this policy stresses the use of the computer for accessing information, knowledge, skills, and communication; c). Promote education for all regardless of age, gender, ethnicity, disability or location through distance education and self-learning, especially for deprived children, youth and adults who lack access to basic education, literacy and skill training, by integrating ICT with radio, television, printed materials and other media; and emphasizes using ICT to increase productivity, efficiency and effectiveness of education management. Through the use of information management systems, ICT will be extensively used to automate and mechanize work such as the processing of student and teacher records, communication between government and schools, lesson planning, assessment and testing, financial management and the maintenance of inventories (MoEYS, 2004).

To enhance the effort of achieving the goals of Education For All (EFA), to apply the Education Strategic Plan 2009-2013, and to achieve the Ministry vision "establish and develop human resources of the very highest quality and ethics in order to develop a knowledge-based society within Cambodia", as well as to make education and management more efficient and effective by the use of ICT, the Ministry of Education Youth and Sport, in 2010, has developed Master Plan for information and communication technology in education for 2009 – 2013. The general objectives of Master Plan are as follows:

1) To increase access to basic education, tertiary education and life-long learning, both formal and non-formal, by using ICT as alternative education delivery media.
2) To improve the relevance and effectiveness of basic education by harnessing the potential of ICT as a major tool to enhance the quality of teaching and learning.
3) To develop the ICT-based professional skills needed by graduates for employment in a knowledge-based society and in order to ensure that Cambodia can compete and cooperate in an increasingly interconnected world.
4) To increase the effectiveness and efficiency of Ministry and school management. Coordinated by the ICT in Education Office, each major department of the Ministry of Education, Youth and Sport will be responsible for specific objectives of the Master Plan (MoEYS, 2010).

Master Plan concentrates on increasing the preparation and employability of students by giving them ICT-based professional skills and other pre-university skills; increasing access to information and research for higher education, reaching out to more students through distance education, and improving the distribution of research and subject-based materials through a web-based clearinghouse; improving teacher training by using video and multimedia as a teacher

education support materials to improve their teaching and administration skills through the use of computers and other forms of ICT; and reinforcing non-formal and informal education by creating materials for self-training for the equivalency examinations, and by developing video materials for income generation programs of the Community Learning Centers (CLC) (MoEYS, 2010).

B. The Current Status of e-Government Services

E-government refers to the utilizing of information technology by governments to enhance the access and delivery of information and services to citizens, business partners, professionals, other institutions, and government agencies themselves (McClure, 2000, Symonds, 2000 and West, 2004 as cited in Nripendra, Yogesh, Michael, 2012). The National Information and Communication Technology Development Agency (NiDA), that was established by the Royal Decree on 23 August 2000 has played the important role in promoting ICT in the Cambodian country. NiDA has been mandated to formulate and implement IT promotion and development policy, and to monitor all IT related projects in the Kingdom of Cambodia. NiDA has implemented e-Government projects, Government Administrative Information Systems (GAIS) and Provincial Administrative Information Systems (PAIS), which have been constructed over National Information Infrastructure (NII). Preparing the effective use of National Information Infrastructure (NII) and the need of e-government application, NiDA has been working in cooperation with JICA to prepare the e-Government Service Deployment Plan. The e-Government Service Development Plan has been divided into seven stages: i). Enabling environment, ii). Essential inter-ministry application, iii). Enhance government portal, iv). Common online interface, v). Business Portal, vi). Citizen's Portal, and vii). Enhanced e-service (National ICT Policy, 2009).

As the least developed country the Royal Government of Cambodia has put the effort to set up and enhance ICT services for its citizens. The government has equipped ICT infrastructures at the public institutions agencies and has built the capacity of government official on the use of ICT.
The survey result of United Nations (2010) stated that

"Least developed countries have no real e-services, nor are they providing citizens with transactional opportunities, ... The vast majority of the sites surveyed primarily contain e-information and the beginning stages of citizen engagement with polls and feedback forms ..."

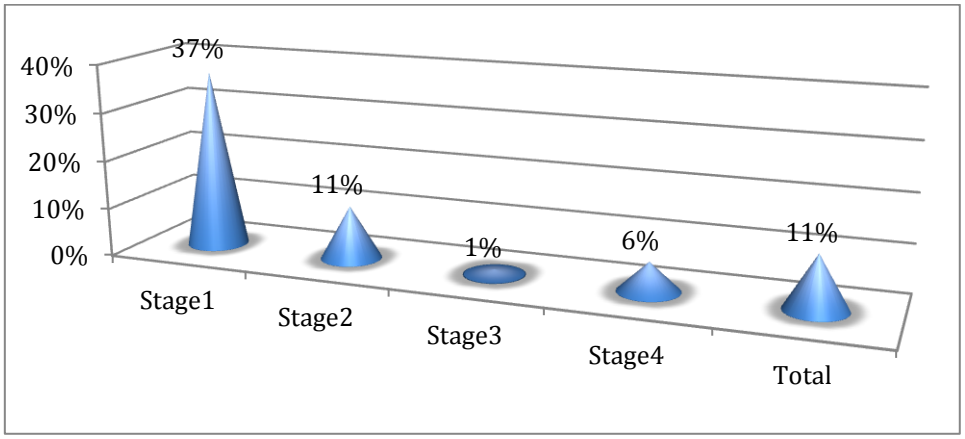
The survey by World Bank Group (2010) shows that there was a significant improvement of ICT infrastructure in Cambodian government and there was some progress of human capital. However, the improvement of ICT in general is still somehow limited. Although most of public institutions

agencies have their website developed, few websites cannot be accessed, as they are currently under construction or information is not available, for instance website of the Ministry of Women's Affairs. Some webs provided reliable and up to date information such as Ministry of Education, Youth and Sport, Ministry of Economy and Finance, Ministry of Commerce and Ministry of Interior, whereas other webs provide static information and only activities of their ministries government such as Ministry of Post and Telecommunication. Some data and reports are not available. Although quite a number of ministries provide reliable information, data and reports, e-service implementation within government agencies and between government, citizens and businesses is relatively low. According to the United Nations (2010) although RGC has committed to boost e-government service in Cambodia, the level of its service is still very low. Compare to the South East Asia countries Cambodia is in the 8th rank follow by Myanmar and Lao People's Democratic Republic. For the world e-government development ranking, Cambodia is moving backward from 139th place in 2008 to 140th place in 2010.

Most government websites in Cambodia are at the stage one, have no real e-services with limited transactional aspect of e-government services. The United Nations illustrates government online services in four stages: i) Emerging information services, ii) Enhanced information services, iii) Transactional services and iv) Connected services.

Broadcasting information on websites in local language is important, as most people, in both urban and rural areas, having limit capacity in English language. According to the study, there were only 12 out of the 21 existing websites provided contents and information in Khmer language, those are OCM, MOC, MCFA, MEF, MOE, MOH, MIME, MoInfo, MPWT, MRD, MOT and PPM (NiDA & JICA, 2009) NiDA in joining with Japan International Cooperation Agency (JICA), in 2008, has conducted the study at 29 government agencies in Phnom Penh on their e-Government readiness. A year later, follow-up survey has been conducted by NiDA and JICA for assessing the progress of e-Government services deployment of each government agency whether it is on the right track. The result of the study shows that there is a minor progress in e-Government readiness. Nonetheless, it revealed that e-Government status of some government ministries remain the same. The comparison between the two studies shows the minor improvement of the e-Government readiness index in all four aspects. The average of the total index in 2008 and 2009 were 2.20 points and 2.41 points, respectively.

[Figure 3.2-5] Online Services Levels



Source: United Nation E-Government Survey 2010

[Table 3.2-2] Average e-Government Readiness Index Comparison between 2008 and 2009

	Pillars	Ratio 2008	Ratio 2009
1	ICT management capacity and leadership	0.64	0.70
2	Financial resource	0.51	0.56
3	Infrastructure	0.54	0.56
4	ICT literacy and experience	0.50	0.59
	Total	2.20	2.41

Source: The Follow-up Study Report on e-Government Service Deployment Plan for Royal Government of Cambodia (NiDA & JICA, 2009)

The e-Government ministries have been categorized into three levels namely Advanced, Average and Behind. The "Advanced" level of ministries have accomplished a significant improvement; the "Average" level are endeavoring to move forward; whereas, the "Behind" level seems less motivated, which are going to face a long journey to reach the "Advance" level. The study shows that most of the ministries have their e-Government ministries improved (see table 2). The ministries that achieved remarkable progress were reported of having support from donors.

[Table 3.2-3] Advance, Average and Behind categorized of Ministries of 2008 & 2009

Category	Total Index	Result of 2008	Result of 2009
Advanced	> 2.4 points (more than 60%)	OCM, MEF, MFAIC, MoInt, MOP, MOT, PPM	MoInt, MOEYS, MOH, MOInfo, MPTC, MOT, MAFF, MLMUPC
Average	<2.4 points>1.8 point (45% above average)	MOC, MCFA, MOEYS, MOH, MIME, MOInfo, MLVT, MOND, MPWT, MRD, MOWRM, SSCS, SSCA	MLVT
Behind	<1.8 points (45% below average)	MOE, MONASRI, MOSAVY, MWA	MOE, MWA
Unknown	Not available	MAFF, MOJ, MPTC, MRC, MLMUPC	

Source: The Follow-up Study Report on e-Government Service Deployment Plan for Royal Government of Cambodia (NiDA & JICA, 2009)

C. The Implementing e-Services

Although e-government service is still at the first stage (UN, 2010), the Royal Government of Cambodia has made some progress on the development of its e-services on e-Visa and e-Banking.

E-Visa

The ministry of Foreign Affairs and International Cooperation of the Kingdom of Cambodia, in April 2006, has introduced the Cambodian e-Visa or Electronic Visa via website http://evisa.mfaic.govkh. On 15 August 2014, the Ministry has launched a new official website for Cambodia e-Visa as www.evis.gov.kh in lieu of the current website. The new website will be effective from 19 August 2014. Thus, tourists still can apply for a Cambodian e-Visa through the URL of the Ministry's website at www.mfaic (MoFAIC, 2014). The e-Visa platform supports up to 25 languages worldwide. Interestingly, there is an increasing of number of e-Visa lanes in major checkpoints from the initial 5 lanes to 20 lanes. The number of e-Visa applicants has reached 55,000 applications by present. Cambodia e-Visa can be downloaded from iPhone, iPad and Android devices (MoFAIC, 2014).

E-Banking

E-Banking service has been firstly introduced to Cambodia by ANZ Royal, includes Internet Banking and ATM. E-baking service has been adapted by most of banks and by some Micro Institutions in Cambodia includes ANZ, ALEDA, FTB, Canadia, Campu, Prasac and more. Not all banks provide the same services of e-Banking. Each bank/micro institute offer e-banking services to customers based on the ability of the bank itself. The e-banking services that are

offered by Cambodia include Internet Banking, ATMs, Debit and Credit Cards ATM bill payment, Mobile phone top-ups, EFTPOS and Unity. Below are the e-Banking services of ANZ Royal and CLEDA Banks:

Payroll System

Ministry of Economy and Finance (MEF) was implementing the Government Public Financial Management Reform Program, and the National Treasury was sanctioned by NBC to work with private Banks. The Government Public Financial Management Reform Program helps the government budget more credible and will make the process of budget more efficient and reduce opportunity for corruption (Rob cited in Cheang, 2006). Changing the cash payments system is among program to be reformed by MEF. The cash payments system for the government officials has been gradually diminished. In 2006, the new payroll system has been started its pilot testing with several hundred officials in the Ministry of Economy and Finance (MEF) and the Ministry of Health. The new payroll system was limited to staff who had position from Deputy Director of Department and above, and who had salaries from USD 150 or more per month. After the success of piloting of new payroll system, the government has gradually reformed from cash payment system to new payroll system. Recently, MoU between MEF and two banks (ACLEDA and Canadia) and WING have been signed for the wage of 400,000 servants from 39 government ministries. This payroll system is scheduled to get the paid via a new electronic banking system. There were two banks (ACLEDA and Canadia) and WING (Micro Finance Institution), to provide payroll services to government staff (Muyhong, 2013).

Social Media/Facebook Pages

At the emerging stage, as real e-government services is still at the first stage, some government ministries have signed up Facebook pages, especially, for their agencies mainly to provide information, legal documents, Prakas, or announcements related to the agencies to citizens. In addition to Facebook pages of their ministries/ agencies, they have also signed up the Facebook personal page to show their agencies activities to the audience as well. For example, the ministry of Education Youth and Sport has Facebook page for ministry (www.facebook.com/KhMoeys) and personal Facebook page of Minister (www.facebook.com/hang.naron). The personal Facebook page provides information mostly the activities at the Ministry as well. In this regards, Facebook could serve as a part of e-services because it can provide information to the public, and people can post questions, but the rate of answering is to some extent only.

D. Challenges

Having dedicated ICT office is very important in improving e-Government services. Some government agencies have been working to setup ICT offices. It was noticed that some “Behind”

categorized agencies that mostly do not have dedicated ICT office apparently have little ideas on how ICT can profoundly affect the performance of an organization. This is because they were solely focusing on the technological potential of ICT only. They did not consider what ICT may bring to ensure corporate governance within the ministry (NiDA & JICA, 2009).

Having dedicated ICT office is very important in improving e-Government services. However, without having adequate authority, the ICT governance would be poor. Some government ministries that have dedicated ICT Offices were found out to be poor in ICT governance due to inadequate authority. MoInt and MoInfo were the only government ministries with a department dedicated the ICT services to the ministry-wide. There is a limited amount of information sharing within units at the ministry or across ministries. Information is rarely disseminated and distributed freely, even among the units, especially within the "Behind" ministries. Having inadequate authority of the ICT office, ICT personnel are not allowed to collect information and to involve in ICT projects of other departments (NiDA & JICA, 2009). The scope of information sharing is based on personal relationship. This practice and thinking leads to the lack of resources for data collection, and create barriers to construct centralized information system. Therefore, strengthening the existing governance concepts within e-government is an important step towards in improving the coordination of process and system within and across government ministries, and changing the way that government operates. Additionally, it is essential to empower ICT personnel, so that they can take the initiative in ensuring the support from all relevant departments (World Bank Group, 2010).

Receiving low salary of civil servants is another reason of slowing down of the human resource development at the government agencies. Most of the government agencies failed to retrain ICT personnel. The reasons of facing difficulties in retraining their personnel capacities includes lack of ability, low level of incentives and less courage in putting the theory into practice (NiDA & JICA, 2009). Getting better opportunities in the private sector and receiving low wages at the government agencies are disincentives for recruitment and retention of ICT professionals in government. Although some officials expressed eagerness to find better ways to provide IT support service to their staff, the retaining IT staff is difficult. The monthly payment for the IT position in government an average is around $100, while teaching position at a university is around $250, and the salary for an IT position in the private sector starting from $250-$400. Additionally, the private sector offers chances for the promotion and the increasing of salary up to $800 (World Bank Group, 2010). Therefore, young ICT graduates tend to shift their work to the private sector or have part-time jobs.

3.2.2. Country Specific (Potential) Demand for e-Services

Although there are quite a number of government ministries that have set up websites for their agencies, there aren't any websites that have been designed specifically for the benefit of women. The Ministry of Women Affairs should play the important role in providing e-services to women. However, this ministry seems fail to accomplish her role and to follow the MDG. Since 2009, the ministry was rated as "the behind ministry" (survey conducted by NiDA and JICA, 2009). Until present, there has no any progress of the website development has been made. The website cannot be accessed, as it is under construction.

One of the reasons of having less public e-services for women is that there are only a few women participating in ICT unit. This would have been a result from lack of gender awareness for the level of ICT decision-making. The result from a survey in 2009 by NiDA & JICA shows that out of eleven ministries, there were only two ministries that had female staff at the ICT unit. The social attitude towards involving women in the technology fields is also a barrier for women participating in ICT. The survey conducted by the Open Institute in collaboration with the Ministry of Women's Affairs (MoWA) and Ministry of Education, Youth and Sport (MoEYS) in 2010 on Women and Information Communication and Technology show that the proportion of female students graduated Bachelor and Higher Degree in ICT in three majors (Computer Science and Engineering/Information Technology, Electronics and Electrical Science, and Media and Telecommunication) was less compare to men. There was only 9 percent in the year 2005-2006 and 17.4 percent in the year 2008-2009.

According to United Nations E-Government survey (2010) Cambodia has no real e-government services for its citizens and the majority of websites contain e-information and at the beginning stages of engaging citizens with polls and feedback forms only. Thus, the considering of providing e-services for women would not even be at the starting point. In helping the Royal Government of Cambodia to provide some e-services for women, although it's limited, some NGOs, especially the Open Institute, have provided some e-services, as listed below:

Women's Empowerment for Social Change Program of the Open Institute aims to promote gender equality in a society in which women can exercise their rights, build capacity to be self-sufficient, and improve their participant in social, economic and political life. The Women's Empowerment for Social Change Program has been implementing four programs including i) Women's Web Portal, ii) Women's Forum, iii) ICT/Computer Training and iv) Gender and ICT research. These four programs were set up to share the information of women's issues with the expectation to lobby for regulations and policies to support gender equality. This program targets

women's organization, female commune council members and government officials, female teachers and students.

1) The Women's Web Portal: The Women's Web Portal (http://women.open.org.kh) has been severed as a platform for the open discussion and providing the expression of interest related to gender and social development. It makes the availability and accessibility of the local news/media. There are more than 2,000 articles related to gender issues, available on the portal, including economy and development, laws related news, health, domestic violence, social security, information technology, elections, human trafficking, editorials, gender, education, capacity building, talent of women and men, and so on. The articles on the Women's portal are regularly updated. The Women's Web Portal provides communication functioning in three means: mailing list, online forum, and web blog. Till date, there are more than 400 members of gender mailing list (gender@lists.open.org.kh) with more than 1,000 discussion posted. The online forum discussion covers more than 20 topics, while the web blog covers around 40 topics. Mailing list is found to be the most useful electronic discussion by using email system. It is one of the most convenient technological tools for discussing and sharing information and knowledge. There are two sub-mailing lists have been set up for this mailing list program (Gender and ICT and E-Learning development). The gender mailing list is for those who are working on gender related issues, while the e-learning mailing list is for those who are working in the education sector and e-learning area. There are 400 members that have been registered in the Gender and ICT mailing list with around 1,000 of discussion posting; whereas, the member of the e-learning mailing list is about 170, with posting of around 400.

2) Women's Forum: It facilitates and animates electronic and direct discussion between women's organizations and other concerned institutions/agencies to create the largest possible amount of synergies and share information among them. A series of forum have been organized for discussing the important and emergency issues related to women and social development. The participants of the forum are from NGOs, government institutions, secretariat of senate, and media agencies. The findings and recommendations from the Women's forums have been published and share with relevant ministries, senate, NGOs, media agencies and public.

3) ICT/Computer Training: The aim of ICT/Computer training is to enhance synergies of organizations/agencies working with women. The training courses cover Khmer UNICODE, Open Office application, Internet and Email. The participants of ICT

trainings include NGO staff, Government Official, Senate, Royal Palace, commune council members, Court Official, private companies and universities.

4) Gender and ICT Research: Gender and ICT Research: The Gender and ICT carriers research to explore opportunities and obstacles of women in accessing to ICT. The research's findings and recommendations are to be distributed and submitted to women's organizations and government for policy formulation and further actions.

The Gender Based Violence (GBV) of the Open Institute has been set up to empower women's organization in Cambodia in using information and communication technologies (ICT) for reporting GBV incidence, and to assist RGC' s in responding and implementing the National Action Plan to End Violence against Women. The Gender Based Violence (GBV) project implemented by the Open Institute in cooperation of the Ministry of Women's Affairs and the National League of Communes/Sangkats (NLC/S), in 379 communes of 4 provinces in Phnom Penh, Battambang, Siem Reap and Kampong Thom, with more than 10,000 councilors. It is led and funded by the Association of Progressive Communications (APC). The project has set up Ushahidi platform (http://gbv.open.org.kh/) for widely uploading and retrieving information, news, and reports related to violence against women with visualization and interactive mapping. Ushahidi is the first database system allowing public view and report GBV cases in Cambodia. Ushahidi has been developed in the simple feature and in national (Khmer) language, which reduces barrier for users who do not have any foreign language ability, plus it is self-explanations of terms and the way of using it. Thus, it is easy for local people/commune councilors/NGOs capture the important data regarding GBV in their communities. The institutions/agencies working on violence against women and the available services can be also searchable via Ushahidi. People working on and the victim of GBV can access to laws, regulation, policies, and the information of services related to GBV there. The project has provided training courses on data collection, on using and reporting Ushahidi platform to commune councilors and NGOs staff of the Cambodia NGO-CEDAW. It has provided the tools and knowledge that key stakeholders need to record incidences of GBV online that can be viewed by the public, which help to increase awareness of GBV and help to have an immediate intervention. Gender Based Violence project has been considered as the unique project of groundbreaking e-Content in Cambodia. Gender Based Violence project in Cambodia, in August 2013, has been selected to be one of around 500 outstanding e-Content products and applications from 168 countries to enter the second round of the 2013 World Summit Award competition in e-Inclusion & Empowerment category.

3.2.3. Future Directions of e-Services

Being a least developed country and with a low level of providing online services to the public, citizens and business, the Royal Government of Cambodia has committed some following actions:

1) Government supports and encourages all government institutions and universities to establish computer networks and install other ICT systems.
2) Government continue install and upgrade reliable and appropriate ICT infrastructures throughout the country.
3) Government to promote private sector and foreign investments in the ICT infrastructure sector.
4) Government will allow and streamline the use of Voice Over Internet Protocol (VoIP), session -Initiated Protocol SIP) and any other latest technologies throughout the country.
5) Government is committed to develop the capacities of rural areas to develop and manage content on ICT systems.
6) Government will establish appropriate legal instruments to check and control improper use of ICT such as spams, viruses, web squatting, fraud, copy right violation, denial of service, unauthorized entry, privacy infringements, misleading media content, and inappropriate broadcasting.
7) Government will streamline a standard reporting system for all public service activities.
8) Government will support and encourage government agencies to develop respective network application systems.
9) Support the e-Government system and mobilize resources for its expansion to all provinces.
10) Government will continue to monitor and ensure that the official information and contents are homogenous and correct.
11) Support and promote for more Community Information Center (CIC) in the country.
12) Introduce standard ICT curriculum in educational system.
13) Support the use of ICT for formal and non-formal education, skills development and adult learning regardless of age, gender, ethnicity, disability or location.
14) Mandate the Ministry of Education Youth and Sports to provide basic ICT training to all teachers
15) Promote the use of ICT to encourage transparency, competitiveness, efficiency in public and private sectors.
16) Enhance the level of ICT literacy among the population; develop regionally competitive ICT experts and ICT savvy human resources; and support Women in Development (WID) in the ICT Sector.

Beside the government, private sectors have played crucial roles in the development of the country's economy. Likewise, the rapid growing of mobile phones and social media has made the large contribution the social economic growth.

There will be an increasing of e-service of paying, transferring and other transaction of money via mobile phones. According to the National Bank of Cambodia cited in Don, (2012) the services of transferring money via mobile phones have a fledgling market in the Kingdom of Cambodia with about 400,000 users. WING will introduce a new service that allows people pay their restaurant bills by waving on their mobile phones in front of a terminal at the register. Near-field communications (NFC) technology to be introduced by WING's mobile platform for smaller payments, such as purchasing a cup of coffee, according to WING chief operations Officer Anthony Perkins cited in Gregory, (2012). ACLEDA Unity is preparing to expand its own mobile services, enabling people to quickly pay for things just by touching their phone to a point-of-sale terminal (Gregory, 2012).

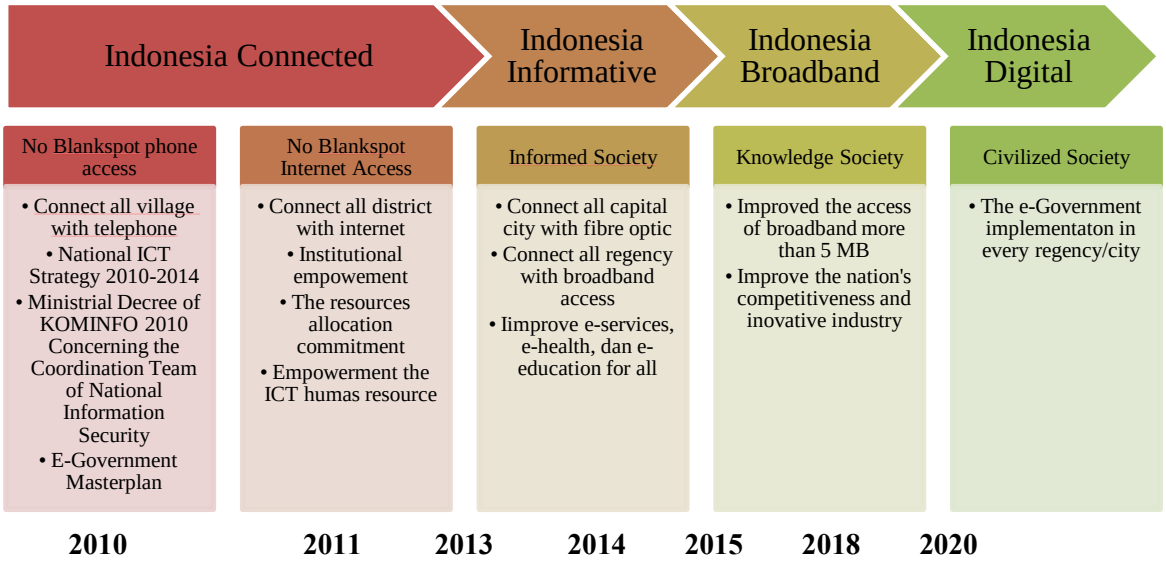
In Addition, the rapid increase of social media users altered the behavior of Cambodians. The users can access media anywhere, anytime, through laptops and smart phones. They, especially youth, participate and engage in information sharing and actively give feedback and comments in real time (Sotherith, 2012). The advertising via social media, especially Facebook has been seen as the advertising tools for business in the present and the future. There will be more and more companies operating in Cambodia realizing the value of targeted marketing strategies through social media networks such as Facebook. Local companies use Facebook to segment their audience specific to their products offering (Daniel, 2013). Similarly, E-commerce in Cambodia would set to boom in the coming years as a result of the rapid technological development and the eagerness of new generation on new technology. E-business and e-commerce will make businesses easier, save time and low operation cost.

3.3. Indonesia[19]

3.3.1. Current Status of e-Services

A. National ICT Road Map

[Figure 3.3-1] ICT National Development Roadmap



Source: Ministry of Communication and Informatics, 2013

The importance of information for each citizen has been acknowledged and understood by the Indonesian government as a right that should be granted to all citizens. This acknowledgement is constituted in the Indonesian Fundamental Constitution (UUD 1945); therefore, Information and Communication infrastructure should be built by Indonesian Government and is absolutely Indonesian Government responsibility, as a basic infrastructure for the people to follow the national development. In the future, information is no longer government's domain, but also Public's domain that can be accessed and followed by each individual in Indonesia.

The Institution that has the role and responsibilities to create "Well-Informed Citizen, Civilized and Knowledge Base Individual, is not only Ministry of Communication and Informatics (MCI/KEMKOMINFO), but also all part of society, governmental and non-governmental institution. In this context, KEMKOMINFO has the competence to formulate national constitution,

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implementation rule, and technical regulation in communication and Information sector.
Based on President Decree number 24 year 2010 regarding Position, Role, Function of KEMKOMINFO has a strategic role, to host all communication and information business in governmental system to help President in running the government. KEMKOMINFO has its strategic role in directing information technology and communication development in Indonesia.

KEMKOMINFO vision is to actualize informative Indonesia in order to have prosperous society through KEMKOMINFO continuous development that people-friendly and eco-friendly in Unitary State of the Republic of Indonesia (USRI/NKRI) frame.

The objective of KEMKOMINFO in 2010-2014 periods is classified into 2 main objectives as follow (only several relevant points that related to the study):

Information and Communication Infrastructure Section

- Provides well-distributed communication and information access across Indonesia. (Narrowing Digital infrastructure gap)
- Provides communication and information facilities and services and all districts and rural, boarder areas, furthest islands, rural areas, and the others non-commercial areas to reduce the blank spot.
- Provides modern communication and information access.
- Provides Communication and Information access in non-commercial areas.
- Constitution, regulation, utilization plan, and radio frequencies spectrum resources engineering. Constitution, regulation, spectrum and non- spectrum resources optimization plan.
- Constitution, regulation, and license for quantity and quality of post services.
- Constitution, regulation, and license for quantity and quality of telecommunication services.
- Constitution, regulation, and license for quantity and quality of broadcasting.
- Constitution, regulation, technical assisting, and certification of electronic system, application service and content evaluation. (Evaluation of spectrum and non-spectrum resources optimization plan)
- Constitution, regulation, standard, certification, inter-operability post devices, telecommunication and broadcasting. (Spectrum and non-spectrum resources optimization plan)
- Achieves e-literate society in Indonesia become 50 percent in 2014.
- Provides information and public services that can be accessed via online.
- Industrial and Manufacturer development that support ICT.

Information and Communication Section

- Various operational and distribution of public information and has educational character,

enlighten society in NKRI frame.

- People empowerment and partnership development in public information distribution.
- Provides and develop Human Resources in information and Communication section as provider agent, public information operation and distribution.
- Performance Reports/Measurement (Results) are presented as follow:

Result of evaluation and analysis regarding the performance measurement of KEMKOMINFO based on Main Performance Indicator (MIP)

[Table 3.3-1] Performance Strategic Objectives Reports in Stakeholder Perspective

Strategic Objective	Main Performance Indicator (MIP)	Target	Realization	%
Well-distributed Post, communication and information facilities development across indonesia. (S1.1)	Communication and information access that is well-distributed across Indonesia.	100%	61%	61%
	Percentage coverage of communication and information in all districts, boarder area, furthest islands, rural area, and the other non commercial area to reduce blank spot.	50%	68%	136%
	Percentage of pentetration access and modern communication and information services that can connect all indonesian Area.	100%	136%	136%
	Percentage of information and communication access services in non commercial area.	100%	67%	67%
Available factual and balance information to all area for every layer of society in NKRI framework (S1.3)	Percentage of received, utilized, and developed by local government and Social Institution.	75%	100%	133%

Source: Ministry of Communication and Informatics, 2013

Provides Access through Universal Service Obligation (USO)

Telecommunication Universal Service Obligation (USO) Program is one of the government commitment in KEMKOMINFO to reduce information gap (Digital Divide) that also form of mandate in Law number 36 year 1999 Article 2 about equality and fairness of distribution. The Indonesian government has run several programs to strengthen access point across Indonesia, has

achieved 61% target.

Sub-district Internet Service Center (SISC/PLIK)

PLIK is a program that aims all sub-districts to have Internet service center that channel the access to all villages. Internet development in sub district is not only to provide internet access room, but also to do 'push productive content' and useful content portal. SISC development has started since 2010, it has achieved 5,748 service point.

Mobile Sub-district Internet Service Center (MSISC/MPLIK)

Mobile PLIK is the same PLIK with mobility (delivered by cars) to provide a healthy, safe, educative, fast and budget-friendly. It targets to serve other unreachable sub-district by internet.

Percentage Coverage of Communication and Information in All Districts, Boarder Area, Furthest Islands, Rural Area, and the Other Non-Commercial Area to Reduce Blank Spot

The performance has achieved 68% from 50% assigned target. The facilities that are built through Base Transmission Station (BTS) telecommunication and information in boarder area, furthest island (Telinfo–Tuntas), provide PLIK and provide telephone line with 'Desa Dering' development.

Percentage of Information and Communication Access Services in Non-Commercial Area

From the measurement, it has been achieved 67% out of 100% assigned target. Facilities are built through Broadcasting Institution (LPK), Radio Broadcasting Services in boarder area, and these provide operable M-PLIK.

Provide educative information content services, enlighten and empower society

250 schools from five cities/districts in Yogyakarta with e-learning system program, has been achieved 100%. Those schools provide computer laboratory, information network inter-school, teaching material with ICT-base, software for teaching material development, and teachers' capacity enhancement to teach in ICT-base.

B. e-Government Roadmap

Roadmap of *e-government* 2010-2014 will be implemented in several phases, standardization phase related to e-government master plan development, online services to inform society phase, infrastructure integration by using data center and cloud computing, interconnected services with collaboration capability and integrated services in e-government implementation to push paperless society.

Objective of e-Government Implementation

- Increasing public service quality by utilizing IT in running the government.
- Create a better government with clean ethic, transparence and can handle changes effectively.
- Re-organize structure, management system, and governmental system.

e-Government Development Goals

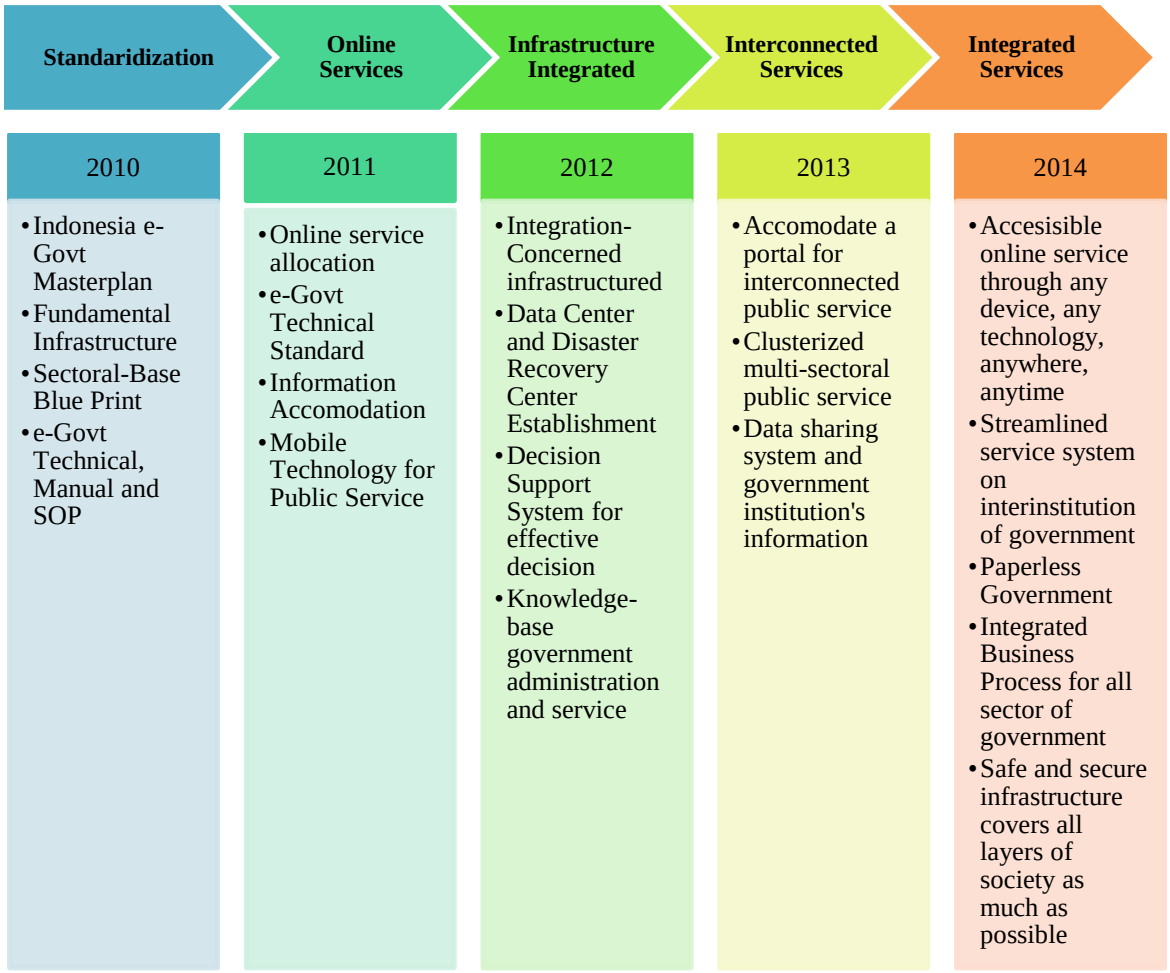
- Create Information system and public service transaction with better quality and affordable.
- Create interactive relationship with business world to increase and strengthen economy capacity to face changes and competition in international trading
- Create communication mechanism between governmental institutions and also facilities for society participation in running the government.
- Create transparent and efficient budget management system and ease the transaction and services inter-institution.

Government Website Ranking

Communication and Information Ministry creates ranking on government website, which is called as Pemeringkatan e-Government Indonesia (e-Government Indonesia Ranking) or Pe-GI. Pe-GI is aimed to provide reference for ICT development and utilization in government environment, give pushes for improvement of ICT utilization in government environment through complete, balance, and objective evaluation, and also to get condition mapping of ICT utilization in national government environment. Implementation of PeGI in ministry level for 2013 consists of 33 ministries in Indonesia.

There are five dimensions to be assessed, which are policy, institutional, infrastructure, software application, and planning. Each dimension has the same points in the assessment because all of them are important, inter-related, and supportive of each other. Ministry of Finance is on the first rank with average e-Government index of 3.57, also gets very good category. The second rank is taken by Ministry of Education and Culture with average e-Government index of 3.44, and on the third rank is Ministry of Public Works with average e-Government index of 3.21. Those two ministries are in the good category.

[Figure 3.3-2] National E-government Roadmap



Source: Ministry of Communication and Informatics, 2013

There are five dimensions to be assessed, which are policy, institutional, infrastructure, software application and planning. The bottom three positions are followed by Ministry of Women Empowerment and Child Protection (1.84), Ministry of Acceleration Development Backward Regions (1.87), and Ministry of Environment (2.08). Those three ministries are in the deficient category. Overall, the number of ministry in the interval of 3.60 to 4.00 with e-Government index ranking category of Very Good is only one ministry (3.03%). There are 19 ministries (57.58%) in the interval of 2.60 to 3.60 with e-Government index ranking category of Good. Others, which are 13 ministries (39.4%), are in the interval of 1.60 to 2.60 with e-Government index ranking category of Deficient. For 2013 PeGI assessment, there is no ministry that happened to be in the interval of 1.00 to 1.60 with e-Government index ranking category of Very Deficient.

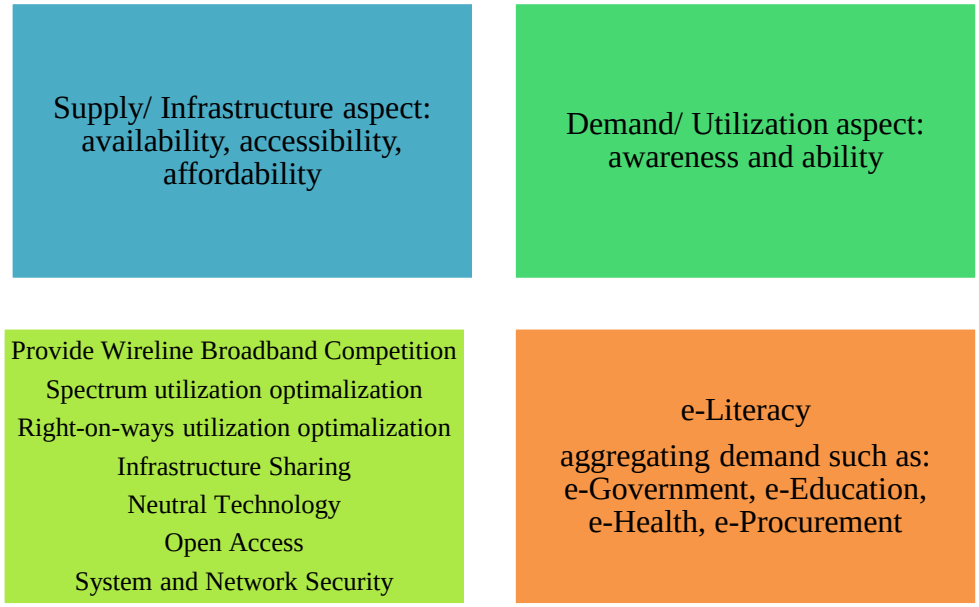
C. National Broadband Plan

The main constitution in broadband development is translated into main strategy of broadband

development consisted of supply/infrastructure aspect through competition and wireline implementation, utilization spectrum optimalization, right of ways utilization optimalization, infrastructure sharing, neutral technology, open access, safe network and system.

The second aspect is the demand/utilization aspect and adoption that consist of digital literation, aggregating demand through e-government, e-education, e-health, e-procurement, e-logistic; and through green with ICT. Both first and second aspects are supported by the third aspect, which is the funding aspect through optimization Universal Service Obligation (USO) budget spending and Government Non Tax Income in ICT Sector, cooperation with government and private company, and also more efficient and more effective ICT budgeting and planning in National Government Budget (APBN). The fourth aspect also support previous aspects, which is regulation and institution framework, consist of the constitution and regulation framework in order to create conducive investment climate and also institution monitoring and implementation of Indonesia broadband Plan.

[Figure 3.3-3] National Broadband Development



Source: Ministry of Communication and Informatics, 2013

D. Regulation Support Dukungan Peraturan

Indonesia already had Law number 14 year 2008 regarding Public information Openness. To support the openness, government institution is obligated to have an official website as a part of facilitation of Public information services responsibilities for society. That point is strengthened

by Information Commission Decree number 1 year 2010 regarding Public information service standard.

Information Commission Decree number 1 year 2010 article 11 regulates obligatory public information in governmental institutions' websites that at least consist of:

1) Institution profile
2) On progress Programs and activities Summary
3) Institution performance Summary
4) Financial Reporting
5) Public Information access reports
6) Regulation, decision, and constitution that affect public
7) Rights and regulation to access public information, and regulation of appeal proposal, information conflict settlement, and responsible party information
8) Regulation of miss-conduct report, authorities, and violations done by any parties
9) Announcement of goods stocks and services
10) Early warning procedure and emergency evacuation in every Public institution office.

In present day, all websites have been provided, but most have not fulfilled all the requirements, even its basic information. The regulation requires the website to only provide information that is needed, not extended services. This also worsens the Indonesian e-services development.

E. ICT Utilization and Empowerment

Creative Community Center Development

Creative Community Center is e-business service center to facilitate Small and Medium Enterprises (SME) in areas. The development of Creative Community Center is expected to improve economic growth in respective areas through acceleration of transformation from conventional business to electronic based business.

Facilities and assistances are provided in the form of training to operate multimedia, basic Office software application, and other e-business related applications, such as blog, online marketing, and product packaging design. Creative Community Center also provides service such as internet access, assistance for SME, and also knowledge and skills improvement.

The objectives of building Creative community Center through electronic SME:

1) Motivate the growth of new opportunities for SME
2) Facilitate SME with ICT to convert their manual activity electronic base activity for their business.

3) As a media to gather SME Community in developing knowledge and creativity and to exhibit their products.
4) East the government to empower SME.

Information Industry Incubator

Information Industry Incubator is a place designed to foster and accelerate the success of information industry development through series of development program both from business and technical sides. The end purpose of Information Industry Incubator is to prepare the information industry owner to become an entrepreneur who is capable of earning profits and to supervise/manage his/her organization and finance well, and also to be sustainable to finally create positive impact for society

Incubation program is commonly aimed at start-up companies or companies that are still in the early phase of starting business. The Information and Communication Technology (ICT)-based industrial development requires more intensive training. This group of industry and business is a little bit different with other types of industry because usually this type of industry is built by personnel who have high education qualification, need big capital, have high technology content and high risk in its marketing. At the incubation phase, the fostered SME (tenant) is given full assistance by a consultant team that intensively evaluates and provides consultation to help them become a strong and independent technopreneur. The incubation period is usually one to three years long.

The facilities provided throughout the incubation period are familiar as 7S Concept, which are:

1) Space: Provide place for tenant to develop its business at early stage;
2) Shared: Provide office facilities to be used together, such as meeting room, phone, fax, computer and internet;
3) Services: Consist of management and market problem consultation, financial and legal aspects, trading and technology information;
4) Support: Support accessibility to research, professional network, technology, and investment;
5) Skill Development: Provide technical skill, business plan preparation, management, leadership and other skill(s) training;
6) Seed Capital: Provide small-business access to funding sources or financial institutions;
7) Synergy: Cooperation with related bodies, such as universities, research institutions, private institutions, professional, and other parts of society.

Work program of Information Industry Incubator in general consists of:

1) Create mentoring or business and technical training;
2) Provide information regarding information industry in general;
3) Companies organization and culture management;
4) Develop marketing strategy;
5) Help with regulation related matters.

The benefits of Information Incubator Program are:

1) Create new job fields, that helps tax income to increase
2) Increase area brand, from governance, social and culture, and technology sides
3) Grow the awareness upon the importance of entrepreneurship, especially in information field
4) Widen business area, by the rise of various startup companies.

Local Content Development

ICT development in Indonesia is executed based on national ICT development roadmap that focuses on ICT infrastructure development with human resources development alignment, ICT service improvement, and ICT improvement that has added value for nation's economic growth with local ICT sector reinforcement. Local ICT sector reinforcement is pushed by local content development that provides avenue for local ICT to describe and strengthen their existence in the middle of ICT global trend. ICT local development also pushes for national independence in terms of utilizing ICT development. One of the examples of this development is through village stalls content development.

Mobile Community Access Point (M-CAP)

Since 2011, Mobile Community Access Point (M-CAP) prototype has been mass produced by KEMKOMINFO to be MPLIK. The functionality of M-CAP is highly influenced by the condition of respective area. For disaster-prone, border, and other heavy domain areas, such as RejangLebong, Bengkulu, and Keerom, Papua, M-CAP is specially equipped.

Objectives of M-CAP are:

1) Provide internet access, phone service acccess, and information dissemination activity audio-visually
2) Provide Information and Communication Technology based education
3) Reach society that haven't had permanent service
4) Expected to solve digital gap
5) Grow creative communication
6) Provide opportunity for society to inccrease their income and welfare

7) Provide access for parts of society that haven't had their own education source.

In 2012, in order to broaden the scope of information access introduction and e-literacy understanding, in river bank areas in Kalimantan Selatan (South Kalimantan), new prototype has been made, which is Boat-CAP, and to reach out the society in village areas in Bogor, Motor-CAP (three wheels) prototype has been made. In 2013, Motor-CAP was made for Difable Society in Surakarta, Jawa Tengah (Central Java). Until 2013, there were 51 units of Mobil-CAP, 1 unit of Boat-CAP, and 2-Units of Motor Cap that had been built.

ICT Volunteers

ICT Volunteers were aimed to develop social networking between youth and student figures as the young generation of internet users so that they are protected from negative global culture influence. The creation of ICT Volunteers was made in province, city, and even village level based.

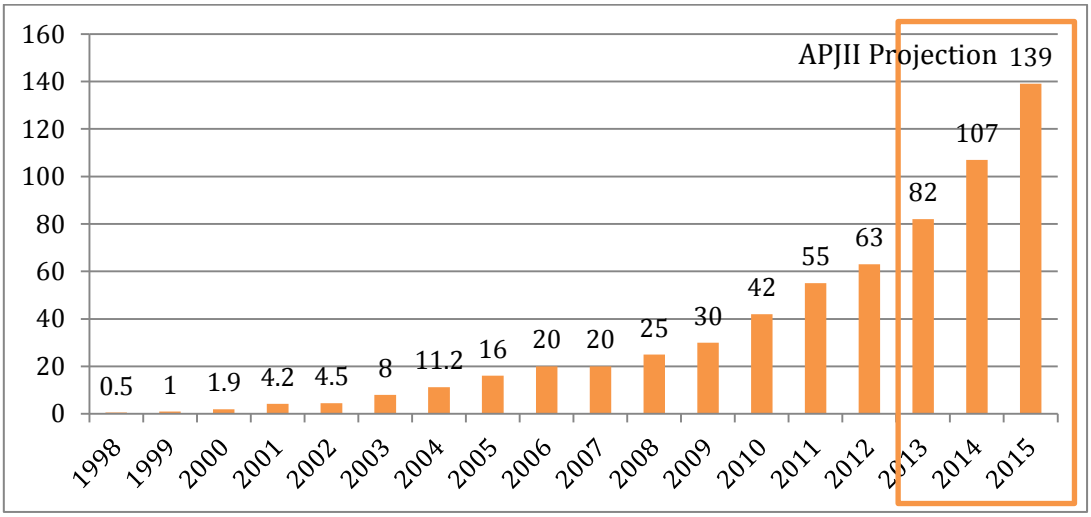
E-Learningin Yogyakarta

E-Learning Yogyakarta was an effort to improve education quality that was directed to even distribution of access, through provision of tools and supports that are needed for schools' activities, preparing ICT and networking facilities, and developing e-learning system in 300 elementary schools and 200 junior high schools in Daerah Istimewa Yogyakarta. The purpose is to give contribution to education quality improvement all over Indonesia.

F. Behavior of Internet User

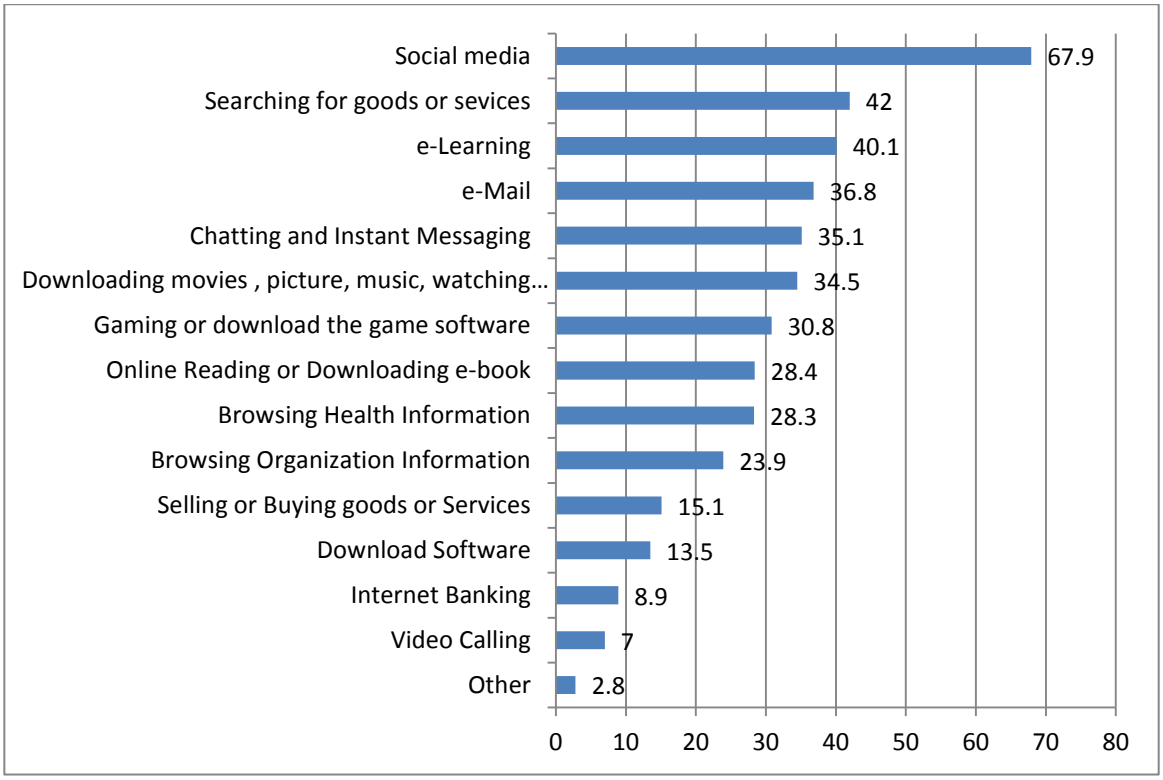
Indonesia has experienced increase of usage of internet users. A pretty drastic increase of usage happened between 2010 to 2011. In 2013, it's estimated that the number of internet users in Indonesia reach up to 82 milions users. APJII projects that in 2015, the number of internet users will reach up to 139 millions people. Here are presented the results of a survey that has been conducted by KEMKOMINFO regarding the use of ICT in 2013.

[Figure 3.3-4] Indonesia Internet Users



Source: Ministry of Communication and Informatics, 2013

[Figure 3.3-5] Activities on the Internet



Source: Information and Communication Ministry, 2013

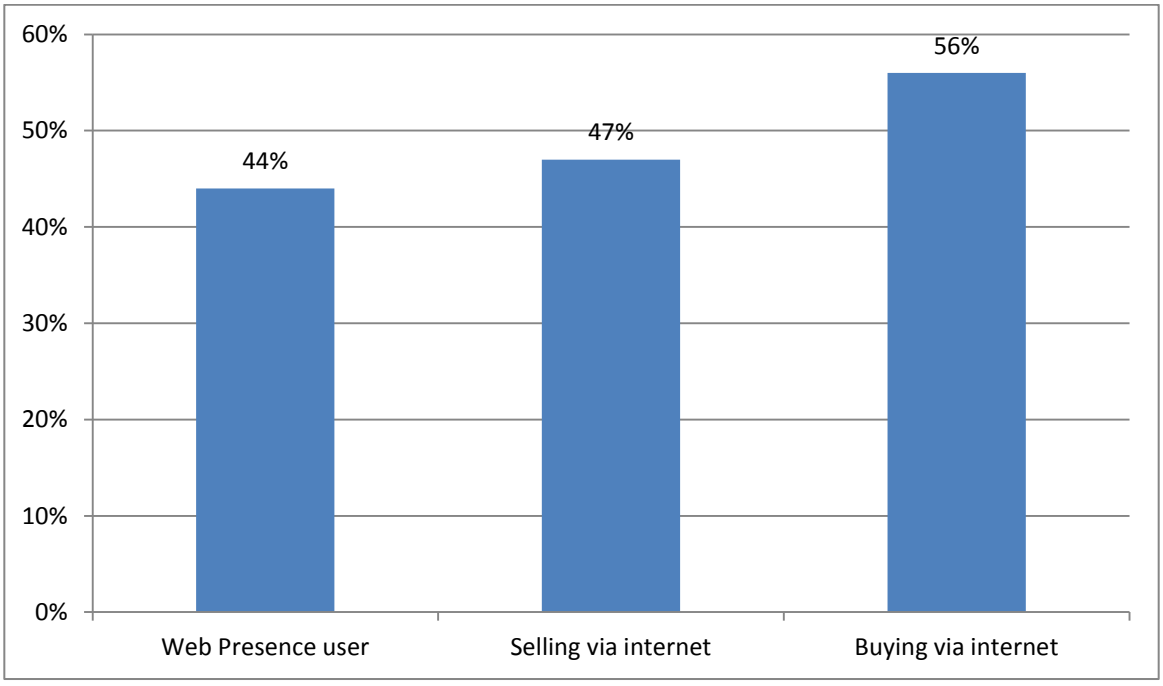
Household Users

According to the survey, four major activities that are mostly done by individuals when using internet is to open social networking sites (67,9%), look for goods and services information (42%), do study activities (40.1%), and send and receive e-mails (36.8%). Meanwhile, accessing financial services such as internet banking is still low in popularity (8.9%). The most frequent activity done in internet is accessing social media with 67.9%, 42% looking for information regarding goods and services, 40.1% is e-learning, and 36.8% sending/receiving email. But accessing financial services with internet banking is only 8.9% respondents.

User in Business Sector

ICT usage in business sector in doing online marketing and transaction through internet is pretty high in Indonesia. There are 44% companies that have web presence, while for business transaction; there are quite many companies that utilize internet for business transaction. According the survey, most frequent transaction are purchase via internet which takes up to 56%, while sales via internet takes up to 47%. Majority of internet usage activities in business sector is sending and receiving e-mails with 96% of respondent percentage.

[Figure 3.3-6] Marketing and Transaction via Internet



Source: Information and Communication Ministry, 2013

[Figure 3.3-7] Activities on the Internet

Source: Ministry of Communication and Informatics, 2013

User in Education Sector

Survey result of ICT usage in education sector shows that mostly schools have already utilized computer and internet for teaching-studying activities. In doing teaching-studying activities, the schools percentage that have already used computer is 73%, while the rest (27%) haven't used computer. Among the schools that have already used computer, only 55% of schools that use internet for teaching-studying activities. It shows that not all schools are connected to internet, although they have used computer for teaching-studying activities. Majority of schools in every education level have utilized computer and internet for teaching-studying activities. The higher the education level is the higher percentage of schools that use computers and internet for teaching-studying activities.

Based on the survey of access and usage of ICT in education sector, more than two third (67%) of schools provide teaching of computer basic skills. There exists correlation between education levels with the percentage of schools that provide teaching of computer basic skills. The higher the education level is, the bigger the percentage of schools that provide computer basic skills. More than half of Elementary Schools (52%) give basic computer teaching, significantly improved up to almost every Junior High Schools (96%) and Senior High Schools (97%). The survey result also shows that there exists difference between numbers of schools percentage that teach Microsoft Office with other basic computer skills subjects. Almost every school that teaches

basic computer skills, teaches Microsoft Office (98%), while schools that teach other basic computer skills are less than 40%. Schools that teach Open Office basic skills are only 36%, graphic design are only 32%. The least (15%) is schools that teach programming. The ratio of students that access internet are only 0.32, which means, among 100 students, only 32 of them that access internet for studying activities. The rest are not using internet access for studying activities.

3.3.2. Country Specific (Potential) Demand for e-Services

Based on the survey result that was collected, there are three government websites that appear to be mentioned often, which are Ministry of Health, Indonesian National Police, and Ministry of Manpower and Transmigration. Those three websites are considered as e-services that are able to satisfy the needs of society, especially women.

These three websites have followed the standard of most websites. It can be seen from the availability of several standard features although not as a whole, such as multiple language, contact directory, and e-newsletter. These three websites are -similar with the other websites owned by government of Indonesia- yet to provide many e-services that can be utilized directly by society. But at least, there are several embedded e-services in the websites, such as internal service (mail for Public Servant), internal portal with its relation to e-office, or feature to refer each other's information/document such as library and law catalogs.

A. Ministry of Health

E-services that were mentioned are in the form of information portal that show specific data. Although it's updated enough, the information management is not set to be used by end user, but for intermediary user, such as hospitals, schools, pharmacies, etc. The delivered data are not directly usable by society. However the website provides persuasion and short tips that can be utilized by society, such as healthy way of living, for example by using soap for hand washing. This website doesn't satisfy the e-service needs from society on educative information, consultation, and specific information for women in health sector.

Already have several e-services embedded in the website, such as:

- E-pharm
- Hospital data
- Health center data
- Diseases information

- Health operational fund information
- Health manpower data
- Total sanitation based of community
- AIDS Digital,
- Recommendations of health school, etc.

Nowadays, the government has issued Government Decree number 46 year 2014 regarding Health Information System. The development of system cannot be known or predicted yet, but referring to the constitution, the system will be the source for decision maker related to health sector. If that so, the users of this system are the stakeholder related to the sector, not society in general.

B. Indonesian National Police

This website has embedded legal complaints, case report and incident report form as one of its services. Although in reality POLRI (Police of Republic of Indonesia) has had Women and Children Protection Unit that has the job to receive gender and children base case reports, it's not separated as how the real life structure is, in the form provided in the website. Thus, the cases that enter through the online report will be mixed and it can't be confirmed that the case handling will be addressed to the specific unit.

Aside from reporting function, the need for police website was also based on the need of legality assurance. The website doesn't have information management regarding that yet, which is to educate society regarding the law. It also doesn't have collection/summary of protection assurance regarding gender base violence that actually already exists in Law number 23 year 2004 regarding Elimination Of Violence In Household, Law number 21 year 2007 regarding Elimination of Human Trafficking Crimes, Law number 23 year 2002 Children Protection etc. This website doesn't answer the need of society upon educative information or even for consultation.

C. Ministry of Manpower and Transmigration

The public services provided in this website are archive, such as standard guidelines, for example Indonesian labor allocation guideline, and related news. Information management that is used is not set to be consumed by end user but intermediary user, such as Authorized Employment Service Company. Although there are many female labors that are sent abroad, but there is no specific procedure for female labor in the guideline.

The other expectation from society that is gained from the survey is the provision of job vacancy information through the website. This is not found easily on the website. There is no specific

column that provides information regarding rights of female labor. This website doesn't answer the e-service needs of society that need educative information or even consultation.

From those three websites, none of them provide specific e-services for women, nor other e-services that can be directly used by society in general. This is in line with the mandate constituted in Law number 14 year 2008regarding Public information Openness that government websites are obliged to include necessary information, but not obliged to provide electronic public service.

3.3.3 Future Direction of e-Services

Study and research about ICT and its effect over economy development has frequently been done. One of those researches is done by World Bank which concludes that 10 per cents broadband penetration growth affect 1.38 per cents GDP growth in developing countries and 1.21 per cents in developed countries. KEMKOMINFO has done a research about "ICT Investment Influence against Economic growth" in order to understand the influence as a development key in ICT Sector in Indonesia. The research shows that ICT has doubled output in 1,359 in aggregate which can be translated that every one trillion IDR ICT sector final demand growth can grows 1.35 Trillion IDR.

Broadband development phase based on National Medium-Term Development Plan (NMTDP/RPJMN) formulated in three main phases, for RPJMN 2010-2014 (connect) with connecting broadband network target in Indonesia and 2014 target is 100% USO area accessed by telephone and internet, 89% in districts accessed by broadband services, broadband penetration level reach 30% of the population, TV Digital penetration reach 35%, and national e-government index reach 3.0 out of 4.0.

In the second phase of RPJMN 2015-2019 (innovate), it focuses on finishing broadband distribution in districts, schools, public facilities, upgrade USO facilities into broadband, finishing TV to TV digital migration and uses digital dividend, integrates data facilities and government information, finishing digital literacy/digital inclusion agenda. RPJMN 2020 – 2025 (Transform) has a vision to create Independent, fair and prosper 2025.

[Figure 3.3-8] Success Key of Indonesia Broadband plan

Access	• **Infrastructure** Telecommunication and Internet
Availability	• **Accomodation** Device, full coverage, no blank spot
Affordability	• **Coverage price/cost device and communication**
Ability	• **Usage** or usability
Awareness	• **Awareness** of culture, education-based positive-outcome oriented character
Empowering	• Empowering the society **to improve** their life quality

Source: Ministry of Communication and Informatics, 2013

Five Indonesia broadband plan success key aspects (including the effect to broadband economy) can be mapped through "5A + E" aspects, which are access, availability, affordability, ability, awareness, and empowering. In order to reach Informative Indonesian Society, can be reached through 3 main factors, well-distributed infrastructure that cover across all Indonesia, well-maintained communication services in term of technology as well as content, also empowered society (IT literate) socially and economically.

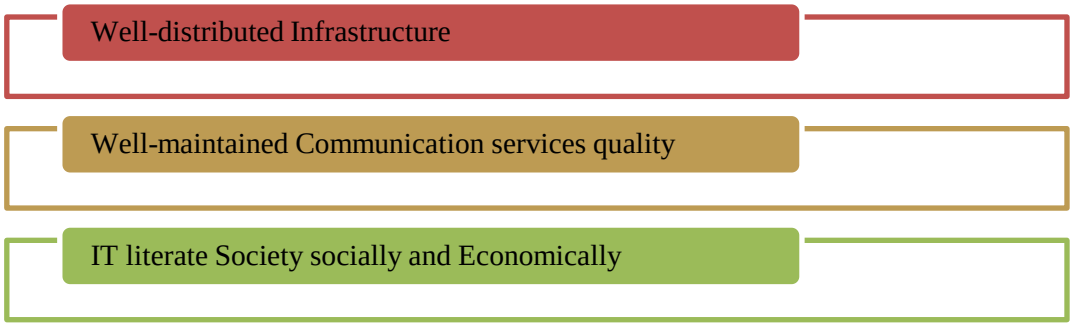
Strategic steps to build Broadband Economy are:

1) Empower SME and the activists to be consistently competitive and also more competitive in global economy.
2) Give programs that can help society to stay competitive and innovative in 21st century by prioritizing broadband in regional development.
3) Help businesses to remove regulatory obstacle for all workers with technology-basis to run their businesses (teleworkers).

In Broadband economy era, information security becomes an ultimate requirement to build trust among businesses and industries in developing their e-commerce/e-business. Strategic and tactical efforts need to be conducted coordinately to enhance nation capabilities, and also widen the awareness and society's culture in information security, in order to anticipate the quantity and quality of cyber threats & cybercrimes.

Meanwhile, e-leadership in national and local scale is an important factor to determine the guarantee of infrastructure development and broadband ecosystem, and the advantages of broadband economy for all Indonesian in all area.

[Figure 3.3-9] Main Factors to Create Informative Indonesian



Source: Ministry of Communication and Informatics, 2013

A. Based on HDI

Indonesia's Human Development Index (HDI) value for 2013 is 0.684—in the medium human development category—positioning the country at 108 out of 187 countries and territories. The rank is shared with Kiribati and South Africa. Between 1980 and 2013, Indonesia's HDI value increased from 0.422 to 0.684, an increase of 62 percent.

Economy

With earnings per capita around 4000 USD per annum (Ministry of State Secretary, 2010), shows that the needs of better economy condition still become the main reason and motivation for Indonesians to grow. The best approach to introduce technology and e-services to them should start from a guarantee of betterment in economy. Technology and e-services should play a role and give a major impact toward economy betterment. Government should take on the role as a facilitator and the media where economical transaction between seller and purchaser meet the deal.

The higher transaction loads, the more complex the market will be. Claim of ownership about the product can be a new problem in the future as we can see in current modern market. In this case, government can actively literate all Indonesian about patent right that will be governed by the government. The understanding about law from the Indonesian will ease the market system and increase the economy betterment.

Beside the role as media and law protection, government can also actively be involved in the transaction, especially in export-import transaction. E-commerce always close to international transaction, where all people around the globe can directly access the market through internet, the involvement of foreigner in this transaction raises a new problem, the understanding of global language. Indonesia as EFL Country (English as Foreign Language) has a problem of global communication. Entering a global market system requires the global language. Here, government

can take a role to provide interpreter and/or teach Indonesian to learn the global language. Understanding a global language is very material to learn e-service, because most information revolves in English. Thus Indonesian needs to be equipped with English.

Some of Indonesian women cannot comprehend foreign language and are less internet literate, therefore, pushing them directly handling website will force a step-backward the needs of fulfilling their daily needs for themselves as well as their family. Moreover, in running their business, they frequently found many problems due to their lack of understanding about Law.

Indonesia as an agricultural country, 82.71% of Indonesian land is agrarian land. Most are for rice fields. So, land cultivating-based job plays important role for Indonesia. Java Island has the highest productivity compared to other islands. This condition provides huge opportunity for the government to improve the agriculture potential.

Indonesian soil is very fertile; its tropical climate is very suitable to be an agrarian country. Meanwhile, Indonesia still has a problem to be independent in fulfilling the needs of the food, proven by the import policy for certain type of food. There are lots of allocations on job vacancies of agriculture, plantation, and poultry, but the volume of crop production are fully depended on the natural conditions. This situation proves that Indonesia still doesn't have qualified human resources to maintain the agriculture. his discrepancy is actually can be solved not only through the supply of agriculture raw materials, but also the transfer of knowledge, such as a manual to rid the pest away, or to adapt with the latest innovation to overcome the challenge of weather, and also to enlarge the market for their products.

Indonesia is an archipelagic country; it has 17.508 islands. 1.85% percent of Indonesian's life depends on the sea. Live and domicile at sea or seashore, work on the sea, they are fisherman, and any job related with sea. It shows that these people will be so much helped if they have more sources to support their job, such as their needs of transferring navigation system, from manual navigation into advance navigation system. Besides navigations, other related innovations and technologies must be transferred too. The source of information also has to be able to show the sea-people how to be independently creative, to overcome the natural problems they found. (Ministry of State Secretary, 2010)

Therefore, e-services are needed for:

1) Online transaction to support women's business (help in maintenance, operation, transaction, guarantee of payment, relatively cheap cost, protect small businesses and help developing the quality, and also help in language/communication between the seller

and the buyer).

2) This forum was started for domestic interest due to the size of Indonesia and its different potencies from different area. For example, coast area has fishery potency and higher land has field and farm potency that can complete the local market needs. Online trading can reduce supplier's loss or its surplus in open market condition. Therefore, using local language is absolutely needed in this service.
3) Increasing women's capacity to produce e-newsletter, e-learning, FAQ, expert corner for Q&A, etc. that can also be an evaluation of their business including about IT with empowerment and Competitiveness objective.
4) Certification for several specific skills such as vocational skills that is acknowledged in real employment
5) Job fields
6) Banking Access
7) Government regulations related to society-based economy development.
8) With Earning per capita around $4356 per year, thus earning increasing still become the needs for Indonesian. Therefore, e-services development should be started from economic development. Government can take a role as facilitator of e-services as the transactional media, including translation into English for possibilities of international transactions.

Education and Knowledge

Internet distribution needs to be use in Human Resources development. The low HDI can also be affected by the short period of experiencing formal education. Even though number of Indonesian participation in elementary school is quite high, it is about 98.36%, but the dropped-out potency as the effect of poverty is still influencing, some of Indonesian children help their family financially and stop their study, and therefore only 19.97% of people can reach University level (Statistics Indonesia, 2013).

Educational development can also be one of the advantages from e-services development in form of more daily applicable e-learning. At first, it can provide information about life survivability, like foods, weather, disaster, etc. Women with more knowledge about foods survivability can use basic ingredient in their surrounding as nutrient-full foods for their family. Women with knowledge about economy can handle financial crisis.

The further development can aim in adding more economical value, for example information about better farming, agriculture, better fishing, or even about how to get initial capital to start a business or banking access, or financial management. Women with better financial knowledge are

able to empower themselves and their surrounding that dependent to them financially.

The third development can target formal educations, online education. A well-prepared system is needed to make the knowledge be more useful, bigger system form educational system itself, certification, standardization, and employment system that can employ this education system's graduates. In the future, better knowledge from this people can be expected to bring society with better quality. Women with sufficient knowledge and with better education can shape a better family, which become the foundation of e better support system for the nation.

Therefore, e-services are need to:

1) Provide basic knowledge regarding life survival, disaster handling, law and human rights, civil rights, baby and senior citizen sitting technic, etc. It also includes basic knowledge regarding reproduction, basic knowledge about family needs like foods (how to process better meal from basic ingredient), rights and obligations under the law (legal married under the law, not only under the religion) which results a clear rights and obligations in family system.
2) Knowledge that can help political life, modern culture (in order to shorten the gap between modern world and local culture), Family financial management, reproduction capacity. With all these knowledge, women can empower themselves and also their surroundings.
3) Both will be delivered in various local languages, audio and visually, also in several specific languages for group with special needs.
4) Forum discussion, that knowledge can be shared easier when it's delivered in simpler language and from a two-ways conversation.
5) Expert corner is not only to produce information, but also to correct some information among the users in order to give the right direction of information.

Health

Women life expectancy is longer than men but is not followed by guarantee and protection (Statistics Indonesia, 2013). Only since 1 January 2014 Indonesian government released national health insurance program named BPJS. This program is manifestation of health constitution. Basically, it is an effort to increase public services from handling to prevention, which actually been so long needed by society. Before it existed, healthcare insurance was only given to public servants, but BPJS came to serve all Indonesian.

In the future, it can be more than just prevention insurance, but also to enhance the understanding about health in general. Society can be invited to be more aware about their health condition as

their aging. For example a mother should aware when her child need vaccination, or senior citizen understand their need when they age and their declining health, things they need to avoid and how to take care of themselves. Not only age, knowledge about health can also be categorized by sex, which women have different needs for reproduction health compare to men. By the increasing of awareness about how important health is for each individual, therefore making society stronger and able to work well and not become a burden of any other.

Therefore, e-services are needed for:

1) Providing basic knowledge to prevent transmitted diseases, healthy lifestyle, and contraception.
2) Knowledge and handling certain disease, baby sitting and also senior citizen needs
3) Knowledge about emergency condition like animal attack, extreme weather and extreme diseases.
4) Calculating ideal condition like body mass index, nutrient, blood pressure, compare to other specific condition like age, etc.
5) Access to closest medic, including insurance procedure.

B. GDI Basis

The Gender Inequality Index (GII) reflects gender-based inequalities in three dimensions – reproductive health, empowerment, and economic activity. Reproductive health is measured by maternal mortality and adolescent fertility rates; empowerment is measured by the share of parliamentary seats held by each gender and attainment at secondary and higher education by each gender; and economic activity is measured by the labor market participation rate for each gender.

Indonesia has a GII value of 0.494, ranking it 106 out of 148 countries in the 2012 index. In Indonesia, 18.2 percent of parliamentary seats are held by women, and 36.2 percent of adult women have reached a secondary or higher level of education compared to 46.8 percent of their male counterparts. For every 100,000 live births, 220 women die from pregnancy related causes; and the adolescent fertility rate is 42.3 births per 1000 live births. Female participation in the labor market is 51.2 percent compared to 84.2 for men (UNDP, 2013).

E-services dashboard is necessary for all sectors that inform GII condition and its component to related sectors, and also gender policy and related regulations in order to make gender equality as mainstream idea in all sectors in national context. For example, mother mortality number is not only supported by Ministry of Health, but also Ministry of Public Works to provide easier health and medication access, Social Ministry can provide social workers for grass-root maternal health problem. Furthermore, indirect substance related to women, like civil rights for new born baby. Or

issue about women quota in parliament, which involve education ministry to let simple politic education in formal education, Ministry of domestic affairs, Ministry of Religion, Ministry of State Secretary to prepare women candidates in parliament.

[Table 3.3-2] Indonesia's GII for 2012 Relative to Selected Countries and Group

		Indonesia	Medium HDI
GII Value		0.494	0.457
GII Rank		106	-
Maternal Mortality Ratio		220	121
Adolescent Fertility Rate		42.3	44.7
Female Seats in Parliament (%)		18.2	18.2
Population with at least Secondary Education (%)	Female	36.2	42.1
	Male	46.8	58.8
Labour Force Participation Rate (%)	Female	51.2	50.5
	Male	84.2	79

Source: UNDP, 2013

C. Culture

Culture is a collective "faith" in a community; it is treated sacredly by the members. Therefore, as a member of a group, women (and also men) rarely criticize the culture ritual in their living hood. It complicates the filtration of useful habit from habits that hinder women life betterment. Most of local cultures in Indonesia are patriarchal and become the sources of gender based harassment.

E-service in cultural sector can be useful for:

1) Registration of local wisdom and property, it can create e-library about this information. Then this information can be processed, selected based on specific information system to be analyzed the impact for the society.
2) Using the positive culture for women, as well as to clarify the culture that discriminate women.

Clarification that will be used must be wise and proper in order to avoid society resistance. For

example, registering pregnancy condition is in order to get special facility like additional nutrient for pregnant women, and emergency access. It will also build an awareness about women for men as spouses, mothers, daughters or even outside family interaction like in working environment as subordinates or in general interaction. This awareness and understanding from men will help women to strengthen their perspective about themselves.

D. Human Resources Development

Besides the e-services future direction, it is also important to have skilled human resources to deliver the technology development to all area. People will become the agent of change for development.

In the last five years, Indonesia has implemented Information Communication and Technology (ICT) in its education curriculum. This curriculum teaches basic understanding about Information System such as tools introduction, understanding tools' function and capacity, and guidance of implementation. Schools are perceived as the best media to introduce students to technology. This curriculum aims to make students understand the uses and the advantages of IT tools. By habituating students close to technology at school builds their curiosity about technology. This habituation leads to explore technology further, especially when they start implement technology in their activities such as school assignments and self-learning for examination preparation. This deep understanding about technology in early age will deliver more gen Y especially in rural area.

These students with understanding of technology are expected to be the "agent of Change" in their area. Living in rural areas will show them the contrast between what they learn from technology with what they see in their area. They will understand what is incomplete in their place. The bond that they have with their place will be the foundation for them to initiate the change in their rural. They will be the first hand to deliver a change and understanding to the locals about technology. Local will start to learn and internalize technology when they bring technology to their daily activities. The needs of knowing about technology will grow parallel with their needs about betterment.

3.4. Lao PDR[20]

3.4.1. Development Context

Social Economic Context

During 2011-2013, gross domestic product (GDP) grew at an annual average rate of 8.2%. It is estimated that growth over the first 3 years of the 7th National Socio-Economic Development Plan (NSEDP) 2011-2015 averaged 13.7% in the industrial sector, 8.6% in the services sector and 2.9% in the agriculture and forestry sector. In 2011, Lao PDR moved up from its lower income status to a lower-middle income economy and a gross domestic product (GDP) per capita reaches US$ 1,450 in 2013. It is forecasted that economic growth will slow down to 7.6% in 2014, reflecting the Thai economy's poor performance in the first half of the year and mainly as a result of the decline in mining output (MPI, 2013).

The agriculture-forestry sector contributes 25.5% of GDP. The production of cash crops and livestock has expanded. The industrial sector contributes 30.3% of GDP. Almost 50% of the growth in the industrial sector can be attributed to the foreign investments in the natural resource sector. The services sector has seen considerable growth, with an annual growth rate of 8.6% and contributed 44.2% of GDP. Road and air transportation infrastructure has been improved and new infrastructure built thereby allowing provision of better transport services. Financial institutions, banks, trade networks, tourism, enterprises and markets have also developed and the creation of the Lao Stock Market has facilitated the mobilization of funds as well as partial privatization (MPI, 2013).

Poverty

The national poverty rate in Lao has declined steadily, having dropped from 46.0% in 1993 to 23.2% in 2013 (MPI, 2014). The overall assessment is that Lao PDR is well on track to achieving the poverty target. However, the Gini coefficient, a commonly used measure of inequality, marginally increased from 35.0% in 2018 to 36.2% in 2013. The poverty in Lao PDR is geographically concentrated. Nationally, an overwhelming majority of poor people reside in rural areas which accounted for 87.6 % of all poor people in the country, despite only accounting for 71.2% of the population. Poverty remains substantially higher in rural areas, at 28.6%, compared to 10.0% in urban areas. About 36% of the poor lived in the Central region. About 17% and 34% of the poor live in the South and the North region respectively in 2013 (MPI, 2014).

[20] Written by Mr. Phothong Siliphong, Social Development Specialist, Founder and President of the Social Development Alliance Association (SODA), Lao PDR

Poverty is higher among minority (Non-Lao Tai) ethnic groups with the exception of the Chine-Tibet ethnic group. The poverty rate is highest among the Mon-Khmer and Hmong-LuMien Headed households with a poverty rate of 42.3% and 39.8% respectively.

Poverty is higher among households headed by persons with lower levels of education, a disproportionate share of them ethnic minorities, and those whose primary employment is in agriculture or are unemployed. Education is strongly correlated to poverty. People living in households headed by a person with little or no formal education have the highest poverty headcount rate (41.7%), while poverty is lowest among households headed by highly educated people (3.7%).[21]

Lao women are poorer than Lao men in terms of time poverty and working burden. The Lao Expenditure and Consumption Survey (LECS) V shows the time use per day and person classified by gender. It points out that women sleep slightly less than men, 8.6 hours for women and 8.8 hours for men. The same situation prevails for eating, drinking and self-care, 2.6 hours for women and 2.7 hours for men. Women used 1.8 hours for household work while men spend only 0.3 hour. The rest of the time is mostly spent on work, 3.9 hours per day for men and 4.7 hours per day for women. The effects of this domestic burden on women's economic opportunities are damaging and predictable but often neglected in policies aimed at increasing female participation in productive paid employment. First, the time burden of rural women's domestic unpaid work and the lack of substitutability of female labour in household work by men serve to limit women's choices with regards to accessing paid employment. Second, female time poverty contributes to unequal education outcomes which, in turn, hinder women from competing with men for more skilled, better paid jobs.

Economic Participation

Lao women have one of the highest labour force participation rates in the region, and remarkably, male and female rates are almost equal. Female labor force participation[22] was 76.3%, slightly less than men (78.9%) in 2011. The latest LECS V estimated the female labor force participation rate[23] at 77.6%, slightly higher than men at 73.9% in 2012/2013. The labor market in Lao PDR is highly informalized and agriculture-based. Within the total female workforce of 1.5 million, 1.1 million women or 72.3 % are engaged in the agriculture and fishery sectors as their main activity and most of this work is in small-holder, family-run agricultural production. The proportion of household participate in waged labor has increased from 14% in 2007-2008 to 17.8% in

[21] University degree
[22] % of female population ages 15+
[23] % of female population ages 10+

2012/2013(LECS V, 2014).

[Table 3.4-1] Labor Force Participation and Unemployment Rate in Lao PDR

	2010	2011	2012
Labor Force Participation Rate for Ages 15-24, Female (%)	69.1	68.8	68.5
Labor Force Participation Rate for Ages 15-24, Male (%)	58.8	58.7	58.7
Labor Force Participation Rate for Ages 15-24, Total (%)	63.9	63.7	63.6
Labor Force Participation Rate, Female (% of Female Population Ages 15-64)	80.1	80.1	80
Labor Force Participation Rate, Male (% of Male Population Ages 15-64)	80.7	80.8	80.9
Labor Force Participation Rate, Total (% of Total Population Ages 15-64)	80.4	80.4	80.5
Labor Force Participation Rate, Female (% of Female Population Ages 15+)	76.4	76.4	76.3
Labor Force Participation Rate, Male (% of Male Population Ages 15+)	78.7	78.8	78.9
Labor Force Participation Rate, Total (% of Total Population Ages 15+)	77.5	77.6	77.6
Unemployment, Youth Female (% of Female Labor Force Ages 15-24)	2.5	2.5	2.5
Unemployment, Youth Male (% of Male Labor Force Ages 15-24)	4	4.1	4
Unemployment, Youth Total (% of Total Labor Force Ages 15-24)	3.2	3.2	3.2
Unemployment, Female (% of Female Labor Force)	1.1	1.1	1.1
Unemployment, Male (% of Male Labor Force)	1.6	1.6	1.6
Unemployment, Total (% of Total Labor Force)	1.4	1.4	1.3

Source: World Bank, 2013

Amongst service workers or shop & market sales workers, 63 % are women whilst 37 % are men. This is also a vulnerable sector, with a significant proportion of the workforce either self-employed or engaged in unpaid work for the family. A far greater proportion of unpaid family workers (65 %) are women as opposed to men (35%).

Women spend most of their time working in agriculture, followed by retail and hospitality, handicraft and services. In 2012/13, 72.9% of all hours worked by women were in agriculture including forestry and fishing; 12.3% were spent working in own business work including wholesale, retail, hotel and restaurants; 2.8% were spent in textile and leather production. Generally there is no significant difference of time spending for agricultural work between

women and men.

On average, women and girls work more hours per day than men and boys. LECS V data shows that income generating activities plus household work occupies female household members for 5.7 hours per day compared to 5 hours for male household members. However, their work is more likely to be unpaid domestic labor while 'men's work' is more likely to be income generating. The vast majority of the Lao workforce - both female and male - is 'self-employed'; however there are significant gender differences in how this work is valued. On average, women and girls work more hours per day men and boys.

[Table 3.4 2] Percentage of Total Hours Worked by Women in Different Sectors in 2013

	Women	Men	Total
Agriculture, Forestry, Fishing	72.9	71.7	72.3
Mining	0.2	0.5	0.4
Food Processing, Beverage, Tobacco	1.2	0.9	1.0
Textile, Leather Production	2.8	0.3	1.5
Wood, Paper, Chemicals, Plastics	2.2	3.3	2.8
Production of Equipment, Motor Vehicles	0.1	0.5	0.3
Electricity, Water	0.1	0.3	0.2
Construction	0.6	5.1	2.9
Wholesale, Retail, Hotel and Restaurants	12.3	5.4	8.8
Transport	0.2	1.8	1.0
Other Services	7.3	10.3	8.8
Total	100.0	100.0	100.0

Source: LECS V, 2014

Overall, the male workforce is better educated than is the female workforce. About 33 % of the male workforces have completed secondary education, compared to 25% of the female workforce. About 28% of the female workforces are uneducated, compared to 17% of the male workforce. Some 6% and 7% of employed men respectively have tertiary and technical school education, compared to 3% and 5% of employed women (LECS V, 2014).

[Table 3.4-3] Time Use on Main Activities by Sex, Hours per Day

Activity	Female	Male	All
Income Generating Activities	3.9	4.7	4.3
Work as Employed	0.6	1.1	0.5
Own Business Work	0.9	0.6	0.6
Agricultural Work	1.8	2.1	2.2
Collecting Firewood/Fetching Water	0.2	0.1	0.3
Hunting/Fishing	0.1	0.6	0.4
Construction	0.0	0.1	0.1
Handicraft	0.3	0.1	0.2
Household Work	1.8	0.3	1.5
School	0.9	1.1	1.0
Sleeping, Eating, Leisure Time	15.4	16.2	15.5
Travel, Others	1.2	1.2	1.6
Total	24	24	24

Source: LECS V, 2014

Gender and Governance

Lao PDR has amongst the highest proportions of women in national parliaments in the region. Twenty five % of female parliamentarians are women. It is clear that some progress has been made on women's participation in central government in 2014. Out of 84 ministers and ministerial equivalent positions, 12 ministers or 14% are females. Five females (8%) are members of the central party committee. Out of 105 vice ministers and equivalent positions, 21 or 16.6% are filled by women. In all Government departments at the ministerial level, there are 71 female directors general out of 366 directors general (or 19%). Out of 760 vice directors general, 186 persons or 24% are women.

However, these achievements are not mirrored at the sub-national level, where significant gender gaps persist. At the provincial level, there are no female governors and only 3 female vice-governors out of 43. At district and village levels, women's representation is very low. For example, according to the statistics from the Government's Office in 2014, there were only 145 female village chiefs from the total of 8,651 villages (2%), while deputy female village chiefs were 1200 out of 16,786 post holders accounting for only 7.0% (NCAW, 2013).

Gender and Health

Despite positive trends in maternal and reproductive health service indicators, the country's

progress towards this goal is not on track. The country still has one of the highest maternal mortality ratios in the region, although the ratio has declined from 405 in 2005 to 357 per 100,000 live births in 2013. Age-specific mortality rates for women and men age 15-49 for the seven-year period preceding the survey (2005-2011) indicate that the level of adult mortality was slightly higher among men (3.1 deaths per 1,000 population) than among women (2.3 deaths per 1,000 population) (MoH, 2012).

Over 90% of women and men have heard of a modern contraception method. Both women and men are more familiar with modern methods of contraception (94 % and 95 %, respectively) than with traditional methods (68 and 69 %, respectively). About 50 % of currently married women are using a method of contraception. The most popular method is the pill, used by 2 in 10 married women in Lao PDR. About 42 % of married women are using a modern method of family planning. About 38 % of births are delivered in a health facility, the majority in public sector facilities. Only 41 % of newborns in the last two years received either a health check or post-natal care (PNC) visit within two days of delivery (MoH, 2012).

The total fertility rate (TFR) for Lao PDR for the three-year period preceding the survey (2009-2011) is 3.2 children per woman, and 3.6 and 2.2 in rural and urban areas, respectively. About 38% of births in Lao PDR are delivered in a health facility, the majority in public sector facilities. The result of the survey shows that about 10% of the populations suffered from a health problem during the last 4 weeks. The 2012/2013 survey shows that in general, the share of women and men suffering from long term sickness is slightly different: women 2.3% and men 1.9%. Women face particular challenges in accessing care given restrictions on their mobility due to social norms, domestic duties, as well as costs and difficulties of transportation. About 52% of the population lived in villages within 10 km of a hospital while 62.5 % were within 10 km of a health center in 2013 (LECS V, 2014).

Gender and Business Sector

According to the Enterprise Survey 2011, about 43.4% of enterprises were owned or managed by women. The gender gap becomes most apparent with medium and large-sized enterprises, where women own only about one-quarter and one-fifth of businesses respectively. The finding that businesses owned by women are generally smaller than those by men –that proportion of male owners increases with enterprise size –is consistent with previous years' surveys. Women do comprise a much larger share of the ownership of large firms in 2011 (19%) than in 2005 (4.8%). Consistent with women owning a greater proportion of small and micro-sized enterprises, whose owners tend to have a lower education level, than men, male business owners are on average twice as likely to have attained higher education than female business owners (39.3% vs. 18.7%)

in Enterprise Survey 2011.

Comparing computer use by enterprise size reveals the finding that larger businesses are much more likely to use computers. In all survey years, 100% of large-size enterprises have been using computers; nearly 9 in 10 medium-sized enterprises use computers. With small enterprises, that figure drops to around half; and fewer than one in seven micro-enterprises use a computer to conduct business (GIZ 2009, 2012). Comparing computer use among sampled enterprises across the four Enterprise Surveys shows a small but consistent increase in the aggregate percentage of enterprises using computers. Across all firm size categories in Enterprise Surveys 2011 (with the exception of large enterprises, where computer was already 100%), computer use rose slightly, albeit by no more than 5% in any category. The largest increase was in small-size enterprises from 47% in 2009 to 52% in 2011; the first time it has risen above 50%. 90% of medium-size enterprises now utilize computers, while fewer than one in seven (13%) of micro enterprises utilize computers.

The condition of physical infrastructure (including roads, water, telecom and internet) was perceived by many businesses to be a constraint, although to a lesser degree than energy and telecom prices. About half of micro, small, and medium sized enterprises found poor infrastructure to be a constraint, while relatively fewer large enterprises considered it to be a constraint. Telecommunications infrastructure problems: 27% of small and 40% of the medium.

Gender in Education

Gender gaps persist at all levels of education and these disparities are worse amongst certain groups: in poorer districts, rural areas and amongst non-Lao Tai ethnic groups. The literacy rate for women (76%) remains lower than for men (90.7%) in Lao PDR reflecting a legacy of gender bias in access to education. This gap wider among the poor, among whom the female literacy rate is 58.7% compared to a male literacy rate of 81.7%. Literacy is thus lowest among females in poor households (LECS V, 2014).

According to LSIS 2012, 69 % of young women (age 15 – 24) and 77% of young men are literate in Lao PDR. Among both women and men (age 15 – 24), the literacy is highest in the Central region at 76% among young women and 79% among young men, and lowest in the South at 55% among women and 70% among men. The primary school completion rate for all of Lao PDR is 94 %. The completion rate among boys (101%) is higher than that of girls (88%). The Gender Parity Index (GPI) for both primary and secondary school is close to 1.00, indicating no difference in the attendance of girls and boys at primary and secondary schools.

[Table 3.4-4] Literacy Rate, 15-24 years by Socio-Economic Characteristics in 2012

		Male	Female
Lao PDR		77.4%	68.7%
Residence	Urban	92.0%	90.6%
	Rural with Road	73.3%	61.5%
	Rural without Road	55.5%	41.4%
Age	Ages 15-19	79.0%	72.3%
	Ages 20-24	75.3%	64.3%
Ethnic Group	Lao-Tai	83.9%	81.6%
	Mon-Khmer	62.8%	45.3%
	Hmong-Mien	81.2%	48.6%
	Chinese-Tibetan	43.1%	30.1%

Source: LSIS 2011-12, Lao Statistics Bureau, Ministry of Planning & Investment

Gender in ICT

In 2006, the survey of 126 913 economic unit shows that the use of information technology (IT) in the operation of the economic unit is still very limited, only 3 910 economic units or 3% of total units use computer. Moreover, only a small number of firms use the Internet. For instance, 0.9% of total economic units use the Internet and other 0.3 percent has their own websites (MPI, 2007).

According to LECS V 2013, the promotions of households with a TV increased from 60.2% to 75.5%. The ability to communicate has also improved significantly, with 76% of households owning a mobile phone in 2012/2013. About 56.1% of poor households owned a mobile phone. About 7.5% and 1.3% of all households and poor households owned a computer respectively. Only 13% of women in Lao PDR read a newspaper at least once a week. One in three women listen to the radio at least once a week, while as many as three quarters of women watch television at least once a week. 5% of women age 15-49 do not have regular exposure to any of the three media, and only 7% are exposed to all the three types of media at least once a week (LECS V, 2014).

Larger proportions of women are exposed to all the media types in urban areas (15%) than in rural areas (3%). Exposure of women to all the three mass media is higher in the Central region (9%) than in the Southern (5%) and Northern region (4%). The percentage of women exposed to all three media types on a weekly basis is highest among women in Lao-Tai headed households (9%).

The most common type of media to which all ethno-linguistic groups are regularly exposed is television (viewed regularly by 40-88% of women of different ethno-linguistic households), followed by radio. Men report a slightly higher level of exposure to newspaper and radio than women. About 18% of men read a newspaper or magazine at least once a week and 42% listen to the radio at least once a week. On a par with women, three quarters of men watch television on a weekly basis. About 9% of men do not have regular exposure to any of the three media, while 10% are exposed to all the three types of media at least once a week.

According to Lao Social Indicator Survey (LSIS) 2011, only 15-24 year old women and men were asked questions on computer and internet use. About 17% of 15-24 year-old women have ever used a computer, 14% had used a computer within the previous year and 11% had used a computer at least once a week during the previous month. About 9% of women age 15-24 had ever used the internet, while 8% had used the internet within the previous year. Only 6% of young women used the internet as frequently as once a week or more during the previous month.

While use of a computer or the internet is fairly low across most of the country, about half of young women in Vientiane capital had used a computer in the previous year and one third had used the internet in the previous year. As expected, both computer and internet use increase steadily with increasing education level and increasing wealth quintile. Less than 1% of women with primary education reported using a computer during the last year, compared with 79% of women with higher education. Use of computer in the previous year climbed from less than 1% among women in the two lowest wealth quintiles to 45% among women in the highest. Use of the internet in the previous year rises from less than 1% in the lowest wealth quintile to 26% among young women in the richest.

Similar proportions of young men as young women had used a computer and the internet during the previous year. Sixteen % of 15-24 year-old men had used a computer and 9 % had used the internet during the previous year. Differences in background characteristics among young men are similar to those observed among young women. Use of computers and the internet is most common in Vientiane Capital, and also rises steadily with increasing education level and wealth quintile. Less than 1% of young men in the poorest households had used the internet during the previous year, compared with 36 % among young men in the richest households. While use of computers and the internet is limited to a minority of the population, a significantly higher proportion of young men of Lao-Tai headed households had used computers (22%) or accessed the internet (14%) in the 12 months prior to the survey than young men of other ethno-linguistic groups (LSIS, 2012).

According to the ICT survey of the Lao Women's Union in 2013, more men than women use the internet: 11.1% of all women are online, compared with 16.5% of all men. Women face real barriers to internet usages including less access to computer, low education, and high internet price. Lack of knowledge on how to use the computer is a hindering factor to use the internet as cited by 48.7% of the female respondents and 35.6% of the male respondents respectively (LWU, 2013).

3.4.2. Current Status of e-Services

Current e-Services

Lao PDR has made significant progress in strengthening its telecommunication infrastructure. Communication and transport, and post and telecommunication play an important role in generating revenues and critically support other sectors to grow. On average, the sector's value added has increased by 7.8% per year and its contribution to GDP is approximately 4.6%. The sector is significantly dominated by mobile telecommunications. Cell phone density and internet access in Lao PDR are low compared to the more advanced ASEAN member countries. In 2014, the number of mobile subscribers reaches 4,374,466 or about 66% of Laotians have a cell phone.

[Table 3.4-5] ICT Access in Lao PDR

	2010	2011	2012	2013	As of May 2014
Mobile Cellular Subscriptions	4,003,395	5,480,851	4,300,000	4,481,395	4,374,466
Mobile Cellular Subscriptions (per 100 people)	62.5	84	64.7	66.1	66
Telephone Lines	103,102	107,643	450,000	678,657	701,738
Telephone Lines (per 100 people)	1.6	1.6	6.7	10	11
Fixed Broadband Internet Subscribers (per 100 people)	0.08	0.09	0.11	0.13	1.7
Internet Users (per 100 people)	7	9	10.7	11	12.5

Source: World Bank, 2013; MPT, 2014

The Vientiane Capital has most mobile phone density accounting for 183% subscribers compared to its total population. Saravane province has less density with only 36% subscribers. Table 7 indicates the number of mobile subscribers in June 2014.

[Table 3.4-6] Number of Mobile Subscribers by Province in 2014

Code	Province	Number of District	Number of Subscribers	%
01	Vientiane Capital	9	1,481,651	183
02	Phongsaly	7	71,716	39
03	Luangnamtha	5	99,960	57
04	Oudomxay	7	126,178	39
05	Bokeo	5	85,667	48
06	Luangprabang	12	227,550	48
07	Huaphanh	9	133,881	39
08	Xayabury	11	188,241	47
09	Xiengkhuang	8	159,653	55
10	Vientiane	13	196,735	38
11	Borikhamxay	7	157,535	54
12	Khammuane	10	240,704	60
13	Savannakhet	15	513,384	54
14	Saravane	8	139,891	36
15	Sekong	4	62,970	59
16	Champasack	10	401,843	59
17	Attapeu	5	86,907	64
	Total	145	4,374,466	66

Source: Ministry of Post and Telecommunications, 2014

Land lines account for 701,738 and by early 2014 fixed-line tele-density was still low at around eleven telephones per 100 people, with limited growth occurring in that segment of the market, over the last decade. Table 8 shows a number of fixed line subscribers by province in 2014.

Internet prices in Lao PDR have dropped every year from 2008 to 2014. The price per month for a speed of unlimited 1 Mbps had dropped to U$35 in 2014. Service providers are competing harder on price for data service because they are not able to do this with voice services as the government has imposed tougher regulation on those services. The internet price could have been reduced further as a result of competition in the market, but the subscriber growth rate has not increased at the level that service providers would have expected.

[Table 3.4-7] Number of Fixed Line Subscribers by Province in 2014

Code	Province	Number of District	Number of Subscribers	%
01	Vientiane Capital	9	229,556	28
02	Phongsaly	7	17,657	10
03	Luangnamtha	5	16,714	10
04	Oudomxay	7	24,713	8
05	Bokeo	5	11,885	7
06	Luangprabang	12	41,136	9
07	Huaphanh	9	31,190	9
08	Xayabury	11	33,246	8
09	Xiengkhuang	8	32,120	11
10	Vientiane	13	43,713	8
11	Borikhamxay	7	22,423	8
12	Khammuane	10	26,783	7
13	Savannakhet	15	73,060	8
14	Saravane	8	24,541	6
15	Sekong	4	11,512	11
16	Champasack	10	50,647	7
17	Attapeu	5	10,841	8
	Total	145	701,738	11

Source: Ministry of Post and Telecommunications, 2014

The number of internet users is growing quickly reaching 707,871 and the penetration rate for internet access is 12.5 percent in 2014. However, if we compare with the nearby countries, internet development in Lao PDR is still slow. The main causes of this slow development include a lack of consumer purchasing power, lack of IT knowledge, lack of content in Lao language, and high cost to subscribe. According to the Internet World Stat (IWS), there are more than 255,880 Lao people subscribing to Facebook accounts as at the end of 2012, representing a Facebook user penetration of 3.9. A fixed broadband internet subscriber in Laos is last measured at 115,147 in 2014. Table 3.4-8 shows the number of fixed broadband internet subscribers.

[**Table 3.4-8] Fixed Broadband Internet Subscribers in 2014**

Code	Province	Number of District	No. of subscribers	%
01	Vientiane Capital	9	52,292	6.4
02	Phongsaly	7	5,349	2.9
03	Luangnamtha	5	2,981	1.7
04	Oudomxay	7	7,102	2.2
05	Bokeo	5	2,988	1.7
06	Luangprabang	12	5,898	1.3
07	Huaphanh	9	3,573	1
08	Xayabury	11	3,661	0.9
09	Xiengkhuang	8	3,921	1.4
10	Vientiane	13	4,513	0.9
11	Borikhamxay	7	4,138	1.4
12	Khammuane	10	2,730	0.7
13	Savannakhet	15	6,003	0.6
14	Saravane	8	1,373	0.3
15	Sekong	4	2,113	2
16	Champasack	10	5,330	0.8
17	Attapeu	5	1,182	0.9
	Total	145	115,147	1.7

Source: Ministry of Post and Telecommunications, 2014

Lao Telecommunication Policy

In October 2007, the National Authority of Posts and Telecommunications (NAPT) devised from the Ministry of Communication, Transportation, Post and Construction (MCTPC). In June 2011, the National Authority of Posts and Telecommunications (NAPT) became the Ministry of Posts and Telecommunications (MPT/http://www.mpt.gov.la) to administer the ICT sector. The e-government center was also transferred from the NAST to be operating under the MPT.

The Government of the Lao PDR (GoL) recognizes the ICT as an increasingly crucial tool for achieving socio-economic development, aims to bring the country into the information age by increasing general access to ICT with the provision of modern telecommunications infrastructure and computer networks; by fostering enterprise and industry; promoting research and development in the fields of ICT; and by developing the necessary human resources and institutional capacities.

The Ministry of Post and Telecommunication is responsible for the day-to-day regulation of post,

telecommunications and ICT sector including licensing, the regulation of frequency spectrum, numbering and electronic addressing, technical regulation and unlawful use of telecommunications networks. According to the ICT Law in 2011, State promotes the following ICT program:

1) The state encourages both domestic and foreign individuals, legal entities or organizations to invest in the construction, development and extension of telecommunication networks according to the types and term telecommunication business license.
2) The state promotes telecommunications service provider to fairly complete in the operation of telecommunication service.
3) Telecommunication Principles Telecommunications shall be complied with the following principles: Ensuring quality in front of the law, non-discrimination, independence of the telecommunication authority from telecommunication service providers in accordance with the law; Ensuring objectively, timely and transparently the assignment and utilization of telecommunication resources, make publicly available of allocated radio frequencies allocated for any specific use by the Government; Ensuring the confidence of the state, the official the privacy of individuals, the confidence of legal entities or organizations, and ensuring transparency and justice; Ensuring compliance with technical standards, interconnection with regional and international telecommunication networks, quick and good quality of service; and protecting legitimate rights and benefits of telecommunication service providers and users.

Law on Development and Protection of Women: The Article 24 defines trafficking in women and children as the recruitment, hiding, moving, transportation, transfer, harboring or receipt of women, within or across national borders, by means of deception, the giving or receiving of bribes, threats, the use of force or forms of coercion, abduction, debt bondage or by other means, for forced labor, prostitution, publishing pornography and what is in contradiction to fine national culture or the removal of various body parts or for other unlawful purposes.

Law on the Protection of the Rights and Interests of Children: The Article 86 imposes a penalty of imprisonment for between one and three years plus a fine of between two and six million kip for anyone who produces, distributes, disseminates, imports, exports, displays or sells magazines, photographs, films, videos, VCDs, DVDs and other items of child pornography.

The National Education System Reform Strategy (NESRS) 2006 - 2015 puts educational development at the heart of human resource development. The ESDF consists of a set of policy

priorities and targets, spanning three priority areas: Equity and Expansion of Access; Governance, Accountability and Performance; Quality, Relevance and Efficiency. Within the quality area, the Ministry of Education and Sport (MoES) aims to develop the curriculum in accordance with international standards and introduction IT into the lower and upper secondary education levels. By 2015, secondary schools are envisaged to have been supplied with teaching and learning materials for IT. The Ministry of Education and Sport (MoES) issued the Notification to ensure the application of ICT to supplements and administer the Ministry of Education five main programmes: 1) Pre-school and General Education Programme, 2) Non-formal Education Programme, 3) Teacher Training Programme, 4) Vocational and Higher Education Programme, and 5) Administration and Management Programme.

In the rural and remote areas, the GOL will pilot telecentre programmes to ensure opportunities for ICT-enabled learning for those most underserved and without readily access to education. To promote the transfer of technical knowledge and expertise, the Lao diaspora shall be encourage to return to assist in human resource development. To ensure growth with equity (reduce disparities related to gender, ethnicity, location and returnee status), the Lao Government will support and facilitate the application of ICT for the development of participatory social networks (civil society, academia, general public, government and the private sector); focusing on the environment, health, gender, and youth.

The National Health Information System Strategic Plan 2009-2015 ensures adequate logistic supports and supplies to the Health Management Information System (HMIS) including ICT equipment at district levels as well as putting maintenance procedures in place for sustainability.

Human Resources in ICT field

In 2014, there is 800 Government staff (306 women and 494 men) in ICT sector. At the central level, 404 staff is working in the Ministry of Post and Telecommunications. The majority of staff hold a bachelor degree (408), followed by high diploma (298). In general, male have higher education level than female. For example, 75% of male staff holds a master degree while 24.5% of female staff does.

[Table 3.4-9] Government Staff in Post and Telecommunications Sector by Central and Local Level

Level	Women	%	Men	%	Total	%
Ministerial Level	149	36.9	255	63.1	404	100.0
Provincial and District	157	39.6	239	60.4	396	100.0
Total	306	38.3	494	61.8	800	100.0

Sources: Ministry of Posts and Telecommunications, 2014

[Table 3.4-10] Government Staff in Post and Telecommunications Sector by Educational Level

Level	Women	%	Men	%	Total	%
PhD	1	33.3	2	66.7	3	100.0
Master Degree	13	24.5	40	75.5	53	100.0
Bachelor Degree	151	37.0	257	63.0	408	100.0
High diploma	130	45.0	159	55.0	289	100.0
Middle level	9	20.9	34	79.1	43	100.0
Primary level	2	50.0	2	50.0	4	100.0
Total	306	38.3	494	61.8	800	100.0

Sources: Ministry of Posts and Telecommunications, 2014

Provided with the current situation of Lao labor market where ICT human resource are still not sufficient, it could be said that, in general, there exists the demand for foreign skilled workers and this would be even higher when the industry developed, unless Lao ICT human resource could fill the gap.

According to a 2006 economic census, there were 3,688 employees working in ICT field. This number is strikingly low, constituting only 1.1 % of the total workforce in Laos. Numbers of total IT professionals were estimated at 4,439 in 2012. The number will climb to 5,493 by the end of 2014. Out of which about 1/4 are working in the service provider side.

The number IT staff within service provider companies has accounted for about 36 percent of total employees in 2012. Comparing the figure with the previous year's survey (2011), we can see an increase of 6 percent. Around 1/3 of IT professionals working for the service providers are

females. Foreign IT workers account for 4 of total IT workers in the service providers. Salary continues to grow, but not evenly, across each job function. Database and website related staff is getting paid better, reflecting the increasing demand in these tasks.

3.4.3. Country Specific (Potential) Demand for e-Services

Under the Initiative of Lao e-Government Action Plan in 2006, Government of Lao PDR has authorized the NAST to implement the Lao National e- Government Project. Followings are key achievements:

1) Provincial e-Government Service Center in 16 Provinces;
2) Construct three training rooms at e-Government Service Center;
3) 51 Teleconference room established;
4) IT equipment and network installation in Vientiane Capital (219 government organizations, 9 districts and 100 villages);
5) IT equipment and network installation in 16 provinces for 192 government officers. (16 Provincial Governor's offices, 16 provincial e-Government service centers, 9 departments and 1 district officer in 16 provinces)

As a consequence of this e-government project, Table 11 highlighted key areas of e-service in Government sector in Lao PDR.

[Table 3.4-11] Key Areas of e-Service in Lao PDR

Application Areas	Current e-Services	Line Government
Laos e-Government System	- e-Document; e-Archive; e-Map; e-Registration; e-household book - CMS, RTX, e-staff list, teleconference, e-learning, and email - All most ministries participate in the e-Government system.	Government's Office
Legal Information Access	- Online search for legal document - Social complaints through hotline	National Assembly
Lao Agriculture Database	- Gender mainstreaming tool for agriculture promotion at the field activity, - Guideline for agriculture production	Ministry of Agriculture and Forestry
Development Forum for sharing information about agriculture, rural livelihoods and natural resource management in Laos.	- The forum consists of an internet discussion group - Online library. It provides gender reports in many sectors	Ministry of Agriculture and Forestry, supported by Development Partners and Non-profit Association (NPA)
National Statistics	- Provide gender statistics in socio-economics survey and census.	Ministry Planning and Investment
Women's Health	- Online Search for Sexual education - Online Search / Archive for Maternal and Child Health	Ministry of Health
Women's Social Welfare	- Online guideline for social security scheme for women and men in business sector	Ministry of Labor and Social Welfare
Gender Policy Planning and Monitoring	- Online gender policy and strategy archive - Online Gender Statistics Archive	Government's office and Lao Women's Union

3.4.4. Future Directions of e-Services

Strategic Direction of the Lao Government (Overall Direction)

Currently, the Government of Lao PDR (GoL) has conducted the Midterm Evaluation (MTR) of the 7th National Socio Economic Development Plan (NSEDP) 2011-2015. The results of this MTR will be used as a reference and lesson learnt for formulation of the 8th NSEDP (2016-2020). The 8th NSEDP (2016-2020) is the means of implementing the final stage of the 2020 Strategy and the Resolutions of the 10th Party Congress with graduation from the Least Development

Country status a key aim of government in this plan period. The 8th NSEDP 2016-2020 highlighted the following directions:

1) Stimulating the non-resource sector and making the private sector a cornerstone of future development;
2) Increasing the competitiveness of small and medium enterprises (SMEs) in order to be a foundation for the growth and employment as well as for poverty reduction;
3) Developing entrepreneurs "technical and professional skills by strengthening marketing capacity, mobilizing financial resources for enterprises and businesses" and improving the business climate within the framework of maximizing the benefits of WTO membership and preparing for integration into ASEAN Economic Community; and
4) Development of infrastructure for small and medium enterprises and human resources, enabling the people, farmers and entrepreneurs to access business, economic, social and cultural services.

Strategic Direction of the National Assembly

To enhance dialogue between the National Assembly and citizens, the following actions are proposed:

1) to increase the accessibility and transparency of the NA and its units, including among others information on draft bills, improved mechanisms should be considered such as the NA website, hotline and petition system, sharing of summaries of plenary sessions and committee meetings for parliamentarians with interested public, background information about the work of the NA and its members through wider audiences, increased visits of NA members and constituents to rural areas;
2) to develop consultation procedures on using conventional and electronic communication instruments, like structured meetings (town-hall meetings), radio talk-shows, e-consultations on legislation and policy, and online discussions. The capacity building of female parliamentarians to use the ICT tools will be a priority;
3) Continue to improve laws and decrees on ICT. This will include a review of the existing laws related to ICT and revision of these legal documents.
4) The GOL aims to develop a comprehensive set of Cyber-Laws to govern activities on the Internet and information networks of Lao PDR. The GoL will begin with a set of cyber laws to encompass e-commerce/e-business, cybercrimes, consumer protection, and intellectual property rights.

Strategic Direction of the MPT and Key Ministries

To support the Government priorities from 2016-2020, the future direction of e-service are followings:

1) Fostering the information technology application in the government offices, in crucial economic sectors and large enterprises.
2) Reforming and automating of its internal processes of government departments and integrating of its applications across all tiers of administration for forming the back end system for implementation of E-Government Project.
3) Telecommunication and Internet development with the state of the art technology, wide broadband, high speed and quality. Until 2015 all provinces of the country will be connected by fiber cable, the remote areas connected to Internet by satellite, Internet user ratio reaches 15% of population.
4) Building hardware infrastructure for connecting to all ministries, departments, provinces, districts and villages.
5) Developing of citizens oriented applications for all government functions of the country having public interface.
6) Develop the new law to censor the social media by the end of 2014.
7) Expand telecommunication networks and services to rural areas aiming to cover 90% of the villages. Install 17,192 Km of fiber optic lines.
8) Attempt to expand mobile phone and fixed line connections to cover 80% of the total population.
9) Make available modern technologies in mail delivery, logistics, and payments of post services; for example, payments by credit cards, letters sent through e-mails, and financial services through E-post. Create an electronic postal service across the country.
10) Improve the telecenter-based tele-health services, especially improvement of health information dissemination for women at the local level.
11) Develop the Lao font for all types of electronic communication.
12) Introduce newer technologies in the educational sector, like ICT, to match with global educational standards.
13) Expend the distance learning programme of the ministry of Education and National University of Laos including improvement of e-learning for girl and ethnic people.
14) Increase the number of women receiving training in agricultural technologies, processing, handicraft and services to 20%.
15) Increase the number of women in modern professional courses. -Increase the proportion of women in the paid workforce to 40% – all things being equal, women will be given priority when awarding jobs.

Strategic Direction of Women Machineries (LaoNCAW and LWU)

1) Appoint more women to high ranking posts (from district mayor upwards), to a target of 15%. This will also apply for the MPT.
2) Increase female members in the National Assembly to more than 30%. The female parliamentarians will also have representatives from ICT sector.
3) Improve the working procedure and plan of the office of the Commission for the Advancement of Women in the MPT.
4) Increase women's participation in planning and sectoral development policies.
5) Build opportunities for women and girls to access social services on an equal basis with men.

3.5. Malaysia[24]

3.5.1. Current Status of e-Services[25]

E-government has become part and parcel of every government's agenda. Many governments have embraced its significant impacts and influences on governmental operation. As the technology has become more ubiquitous, government of Malaysia has decided to inaugurate e-government policy in its agencies and departments in order to enhance the quality of services, better transparency and greater accountability. As for Malaysia, the government is inspired by the wave of the e-government, as its establishment can improve the quality of public service delivery, and also its internal operations. As one of the strategies to achieve Vision 2020 (Malaysian Vision on year 2020), Multimedia Super Corridor (MSC) has been introduced to accelerate Malaysia's entry into Information Age and improving government administrations and operations i) to shape new mode of public service where all public organization deliver a modernized, integrated and seamless service for their citizens and ii) to introduce a paper-less service delivery for a healthier environment (using less paper in all type of application, processes services).

Government Policy on ICTs[26]

The Malaysian government launched Vision 2020 in 1996 to create a fully developed knowledge-based society by the year 2020. The telecommunications sector was privatized in 1987, and after the rolling out of the National Telecommunications Policy (NTP) in 1994, the market is now completely liberalized. The government has invested substantially to build an ICT-friendly environment.

Government Policy on Gender

Gender equality appears to be a priority for the Malaysian government as is evidenced by a UNDP Gender Development Index rating of 0.78, among the highest in the region and in the high human development category on a global basis. Local and global demands have resulted in an affirmation of the laws for improving and protecting women's status and position. In 2001 the parliament made a modification in the constitution to ensure the legal structure required for

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[24] Written by Ms. Siti Atimah Khairiah M. Amin, System Analyst, Ministry of Education, Malaysia

[25] Hybrid Approach of e-Government on Malaysian e-Government Experience (International Journal of Social Science and Humanity, Vol. 2, No. 5, September 2012 by Razlini Mohd Ramli) http://www.ijssh.org/papers/127-G00020.pdf

[26] Engendering ICT Toolkit - MALAYSIA (Technological Change and Women's Employment in Malaysia by Cecilia Ng Choon Sim) http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTGENDER/EXTICTTOOLKIT/0,,contentMDK:20272164~menuPK:562599~pagePK:64168445~piPK:64168309~theSitePK:542820~isCURL:Y,00.html

complete implementation of laws related to gender equality (Hafkin and Taggart 2001). Favorable policies have resulted in women occupying high-skilled and managerial positions in Malaysia.

Policy implemented to address especially these following areas[27]:

1) To offer efficient, high-quality administrative online services to citizens and businesses;
2) Streamline government's internal process to improve quality of service, reduce costs and increase productivity;
3) Strengthen data security and protect privacy. To increase citizen participation in government;
4) To create transparency through good documentation and effective communication.

Honorship of Participation among Government Agencies and Departments[28]:

1) The aim of the assessment is to further support Government agencies in promoting more online services and better services delivery that can reach the public through the websites or portal interface;
2) It accessed the websites of the government with two basic approaches that is assessment and best practices, also an additional approach known as Strategic Achievers.
3) From the overall ranking of Portals and Websites, the usual sub-rankings were derived namely Ministry, State, Local Authority, University and Managed Portal Services (MPS).
4) A total of 1,349 portals and websites were assessed on 2012 but the actual portals/websites derived from myGovernment portal were higher.

Some of the preliminary portals that have been introduced are following:

MYEG

MY E.G. Services Berhad ("MYEG") is a concessionaire for Malaysian Electronic-Government ("E-Government") MSC Flagship Application. MYEG builds, operates and owns the electronic channel to deliver services from various Government agencies to Malaysia citizens and businesses. Example services are:

1) Auto insurance renewal
2) Road tax delivery status
3) PDRM(Police) summons alert

[27] Hybrid Approach of e-Government on Malaysian e-Government Experience (International Journal of Social Science and Humanity, Vol. 2, No. 5, September 2012 by Razlini Mohd Ramli) http://www.ijssh.org/papers/127-G00020.pdf

[28] Malaysia Government Portals and Websites Assessment, (MGPWA 2012), Public Governance, Governance Dimension, Multimedia Development Corporation MALAYSIA http://www.mscmalaysia.my/sites/default/files/mgpaw2012/ MGPWA-2012.pdf

4) Web: www.myeg.gov.my

TNB – Malaysian Energy (Electricity) Provider

Enjoy the offered services at the public convenience.

1) Pay electricity bills online
2) View detailed information about TNB account.
3) View latest and past billing information.
4) Track monthly electricity consumption.
5) Web: www.tnb.com.my

Malaysian Banking

Almost all banks in Malaysia provide online services such as:

1) Online transfer (helps for online shops and entrepreneurships)
2) Pay Bills online
3) Top ups phone credits
4) Pay loans online
5) Pay fees online
6) Online Ticketing

Example banks are

- Maybank Berhad : www.maybank2u.com.my
- CIMB Bank Berhad : www.cimbclicks.com.my

Government Portal for Women[29]

MyWanita Portal (means Malaysian Women in English) Handle by Ministry of Women, Family and Community Development

Providing services:

1) Single Mothers - Registration, Information, Programs
2) Gender Awareness - Information, Related links (UNESCO)
3) Entrepreneurship - Registration, Information, Mother or Single Moms Business Opportunity
4) NGO information and references
5) Counselling - Client and Counsellor Application, Information, Online Stress Test, Psychology Test, Programs

[29] MyWanita Portal Wanita (Portal for Women under The Ministry of Women, MALAYSIA) - http://www.jpw.gov.my/

6) Online Training
7) Women Taxi information and contact person list to get the service.
8) Flexi Work Life: flexWorkLife.my aims to build a network of employers and talents to optimize work-life integration while maximizing work efficiency and enhancing employee engagement.

The portal has a repository of the best ideas and practices in flexible working arrangements as well as family-friendly facilities. You will also find case studies, success stories and job opportunities which offer flexible working arrangements. PerWani is a link to promote information on knowledge and what should women do on violence against women.

A Women NGO Portal: AWAM

AWAM is an independent feminist organization in Malaysia committed to ending gender-based violence and upholding equality and rights for all. We are a tax-exempt, non-profit organization established in 1988.

Services:

Telenita Helpline - Provide services such as:

1) Counselling Services in Malaysia
   - Hospitals and One Stop Crisis Centres
   - Legal Services
   - Police
2) Women's Shelters in Malaysia
3) Guide to overcome violence (Against women)
4) Information regarding related resources
5) Paracouncellor - AWAM runs an annual training for members who are keen to help run our Telenita helpline

Web: www.awam.org.my

Digital Malaysia Progressing - MDEC Release[30]

Aims:

1) Improve ICT contribution to the nation's Gross National Income to RM294 billion or 17%, an increase from the current 9.8%;

[30] Digital Malaysia Progressing Ahead as Planned – MDEC Release (Corporate Affairs Division MDEC) - hany@mdec.com.my
http://www.mscmalaysia.my/sites/all/themes/mscmalaysia/templates/images/press_release/press_release_20120927.pdf

2) Create 160,000 high value jobs and an additional RM7,000 digital income per annum for over 350,000 citizens by the year 2020.

Progress:

1) Asian e-Fulfillment Hub

   The project aims to make Malaysia the centre of e-Commerce related logistics services for Asia by leveraging on the power of the internet for the assembly, packaging, shipping and tracking of products across the region.

2) Enabling e-Payment Services for SMEs and Micro Enterprises

   This will be done by creating more merchant outlet points enabled by electronic funds transfer at point of sale (EFTPOS) terminal, smartphone reader and online e-Payment.

3) Shared Cloud Enterprise Services

   This project aims to garner more local companies to adopt Cloud-as-a-Service (CaaS) solutions as well as to get more independent software vendors (ISVs) to offer their services on the Cloud.

4) Develop On-Demand, Customized Online Education

   This project aims to provide Malaysian internet users with customized education content with an entertainment edge (edutainment).

5) Microsourcing to Generate Income for the B4

   This project with the Ministry of Women, Family and Community Development as public sector lead, aims to provide training for the Bottom 40 members of the community, to enable them to work remotely from their home in order to generate additional income for themselves and their family

6) Facilitating Societal Upliftment

   Provides the system and tools needed to match community development programs and funding distributions

7) Grow the Embedded Systems Industry

   An embedded system is some combination of computer hardware and software

8) Develop a trusted Mobile Digital Wallet System

   Ecosystem that will ensure a more pervasive adoption of Near Field Communications (NFC) by encouraging greater service provider participation and subsequently enabling more customers to enjoy the service in light of more manufacturers embedding the NFC capabilities in their latest mobile phones or devices.

3.5.2. Country Specific (Potential) Demand for e-Services

Specific demands on e-Services for women in Malaysia are:

1) Online Shopping – home appliances, clothing
2) Platforms for small/home business – women entrepreneurship
3) Agriculture information and government supports in terms of training in skills, opportunity and money – also on women entrepreneurship
4) Healthcare Information for self and family members
5) Guidelines for Child bearing, development and educations
6) Homecook recipes
7) Reading and Information on Religion
8) Enabling Women's Social Empowerment

From the survey, it can be concluded that the portal developed is to provide an eservice medium for the public. However, it is obvious that gender is not a specific issue in Malaysia. Thus, the portal or website developed is not meant for women alone, although the portal was developed and maintained by the Ministry of Women.

As the government supporting and aiming for the national year 2020 target, all services has been up to the technology and to be treated online. And as study can be seen on case 1 – is meant for the disabled people and case 2 for the kindergarten or nursery handler, almost every possible function such as multiple language, mobile access, log in the personal information, contact us, audio and video function and so on is developed to ease and make it useful to the public. Thus, to effortlessness the public to use the portal and understanding it's functions.

However, on both cases there is still lack of statistics to be shown and shared for the researchers and observers to gain more information. There is still information hidden and undisclosed for the public usage. It is still a good start, because the data and records is being kept and saved for future improvement and enhancement.

The main agenda for e-Services offered studies is to improve the deliverables of government services. However, one of the cases is a new portal developed for women support not just support but for women to get related information, especially the house maker. The portal also developed for the management to get the information and statistic on women. The portal has just been on live last year (2013).

Women may find that information shared on the portal useful, such as taxi for women, tax relief

for the employer who employed part-time women worker, counseling information if needed, gender awareness, online training and various other useful things. Women also may share their handmade items or products for sale to other women on the portal. For divorcee and also single mom (especially whom does not have any experience in working fields) are able to go to the website and apply for any trainings provided. Women may also come to visit the website for getting information on women's health issues such as information regarding mammograms, HPV immunization and so on. Women simple health check on cholesterol, sugar level in blood, Pap smear also offered by the ministry with a low cost.

Actually all of the services has been offered by the Ministry long before the portal is up and running. The awareness of these services is hidden and unseen by the public. By developing this portal, the government put aims to provide helps for all women in Malaysia. It will be easier for the officers to explain and introduce the services offered by the government by promoting this portal. Thus, easier for them to capture and keep information and statistic regarding women on their tour.

3.5.3. Future Directions of e-Services

Outlook on e-Service in Malaysia

1) An attempt to replace the traditional form of governance and its accompanying deficiencies with a modern, more open, transparent and responsive service delivery system;
2) ICT development and enhancement for Y Generation- Understanding on Y Generation is essential to guide the design and implementation of ICT Solutions (eservices);
3) According to pikom[31], When it comes to gender, male ICT professionals have a median salary of RM5,201 while their female counterparts only earn a median salary of RM3,855, which is about 35% less. This could be related to most man work in the private sector where else women work in the government sector. So moving forward, the government should relook into this to avoid the resulting in talent depletion. One of the reasons is the fact that female workers tend to retire earlier from the workforce to tend to their families[32]

[31] Placing Women's Empowerment Back Into Gender Equality
[32] Kuala Lumpur ranks 53rd in ICT salaries, behind cities in Vietnam, Thailand (The Malaysian Insider – Fri, Jul 4, 2014) https://my.news.yahoo.com/malaysia-ranks-53rd-ict-salaries-behind-vietnam-thailand-082723567.html

Element for sustainability of an e-Service are[33]:

1) Security needs to be update to follow the change in technologies;
2) Supply chain need to be revised because of actual perturbations in transportations areas;
3) Internal processes to be recalibrated again to make workflow much more dynamic;
4) Governments and states need to take more actions to make e-service much sustainable;
5) Provide statistics data so that researchers and consumers will get more interesting in the outcome.

Government to Develop Information, guidelines and policy against Internet Frauds among Women

1) Online dating scams;
2) Consumer fraud and scams;
3) Internet safety for women;
4) Drug distribution via online administrations;
5) Conduct trainings to educate, acknowledge and empower women on the ICT usage;

Parameters of ICT Policy Development (the 5 C)[34]

1) Connectivity – To ensure all the basic rules, regulations and accessibility requirements.
2) Community - Nondiscriminatory, research, skills and technologies.
3) Capacity – Encouragement in learning and policy development, awareness, incentives, affordability.
4) Collaboration – peering, uncompetitive
5) Cash – Investment

Advocacy of integrating a gender perspective in ICT and development has identified several important concerns such as[35]:

1) Access and Control
2) Education, Training and Development of Skills
3) Power and Decision-making
4) Privacy and Security
5) Internet Frauds

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[33] Public E-service Sustainability Failure Factors: Project Stakeholders' Views JOURNAL OF INFORMATION SYSTEMS RESEARCH AND INNOVATION http://seminar.utmspace.edu.my /jisri/download/G_FinalPublished/Pub9_EServiceFailureFactor.pdf

[34] The nature of the information society: A developing world perspective (written by Madanmohan Rao) - http://www.itu.int/osg/spu/visions/summaries/developing.pdf

[35] Information and Communication Technologies (ICTs) for Social Change by APC Women - http://www.apcwomen.org/gemkit/en/understanding_gem/icts.htm#jump35

6) Networking
7) Motivation and Goals
8) Financial Capital and Expenses
9) Products and Services Quality
10) Dependency and profitability variables
11) Crisis and Prevention Recovery

Growth of women Entrepreneurs in SMES is summarized by four elements (barriers) such as financial and capital assistance; network; education, training and counseling; and usage of ICT as shown on figure below[36].

Teleworking and Development in Malaysia[37]

The emergence of Internet technologies has made it possible to carry out a wide range of service sector work at a distance from the main premises of corporate organizations. These can be performed either from home-based units or from institutions such as call centers. The ease with which work can be externalized also meant a massive rise in outsourcing which led to the transferring of jobs from affluent countries or regions, with high overhead costs and wages, to less prosperous ones. Teleworking, understandably, has significant implications both for regional development and urban planning. In addition, international telework makes it cost effective for corporate and organizations. Towards an enabling environment:

1) Promote new perspectives on telework
2) Promote a paradigm shift in management and work culture
3) Review legislative framework
4) Promote ICT knowledge and skills to target groups Infrastructure
5) Speed up the timetable for universal access
6) Review telecommunications pricing structure/regulations
7) Review price differentials in hardware and software
8) Establish an independent agency
9) Study reasons for women's exit from the labor force

[36] Improving Women Entrepreneurs in Small and Medium Enterprises in Malaysia: Policy Recommendations (Wendy, Ming-Yen, Teoh, Multimedia University, Malacca, Malaysia, myteoh@mmu.edu.my Siong-Choy, Chong, Putra International College, Malacca, Malaysia, scchong@iputra.edu.my) - http://www.ibimapublishing.com/journals/CIBIMA/volume2/v2n5.pdf

[37] Teleworking and Development in Malaysia – (Edited by Cecilia Ng Published in association with UNDP and INTECH/United Nations University) http://www.southbound.com.my/icts/teleworking_cn.htm

Fundamental and interdependent roles or impacts of eservice[38]:

1) Accessing information and knowledge, with dramatic increase in the power and speed to access, process, adapt and organize information. This, in turn, has accelerated learning, innovation, and knowledge creation and dissemination. In this sense, ICT may have the profound impact of the invention of the printing press.
2) Speeding up and reducing the costs of production and transactions throughout the economy. ICT is increasingly embedded into all types of production, processes and transactions, giving rise to intelligent products, real time control processes, facilitating trade, outsourcing business-support and back-office services, and enabling complementary organizational innovations. In this sense, ICT may have similar implications as the steam engine, electricity and the railways in transforming production and transportation systems.
3) Making connections among people, NGOs, enterprises and communities. This gives rise to empowerment, participation, coordination, decentralization, social learning, connecting communities of practice, mobilizing social capital, and globalizing civil society concerns. ICTs have been increasingly described as "technologies of freedom" (Ithiel de Sola Pool, 1983). There may not be a historical parallel to the enabling role of ICT (including telecommunication and the Internet) to coordinate and empower.

E-Service for Better Government

Objective of transforming the deliverables of the government via eService is to improve services to the public. Thus, adhere to the government initiatives to provide an open, accessible, informative, helpful and user-friendly service.

In summary, in order to maintain and sustain a healthy environment of eservice on women the government should include:

1) Increased awareness of and access to opportunities in education and work for women;
2) Identify the key factors and benefits of a better government by implementing e-government;
3) More opportunities to work at home and in safer working conditions or environments;
4) And more networking of women on issues of common concern.

[38] The Diffusion of E-commerce in Developing Economies: A Resource-based Approach (Book By Zeinab Karake-Shalhoub, Lubna Al Qasimi p76-p77)

3.6. Myanmar[39]

3.6.1. Current Status of e-Services

In 2013, the sum total of global internet users' amounts to 2.7billion, and in developing countries, the number has risen as much as three times, during 2007 and 2013. In Myanmar, at present the density of telephone communication is 12 per cent and using of the net is 5 per cent[40]. There are in the neighborhood of 200,000 people who use the face book currently in Myanmar. It has turned out that there has been a rise in the use of the internet and of social network media, being conditional upon increased ability to surf the net in connection with mobile phones. The historically pervasive levels of Internet censorship in Myanmar were significantly increased with very low Internet penetration rate due to both government restrictions on pricing and deliberate lack of facilities and infrastructure.

Current e-Services from Myanmar Government supported (10) websites from Union level institutions. 6 websites are both English and Myanmar languages and 4 websites are Myanmar langue only. Out of the Union Ministries (36), six Ministries of Presidential Office have no specific website any more. Only Presidential Office website is support to people. Other Union Ministries (30) supported 31 websites. 23 websites are both English and Myanmar languages, and 4 websites are Myanmar langue and 4 websites are English language only.

In Myanmar, only one e-Service providing women related issues managed by Ministry of Social Welfare, Relief and Resettlement. Two e-Service providing women related issues managed by Institutions such as Myanmar Women Affairs Federation (MWAF) and Myanmar Women Entrepreneur Association (MWEA). They would be supported about their organizations' information only. There are no founded women's livelihood based information, vocational training opportunities and any other job opportunities. In Myanmar, government ministries do not providing specific e-Services for women related issue. Some of the organizations are providing women's health issues but not found any specific websites for women.

An October 2010 survey found that blogging is the fastest growing type of Internet use in Myanmar, with a 25 percent increase from 2009. A non-scientific survey taken in 2009 found that: Blogs focus on entertainment (14%), technology, computers, and the Internet (17%), books and literature (9%), news (6%), hobbies and travel (6%), politics (5%), and religion (4%), among

[39] Written by Ms. Kyawt Kyawt Khaing, Researcher, Myanmar Development Resource Institute – CSIS, Myanmar

[40] The Mirror News Paper of Myanmar/25th July 2014.

other topics; 52 percent of Myanmar bloggers write from Myanmar and 48 percent write from abroad; 72% of bloggers are men and 27% are women; 77% of bloggers are single and 14% are married; 35 percent of bloggers are 26 to 30 years old and 29 percent are 21 to 25 years old; 80 percent blog in Myanmar, while 8 percent blog in English, 10 percent write in both languages, and the rest use ethnic minority languages such as Kachin, Karen, and Chin[41].

The Internet in Myanmar has been available since 2000 when the first Internet connections were established. According to World Internet Stats statistics as of June 2012, the country had over 534,930 Internet users (1.0% of the population) with the vast majority of the users hailing from the two largest cities, Yangon and Mandalay[42]. Although 42 cities across the country have access to the Internet, the number of users outside Yangon and Mandalay is just over 10,000. Most of the country's 40,000 Internet connections are ADSL circuits, followed by dial-up, satellite terminal, and WiMax. Myanmar Post and Telecommunication (MPT) are also undertaking a trial of fiber-to-the-home in Mandalay, and plan to roll out a similar trial in Yangon. Myanmar Teleport (formerly Bagan Cybertech), Yatanarpon Teleport, formation Technology Central Services (ITCS), Red Link Communications, and the state-owned Myanmar Post and Telecommunication (MPT) are the Internet service providers in Myanmar. Internet cafés are common in the country and most use different pieces of software to bypass the government's proxy servers.

The use of Internet censorship circumvention methods is officially banned in Myanmar. Myanmar ISPs block many bypass and proxy websites, but are unable to block all circumvention methods. Cybercafes are required by law to keep records on their customers' activities and provide police access to the records upon request. However, many cybercafés do not systematically enforce such monitoring, often assisting their users in circumventing censorship instead. Prior to September 2011 the government used a wide range of methods to restrict Internet freedom, including legal and regulatory barriers, infrastructural and technical constraints, and coercive measures such as intimidation and lengthy prison sentences. Although the authorities lacked the capacity to pervasively enforce all restrictions, the impact of sporadic implementation and the ensuing chilling effect was profound. While information circulating on the Internet is still closely monitored, reforms by the Myanmar regime that began in 2011 resulted in information being more freely circulated.

According to government statistics, 5.4 million of Myanmar's 60 million populations had a mobile phone subscription at end-2012, giving the country a mobile penetration of 9 per cent.

[41] http://en.wikipedia.org/wiki/Internet_in_Burma
[42] http://en.wikipedia.org/wiki/Internet_in_Burma

According to official figures released in mid-2012, Myanmar had 857 Base Transceiver Stations (BTS) for 1,654,667 local GSM mobile users, 188 BTSs for 225,617 local WCDMA mobile users, 366 BTSs for 633,569 local CDMA-450 mobile users, and 193 BTSs for 341,687 CDMA-800 mobile users. Huawei who has built 40 percent of the towers and ZTE have built 60 percent in Myanmar, which amounts to 1500 across the country, said it has built the towers mostly in Yangon, Mandalay and Naypyitaw[43]. The Myanmar Telecommunications Operator Tender Evaluation and Selection Committee selected Norwegian Telenor Group and Ooredoo of Qatar as winners of the bidding, for the two telecom licenses issued by the government of Myanmar. The licenses allow the operators to build and operate a nationwide wireless network for 15 years. The country had over 400,000 Internet users (0.8% of the population) with the vast majority of the users located in the two largest cities, Yangon and Mandalay. The government now allows access to the entire Internet and a lot of people are using the internet freely usually with their mobiles.

3.6.2. Country Specific (Potential) Demand for e-Services

In Myanmar 50.6% of the total population are women[44]. The status of Myanmar women has enjoyed equal rights as men. With regard to education, the literacy rate of women is 95.1%[45]. There is no gender discrimination in the education system. The government is making concerted efforts to promote the education status of women and children especially in the rural and remote border areas. With regard to health, the government places special emphasis on family health, the most basic and integral unit of society. The health coverage is extended to the rural and far-reaching border areas. Myanmar is changing to the market economy and as such, not only the government sector, but also the private sectors are playing an important role. As such, more women are entering the private sectors, contributing a significant labor force. The legal system of Myanmar provides equal rights to women and men in the area of business and commerce.

Women's Economic Participation

Out of the whole population of Myanmar, 60.97 per cent[46] live in rural areas and earn their living mainly through agriculture and livestock breeding, and still there are many illiterate people. Female literacy rate is two times less than that of male rural people, and there is hardly any job prospect for these illiterate females. So, for the sake of income, many of them have to work in very low-income positions in urban areas, as well as in foreign countries.

[43] http://www.elevenmyanmar.com/index.php
[44] Population by Sex, 2012/ASEAN Statistical Yearbook 2013.
[45] Literacy Rate, 2012/ASEAN Statistical Yearbook 2013.
[46] Rural - Urban Population, 2012/ASEAN Statistical Yearbook 2013.

Myanmar women now make a contribution to the economy of the country in such a way that they are conventionally required to perform domestic chores, as well as to get themselves involved in business, both formal and informal, to gain financial independence. Traditionally working in the home, the worsening economic situation has brought women into paid employment, while maintaining the same level of household responsibility. Women work primarily in the informal sector, in factories, as street vendors, prostitutes and domestic help. Both in local workplaces, in forced labor, and as migrant laborers in factories and as housekeepers in neighboring countries, women report both being exploited as workers, and being exposed to sexual and physical violence, without recourse to legal protection. Myanmar is essentially an agrarian economy with two-thirds of the total population engaged in subsistence agriculture. The rural poor households have suffered from low access to various services (education, health, water supply, etc.), and lack of assets such as land and livestock, which are strongly related to the rural poverty status.

Now that there have come many opportunities open to women, many women start to have greater tendency upon getting down on business fields as the self-employed, rather than being government employees. But still there are women, who despites good educational qualifications and expertise don't join the work force and still in some vocational and technical colleges and universities, female students are for the most part outnumbered by male students, because of preference given to male students. Many women are joining Master Degree courses and PhD courses, and upon the completion of these courses, still there are many women waiting in line for job offer. Very few women can be seen in very high job positions and this means a great loss out of the lack of ability to make the fullest use of human resources, not only in Myanmar but also in many other countries are only a few women in top positions of power and authority.

Women make up the larger proportion of Myanmar population and thus the role of them and their inclusiveness in the economic reforms are very pivotal to poverty alleviation. According to the statistical data collected, out of 100 women, 50.2 per cent[47] is representative of those women in various work places, who are economically active and coming by income. In order to create opportunities for rural women so that they can join the enterprises of certain amount of income, it is necessary to run some programs to transfer technology and expertise to women, especially to encourage them to get more and more involved in such enterprises as agriculture together with livestock breeding, labor-intensive parts suppliers, fishery, and transforming raw materials from fishery and livestock breeding into value added, high quality goods. Compulsory basic education for rural women, both formal and informal, as well as reorientation courses should be initiated. In such a time of economic reforms by means of privatization and of other necessary changes with

[47] Labour force participation (% of female), ASEAN Statistical Yearbook 2013.

might and main, women are expected to become essential human capital, which is strategically important for the development of the country.

Women's Economic Empowerment

Female participation in the labor market is significantly below that of men, at 63.1% compared to 85.1% for men. The share of women in paid employment in non- agriculture sector has gradually increased from 41.3% in 2005 to 44.7% in 2010 (with variations across states/regions). The data reflects women's limited access to labor markets in industry and services. A wide gap remains between men and women in higher ranks of paid employment, with women concentrated in lower ranks and lower-skilled jobs. Women comprise about half of all staff in state administrative organizations and Ministries, however, they are concentrated in lower-level positions. In 2008-2009, they occupied only 31.7 percent of senior-level posts (Deputy Director and above). Despite legal provisions for equal pay for men and women, disparities in wages exist. Overall, women provide unpaid, largely invisible and unrecognized care work at home, in addition to their paid work in public sphere. Many women from Myanmar migrate to neighboring countries in search of better- paid jobs. Most Myanmar female migrant workers end up as low-skilled industrial, agricultural or domestic workers in neighboring countries, often in exploitative workplaces (including those where they are at risk of sexual exploitation). Women consistently received lower salaries than men, even in similar occupations[48].

In Myanmar, usually there are some categories of job deemed particularly suitable for females such as teaching career, sales girl, nurse and so forth. Now it is very difficult particularly to say that women can hardly join labor forces, and very few women are content with their financial dependence without doing any jobs. More and more women are taking part in jobs which were not much of female domain, especially in terms of the nature of job and of cultural convention, in the past, for example: media, entertainment, designer, beauty salon, tourism, computer service and factories. What underpins Myanmar economic reforms is poverty alleviation, and poverty will be able to be reduced to a degree by enhancing economic empowerment of women. As stated above, poverty alleviations is a key factor of economic reforms. By creating job opportunities for women in rural areas, it will certainly serve the double purposes of giving primacy to the development of women's life and making a positive contribution to economic development as a whole. The general views that we have had of women as 'the weak and the vulnerable" have changed a lot these days and their efficiency in equality with men are coming into more and more prominence. It is women who are required to take an active part in the activities aimed at promoting the development of women's life. In order to achieve sustainability, they should be empowered by

[48] Sustainability and Equity: A Better Future for All, Human Development Report 2011.

themselves.

Women's Health

The health-care system in Myanmar has public, private and co-operative sectors. In the public sector the Ministry of Health is primarily responsible for the provision of health-care and the Department of Health under this Ministry has the responsibility for the organization and management of all allopathic (Western Medicine) health care delivery. It is organized into several levels such as Central, State/Region, District, Township and Village. The private sector includes both traditional and Western medical care at private clinics, hospitals and drug stores selling pharmaceutical products. There are a number of cooperative and joint venture clinics and hospitals, which also provide health services to the population.

Myanmar women and men have equal access to health services. Myanmar National Health Policy is raising the level of health of the country and promotes the physical and mental well-being of the people, which includes both men and women. Health services in Myanmar are aimed to provide a holistic, lifecycle approach to health care for women. The needs of the girl child have taken care of as well as the health needs of women in the reproductive age. For older women also, there is a health program to cater their needs. Occupational health legislation embodied in the labor laws of the country cover all working women. Pregnant women are entitled to three months maternity leave. In the organized sector it is compulsory to provide facilities at worksites, including outpatient clinics, nurseries, and day-care centers. Medical care available includes prenatal care, postnatal care, pediatric care of insured mothers up to six months, and leave for up to six months in the care of miscarriage.

One of the statements of the National Population Policy is "to improve the health status of the women and children by ensuring the availability and accessibility of birth spacing services to all married couples voluntarily seeking such services". Family spacing is justified on the basic of its importance on maternal child health and not as a demographic measure. Population related activities carried out in Myanmar included birth-spacing programs and conduct of census and surveys. In surveys, data on specific indicators in specified fields are collected whereas census comprises collection of basic data. Birth spacing programs are carried out by the governmental sector as well as by nongovernmental organizations with assistance from international agencies.

Myanmar has a high maternal mortality rate with 240 deaths per 100,000 live births and is unlikely to meet the MDG target[49]. Myanmar also has a high adolescent fertility rate at 16.9

[49] Sustainability and Equity: A Better Future for All. Human Development Report 2011.

percent, mainly as a result of lack of sex education[50]. HIV/AIDS prevalence is the highest in Myanmar. An increasing number of women are contracting HIV. Women's vulnerability to HIV is increased by high-risk behavior of their spouses or partners as well as their inability to negotiate safe sexual practices. Nearly 3 percent of new HIV infections may be attributed to mother-to-child transmission[51]. A report of the desk review of research on Gender and HIV in Myanmar highlighted that factors which may limit women's access to HIV services are related to their lower status in the household, lower literacy rate, less access to health information, and exclusion from decision making in household health action and expenditure.

Women's Education

Myanmar ranks 96 out of 146 countries in the 2011 Gender Inequality Index (GII)[52]. It has achieved gender parity in education with regard to enrollment ratios of girls and boys in primary and secondary education. Myanmar has reached gender parity in education with girls accounting for 49%, 50% and 53% of total primary, lower and upper secondary school enrollments in school year 2010/2011[53]. Girls' access to education appears to be strongly affected by constraints arising from their social class, ethnicity, and linguistic background or whether they come from rural or urban locations. There are also disparities between states with the lowest ratio of girls to boys in secondary education. Poverty also more strongly affects female dropouts: for the poorest quintile, the share of girls out of school is percentage points higher than for boys. A slightly higher proportion of girls are also out of school in rural areas. Multiple Indicator Cluster Survey 2009-2010 highlights that education of the mother is positively linked to children's school attendance[54]. While education data are limited, there is at least some evidence to suggest that distance to schools, language of instruction, gender stereotypes and lack of gender sensitive and locally relevant curricula and teaching methods and a lack of qualified teachers in remote areas pose obstacles for girls and boys attaining an education. In addition, while females outnumber males in post-secondary education, their labor force participation remains very low. This indicates a mismatch of skills attained and labor market needs, as well as gender discrimination in types of study based on cultural stereotypes related to types of skills /occupations suitable for women.

Domestic Violence

The CEDAW Committee expressed concern over widespread domestic violence and sexual

[50] Thematic Analysis 2011: Achieving the Millennium Development Goals in Myanmar-United Nations Country Team in Myanmar.
[51] United Nations General Assembly Special Session on HIV/AIDS, (UNGASS), 2010.
[52] Sustainability and Equity: A Better Future for All. Human Development Report 2011.
[53] Female students comprise roughly 60% of higher education enrollments in school year 2010/2011
[54] Multiple Indicator Cluster Survey 2009-2010. Ministry of National Planning and Economic Development, Ministry of Health and UNICEF (2011).

violence, including rape, which appears to be accompanied by a culture of silence and impunity[55]. Myanmar does not have specific legislation against gender based violence, although there are Penal code provisions against sexual assault and rape. Public awareness of the issue is low. A combination of traditional cultural beliefs, low social value of women, women's lack of knowledge of their rights, insufficient support services (legal, health, counseling, shelter, etc.) collude to ensure that cases are under-reported and settled out of court. Trafficking is another serious challenge, with Myanmar women, children, and men trafficked to overseas countries and neighbor countries for sexual exploitation, domestic servitude, and forced labor. The Myanmar government made trafficking a national cause since 1997 and enacted the Anti-Trafficking in Persons Law in 2005. The government has taken measures in collaboration with key development partners to combat trafficking, including protection and reintegration of trafficked women, mechanisms to prevent trafficking of women and establishment of collaboration and coordination amongst relevant ministries to uncover trafficking cases and take legal action against perpetrators.

Women's Institutions

Myanmar's national machinery for the protecting of women in development includes the Ministry of Social Welfare, Relief and Resettlement (MSWRR), with the Department of Social Welfare as the focal point for women issues. The Myanmar National committee for Women's Affairs (MNCWA) and the Myanmar Women's Affairs Federation (MWAF). The MWAF was formed in 2003 to organize women all over the country to carry out activities to ensure security and advancement of women. It has networks at the different levels of administration from the state/division down to the district and township level. MWAF is a link with government but operates under MSWRR, is government funded and staffed. MWAF implements a national plan of action drawn from, but not including all twelve areas of the Beijing Platform of Action. However, the above agencies lack critical capacity, resources, and institutional support to carry out their mandate. In addition, the institutional capacity is limited in key line ministries with regard to mainstreaming gender in national policies, plans and programs. Myanmar is signatory to a number of international conventions relevant to gender and development, including the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW), the Convention Against Transnational Organized Crime (CTOC), the Protocol to Prevent, Suppress and Punish Trafficking in Persons, especially Women and Children (TIP), Convention on the Rights of the Child and the Protocol to Combat the Smuggling of Migrants by Land, Sea and Air (SOM).

[55] Committee on the Elimination of Discrimination against Women, CEDAW/C/MMR/3

3.6.3. Future Directions of e-Services

International experience clearly demonstrates that mobile phone services have very positive economic as well as social impacts. By connecting users to clients, coworkers, relatives and friends, they help people to access information, create business opportunities, lower transaction cost and enhance social interaction. Most recently they have also helped people access financial services with the ability to save and send money safety, no matter where they are located. Government of Myanmar will also upgrade its internet infrastructure to allow a comprehensive e-strategy for leapfrogging in a number of areas such as educational programs, government regulations and knowledge management. In education, training of teachers as well as school curriculum will include ICT skills while Government of Myanmar will provide necessary resources for connectivity. Government of Myanmar will also seek to increase the technical competence of the workforce to achieve economic and social progress through training workers with market-oriented technical and languages skills. It highlights the need to create a system of continuous learning so that workers and students can acquire new skills relevant to the fast changing demands of the modern workplace throughout their working careers. Myanmar‘s competitive edge will undoubtedly depend on the quality and productivity of its human capital. In this context, woman potentialities should appropriately be exploited for accomplishing the goal and objectives of national development. Accordingly the women must be capable of adopting and adapting new technologies. They are required to continuously upgrade themselves, and stay ahead of change by doing continuous learning, training and skills upgrading in their pursuit of better quality of life.

Union Ministry of Post and Telecommunication is support phone lines include both telephone lines and cell phone subscriptions. But phone line connection is bad and internet connection is too slow. Most of the rural areas have no telecentre either. The government now allows access to the entire Internet and a lot of people are using the internet freely usually with their mobiles.

Myanmar Government supported e-Services through Union Ministry websites and Union level institutions. They are provided relevant information about their department’s news and information. No one support any e-Services for women related issues even livelihood based e-Service. Only one government website supported women related information managed by Union Ministry of Social Welfare, Relief and Rehabilitation. But they have not support detail information and fact and figure. Even those two websites provided women information managed by Institutions such as Myanmar Women Affairs Federation (MWAF) and Myanmar Women Entrepreneur Association (MWEA). But they would be supported about their organizations’ activities and events. Any websites of women related issues are not founded from Myanmar

websites and Ministries of Myanmar Government do not providing specific e-Services for women related issue. Some of the organizations include UN, INGOs and NGOs from inside and outside country are providing women's related issues such as research papers, information, news, and some kinds of livelihood based technologies by delivery e-Service. In future more development and delivery of livelihood based e-Services are greatly needed for Myanmar women as well as ASEAN women.

3.7. Philippines[56]

The global growth of information and communications technology (ICT) is unstoppable and has permeated the Philippine society. ICT has transformed and revolutionized Filipino society-drastically changing the manner by which the government, business sectors and people conduct their operations and interact.

New technologies such as the Internet, satellite and digital broadcasting offer unprecedented opportunities. ICT has made possible the offsite conduct of transactions and businesses, as well as the rendition of services offshore, without necessarily establishing physical presence. In fact, the Philippines has emerged as one of the world's fastest growing destinations for business process outsourcing with foreign currency earnings exceeding those of any other industry (ADB, 2007). Innovations in technologies have facilitated communication and freedom of information enabling rapid information sharing and cross cultural dialogues. Social networks have greatly affected the manner by which Filipinos interact and communicate with Facebook and Twitter usage among the highest in the world[57].

As ICT permeate almost every aspect of Filipino lives, it stands to reason that the reach of ICTs would extend to government services. The role of ICT cannot be ignored in the realm of government as ICT applications promises to enhance the delivery of public goods and services to citizens not only by improving the process and management of government, but also by redefining the traditional concepts of citizenship and democracy (Pascual, 2003).

The effects of ICT are far-reaching; however, there remain noticeable disparities in terms of accessibility and benefits. The benefits of knowledge and technology are not available to the large majority of the world's population with women in most cases, not only excluded from social and economic opportunities, but also in terms of the benefits offered by ICTs (Primo, 2003). This discrepancy highlights the critical role of government in the age of technology. ICTs have the potential to help bring about substantial changes in women's lives. Governments must pay special attention to not only in providing women with access to ICT but also with ICT training and education. ICT is an instrument that promises much for the Filipino women, in terms of opportunities for learning, employment, business and enjoyment. For instance, e-government can

[56] Written by Ms. Karen Beloso Brutas, Program Officer, Women's Legal and Humen Rights Bureau, University of the Philippines, Philippines

[57] Over 80% of the Philippine internet population uses social media networking sites. In Universal McCann's 2008 Wave 3 study on social media, the Philippines had the highest penetration of social networking among Internet users at 83%, compared with the global average of 58%.

provide marketing and promotion for women's businesses, products and services. Likewise, it can increase the productivity of female farmers with access to information on agricultural inputs and markets.

This section of the research aims to provide the current status of e-services in the Philippines and identify how the government is facilitating in the development and delivery of livelihood-based e-service to Filipino women. The research covers a.) Current status of e-services in the Philippines with overview of the national e-government development plan, b.) Specific (potential) demand for e-services identifying specific e-service providing women-related information, c.) Future directions of e-services for women.

3.7.1. Current Status of e-Services

Women and ICT in the Philippines

When the Philippines ratified the Convention on the Elimination of all Forms of discrimination against Women (CEDAW) in 1981, it made a commitment to ensure that women in different contexts and situations achieve substantive equality. Indeed for the past years the Philippines enjoyed a high rating with regard to international gender equality measures and indices. In 2013, it placed fifth in the Global Gender Gap Report making the Philippines the best performer within the Asia-Pacific region in terms of gender equality[58].

At the same time, statistics show a rosy picture of status of ICT usage and access in the Philippines. In the last decade rapid growth and development of ICT have been observed in the country. The Philippines is in the top 20 countries with the highest number of Internet users in the world. The number of internet users has steadily grown from the time the Internet was introduced in 1994 with 4, 000[59] users to 33 million in 2013 (Philstar, 2013). The average Filipino spends 16.4 hours on the internet per month with 41.5% of the time spent on social media (Infographic, 2013). The 2013 South East Asia (SEA) Digital Future in Focus reported that the Philippines has the highest social network access among SEA countries with women being the most active in social networking sites (Comscore, 2013). The same study revealed that Filipinos preferred using Facebook with 92% of them having a profile and an active account.

In terms of mobile phone usage, more than 87 million Filipinos have access to mobile phones

[58] The World Economic Forum (WEF) annually ranked countries on their ability to close gender gap in four key areas- economic equality, political participation, health and survival and educational attainment.
[59] International Telecommunication Union

(ICTO-DOST, 2011). The Philippines has been dubbed the "text capital of the world" with the average Filipino sending about 600 text messages in a month[60]. With the introduction of smartphones, Filipinos are using mobile phones not only to call and send text messages but also as mobile computers. Smartphones have become a means for users to have "internet-on-the-go", allowing them to be always online (Philstar, 2013). In fact, Filipinos access the internet using a mobile device 20% of the time (Infographic, 2013). As unlimited internet services and mobile data plans are being offered to Filipinos by several telecommunication providers, it is expected that internet use in the Philippines will continue to grow each year.

ICT and the Philippine Government: The State of e-Government in the Philippines

The perception that the Philippine government is bureaucratic and corrupt make many Filipinos do not look forward to dealing with government (SWS, 2012). Many efforts have been initiated to change such perception and make government services more effective and efficient, but without much success. The advent of ICT has been seen as a potential tool in introducing changes in the current system. ICT applications are expected to enhance public sector efficiencies and streamline governance system as well as provide cost effective and transparent delivery of services to the Filipino people.

The Commission on Information and Communication Technology-National Computer Center (CICT-NCC) in 2005 conducted an evaluation of the state of web presence of national government agencies in the Philippines using the United Nation-American Society for Public Administration (UN-ASPA) Five Stages of e-Government. The evaluation revealed that the greatest number of these government agencies is either in the Enhanced Web Presence Stage (Stage II) or in the Interactive Web Presence Stage (Stage III) which means that government websites post updates with regularity and provide users downloadable forms.

In 2012, the National Computer Center (NCC) of the Philippine in partnership with the National IT Industry Promotion Agency (NIPA) of the Republic of Korea conducted an e-Government assessment to determine the current state of e-Government in the Philippines. It involved interviewing select government agencies and conducting a survey of 100 Filipino citizens to surface their perception of government services. The study revealed that e-Government in the country is still at the entry level of digitization with basic infrastructure such as data centers and communication network weak and internet connectivity very low. And according to the feedback from the survey, the speed of government service delivery is still very low and most of the

[60] 2009 researches conducted by Reuters, Portio research, NY Times, CTIA.org ten percent of the global traffic from short text messaging came from the Philippines.

information is not digitized.

Globally, the Philippines ranked 95th in the United Nations Global e-Government Survey with 0.4768 e-government development index and placed 51st in the e-participation index (UN, 2014). Despite the low ranking, the report noted that e-government in the Philippines has advanced albeit the country relatively lower national income. This could be attributed to creation of national strategic framework and national ICT policy plan.

Conducive ICT policies were cited as well for Philippines improved ranking in the 2014 World Economic Forum (WEF) Global Information Technology report. Based on the WEF Networked Readiness Index, the Philippines ranking among 148 countries improved from 86th to 78th spot (WEF, 2014). The report noted increase in the Philippines' scores in all the 10 networked readiness pillars: political and regulatory environment, business and innovation environment, infrastructure and digital content, affordability, skills, individual usage, business usage, government usage, economic impacts and social impacts. With stable performance, Philippines is expected to continue its positive trend.

ICT Policy Situation in the Philippines

The Philippine government had been implementing national plans and programs that targeted an ICT-enabled country. It has initiated several motions that signify its belief and trust on ICTs as forceful agents in promoting efficient, credible, transparent, and effective delivery of basic services to the Filipino people.

The 1987 Constitution

The Philippine Constitution sets the framework of the state's accountability for harnessing the potential of ICTs for development and nation-building. Likewise, the 1987 Constitution states that the Philippine government "recognizes the role of women in nation-building, and shall ensure the fundamental equality before the law of women and men."

The Constitution recognizes the matters of "communication and information" and "science and technology." It "recognizes the vital role of communication and information in nation-building,"[61] and declares that "science and technology are essential for national development and progress."[62] Further, the Constitution says that "the State shall regulate the transfer and promote the adaptation of technology for the national benefit"[63] and "shall give priority to… science and technology…

[61] Section 24, Article II
[62] Section 10, Article XIV
[63] Section 12, Article XIV

to foster patriotism and nationalism, accelerate social progress, and promote total human liberation and development"[64] (WLB, 2011).

The 2009 Magna Carta of Women

Republic Act 9710 or the Magna Carta of Women serves as the comprehensive human rights law of Filipino women. Herein, the role of technology is mentioned numerous times as means to fulfil their rights to a life with dignity. It specifically recognizes technology in women's right for a livelihood. It states that women shall be provided with "updated, useful information and gender-sensitive technologies for production, processing, and marketing of food products."[65] At the same time it demands the State to provide "women-friendly and sustainable agriculture technology"[66] and ensure "right to livelihood, credit, capital and technology."

Overview of the national e-government development plans

The e-government plan in the Philippines reflects the existing structures, prioritize and ongoing reform processes in the country. For the past five years, the Philippines has become one of the fastest growing economies in the region with a gross domestic product (GDP) growth average of 5-6%. It was even considered a miracle economy amidst the 2008 financial crisis. To sustain its impressive growth and make it more inclusive, the government sees the need to optimize the role of ICT in providing an environment that ensures openness, efficiency in the delivery of services, and spaces for greater competitiveness.

The government considers the ICT industry to be a budding leader in the country's economic growth, in fact calling it the country's 'sunshine industry' (NEDA, 2007). It boasts not only of international recognition, increase in the national income and the creation of more jobs but the provision of high-paying employment opportunities particularly for women, which are taken as indications of national progress (Laguilles, 2011).

The development of the ICT industry had been part of the government's economic plans and programs since President Corazon C. Aquino's time, where technological parks or 'techno parks' and similar special economic zones have been in operation (UN, 2002). But it was during President Fidel V. Ramos' administration that the ICT industry was given a more official focus from the government. In 1993, the National Information Technology Plan 2000 (NITP 2000) was created with a vision of transforming the Philippines into a knowledge society by the year 2000. In 1995, Republic Act 7925, known as the "Public Telecommunications Policy Act of the

[64] Section 17, Article XIV
[65] 2009 Magna Carta of Women, Rule V Section 23
[66] 2009 Magna Carta of Women, Rule V Section 23

Philippines," was enacted in support of the government's vision. RA 7925 facilitated the creation of a competitive environment fostering private ownership of telecommunication services. This has resulted to the establishment of solid base mobile and land-based telecommunication networks. But with the Asian financial crisis hitting in 1997 together with ongoing economic problems such as debt, these plans remained to be fulfilled to its fullest by the end of Ramos' term. In 1998, which was during President Joseph E. Estrada's time, the IT21 Philippines was launched. It echoed the NITP 2000 plan, however, with stricter timeframe to achieve the goals.

It was the Government Information Systems Plan (GISP) that provided the foundation for creating an "on-line government" by highlighting the importance of ICT in developing new and better services for the public. The GISP was a presidential level initiative envisioned to create an on-line Philippine government by 2004. It identified institutional and policy-related issues of e-Government. This thrust was further strengthened through the enactment of RA 98792 or the "Electronic Commerce Act of 2000" which recognizes the vital role of ICT in nation-building.

By 2001, under President Gloria Macapagal-Arroyo's regime, the same efforts were not only continued but intensified. In here, the Medium-Term Philippine Development Plan (MTPDP) for 2001-2004 laid the policy framework for utilizing ICT as a means to leapfrog into the new economy and make the Philippines the "the e-hub of the Asia-Pacific region". Job and wealth creation, as well as poverty reduction are apparent goals of MTPDP which focuses on promoting the development of the needed ICT skills, improving conditions for access, developing the infrastructure and establishing the appropriate legal basis for ICT operations.

The e-Government Master Plan (EGMP)[67]

The previous e-government undertakings can be described as isolated and disjointed initiatives, largely confined to transactional-related and organization projects. Such hampered the Philippines' pursuit of a digitally empowered and integrated government. The EGMP was created to address the gaps in the previous ICT initiatives. It moves on from the non-integrated path of ICT development and agency-specific applications, toward a path that leads to an e-Government model that creates more valuable and meaningful services through interoperability and maximization of resources.

The EGMP is the blueprint for the integration of ICTs for the whole Philippine government. It builds on the past e-government initiatives and at the same time consolidate the current needs of

[67] Complete details of the Philippine e-Government Master Plan can be accessed at http://i.gov.ph/pegif/wp-content/uploads/2014/03/eGovMasterPlan_Final-Version.pdf

e-government in the country to create a vision for the future. The EGMP envisioned creating "a digitally empowered and integrated government that provides responsive and transparent online citizen-centered services for a globally competitive Filipino nation."

The plan describes the institutions, agencies, processes, resources and policies that need to be strengthened to make its implementation possible and sustainable. Currently, the Information and Communications Technology Office (ICTO) of the Department of Science and Technology (DOST) is tasked to be the lead implementing agency in its ICT-related efforts such as industry development, policy formulation, ICT infrastructure development, research and development, ICT capacity building for the public sector and administration of the e-governance fund.

Government efforts to maximize the use of ICT for development and delivery of services are laudable. However, gender perspectives in these policies and programs are significantly missing. A clear-cut and equivocal commitment to advance gender equality and women's empowerment through ICT is yet to be seen (PLCPD and Women's Hub, 2004). The Philippines' strategic framework for ICT development is still silent on gender issues and considerations. For instance, in looking at the EGMP thrusts, it is not clear whether these thrusts will address gender discrimination and inequality in technology. Questions on how the government's plan will address and maximize the newly-opened economic opportunities for women, and at the same time avoid the tendency of stereotyping women into their traditional, menial work such as encoders, telecomm operators, administrative assistants, etc. remain (FMA, 2013). The ICT plans assume that the trickle-down effect will benefit the whole population. It believes that the economic growth that would be generated by the ICT as a process and as an industry would automatically benefit women. However, women's ability to take advantage of ICTs is dependent on conducive policies and an enabling environment in their own country to extend communications infrastructure to where they live.

3.7.2. Country Specific (Potential) Demand for e-Services

Having laid out the women and ICT situations of the country and its accompanying related policies, this section looks at the potential demand for e-Services in the Philippines. It particularly looks at the e-services afforded to Filipino women by examining various government websites/portals. Moreover, this section presents the result of the survey that was distributed to 100 women – surfacing their e-service usage and identifying their needs to promote their livelihood.

State of Web Presence of Select National Government Agencies

In the age of technology, a government online presence can be indicative on how it reaches out, connect and provide services to its citizens. A government agency's decision to open up a website for information and services is influenced by a variety of factors; are often met with challenges and as such implement their e-government projects by phases. Using the UN-ASPA stages of e-government, the research examines the state of web presence of select government agencies namely Philippine Commission on Women, Department of Social Welfare and Development and Department of Health and identify where they are in terms of providing e-services. These are the top three agencies cited to be providing women-related information and services.

[Table 3.7-1] Analyzing the contents of the website using the UN-ASPA "Five stages of e-Government"

Stages of e-Government	Philippine Commission on Women (PCW)	Department of Social Welfare and Development (DSWD)	Department of Health (DOH)
Emerging Stage			
Agency Name	✓	✓	✓
Agency Logo	✓	✓	✓
Write up/History	✓	✓	✓
Organization Structure	✓	✓	✓
Key Officials	✓	✓	✓
Plans and Projects	✓	✓	✓
Rules and Regulations	✓	✓	✓
Services		✓	✓
Reports	✓	✓	✓
Statistical Information	✓		✓
FAQs		✓	✓
Contact Information (Postal and Email Address, Telephone Numbers	✓	✓	✓
Enhanced Stage			
Accessible Information	✓	✓	✓
Updated Monthly	✓	✓	✓
Downloadable Forms		✓	
Downloadable Publications, Newsletters	✓	✓	✓
Announcements	✓	✓	✓
Search Function	✓	✓	✓
Site Map		✓	✓
Feedback Form		✓	

Interactive Stage			
User Log-in		✓	✓
Online Forum/Chat Room			
Discussion Board			
Transactional Stage			
Public User Log-in and Password			
Fully Integrated			

From the above table it can be observed that PCW, DWSD and DOH are under the emerging and enhanced stages of e-government. This means that the three government agencies are merely disseminating information online. The information offered by the three agencies ranges from static content, such as agency's history, organizational structure, the vision and mission (VMG) and contact information, to updated materials, such as reports, press releases, announcements, policies, and statistical databases.

The table revealed as well that interaction with the government agency and its citizen is still limited. The three government websites has yet to maximize the internet as a medium to consult with its various publics. Based on the feature of an interactive e-government, these agencies have yet to add e-forums, chats and issue-based discussion boards on their websites. However, it has to be noted that even though these features are absent from the websites, these government are using other online channels to get feedback and suggestions from its citizens. All the three websites post contact information that includes e-mail addresses where its citizens can ask questions and send comments. Some of the agencies offer short messaging service (SMS) facility to connect with the public. For instance DSWD has an interactive portal which features WiServ or Wireless Service wherein it provide different access numbers for asking information about the DSWD various programs. Also, it is noticeable that these agencies are taking advantage of the popularity of social media in the country, as all link their websites to Twitter and Facebook. However, the responsiveness of these online channels such as ensuring quick and substantive response to feedback and comments posted by its users remains a question. As previous study revealed on the use of SMS facility it "merely accommodates the receipt of the incoming message and such replying to these messages involves other channels of communication instead of sending the feedback to the public via SMS as well" (Mirandilla and San Pascual, 2010).

E-services Provided by Select Government Agencies[68]

1) The Philippine Commission on Women (PCW)

Established in 1975, PCW is the primary government agency mandated to ensure the protection and fulfilment of the rights of Filipino women through policy making. It is also tasked to ensure and monitor that all government agencies incorporate gender perspective/responsiveness in their own plans. PCW undertakes advocacy campaigns to promote economic, social and political empowerment of women as well.

Content

PCW provides women and gender related information on its website. Mostly sex disaggregated data and statistics in various areas of concern such education, health, violence against women, labor employment etc. Women-related polices and laws can be downloaded as well from the website. PCW presents its programs and projects on its website; however, specific information and/or advocacy materials on health, sexual/domestic violence prevention and education, vocational training, opportunity, information on microfinance and livelihood-related information are missing.

Because PCW is a policy advisory and coordinating agency, it does not provide services directly to women. However, PCW refers women or other inquiries to government agencies that directly provide the service being asked. For instance it has a quick referral system (QRS) for information on services for women victims of violence. In the PCW website, there is a list of women non-government organizations (NGOs) providing an array of services.

Functionality

As previously mentioned, PCW website can be categorized under the Enhanced Stage of UN-ASPA stages of e-government which means that it functions mainly to disseminate information. It provides a monthly update of its activities through news bulletin and announcements. It provides a "Search" option for easy navigation and obtaining information in English which might be challenging to non-English speakers. On a positive note, PCW acknowledges its shortcomings and solicits comments from users on how to improve the website.

2) Department of Health (DOH)

The DOH is the primary health agency in the Philippines. It is mandated to ensure access to basic

[68] The selected agencies are the top three agencies mentioned by women in the survey to be providing women-related information.

public health services to all Filipino people through the provision of quality health care and regulation of providers of health goods and services.

Content

Women-specific information can be found in the website of DOH. DOH provides health statistic on maternal deaths, live births by gender and live births by pregnancy. One of DOH key programs is the National Safe Motherhood Program wherein DOH aims to improve the maternal health of women and child mortality. Information about the program can be found in the website such as goals and strategies to achieve it. In the website, one can search for health promotional materials on safe motherhood, prenatal check-ups and emergency signs to watch out for when one is pregnant. There are also posters informing pregnant women of facility based-health centers.

DOH provides a variety of health-related information resources. It has a monthly publication called Healthbeat which brings out different health issues such as measles, tuberculosis, marriage and health, etc. The magazine can be downloaded from the website. One can also look for a particular health concern by clicking the links provided such as health journals and availing online subscriptions. DOH keep the public inform as well of any health scare through news clips and health advisory bulletins.

DOH keeps the public inform of possible epidemics. It has a specific feature in the website called Disease Surveillance in which it monitors the development of a particular disease or health problem by providing a monthly statistic and demographic updates. One on the health conditions DOH keeps an eye on is HIV. However, information given about a particular disease is limited. For instance, in the case of HIV there is no information on prevention. DOH does not provide a list of clinics where patients can get tested/treatment and counseling services. Nor does DOH connect the patients with other organizations that maybe providing HIV-related services.

Functionality

DOH keeps track of the number of users accessing information from its website. It displays the number of users that have read the articles posted on its website. It has an accessibility statement which provides an instruction for the user on how to use the website efficiently. It lists down key board short cuts and has quick navigation features. It also has a magnifier features for users that are visually challenged. However, instructions may not be easily understood as the website uses English language only.

Using the UN-ASPA stages of e-government, DOH website is entering in the Interactive Stage of e-government with its log-in feature. However, it is with limited functionality as e-participation

tools remain missing from the website. Online forums and chat rooms where users can exchange experiences regarding their health conditions and concerns are absent.

3) Department of Social Welfare and Development (DSWD)

The DSWD is the executive department of the Philippine Government responsible for the protection of the social welfare rights of Filipinos and to promote social development. DSWD function is not limited to policy making, it includes providing direct services through its various programs.

Content

DSWD presents in its website the details of its programs. DSWD programs specifically targets vulnerable groups of people, one of which is women in poverty and difficult circumstances. In the website, women can found information on DSWD center based programs for women. INA Healing Center which provides psychological support to bereaved mothers is one of them. One can also find in the website information on community based services for women wherein residential care services are given to women in difficult circumstances to enable them solve their problems and prepare them to eventual return to their families. Another program of DSWD where women are the primary beneficiary is the Pantawid Pamilyang Pilipino Program wherein it provides cash grants to poor households with children 18 years and below provided that they fulfill the conditions set by the program. The website provides updates and status of implementation of the program by sharing the stories of women beneficiaries. It provides regular news update of women who became empowered through the programs.

Information on livelihood opportunities for women can be found in the website under the DSWD Sustainable Livelihood Programs (SLP). The SLP aims to capacitate and develop the entrepreneurial and socio-economic skill of poor households through income-generating opportunities and access to employment. The beneficiaries of the project are at times provided with occupational guidance and counseling, skills training and granting of cash assistance. Other women-related information can be found in DSWD e-magazine, Infolink, wherein it features women and their issues.

DSWD provides comprehensive information about its programs; however, one of its limitations is that it fails to provide step-by-step procedures on how to avail the above-mentioned services[69]. There is no information as well as to where and who they should contact to get the services. For

[69] In the website FAQS one can requirements and procedures for adoption, travel clearance for minors and persons with disabilities privileges.

instance, there is no list of shelters and their addresses in the website. It is assumed that women should coordinate to respective DSWD near them.

Functionality

DSWD strives to make its website accessible. In the DSWD accessibility statement, it says that it is committed in making the website accessible for all users, including people with disabilities. The accessibility statement explains the websites lay-out and provide short cut function keys. However, the websites mainly uses English language, thus, it might not be accessible to Filipino women who can't read and comprehend the English language. It is not clear either on how it is making its websites accessible for person with disabilities as for instance there are no audio materials or videos for persons who might have visual or hearing impairments.

DSWD strives as well to engage with the public. Though the website e-participation functions are limited e.g. no chat/forums or discussion boards, DSWD has a citizen interactive portal where people can report, ask questions by sending text messages. DSWD proactively seeks comments and suggestions of the general public by linking the website to social networking sites such as Facebook and Twitter. As of August 8, 2014, DSWD has 39, 116 likes on Facebook. Twitter feeds are also stream in the website. DSWD is particularly concern with violence against women and their children (VAWC). It has a special SMS hotline where women can report. And for concerns about DSWD specific programs, it has an online grievance redress form where one can ask queries, raise concerns or complaints about of the program, be it about the mode of implementation, the staff or anyone involved in the program.

3.7.3. Future Directions of e-Services

Challenges and Opportunities

E-services promises much to Filipinos particularly to women. The Philippine government has shown its commitment to e-government through the development of a national strategic framework for e-government. However, the government is faced with several challenges that it must address towards the full implementation of e-government plan.

Infrastructure and Cost

Like any government infrastructure, e-government implementation entails cost. e-Government projects are, more often than not, long-term endeavors, requiring large capital infusion in software, hardware, infrastructure and training. The more complicated and sophisticated the kind of services the government wants to offer, the more expensive it is. Inadequate ICT infrastructure to support

interconnectivity and wider public access to government information and services remains a problem in the Philippines[70]. There is a need to establish a high speed, secure and reliable networks connecting different government agencies. Thus, a viable financing plan should be available, not only to jumpstart e-government; but one that consider its long-term financing options for the sustainability of the project.

Affordability and Accessibility

Lack of access to ICT is a constraint on e-government development. One of the challenges for the government is to provide an affordable internet access for all. Being an archipelagic country with 7,100 islands, the cost of internet infrastructure and connectivity is very expensive in the Philippines[71]. In terms of internet connection prices, fixed-broadband pricing in the Philippines is among the highest in the world[72]. Despite increasing trend in internet penetration, majority of the population remains without access or with consistent internet connectivity. Rural areas have limited access to broadband services. There is an inadequate or at times total lack of communal/collective public access to ICT facilities throughout the country for those without access to internet.

Privacy and Security

A central challenge to e-government is the need to strengthen confidence in data privacy and security measures. Protecting the privacy of citizens and assuring them that their personal information will not be compromised is critical in e-government because this is the key to user trust. Without this assurance, no one will be prompted to use e-government services. The Philippines has enacted the Data Privacy however, implementing rules and regulations have yet to be drafted. There is no governing body creating or assigned to oversee its implementation.

Digital and Gender Divide

E-Government can make possible the delivery of basic human services that are more pressing and more primary to marginalized communities and sectors. ICT is a powerful tool for improving the quality and efficiency of government services, such as health and education, especially in places where resources are scarce and geography is an obstacle for communication. Disadvantaged

[70] An update report on Information and Communication Technology Development in the Philippines as presented by Assistant Secretary Cecilia V. Reyes of Departmen of Transportation and Communications. http://unpan1.un.org/intradoc/groups/public/documents/apcity/unpan006170.pdf

[71] ICANN vice president for global stakeholder engagement Christopher Mondini told reporters on the sidelines of a forum Friday that the Philippines' archipelagic geography was one major deterrent to improving Internet infrastructure. http://negosentro.com/ph-internet-infrastructure-lags-behind-asean-neighbors/

[72] Philippines ranked 95th in fixed broadband Internet tariffs-not only one of the most expensive in the world but also one of the most expensive in ASEAN region.

groups often require interaction with government but are among the most to likely miss out on what e-government has to offer. ICT can create a digital divide that results not only in the marginalization of those individuals who do not have access to or the skill to use the technology, but also in reducing the ability of citizens to engage government in public debate. Unequal access is likely to limit and fragment e-government usage in the country. Notably, this affects individuals or sectors in society that are already marginalized to begin with, such as women. The situation of women and ICT in the Philippines reflects the global phenomenon of gender divide wherein women have been unreservedly associated with low Internet use and overall disinterest in technology. They are also underrepresented in their ownership and use of computers and mobile phones and access the Internet less frequently than men.

The rising social media and networking tools show some promising gender trends. Women demonstrate higher levels of engagement with social networking sites than men. Although they account 47 they consume and spend more time on it. Government can take advantage of this by linking its websites to social networking sites, blogging software and mobile technology to tap into the collective knowledge of society quickly and directly.

ICT Awareness and Capability

Public awareness and support for e-government is critical for its success and its sustainability. A sound e-government must consider a citizen-centered approach wherein various stakeholders are consulted in the process. This also means that e-government is an end-user or demand driven service. While e-government may provide ease and convenience in the delivery of public services, many do not use e-government for various reasons. The survey of 100 women revealed some concerns with using government websites such as user-friendliness of the websites, delivery of updated information, concerns about privacy and security and lack of access. These concerns must be addressed first before to encourage citizens to use e-government.

3.8. Singapore[73]

3.8.1. Current Status of e-Services

As a country with 100% urbanized population, it is no surprise that Singapore has a 73% internet penetration rate, the highest in Southeast Asia (Huang, 2014). As a result, even the Singapore government has set up shop on the internet to allow Singaporeans to access government services from the comfort of their home, office or even on the go with their mobile devices. Today, citizens and businesses can access more than 1600 online services and 300 mobile services provided by the government. Singapore's efforts in the area of e-Government is recognized globally and has won many international accolades, which includes being ranked 1st in the Waseda University World e-Government Ranking 2013, 2nd in the World Economic Forum Global Information World Economic Forum Global Information Technology Report 2014 and 3rd in the UN e-Government Survey 2014. A survey conducted by Accenture in 2014 which ranked 10 countries in their use of "digital government" found Singapore at the top of the list in providing e-Government services, from offering online portals to access public services to employing digital channels and social media to communicate and engage with citizens (Accenture, 2014). The ranking was based on factors such as citizen service delivery experience, citizen satisfaction and service maturity.

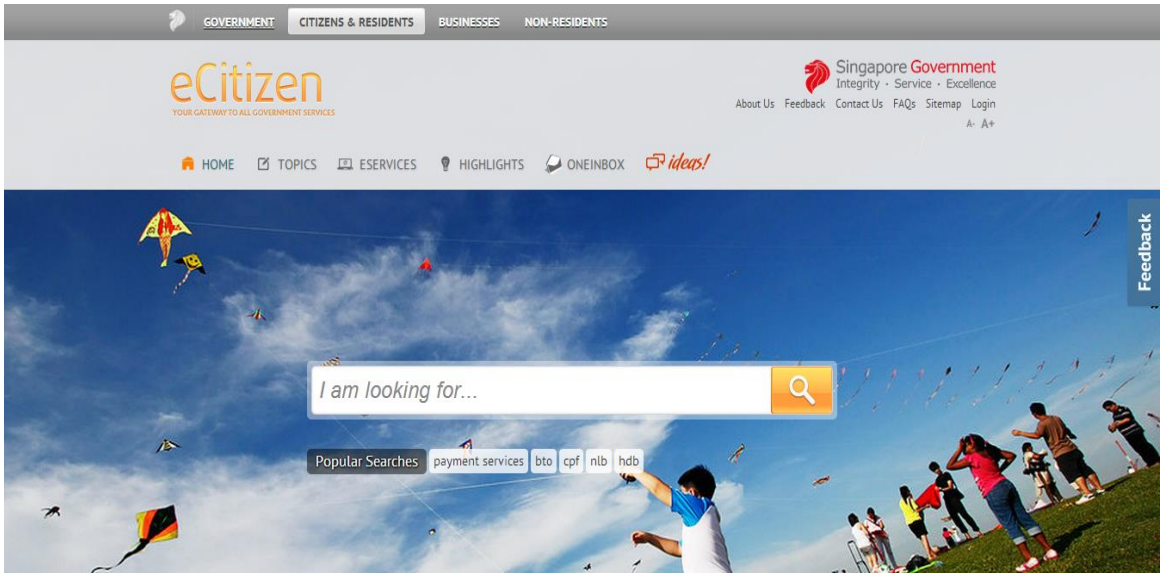
This journey began in the late 90s, when Singapore saw the convergence of information technology with telecommunications, which transformed the concept of service delivery. This paved the way for the launch of the e-Government Action Plan (2000 - 2003) and the e-Government Action Plan II (2003 - 2006). The key objective of the first plan was to roll out as many public services online as possible, while the emphasis of the second plan was to enhance the service experience of customers. iGov2010 Masterplan (2006-2010) was developed on the basis of this strong ICT foundation. It focused primarily on creating an Integrated Government that operates seamlessly behind the scene to serve customers better (Infocomm Development Authority of Singapore, 2013). During this period, mobile services were also introduced to ride on the wave of high mobile phone penetration rate, in order to offer customers an additional channel for accessing public services. (Infocomm Development Authority of Singapore, 2013)

Today, every Singaporean holds a Singpass, which gives him/her access to the various e-government services. The various e-government services are consolidated in the eCitizen portal. The portal is a very user-friendly site that has a homepage comprising of a search box, so users

[73] Written by Ms. Boey Lin Fong, Consulting Director, Integral Solutions(Asia) Pte Ltd, Singapore

can easily search for what they need.

[Figure 3.8-1] eCitizen Portal



The eCitizen portal provides a comprehensive list of articles, tips and guides to the various types of government e-Services available. This includes:

[Table 3.8-1] Types of Government e-Services

No.	Topics regarding various Government e-Services	Details about Articles and Guides Provided
1	Arts and Culture	Information about the types of arts and heritage grants available, where and how to apply, grant amounts and the administrating body. Useful links and information about various sites providing articles and other media relevant to Singapore's heritage and culture that citizens can access online.
2	Defence and Security	Information about civil defence and the public warning system. Information about crisis preparation and safety Emergency hotlines and services How to maintain fire safety at home Exit permit requirements for national service
3	Education	Assistance schemes for single parents, eligibility criteria and assistance amounts, and how to apply. Financial assistance available for students, benefits, eligibility criteria and how to apply.

		Information about home-schooling, advantages and disadvantages and how to apply for it. Applying for re-admission to schools for citizens and permanent residents returning from overseas. Information about school admission for Singaporeans, such as when to apply for admission and examination timelines.
4	Employment	How to hire foreign domestic helpers, how long it takes, types of levies and fees. How to apply for government-paid adoption leave. How to apply for government paid child care leave. How to apply for government paid maternity benefit. How to apply for government paid maternity leave. How to apply for government paid paternity leave. How to apply for government paid shared parental leave. Help for jobseekers- information about career planning, job seeking, types of programmes for upgrading and subsidies available for training. How to become a licensed tourist guide. How to become a bus driver.
5	Environment	Where to find help for animal nuisances and hazards. No-smoking rules in Singapore. What constitutes pollution, where and how to report litter and pollution. Responsible dog ownership- dog training facilities, vaccinations, leashing and muzzling and other rules.
6	Family and Community	Assistance schemes for single parents. How to get help for gambling problems. Getting married for Muslims and guide to solemnization. Things to take note of getting married overseas. Marriage requirements and solemnization guide to marriage in Singapore. Government co-funding for assisted reproduction. How to apply for government-paid adoption leave. How to apply for government paid child care leave. How to apply for government paid maternity benefit. How to apply for government paid maternity leave. How to apply for government paid paternity leave. How to apply for government paid shared parental leave. Pro-family leave schemes Community disputes to resolving disputes. How to get help for drug addiction. Subsidies for infant, child and student care. Visit pass for family members.

7	Health	Assistance schemes for single parents Breast and cervical cancer screening subsidies, eligibility criteria and how to apply. Support services for dementia. Guide to choosing long term care. No-smoking rules in Singapore. Paying for long term care. How to get help for drug addiction. Subsidized healthcare for low income households.
8	Housing	Housing assistance for single parents. Comparison between build-to-order flats and executive condominiums. A first-timer's guide to buying a new HDB flat. Key considerations to buying foreign property. Flats for singles. Housing grants for lower and middle income families. Housing priority schemes for married couples with a family or starting one. Housing schemes for multi-generational families. How to monetize your flat for retirement. How to maintain your flat.
9	Immigration and Citizenship	Getting married overseas How to apply for and renew your passport. Prohibited and controlled items through Singapore customs. Reporting a lost Singapore passport. Immigration process for returning Singapore citizens and PRs. How to apply for Singapore citizenship. Privileges and rights to having a Singapore citizenship. Visit pass for family members.
10	Others	Procedures required to changing addresses. Applying for Singpass. How to conduct background checks on businesses. How to get fibre broadband access in your home. How to register a death. How to use Oneinbox. How to access affordable legal services and assistance. Where to find Citizen Connect centres.
11	Savings and Taxes	Contributing to Supplementary Retirement Scheme to enjoy tax benefits. How to get help for debt and bankruptcy. How to access CPF information and services.

		Paying for long term care. Post death matters Renewing road tax.
12	Sports and Recreation	Camping and chalet for holiday retreats.
13	Transport and Motoring	Carbon emissions-based rebates and surcharges for cars. How to convert a foreign driving license. Fee rebates for green vehicles. Getting a driving license for heavy vehicles, motor cars and motorcycles. How to become a bus driver. How to pay parking fines. How driving record affects motor insurance. Renewing road tax. Applying for and renewing season parking. Senior citizen concession for cheaper train and bus rides. Paying traffic fines.
14	Travel	Duty free concession and GST relief for inbound travelers. National service exit permit requirements. How to find help in emergencies overseas. Applying for and renewing Singapore passport Prohibited and controlled items through Singapore customs. Reporting a lost Singapore passport.

The eCitizen portal also provides a comprehensive list of all government e-Services. Such services include payment services- taxes, school fees, CPF contributions, license fees and fines; and services from other ministries- applying for a new passport/ renewal of passports, enquiry of electronic driver data and checking your CPF account.

Through the eCitizen portal, Singaporeans can also access their own mail inbox- OneInbox, where they can receive electronic correspondence from the government on a secure platform. Currently, Singaporeans can only receive correspondence from the Central Provident Fund Board, Housing Development Board, Inland Revenue Authority of Singapore and Ministry of Manpower.

There is also a beta feature on the eCitizen portal known as Ideas! It is an avenue for the Singapore Government to organize crowdsourcing activities in the form of challenges (such as contests for ideas generation, apps development competitions, hackathons and campaigns) to leverage citizens' knowledge and gather ideas from the public to solve problems and issues that Singapore may be facing. To make it easy and convenient for the public to participate, eCitizen

Ideas! serves as one-stop portal that allows the contribution of innovative ideas and solutions – whether technical, scientific or creative, to help solve challenges that are posted by all government agencies, for the benefits of Singapore. The public may also attach files, comment and vote on the best ideas, and share the challenges via their social sharing networks with their peers.

According to the e-government customer perception survey conducted for April 2012- March 2013, 88% of 1213 respondents above 15 years old who visited Government websites chose to transact with Government electronically via online services i.e. use the e-services provided by the government during the period stated. The remaining 12% who did not transact using Government online electronic services primarily do not find the need to use them or they prefer human contact/assistance in completing their transaction. More than 9 out of 10 users (96%) were satisfied with the quality of Government electronic services, of which, 73% gave a rating of 5 and above. More than 9 out of 10 users (94%) were satisfied with the quality of Government mobile services, of which, 68% gave a rating of 5 and above (Infocomm Development Authority of Singapore, 2013). However, when evaluating the primary internet activity undertaken by all users, only an average of 8% of internet users above age 15 use the internet for transactions with government/public entities (Infocomm Development Authority of Singapore, 2014). This shows that in general, Singaporeans are keen to use e-services provided by the government and those services are generally satisfactory in quality. However, there is a dearth of gender-specific data in this area.

E-services are also available for businesses, mainly Small Medium Enterprises (SMEs). The EnterpriseOne site provides business start-up and growth advice in both English and Mandarin. It provides information about government schemes to help SMEs. Managed by **SPRING Singapore, EnterpriseOne** is a comprehensive network where business owners can find the help and answers they need to start, grow and sustain their business. A wealth of government information and e-services can also be found here at our EnterpriseOne portal. There are over 20 sections covering a comprehensive range of topics such as venturing abroad, hiring people, Government tenders, loans, taxes and regulations. Each section pulls together information from different Government agencies so users do not have to trudge from agency to agency to look for answers. There are industry guides available and organized in sections so business owners can easily find information relevant to their business. It also provides links for business owners to contact business advisors to get more detailed and personalized help for their businesses and various government assistance and funding options for businesses. There is also a link to an online business licensing service, which makes it easier to obtain all the required licenses to start a business. There are even how-to guides and flowcharts to help business owners understand the process and requirements in

applying for government assistance schemes, licenses, permits, approvals and other registrations. In the e-government Perception Survey on Businesses conducted for April 2012- March 2013, more than 9 out of 10 (93%) businesses out of a total of 1636 businesses were satisfied with the overall quality of Government electronic services, of which, 60% gave a rating of 5 and above. More than 8 out of 10 (89%) businesses were satisfied with the overall quality of Government mobile services, of which, 59% gave a rating of 5 and above. (Infocomm Development Authority of Singapore, 2013)

Singapore also has various e-Services catered for/targeted towards women. While they may not be run by the government ministries, many of them are run by public institutions and non-governmental organizations. One area that Singapore has focused on is the economic empowerment of women, specifically providing job opportunities and making job-seeking an easier process. This e-Service is provided by the Women's Development Secretariat (WDS) under the National Trades Union Congress (NTUC). The aim of WDS is to develop and implement programs and initiatives to assist women with job opportunities to enter or re-enter the workforce, enhance the employability of women through training, and helping women to remain in the workforce by promoting work-life integration. The WDS website provides information about the various initiatives the secretariat undertakes to assist women in seeking re-employment. They also hold events such as job fairs, training sessions etc. Relevant information and details are provided in their website. The e-Service provides detailed job listings from companies who are registered with WDS. Women who are interested can email their resumes to an address stated on the job listings page. Telephone assistance is also available. WDS has also implemented a "Jobs On Wheels" project, launched on 15 June 2012, that goes around the different zones in Singapore, making it more convenient for residents to take up jobs.

There are various non-governmental organizations in Singapore that support and fight for women's rights and they all have websites and services that help to counter sexual and domestic violence against women. These organizations include Aware, Singapore Council of Women's Organizations, We Can! Singapore and Pave. In this section we will mainly be focusing on Pave as it is one of the more established organizations in Singapore targeting domestic violence. Pave provides an e-Service to women suffering from domestic violence through its website. It has various information pages and articles discussing what constitutes violence, raising awareness of domestic violence and advising its readers on how to prevent violence. Most importantly, Pave provides counselling services and services to help women seek legal protection through a Personal Protection Order at its office, and appointments can be booked through their website.

Another crucial e-Service caters to women's health. There are a few providers for this service and

they largely focus on providing information about various conditions. The Ministry of Health website provides general information (a searchable directory) for various diseases and conditions and their symptoms. This e-Service also provides a searchable directory for specialist clinics and hospitals, their location and opening hours. It also has a listing of the estimated hospital bills for various conditions. However, it is not targeted to any particular gender which means that there is no section on women's health specifically, though the directories provided do include women's diseases, conditions and specialist clinics. Another provider, Singhealth, the largest public healthcare group in Singapore, has started the HealthXchange portal. This e-Service has an entire Women's Health section easily accessible from the home page. It provides articles about various women health issues such as birth control, breast cancer, menstrual problems, which includes information regarding conditions, causes, symptoms, risks, treatments and even frequently asked questions. This e-Service also features a community forum and an "ask the specialists" function for users to actively participate.

However, in our survey, 93% of our respondents are unaware of any government websites providing women related information or programs in Singapore. Only 3% have visited the website that they know about while 2% said that they have visited a government website for women but couldn't remember which one. However 3% of those that have used an e-Service have been satisfied with the e-Service. The other 2% have been unsatisfied as they felt that the information provided was irrelevant to their needs. This is despite 98% of the respondents having easy access to the internet and 55% using the internet at least once a day. The lack of e-Service usage might be due to lack of awareness of e-Services providing information or programs for women. 99% of the respondents were unaware of any government policy to support women's e-Service use in Singapore.

3.8.2. Potential Demand for e-Services

E-services would definitely be helpful in providing useful information. There clearly is a strong demand for e-Services by the women in Singapore. The greatest demand among our respondents is for e-Service providing information about free health clinics. 23% of respondents say that the information about free health clinics are generally useful (Info-Fre-Gen) and 75% say that information is crucial for their use (Info-Fre-Cru). The next most important e-Service is information about job opportunities, where 42% said that job information was generally useful and 53% said it was crucial. Information about child care has the third overall highest demand- 50% deemed the service generally useful and 36% believed it was crucial. There is also significant demand among our respondents for e-Services providing information about immunization,

sanitization, HIV/AIDS and maternity care. E-Services providing information about domestic/sexual violence or abuse prevention was also deemed useful and crucial by a significant number of women. Thus it can be derived from this survey that most Singaporean women are most concerned about and want to see more e-Services providing information about job opportunities, health related issues and family related themes.

The most highly demanded function is for e-Services to have multiple languages. 73% of the 100 women surveyed felt that multiple languages is crucial for their use (Func-Mul-Cru), while 20% felt that it was generally useful (Func-Mul-Gen). Given that currently many of the government e-Services are only available in English, it is easy to see why this is the most highly demanded function. The next most demanded function is for e-Services to have mobile access options- 71% deemed that crucial while 17% deemed that generally useful. Most government e-Services today are accessible via the internet browsers available on mobile phones and tablets; however most e-Services currently have no mobile applications or apps to provide direct access. 70% of our respondents also felt that it was crucial for e-Services to have sight/hearing accessibility for disabled persons. Likewise, many of the current e-Services do not have disabled access options, so this survey shows that there is a demand and a need for such a function. Our respondents also want to have e-learning and audio/video materials on e-Services.

Independent comments from our respondents indicated a demand for free e-learning services for women and senior citizens. Participants also suggested the need for websites and e-Services in Chinese, basically websites in multiple languages. Some other suggestions included the need for easy to use e-Services so that senior citizens who are less adept at using technology can easily access and use the e-Services. Some also believe that it is necessary for the government to promote greater accessibility and awareness for e-Services so that more people can benefit from those services. Additional suggestions also include providing e-Services for student care. Currently, there is an e-Service providing information regarding subsidies available for student care on the eCitizen portal, but there can be more information about where they can get student care.

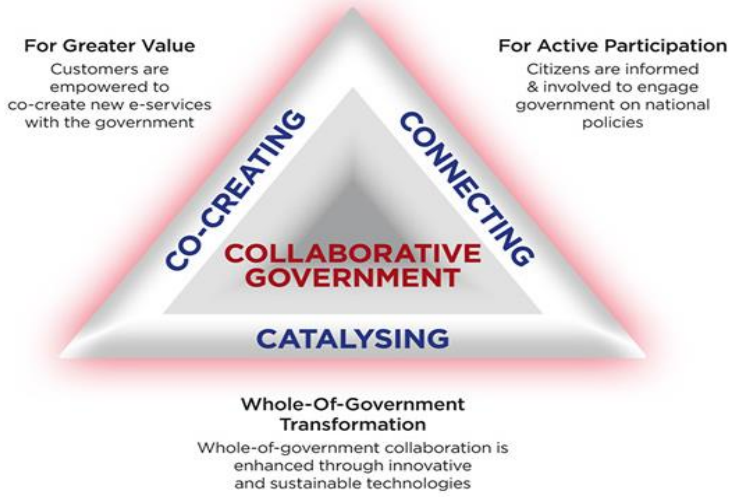
Currently, there are no official surveys to assess the potential demand for e-Services in Singapore. However, in April 2013 the government data portal data.gov.sg launched a competition in conjunction with the Ministry of Finance, Infocomm Development Authority and the Singapore Land Authority to look for innovative apps that use government data. We can use the results from this competition to obtain a rough understanding about what Singaporeans want. The audience favorite app in the competition was an app that assists students to plan their education choices (data.gov.sg, 2014). Clearly, education is an area that Singaporeans are very concerned about,

especially among younger people who are more attuned to technology and who use apps and e-Services more often. While this competition is non-gender specific, we can postulate from these results that the desires and concerns of the general population would somewhat be applicable to women. Thus it is likely that there is a potential demand for e- Services related to education for women. One example would be e-Service providing information about job training such as types of qualifications necessary for certain positions and where and how women can obtain them. Another might be e-learning apps or websites that allow women to improve their skills through remote learning and therefore be able to manage their family commitments while learning.

3.8.3 Future Directions of e-Services

The Singapore e-Government Masterplan 2011-2015 (or eGov2015) aims to shift from a "Government-to-You" approach to a "Government-with-You" approach in the delivery of government e-services. The goal is to facilitate more co-creation and interaction between the Government, the people and the private sector to bring about greater value creation for Singapore and our people. eGov2015 is about building an interactive environment where the Government, the private sector and the people work together seamlessly, through the enabling power of infocomm technologies (Infocomm Development Authority of Singapore, 2013). The vision of a collaborative government will be achieved through the three strategic thrusts depicted in the diagram below.

[Figure 3.8-2] Three Strategic Thrusts



Recognising the Internet as an important channel for the direct delivery of information and services to the public, the Government will continue to improve the information and services delivered through government websites. Their Website Transformation Strategy seeks to provide customers with a seamless and integrated web experience across all government websites, while developing standards, common tools and capabilities to support government agencies in improving their websites. Riding on the high smartphone penetration in Singapore, the Government will also be driving the next phase of Mobile Government (mGov) programme to deploy more feature-rich and innovative mobile services. Customers can look forward to an enhanced mobile experience while accessing information from, and transacting with, the Government on the move. With the desire to improve e-service delivery, the Government is always exploring the creation of useful e-services, including personalised e-services offered at the whole-of-government level (Infocomm Development Authority of Singapore, 2013).

The eGov2015 Masterplan will build on the iGov2010 efforts in raising awareness and engaging the citizens in the policy-making process. The Government aims to widen and deepen the e-engagement efforts and experiment with new ways to tap on the wisdom and resources of citizens. Under eGov2015, the focus will continue to be on raising the awareness of Government's e-engagement efforts by keeping citizens informed and linking up citizens who are keen to provide views on the formulation of public policies with government agencies. Thus it can be reasonably assumed that future e-Services will be more interactive and mobile, making services more accessible and convenient for the general public as well as encourage customers to actively provide input and user feedback for the e-Services.

Singapore is building a Smart Nation and the continued delivery of quality and responsive public e-Services will continue to remain a key component of this development to improve the quality of life for citizens. It would include engaging citizens and empowering them to co-create, developing responsive e-Services to help citizens make informed decisions, and providing integrated services that are easy for citizens to use. The Singapore government intends to increase internet connectivity throughout the nation, for instance increasing free wireless hotspots, introducing fibre network coverage throughout the nation, and having an $8 million digital inclusion fund to help low income households and individuals adopt internet access, thereby increasing Singaporeans' access to e-Services. Another initiative will be the Smart Nation Platform (SNP). Built on three focus areas--connect, collect, and comprehend--the platform will provide an operating system that all public agencies can connect to. This will enable essential data, captured and collected via sensors placed around Singapore, to be anonymized, secured, managed, and shared. Such data will be used to produce relevant insights and determine timely, and appropriate, decisions to support more responsive and "anticipatory" services for Singapore

citizens. IDA believes an anticipatory government will allow issues to be resolved before they are even raised by the general public and facilitate better policy planning and creation of citizen-centric services (Yu, 2014). This would produce more responsive and comprehensive e-Services to be designed, improving the overall quality of government e-Services.

The Apps4Sg competition organized by the Singapore government's data collection authority required participants to use government data to design mobile applications that would improve the way Singaporeans live, work and play. This could be an indication of the future direction of e-Services, which is to enable Singaporeans to make use of e-Services and government data to improve their daily lives. This also indicates that the government is keen on increasing mobile access to e-Services, which is in line with our survey results where 88% of respondents felt that mobile access options or apps for e-Services would be a useful or crucial function. The submissions were judged according to the originality of the key ideas and concepts behind the application; the social or commercial value and benefits of the application; and their user friendliness. The winners of the competition were an app that assists students to plan their education choices; an app which finds a common location for people to do multiple tasks thus improving productivity by reducing travelling time; and a web-based mapping application which enables wheelchair users to find a barrier-free path between their start point and their intended destination (data.gov.sg, 2014). Clearly, education is an area that the government is very concerned about. This might indicate that the government would be moving towards providing more e-Services to offer advice regarding the types of education or training one can pursue and help Singaporeans plan their education.

NGOs like **University Women's Association Singapore** (UWAS) have also been driving the proliferation of more e-Services in the education genre. UWAS announced at the 2014 APEC Women and the Economic Forum (Women's Business Smart Technology Seminar) in Beijing that they will be leveraging on smart technologies to roll out their Student Enrichment Platform. This intelligent platform leverages on learning analytics, artificial intelligence and semantic analysis engine to assess students' subject concept mastery skills and discover individual student's learning gaps automatically. In line with their mission to empower women & girls through lifelong education, UWAS (www.uwas.org) will be offering this to benefit under privileged students especially girls to learn English and Science through a smart collaborative learning approach.

Productivity is also another aspect the Singapore government is looking into, perhaps to provide an e-Service that helps Singaporeans make better use of time, whether it is eliminating the need to queue or reducing travelling time. This is also one major reason why government e-Services have largely received positive feedback- they provide a mobile platform on which citizens can handle

transactions with the government or use government services without the hassle of queues or travelling to the ministry or statutory board.

This competition also showed that there is interest in developing e-Services for the disabled community, which makes sense especially since their mobility is limited and therefore would greatly benefit from e-Services that help them do tasks without physical travelling. Most of the current government e-Services do not provide disability access for the deaf and blind so there would definitely be room for improvement in this respect. Given that this survey also reflects a strong demand for e-Services to cater for the disabled, it is highly likely that future developments in e-Services would increase accessibility for the disabled.

In terms of the type of e-Services women in Singapore need, our respondents reflected the need for more e-Services providing information about free health clinics, job opportunities and child care. There is also significant demand for e-Services providing information about health issues such as immunization, sanitization and HIV/AIDS and family issues such as maternity and domestic/sexual violence or abuse prevention. Currently, there is a lack of e-Services providing information about free health clinics, child care and sanitization. The HealthXchange portal provided by Singhealth does contain a lot of information regarding most health issues, including an entire women's health section. There could be more comprehensive e-Services providing more information for domestic/sexual violence and abuse prevention. According to the iGov Masterplan, the government will seek to garner feedback and opinions from the public so as to improve the current state of e-Services in Singapore, hence it is reasonable to expect that there might be more comprehensive e-Services providing information about healthcare and family matters.

However, many of the e-Services in Singapore are not available in multiple languages- this may be because English is the first language used in Singapore and most Singaporeans have a reasonable level of English proficiency. But as we see in our survey, many respondents felt that the e-Services should have multiple languages, especially for the senior citizens who are more proficient and comfortable in their mother tongue (Chinese, Malay or Tamil). Mobile access is also a highly demanded function from the survey respondents- this is something that the government is already actively pursuing for all its e-Services. It is likely that there will be more mobile applications available in future for government e-Services. Our survey also reflected the need for e-Services to be more accessible for the disabled; e.g. deaf or blind. This is also a very plausible future direction for e-Services in Singapore as mentioned above.

From this research we are able to derive a rough idea of where Singapore is headed in terms of

government e-Services in the future. Despite there not being a comprehensive survey to assess the demand for various types of e-Services among women until now, the current status of e-Services in Singapore is actually rather satisfactory in this aspect. There already is an e-Service to promote employment, education and training for women by NTUC; a couple of sites that provides health information for the general public including women's health; and a few NGOs in Singapore provide e-Services for women seeking help from domestic abuse. Of course, there is room for improvement for these e-Services, perhaps to make them more comprehensive, more informative and accessible for women of all ages and different language proficiencies. Given our survey results and the strong demand for more information about free health clinics, this is one aspect that the healthXchange portal and MOH Online can improved.

With a high internet penetration and continually improving telecommunications and wireless internet infrastructure due to plans for making Singapore a Smart Nation, Singaporeans have no problem gaining access to the internet. Thus potentially, every one of them should be able to use e-Services provided. However, from our survey of 100 women who use the internet rather frequently, we understand that most of these women are unaware of government e-Services for women, even though our research has shown that such services, especially in the areas of healthcare and job opportunities, are available. Thus the most crucial action to be taken here would be to promote these e-Services so that the women in Singapore are aware of and can begin to use them. According to the iGov2015 Masterplan, plans to promote e-Services are already underway, but there clearly needs to be greater effort in promoting the various government e-Services available for women.

3.9. Thailand[74]

3.9.1. Overview

Relevant Media & Society Reform Scenario of Thailand and in ASEAN;

The growth of civil society especially the Constitution Law of 1997 has been considered to be one of the remarkable holistic changes in Thailand especially about the politics, along with the communication and media reform especially about the media freedom. Because it was the first time that the constitution has initiated the independent regulatory agency affected to be the first independent TV Station name ITV to be independent from all kinds of political power along with the promotion of public communication, media freedom, and people's right to communicate, freedom of expression all over the country. Transparency and good governance in all sectors are promoted via the media freedom. More concrete laws and regulations are actively launched and monitored as follow;

1) The Constitutions of Thailand, 1997
2) The Press Act 1941
3) The Criminal Code 1956
4) The Civil Procedure Code 1924
5) The Act for the Suppression of the Dissemination and Trade in Pornographic Materials 1928
6) The Copyright Act 1994
7) Code of Ethics (Journalist Association of Thailand) 1997

And other relevant regulations are the Act to Establish Youth and Family Courts and the Procedure for Youth and Family Cases 1991. Along with more collaborations among all active media agencies as follow; the Broadcast Journalist Association of Thailand (BIA), the Journalist Association of Thailand (TJA), the Press Council of Thailand, the Council of Communication Arts Education Institution of Thailand, the Southeast Asian Press Alliance (SEAPA), the National Human Right Commission (NHRC), the Campaign for Popular Media Reform (CPMR), the Campaign for Popular Democracy (CPD), the Thai Volunteer Service Foundation (TVSF), the Civic Net, the Media Monitor Project, the Netizen, the Thai PBS (Thai Public Broadcasting Services), and others.

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Thai and ASEAN Scenario: e-Society & e-Government Services

The e-ASEAN initiative was launched at the 3rd ASEAN Informal Summit in Manila in November 1999 to facilitate the growth of e-commerce in ASEAN, to establish a free-trade area in ICT products, services and investments, to develop an e-society in ASEAN, and promote e-Government services.

On 4 July 2000, the government of Thailand addressed its attention on the e-ASEAN initiative and ordered the National IT Committee (NITC) to work on creating an e-Thailand as part of the national development agenda. The vision for *e-Thailand* is to exploit the potential of Information and Communication Technologies (ICT) to strengthen the country's economic competiveness, reduce poverty, and achieve sustainable development (NITC, 2002).

Women and homeworking and home-based production have long been practiced in Thai society. In 1999, for the very first time, the government of Thailand provided formal support for setting up a registration system for disadvantaged and marginalized women under the category of "Homeworkers" (HWs). Homeworkers or work-base workers are mostly women base which are mostly the group of small homeworkers or the poor homeworkers who are mostly working at home after finishing all her household works, or farm works. Many of these homeworkers are also needed to taking care some of the dependent family members i.e. the babies, the elderly parents, the handicap children or even the relatives, etc.

There are around 311,790 homeworkers in Thailand which their average age is between 20-49 years old, mostly married and with an average monthly income of 5,000 Thai Baht. About their quality of life i.e. their accommodations, the women who live in Bangkok are mostly the migrant from the rural areas with her husband and children, so they usually rent rooms, apartments, houses or shared houses; while those who live in their hometowns or in rural areas stay with their extended families or have their own houses. Homework or home base works in Thailand covers a wide range of small or home-base industries: ready-made garment and clothing industry, jewelry cutting, wood and paper making, artificial flower making, food, beverage and tobacco processing, leather products making, glass and ceramic industry, furniture making, recycling industry, and others.

Thai homeworkers can be classified into four main groups: 1) individual household production / the family-base production, 2) group homeworkers/ the vocational groups, 3) the freelancers and 4) the Small Medium Enterprise (SME). Homeworkers or home-base workers in Thailand are under the category of "**informal sector**" which has been ignored from the government for long till under the government of Taksin Chainawatra who has initiated the OTOP policy to help all the

marginal groups in Thailand since 1997. “One Tambon (sub-district) One Product” (OTOP) has been kicked off concretely by the government, aims to support Thai rural communities in the production and marketing of locally made products in each tambon/ village in Thailand. The aim of this initiative is to preserve Thai indigenous knowledge, skills, craftsmanship and heritage, which has been passed on for centuries from one generation to the other.

OTOP include a variety of products including handicrafts, silk and cotton garments, textiles, household items, pottery, food and beverages, among other products. Traditionally, these products were not meant for mass production, rather destined to be exchanged, bartered, or sold to other villages in Thailand.

OTOP: the One Tambon One Product Policy has been initiated to help all kinds of homeworkers / home-base workers strengthening. Financial loans, Micro-finance supports, as well as some kinds of fundamental welfares have been initiated to help all women homeworkers. Homeworkers’ main welfares from the government are as followed: 1) the 30 THB Public Health Campaign, 2) the SME Loan, 3) the Vocational Micro-Finance Loan, 4) the Elderly Citizen monthly support, 5) the handicapped monthly support. And the most update is the Women Empowerment Fund by the previous government Yingluck Chinawatra.

The ICT that homeworkers most commonly use to engage in e-service activities are: mobile phones, tablet, community radios, community towers, cable TV, and telecentre or the ICT Community Learning Centre. However, there are obstacles to the use of ICT, accordingly the costs of internet, the accessibility to the internet, the illiteracy, high costs of ICT capacity building trainings, English illiteracy, and lack of awareness of the potential of ICTs for their own development.

However, with the increasing and opening of more positive scenario i.e. more friendly ICT, more accessible and affordable ICT, new regional and international markets, Thai homeworkers, women homeworkers have understood the importance of ICT for their life-long and self- learning i.e. the new commerce and trading skills, marketing strategies, and all kinds of new ideas or creative knowledge and skills, etc.

“I learnt how to create a Fan page on Facebook; I will use this space to sell my own products, my family’s products online and reach to more people from different countries”, said one of the homeworkers named Ball from Sa Kaeo province.

3.9.2. Current Status of e-Services

The Ministry of Information Communication Technology of Thailand (MICT) is the leading agency for all the e-Service initiatives in Thailand: The ETDA (Electronic Transactions Development Agency (Public Organization), the EGA (Electronic Government Agency), Ministry of ICT (MICT). The EGA has kicked off its policy in 2014: "**e-Government for All**". The GAC (Government Application Center), the EGA Smart Box to welcome all kinds of e-Cards to access to any kind of government services i.e. the Driving test for license, the tax payment, the I.D. application and process and others also has been kicked off to all mobile devices. But all those e-Services are designed for the general people as a whole. There are still none or least e-Services that are targeted exclusively to women as well as the other marginal groups i.e. the handicap, the elderly people, etc. Besides, the NTC (National Telecommunication Commission): USO (Universal Service Bureau) also try to help more accessibility to all marginal groups along with increasing more telecommunication service area to all over the country. E-Government: e-Services have been set as one of Thailand's priority policies under its mission of "Smart Thailand".

More evidences of success stories among the small women homeworkers all over Thailand have keep increasing as example…

Ms. Kalaya, the single mom homeworker in small village, she has the intention to make the textile in her hometown more well-known. "My dream is to build a brand of Lee District that will associate with the community as well."

"The community has their capability to develop their own quality of life by addressing and empowering their own potential; facilitation their working seriously towards the hopes, the dreams and the love of the land. Mostly, it was ignored by using all kinds of appropriate technology and e-services".

"ICT has completely helped the community to improve products advertising and marketing as well as finding some other sources of raw material. Access to ICT gives us the opportunity to gain new knowledge, techniques as well as designs that helps to promote the product, and also gain more new customers".

[Table 3.9-1] Some Key Policies Have Been Launched and under Development

Goals	Outcomes
EGA, ETDA (MICT)	MICT (Ministry of Information Communication Technology of Thailand) is the leading agency for all e-Government Services to all at its current first phase now.
All government agencies need to have websites.	All government agencies have done their websites at 1-3 levels: (Information, Interaction, Interchange, and Transaction). The next step is to develop all websites to reach the levels of Integration and Intelligence.
All government agencies need to have a Web-board	All government agencies have created their Web-board.
All government agencies have to offer the e-Citizen Portal.	The Thai government has provided www.ecitizen.go.th aimed to support all integrated services to be Single Point Service / Single Window Services.
All policy levels of all government agencies have to have their e-mail account.	All policy levels of all government agencies have their e-mail account.
Develop the ICT One-Stop Center	Undergoing in offering the "Single Point Service" to all people
Gov. Data Exchange (GDX)	In 2004, the Government has launched the One Stop Service for Food Industries.
Gov. Contact Center (GCC)	In 2004, the Government has launched the "Government Call-center". Using *Number* 1111, people are able to access all Government services as well as address their complaints.
Citizen Smart Card	In 2004, the Government has integrated its work with the Ministry of Interior
Cyber Inspector	The Cyber Inspector Team has been set up.
Back Office	In 2004, the GFMIS has been set up for all Government's budget monitoring and control.
e-Procurement	e-Auction system has been launched.
CIO	CIO Association has been set up.

The agencies who are currently in charge of all e-Government: e-Services in Thailand are; the Office of the Electronic Transactions Commission (http://www.etcommission.go.th/); the ETDA (Electronic Transactions Development Agency (http://www.iqnewsclip.com) (Public Organization); the EGA (Electronic Government Agency) (www.ega.or.th) Ministry of ICT (MICT), and others.

3.9.3. Country Specific (Potential) Demand for e-Services Related to Women

[Table 3.9-2] Main of e-Service Areas in Thailand

Application Areas	Current e-Services
1) General Policy Outreach	- The EGA has kicked off its policy in 2014: e-Government for All. The GAC (Government Application Center, - All kinds of telecentre / the community ICT Learning Centre - One Tablet per child - Smart School - The Institute for Women and Family, Ministry of Social Development & Human Security - Thai Women Empowerment Fund, the Prime Minister Office
2) Women's Economic Development : Small Homeworkers, SME, and Entrepreneurs	- OTOP (One Tambon One Product) - ICT training for all women & girls with all holistic economic involvement & development - Women, homeworkers, artisan's registration system - Vocational Training - SME start Up & loans
3) Women & Girls Education & Empowerment	- Girls schools both for formal & informal education; - Vocational schools for girls and scholarship; - Vocational and ICT training for further development; - Thai women Empowerment Fund
4) Women & Girls' Health	- Online health education; - HIV Aids education and protection
5) Women & Girls' Self Development, Identity, Violence, Creativity, Networking, Mentor	- Women & Girls Knowledge Gateway by UN-Women; - Thai Women Empowerment Fund for all kinds of Women & Girls empowerment as well as protection.
6) Gender Policy Support	- Thai Women Empowerment Fund, the Prime Minister Office - Set up a more concrete Gender Statistics Archive

[Table 3.9-3] Situational Analysis about e-Services Relevancy among Thai Women & Thai Women Homeworkers

Situational Analysis by SWOT	
Strengths	**1. Women Homeworkers**: In the last years, an increased number of NGOs, civil society organizations and government agencies have been working on issues related to the HWs: Homenet Thailand, ILO, the Ministry of Labor, SMEs, the Thaitambon.com, the Thaicraft.com, civil society groups in Thailand are some of the actors involved. Partnerships among different stakeholders and sectors help create synergies in developing e-services that are useful for the community's sustainable development. **2. E-Services and ICT**:

Situational Analysis by SWOT	
	The government of Thailand has a very concrete ICT Policy Framework that includes 4 key priorities: e-Commerce, e-Society, e-Industry, and e-Government. Ministry of ICT as well as its agencies i.e. the EGA, the ETDA, and others have been keeping its development of e-Services to serve all groups of people under the policy "e-Government for All" as well as the GAC (Government Application Center) aims to access more kinds of government services to all groups of people.
Weakness	**1. About the Women Homeworkers**: 1.1 There are still no concrete or specific policies and framework on women homeworkers' rights, welfares, and career paths. The policy about informal or the non-formal economy still under pending for long. In addition, the definition of "homeworkers" in Thailand is still not clear. This has made it difficult for agencies to support homeworkers. 1.2 There are quite less collaboration among all relevant agencies which work relevant to women development i.e. the Ministry of Labor for homeworkers or the informal economy besides from the formal economy; the Ministry of Human Development and Welfare; the Ministry of Interior, the Prime Minister Office. **2. About the E-Services and ICT**: 2.1 Majority of women homeworkers are mostly being the small homeworkers with less education, less opportunities, less budget for their own investment, and less knowledge and skills of ICT. This made most of the women homeworkers cannot or gained less benefit from ICT. And also from the government side, there are still very least ICT training for the marginal groups including women especially the women homeworkers. There are some ICT trainings provided by some of the agencies (GOs, NGOs, BOs, and POs) but still have less and least integration between the ICT and the needs or the problem solving of the women homeworkers. This made all women and women homeworkers gained very least awareness on the potential of ICT for their own development. ICT is the other world from them. E-services also the similar situation because the women, the women homeworkers still have all fundamental skills, knowledge and awareness; 2.2 e-Service and ICT form all relevant agencies still mainly for the middle class and upper class. Some of main barriers are ICT illiteracy, the English illiteracy, and the relevancy between the e-Services and their needs, etc.
Opportuni-ties	1. More and more concrete policies, and strategies for women, women homeworkers under the e-Society policy of the government leading by the Ministry of ICT, and the others; 2. More accessible coverage areas of telecommunication to all groups of people all over the country, the USO is one among the accessible policy to all by NBTC as well as the telecentre / the ICT Community Learning Centre by MICT, the Community Learning Centre, etc.; 3. More affordable to all marginal groups especially after the FTA regulations implementation in all telecommunication sectors. Less monopolization, more friendly investment competitions and networks, etc. All those made price down in all telecommunication products and services; 4. More friendly devices and huge of applications for all epically all the online social media i.e. Line, Facebook, etc.

Situational Analysis by SWOT	
	"Facebook amuses me. I can communicate with friends and instantly receive news. I am aware that social media has both advantages and disadvantages. Some might use Facebook for propaganda, other may use social media as their business channel", said one of the women homeworkers Nid from Satul province.
Threats	1. Relevant agencies and stakeholders spend quite less investments on ICT to empower all marginal groups including women, women homeworkers, handicaps, and the elderly citizen. This leads to weak policy, regulations, laws and welfare plans in favor of all those groups; 2. Still less policy and actions about e-Security for all marginal groups including women, women homeworkers, and etc. while more and more high risks from all ICT accessibility, etc.;

3.9.4. Future Directions of e-Services for Thai Women & Thai Women Homeworkers

Under this current policy and plan of the Thailand Information and Communication Technology (ICT) Policy Framework (2011-2020) or IT 2020 has guided the development of Thailand's ICT in the first decade of the 21st century until the present. Its' flagships, the "5 e's strategy", emphasize the development and applications of ICT in five strategic areas, namely, e-Government, e-Industry, e-Commerce, e-Education and e-Society aiming to enhance the economy and quality of life of the Thai people and lead Thailand towards a knowledge-based economy and society then being the Smart Thailand as a whole.

In the development of the ICT2020 Policy Framework, the previous policy framework and the current status as well as the ICT development scenario of the country have been integrated. Furthermore, the all kinds of technological development and changes have been considered which aims to serve all groups of people in the society: individuals, economy, industry and social transformation of the country as a whole. Besides, the Thai government also focused on the preparation of Thailand to ASEAN in the year 2015. The six strategic areas are as follow especially the 6th strategy aiming for all kinds of e- inclusiveness development. Some high-lights are as follow;

Strategy 1 Economic Change (Economic transformation) is to prepare an appropriate environment to do business in order to attract trade, investment and business creation in the field of information technology and communications.

Strategy 2 The participation of the people and capacity building for the people (People empowerment and engagement) to improve the quality of life through access to ICT thoroughly and evenly at reasonable prices.

Strategy 3 Innovation is to promote information and communication technology industry for the Environment (Green) by using creativity and novelty including the promotion of research and innovation to strive for academic excellence.

Strategy 4 Infrastructure development is the provision and developing of infrastructure, ICT to support services, information technology and communications across all communities in the region, including the management and integration of meteorological information warning systems and disaster (Disaster Management) effectively and timely.

Strategy 5 Human capital development is the cultivating of human resources with ICT skills and capabilities to support the growth of the ICT industry and help promote other economy industries.

Strategy 6 Reducing the digital gap (Bridging the digital divide) is to develop and promote the adoption of ICT to good use on a daily basis to build careers.

Some Details of the Relevant Strategy: Strategy 6 – ICT to Enhance Social Equality or e-Inclusiveness

This strategy aims to allow people to have secure rights in accessing and making use of telecommunications services and information in order to create economic, social and cultural opportunities in a comprehensive and just manner. The strategic actions and measures are as follows:

1) Provide information infrastructure which is distributed equitably, in order to narrow the digital divide, by aiming to disseminate ICT as a basic utility needed for ICT work as well as the high-speed internet network. In addition, promote and support research and development in ICT technology, tools and devices at affordable prices, along with assistive technologies for the PWD. Support technology transfer for production and service.
2) Reinforce knowledge, understanding and skills in using ICT for the general public in order to create knowledge and skills in the development and use of ICT that relates directly to the ways of life of people, various communities and to ensure astuteness about information. This is with a view to apply ICT to meet the needs of individuals, communities and localities, which will give rise to opportunities for increased

employment and income.

3) Promote digital media which can be used in daily life and learning by the people. Communications resources should be allocated for educational television, developing electronic content in local languages, translating content or books, and creating content in sign language for the deaf. In addition, accelerate the definition of national standards for the format of electronic document archive modules. Support voluntary work in creating content that is suitable for communities, by using online social networks as the collaboration platform.
4) Provide electronic government services through various access channels and ensure that these services meet the needs of people in their daily life. This is in order to facilitate people's access to information and social services and increase their participation in public administration and services. In any case, appropriate ICT standards should be used, for instance, standards for web accessibility that allow the PWD and elderly to access the government information and services on an equitable basis.
5) Promote the creation of online creative communities or learning society, web portals, diverse electronic content, and social groupings that are robust. Learning networks should be set up among educational institutions, temples, libraries and community learning centers in order to facilitate access to useful learning and information resources. They will also stimulate the dissemination, exchange, learning and enhancement of local wisdom with modern science. This will lead to a lifelong learning society, along with the creation, enhancement, transfer and integration of knowledge that is suitable for the development of communities. Promote people to access, be aware of, understand and respect social and cultural diversity that exists in the country.
6) Strengthen trust and confidence as well as security in using electronic media by accelerating the development of laws or regulations that are necessary for using electronic media safely. Encourage the people to have knowledge and understanding about existing laws and self-protection from online threats. Organize activities to disseminate knowledge or training activities to develop knowledge, understanding and wisdom about information and to become astute in using media. This is with a view to people being aware of risks and dangers that might occur in the online community. Promote the use of social mechanisms to build online communities or society in a creative manner, in line with the approach of self-monitoring.

The ICT2020 framework pays special attention to creating opportunities or reducing gaps in accessing critical basic services among all groups of people of the country under its mission of "Smart Thailand". So, the E-Government: e-Service is currently the top priority among the other policies of Thailand. Because under the Electronic Government Agency (EGA) is exploring

emerging technologies such as cloud computing and mobile development, and is now making its way towards better government IT infrastructure. EGA Director, Sak Segknoonthod said "The goal is for Thailand to offer universal government services online by 2015, allowing public access via any device around the clock." The future direction for the government is to achieve integrated services development by sharing data, information and services across government organizations, establish high-level management oversight and supervision in the implementation of e-government programs, fostering innovation and combining better services and lower costs while still having impact on more people.

When it concerns women and girls' accessibility to public e-services such as e-health, e-education and employment, organizations and agencies such as the Prime Ministry Office, the Ministry of Social Development and Human Security, the Thai Women Empowerment Fund, the Ministry of Labor, the Ministry of Interior, the Institute of SME, UN Women, Telecentre Women Academy, ILO, UNESCO, FAO, UNICEF, the Population Development Association, the Rural Women's Craft Co-operative, HomeNet Thailand, Thai Women Empowerment Fund, and others, are also playing an active role in guiding the direction that e-services in Thailand should take. One of the concrete drives of women e-literacy in Thailand is as follow;

Over 1 Million Women Empowered With Digital Literacy Skills

The Telecentre Women: Digital Literacy Campaign launched by the International Telecommunications Union (ITU) and the telecentre.org Foundation has reached its goal this month with a total of **1,014,096** disadvantaged women trained in basic digital literacy skills. This result is a key step forward towards the achievement of goal 3 of the UN Millennium Development Goals – promote gender equality and empower women.

Since 2008, the Thai Ministry of ICT has made the Telecentre program one if its top policy priorities in its effort to reduce the digital divide in Thailand and provide Internet access to all members of society. Since then, The Research Centre of Development and Communication Knowledge and Management (CCDKM) at Sukhothai Thammathirat Open University (STOU), APTN (Asia Pacific Telecentre Network) and many other stakeholders including UN agencies, NGOs, and academia, have been effortlessly working together to reduce the digital divide and alleviate poverty at the grassroots by promoting ICT literacy, life-long learning initiatives, entrepreneurship and e-commerce strategies.

Today, as an outcome of the Telecentre Women: Digital Literacy Campaign, over 1 million disadvantaged women have been empowered with the digital literacy skills required to improve their employability, access information, and utilize e-Government : e-Services. A Certificate of Appreciation for the strong support given to this successful Campaign was awarded to Dr.

Kamolrat Intaratat, Chair of APTN, for actively involving in this global initiative thousands of grassroots telecentres in Thailand and in the Asia Pacific.

Learn more about Thai Telecentres from e-Women Award winner Ms. Saiyud Poonsawas at: http://www.youtube.com/watch?v=vCBVN4HZgsU or visit APTN Asia Pacific Telecentre Network (www.APTN.asia)

3.10. Vietnam[75]

3.10.1. Current Status of e-Services

3.10.1.1. Current Status of Information and Communication Technology (ICT)

Information and communication technology (ICT) industry continued growing in 2012, having significant achievements, becoming a highlight of the Vietnamese economy given economic difficulties. According to information from the "Vietnam Information and Communication Technology 2013"[76], some of the industry's outstanding achievements in the period 2012-2013 can be summarized as follows.

ICT infrastructure is continued being invested in and upgraded to satisfy robust growth of communication and internet subscribers. In 2012, the number of mobile subscribers continued growing more slowly with more than 138 million of subscribers, increased by 3.2%, making the number of mobile subscribers/100 inhabitants to reach 148.33. Noticeably, in 2012, although the number of 3G subscribers fell mildly due to the cutting down of virtual subscribers by mobile telesystems, the number of 3G subscribers was higher in reality. Whereas, due to technological factors, the number of fixed telephone subscribers continued falling to be nearly 10 million subscribers, or a decrease of 6% compared with the number of fixed telephone subscribers/100 inhabitants of 10.76.

The number of broadband Internet subscribers grew fast to reach 4.78 million, increased by 24.7%. Density of Internet users was 35.3% (or 31.3 million people). Ratio of households having computers was approximately 18.8%; and nearly 21.3 million households had televisions (or 91.7%). Public postal service network had 13,612 service points. Average number of inhabitants served by a postal service point was 6,486.

[75] Written by Ms. Thi Bich Thuy Nguyen, Director, Research Center for Female Labour and Gender, Institute of Labour Science and Social Affairs, Ministry of Labour, Invalids and Social Affairs, Vietnam

[76] "Vietnam Information and Communication Technology 2013" is an official publication of the National Committee for Information and Communication Technology and Ministry of Information and Communication of Vietnam.

[Table 3.10-1] The Number of Broadband Internet Subscribers, Fixed/Mobile Phone Subscribers

	Fixed/Mobile Phone Subscribers		The Number of Broadband Internet Subscribers (ADSL)
	Total	of Which: Mobile Phone	
	1,000 Subscribers		
2005	15845.0	8718.1	210.0
2006	28518.1	19748.9	516.6
2007	56189.7	45024.0	1294.1
2008	89639.9	74872.3	2049.0
2009	112563.2	98224.0	2967.3
2010	124311.1	111570.2	3643.7
2011	138143.7	127318.0	4084.6
2012	148490.0	138550.0	4775.4
	Development Index (Previous year =100) - %		
2006	180.0	226.5	246.0
2007	197.0	228.0	250.5
2008	159.5	166.3	158.3
2009	125.6	131.2	144.8
2010	110.4	113.6	122.8
2011	111.1	114.1	112.1
2012	107.5	108.8	116.9

Source: General Statistical Office

ICT industry continued its spectacular growth momentum with FDI enterprises' key role. Total revenue of ICT industry was 25.5 billion USD in 2012, spectacularly increased by 86.3% compared to 2011. This high growth remained thanks to the continuation of impressive growth rate of hardware and electronics industry with more than 23 billion USD revenue, or 103.2% increase compared to 2011, which comprised up to 90.4% total revenue of ICT industry.

Software and digital content industries also grew but with moderate growth rate of 3.1% and 6.0% respectively. Software, therefore, grew the slowest among the 3 industries. ICT products export turnover reached 22.92 billion USD, increased by more than 110.4% compared to 2011. Especially, total export revenue was nearly 3.5 billion USD higher than total import turnover. In 2012, total number of labors working in ICT industry was more than 350,000, increased by more than 50,000 compared to 2011, and mainly concentrated in hardware industry.

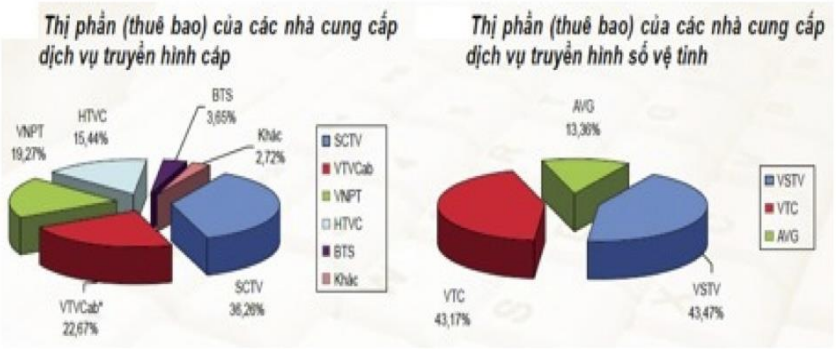
Telecommunication industry restored its growth momentum with VNPT as the fixed telephone system leader and Viettel as the leading mobile services provider. Overall, given economic downturn in 2012, total telecommunication revenue still achieved nearly 8.5 billion USD, increased by more than 21% compared to 2011. Of which, mobile services revenue increased by

more than 1 billion USD (from 5.4 billion to 6.5 billion USD) and accounted for a major part in telecommunication revenue structure (76.43% total revenue). This was the main reason for the growth of telecommunication market. Revenues from fixed telephone and Internet services also grew but with moderate rates of 394.2 million USD (or 8.9%) and 474.8 million USD (or 1.42%).

Vietnam's broadcasting industry had stable revenue with an impressive growth in the number of subscribers. Broadcasting system was strongly developed with 67 radio and television broadcast stations, and had been being upgraded to and updated with advanced technologies worldwide. Also, pay television service grew fast. Total pay television service revenue reached more than 200 million USD; of which, cable television service accounted for 97% total revenue.

Number of pay television subscribers also increased impressively, with the highest numbers of subscribers in cable television and terrestrial digital television services of 4.4 million and 3.6 million respectively. In terms of market share in pay television and cable television, SCTV accounted for the highest part with 36.26%, followed by VTVCab with 22.67%. Whereas, in terms of satellite digital television, VSTV and VTC were two leading providers with close market shares of more than 43%; AVG, as a newcomer, accounted for 13.36%.

[Figure 3.10-1] Market Shares (Numbers of Subscribers) of Cable Television Providers and Satellite Digital Television Providers



Source: Market shares (numbers of subscribers) of cable television providers

Source: Market shares (numbers of subscribers) of satellite digital television providers

Training system of ICT human resources continued to be kept stable in training scale and forms. In the whole country, there were 290 universities and colleges which offered ICT courses. Enrollment rate in this industry was 10.83% of total enrollment quota for2012. During this year, the number of students who graduated from universities and colleges as ICT majors was more

than 40 thousand persons, those enrolled in universities and colleges was 58 thousand persons and those studying at universities and colleges was nearly 170 thousand persons. Besides, the number of vocational colleges and secondary schools which offered ICT courses increased by 30 units compared to 2011, making total number of vocational colleges and secondary schools which offered ICT courses to reach 143 units.

ICT legal environment had been being improved, creating favorable conditions for information technology development and application, and for the enhancement of State's management and administration ability. In 2012, developed and stipulated policies mainly focused on information security in electronic environment and national security such as draft Law on information security, amended Decree on anti-spam, Decision on criteria for identifying vital telecommunication premises relating to the national security, Circular regulating a list of used IT products to be banned from import. Meanwhile, many big policies, programs, projects were being deployed effectively by Ministry of Information and Communications such as: Resolution of the Central Committee IV on the development of information infrastructure, Project on digitization of terrestrial digital television broadcasting and transmission to 2020, Program on providing public telecommunication services for the period 2011-2015, Program on bringing ICT services to communities.

With noticeable results and achievements, ICT industry continues its position and growth momentum, contributing to the fulfillment of planned tasks to 2015; at the same time, gradually deserving its role as one of 10 key infrastructures of a comprehensive infrastructural structure system, bringing Vietnam to be an industrial country by 2020.

3.10.1.2. Women's Access to e-Services

A. Opportunities for Women to Access e-Services

Vietnamese women are increasingly participating in ICT industry. Before, hardly any women worked in ICT; but in 2012, women accounted for nearly 1/3 total human resources in this industry. Number of newly enrolled students in ICT courses tended to increase in recent years.

In Vietnam, in 2013, women accounted for approximately 30% total labors working in the press; female lecturers in ICT courses in universities and colleges accounted for 26%, etc.
In universities and colleges training ICT, female students accounted for more than 30% in newly courses such as multimedia, nearly 50% in software courses, 50-60% in information system management, etc.
Source: Vietnam General Statistics Office, 2013.

Internet, computer, mobile phone, television, etc. are becoming popular in Vietnam, supporting inhabitants in general and women in particular in accessing e-services. Urban women and girls are easy to use internet as well as e-services thanks to its availability, convenience and relevant price. Households/ women who do not own computers may use pay-internet in private internet shops. It is easy to search for private internet shops in Vietnam, including rural and mountainous areas. Service price is relatively relevant, from 20 cents per hour to 50 cents per hour (in US Dollar).

Policies, programs, projects on providing inhabitants in disadvantaged areas with low-price internet or free-of-charge internet create favorable conditions for poor women to access and use e-services. The Government of Vietnam paid attention to the use of ICT services in general and e-services in particular among inhabitants, especially women in rural, mountainous, poor and ethnic minority areas. Most policies/ programs/ projects on rural development and poverty reduction assisted disadvantaged areas to build ICT infrastructure; simultaneously, providing support for the set-up of public internet access points such as: "public library" (communal, district, provincial library) or "communal cultural post office". Some policies and projects also provided service subsidies to inhabitants in poor and disadvantaged areas.

A successful model of compelling women to use computer and internet at "Public Library" and "Communal cultural post office" Thousands of women in remote areas across 12 provinces, including Ha Giang, Thai Nguyen, Tuyen Quang, Thanh Hoa, Nghe An, Ha Tinh, Daknong, Binh Phuoc, Ben Tre, Tra Vinh, Soc Trang and Tay Ninh experienced an event namely "Internet day for women" in more than 700 Public libraries and Communal cultural post offices from the end of May to the beginning of July 2013. By participating in the event, local women got familiar with basic knowledge of computer and skills in using and searching for information from Internet which is useful for their lives and production, and experienced as well. Especially, at the event places, women could participate in thematic activities relating to issues which are useful for lives such as household economic development, child feeding and upbringing, gender equality, etc. This was one of benefits that inhabitant could receive from the Project "Enhancement of computer using and public Internet accessing abilities in Vietnam."

B. Challenges/Difficulties faced by Women while Accessing e-Services

While accessing ICT in general and e-services in particular, obvious gaps still exist between:
(i) Women and men; (ii) Urban women – rural women; Women among delta – mountainous – island areas; (iii) Women living in developed economic areas – poor areas, (iv) Kinh ethnic majority and ethnic minority women, etc.

Women's educational and technical qualifications are lower than that of men. This is a big barrier

which can affect women's access to ICT/ e-services. Rural women, ethnic minority women, poor women, low-educated women, etc. do not have enough knowledge and skills for using computer and internet. This is the biggest barrier that prevents them from accessing and using e-services. Illiterate women aged 15 and over accounted for approximately 7%, higher than that of men which was a little bit more than 5% (2012).

[Table 3.10-2] Gender Gap in Technical and Educational Qualifications in 2012

	2012 Total (%)	Male (%)	Female (%)	Difference by Sex, % (Female-Male)	Gender Gap Index (Female/Male)
Total	100	100	100		
Not Being Trained	83.2	81.1	85.3	4.1	1.05
Vocational Training Center	4.7	7.1	2.2	-4.9	0.31
Professional Secondary School	3.6	3.6	4.0	0.7	1.21
College	1.9	1.4	2.4	1.0	1.67
University and above	6.5	6.9	6.0	-0.9	0.87

Sources: Ministry of Labor, Invalids and Social Affairs, Labor Force Surveys from 2001 to 2006; General Statistics Office, Labor Force Surveys from 2007-2012.

Technical qualification[77] of female labor force was still low, and also lower than that of male labors. In 2012, female labors having technical and educational qualifications accounted for 14.7% total female labor force. This figure of male labor force was 18.9% in 2012. In group of labors having vocational qualifications, university qualifications and above, gender gap was still a disadvantage for female labors. In 2012, ratio of female labors having "Vocational" qualifications was much lower than that of male labors, with a rate of 2.2% for women compared with 7.1% for men (a difference of -4.9%). For "University and above" qualifications, difference by sex in 2012 was -0.9%, gender gap index was 0.87 point. Gender gap in this qualification level was not so high; nevertheless it is more difficult to narrow gender gap at this qualification level.

Another barrier for women to access ICT/e-services is out-of-date customs and conceptions towards women. Gender prejudice in career remains in Vietnam, with ICT being considered as men's career. Therefore, fewer women than men chose to study and work in this field. Gender prejudice is tougher in rural, mountainous and ethnic minority areas. Rural, ethnic minority, poor

[77] Labors having technical and educational qualifications: only labors having certificates are counted.

women hardly participate in activities at public places such as public libraries or communal cultural post offices. Thus, they have fewer chances to access ICT and e-services than men do. According to current gender role, women, especially rural women, have to be mostly in charge of housework and family care. Their working time, therefore, is longer than that of men. Hence, they do not have much time for entertainment and further studies. This is a great barrier for them to access and use e-services.

Capability of households to access information sources may be evaluated by their use of information receiving equipment/information sources such as internet, books, newspapers, magazines, fixed telephone, mobile phones, television, radio, etc. There still existed women-headed households having no information receiving equipment such as television, radio, etc. Moreover, due to difficult living conditions and the burden of housework, hardly any women arrange time and housework to go to public places (hamlet, communal cultural houses) or to hamlet/communal officers' houses to receive information. Thus, gap in accessing information still existed between groups of poor, ethnic minority women who lived in remote areas that were inconvenient for travelling.

By sex of household head, in 2010, ratio of women-headed households accessing all information sources above was always lower than that of men-headed households[78]. Television (color, black and white) was used the most in households for receiving information. It was being used by more than 70% men-headed households, nearly twice that of women-headed households (approximately 40%). Similarly, ratio of men-headed households using mobile phones for accessing information was 58.6%, twice that of women-headed households, 29.5%

Some modern information sources had lower usage ratios of both men-headed and women-headed households such as internet. It should be noted that in these modern information sources such as internet, there existed a great difference in usage ratio of households between urban and rural areas, with 17.5% and 1.9% respectively. Limited knowledge and skills on technical facilities, modern technique of communication will be one of the challenges for women, especially poor and ethnic minority women in accessing and using information.

Current statistical data on information and communication are not disaggregated by sex, therefore it is difficult to measure and calculate the number of women not accessing communicated information. Thematic surveys with tools for gathering detailed information are needed to accurately reflect current situation.

[78] Source: Household Living Standards Survey 2010, General Statistics Office

3.10.2. Country Specific (Potential) Demand for e-Services

3.10.2.1. General Policy Outreach

Women's Demand for Gender Policy Archive

E-services need to be developed towards disadvantaged women groups, for example, by designing simple interfaces, using different images, communicating with voices, etc.

Women's Demand for Online Polls/ Feedback

This service's development needs to be focused on to meet the requirements of women in the coming time. The reason is that, Vietnamese women, with their current gender role, are carrying "triple roles": (i) working for income; (ii) implementing most of housework, child care and elderly care; (iii) participating in socio-political activities. Due to the burden of work, women have less time for socio-political activities, and hardly participating in meetings and events to make contribution to the construction of policies and plans for community development, etc. The development of online polls, online feedback, etc. may support women in participating in, contributing to and criticizing socio-political activities at local and national levels. It should be noted that e-services are developed in accordance with the need and ability of disadvantaged women groups.

Women's Demand for Widget Link for Social Networking Sites

Women's demand for participating in Social Network, as a common trend of the world, will sharply increase in the time to come. Taking advantages of capability to rapidly spread information within communities, social networking sites may assist women in every area, from work to family life, social activities, etc. In the coming time, not only urban women but also rural women and those who live in remote areas will have a high demand for joining social networking sites. Women groups, especially those of less than 25 years old, will gradually be familiar with internet, Social Networking sites and this fact will become popular and spread quickly in rural areas, even in remote areas. However, the administration of Social Networking Sites needs to be strengthened to make sure that women are safe in their using process. Also, it is necessary to improve propaganda and education for women so that they can see risks while getting in touch with, or while participating in social networks. Demand of disadvantaged women groups for using this type of service also needs to be satisfied, from then on, having measures for assisting and guiding women to participate in a safe and effective manner.

3.10.2.2. Women's Health

Women's Demand for Online Search/ Archive for clinics supported by government

Demand for this service will enjoy a boom in the coming time, when the coverage of internet spreads. The service is indispensable, given the system of state-owned hospitals being always overloaded at central and provincial levels; people, including women, being confused about searching for reputable health centers that are relevant to their diseases and financial conditions. In the future, apart from providing clinics' addresses, the service should be supplemented with the guidance on the selection of relevant clinics. Despites many service providers for this service, it is used by few women. Therefore, propaganda for the service should be enhanced so that it is known and used by more women when needed.

Online Consultation on Women's Diseases, Sexual Violence/Abuse and e-Learning to Prevent Sexual Violence/Abuse

Currently, Women's Diseases and Sexual Violence/Abuse are still "sensitive, hard" subjects for Vietnamese women, especially rural women. They hesitate to come to health centers to consult health staffs in person because of being ashamed and complex. The development of online consultation, therefore, will help women get rid of their concerns. Women groups interested in this service include young women, migrant women, single women, etc. Beside the development of services relevant to the need and ability of target groups (being low-educated, having low ability to pay, not being fluent in using internet, etc.), service propaganda and popularization to targeted women groups need to be strengthened.

Online Search/ Archive for Maternal and Child Health

Given socio-economic development, women have more chances to pay attention to maternal and child health. Women's demand for Online Search/ Archive for Maternal and Child Health will increase fast. The convenience and relevant service price will be driving forces for more women using this service, beginning by urban women. It will take less time and money for women to search for information; at the same time, women can refer to different information sources to compare, select and search for the most relevant and reputable information sources. Nevertheless, it is necessary to take into account the need of women groups which are low-educated and not fluent in using internet. Easy-to-use services with relevant prices should be developed to serve these target groups.

3.10.2.3. Women's Economic Participation

In the coming time, there will be still many women working in informal sector and self-

employment sector. They are in need of assistance in business start-up, especially under convenient and low cost assistance forms.

Online Coaching for Women Start-up Business

Experiences in the last time show that women's demand for this service is getting bigger. However, it is difficult for low-educated women who cannot fluently use computer and internet to learn independently. Therefore, women need to be gathered by occupation group and online coaching will be held for each group. Each group should have some people who already participated in online coaching to share experiences with the newcomers. E-leaning is a new form of training in Vietnam; it is very suitable for women, especially married women, women with young children. Women can work while studying; just take care of children and doing household chores. E-leaning demand will increase in the future, especially those jobs do not require practice on machines such as English, accounting, etc. Recently, trends in e-leaning applied have increased rapidly in universities, colleges and vocational training in Vietnam.

3.10.2.4. Gender Policy Monitoring

For a large number of agencies/ organizations and individuals, the demand for gender statistics is quite great. Although the indicator system of statistics on gender and development at national and other levels was launched by the Government, data collection and upload on government agencies' websites have not been conducted. This is a challenge for searching and using gender statistics in general and data module on women's ICT use in particular.

3.10.3. Future Directions of e-Services

3.10.3.1. Orientation for ICT Development in Vietnam to 2020

Vietnam has an impressive ICT development growth rate compared to other countries in the region and in the world over the last time. In the time to come, the Government of Vietnam will continue investing in ICT development, considering ICT as a vital solution to turn Vietnam into a basically industrialized and modernized country by 2020. Detailed policies and strategies are as follows.

Resolution No. 13-NQ/TW, dated 16 January 2012, by the 4th session of the 11th Central Committee of the Communist Party on ***Building a comprehensive infrastructure system*** aims at turning Vietnam into a basically industrialized and modernized country by 2020. Detailed orientations for information infrastructure development are as follows:

1) Strongly develop a system connected diversely to international network, forming domestic information superhighways and international links; strengthen the management of information on Internet, social networks and personal blogs. Further develop telecommunication satellites, putting Vinasat-2 into operation by 2015; build national key information technology zones.
2) Build national database on citizens, land, housing and enterprises to form the basis for the application of information technology in the management of resources for the country development. Accelerate the implementation process of citizen electronic cards, e-Government and e-ASEAN commitments.
3) Push up the application of information technology in the management, exploitation and operation of the socio-economic infrastructure system and of the whole economy. Consider the promotion of information technology development and application as the first priority in the itinerary of industrialization and modernization of each industry and area. Develop information technology industry, promoting the development of the software industry in a fast and sustainable manner.
4) Enhance capability to master technology and enhance the effectiveness and efficiency in managing the infrastructure system of information technology and the information contents used for the Party and the State's leadership, direction and administration; meet requirements of information supply and exchange in the society, pushing socio-economic development, ensuring national defense and security; ensure information safety and security, and national sovereignty over cyberspaces, etc.

Resolution No. 16/NQ-CP dated 8 June 2012 by Prime Minister stipulating ***Action plan on building a comprehensive infrastructure*** targets at turning our country into a basically industrialized and modernized country by 2020. The plan sets out detailed missions in terms of information infrastructure as follows:

1) Develop a project on financial mobilization for investment in information infrastructure to 2020, and make sure that the project is feasible.
2) Review, speed up and oversee the implementation of projects on investment in the system of post and telecommunication. Focus on investing in building an international-linked ICT infrastructure system. Form domestic information superhighways and international links.
3) Develop a project on investment in applying information technology in the management, exploitation and operation of the socio-economic infrastructure and the economy as a whole.
4) Develop a project on investment in applying information technology in education and training, e-textbook development, online training, etc. to meet requirements of the

renovation of teaching and learning method, examination and the evaluation of education quality.

5) Develop a project on investment in intelligent health to improve the quality of health services, contributing to cost saving and restricting hospital overload.
6) Build Programme on investment in improving ability to develop internationally qualified human resources in information technology; improve capability to master technology, capacity to research and develop, ability to master source technology, produce core and key products on information technology; enhance capability, effectiveness and efficiency in managing the system of information infrastructure and the information contents used for the Party and the State's leadership, direction and administration; develop capacity of national information technology to meet requirements of information supply and exchange in the society, pushing socio-economic development, ensuring national defense and security; ensure information safety and security, and national sovereignty over cyberspaces.
7) Focus on investment in the information technology industry; push up the development of the software industry. Build national key information technology zones.
8) Develop national database on citizens, land, housing and enterprises. Implement citizen electronic cards and e-Government nationwide.

According to the development orientations of Vietnam's information infrastructure to 2020, e-services provision to people in general and women in particular will be more promising than in previous periods.

3.10.3.2. Advantages and Disadvantages for Women

Women's advantages and disadvantages in e-Services are summarized below along with policy recommendations.

Advantages

1) With prospects of e-Government and information technology infrastructure development at both central and local levels, providers, especially government providers, will have more favorable conditions and be strengthened in capacity to provide e-services. Also, quality of e-services will be improved with updated information, information forms being more diverse and user friendly.
2) Government programme on investment in ICT infrastructure will push up the coverage speed of internet and e-services. Women in rural and disadvantaged areas, therefore, can have a chance to use internet and e-services.

3) Policy on support for E-learning development will facilitate women in learning, improving educational and technical qualifications, health care skills, skills in protecting themselves from risks, etc. On the other hand, e-learning can help women improve their capability to use information technology in general and internet in particular. These are favorable conditions for women to develop their careers, making work better, having better income and living standards.
4) The robust development of low-cost smart phone for internet access will facilitate low-income women, rural and mountainous women in using internet and e-services.
5) Women's educational qualification and gender equality in ICT are getting improved will be favorable factors to support women in accessing computer, internet and e-services.

Disadvantages

1) A part of rural, ethnic minority and poor women are facing difficulties in using computer and internet to exploit information on gender policies;
2) The development of e-services has not properly taken into account the actual need and ability of women, especially disadvantaged women groups. Thus, there will be not many e-services for serving the needs of disadvantaged women groups in e-service in the time to come.

Recommendations

1) It is necessary to mainstream gender equality in policies and programmes on ICT development in general and e-services in particular, making sure that both women and men have a chance to enjoy these services.
2) Promote the popularization and propaganda so that more women know about and use e-services
3) During the development process of e-services, it is necessary to pay attention to the actual need and conditions of disadvantaged women groups. Develop e-services so that they are friendly to disadvantaged women groups.
4) Have policies on supporting disadvantaged women groups in accessing e-services. In details, (i) Assign local Women's Union to set up and manage public internet points for women in each residential cluster, with fee exemption or reduction. (ii) Consider the grant of free internet cards to disadvantaged women groups registering to use e-services, for example, registering e-learning to study and to learn about an occupation; online coaching for women start-up business; online consultation on women's diseases, children's health, online search, etc.
5) Propagandize women on risks of using internet, social networking sites, etc. so that they know how to prevent and protect their families and themselves from these risks.

6) The Government should make every effort to operate the indicator system of national statistics on gender and development and upload it on its agencies' websites.

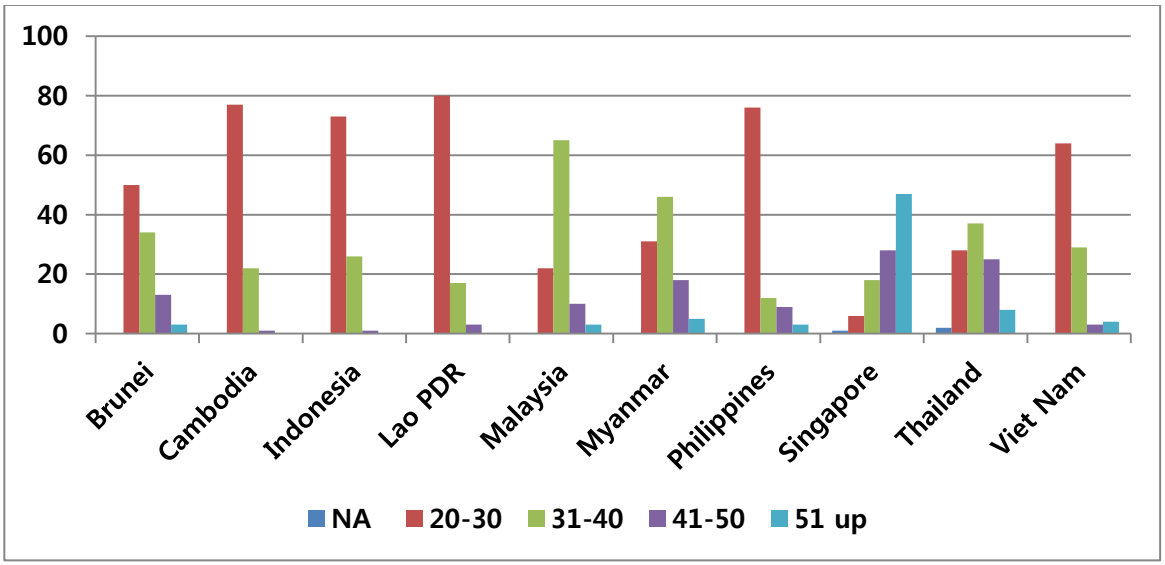
4. Overall Analysis

4.1. Comparison and Analysis of ASEAN Countries

This section conducts overall analysis for data collected through the survey[79]. Before presenting the results from the study, it is important to note that any results from the survey analysis cannot be generalized to all ASEAN member countries. Since ASEAN countries possess widely dispersed ICT infrastructure level as well as ICT literacy, these should be accounted for when developing e-Services. In this sense, one of the main objectives of this study is to find idiosyncrasy in individual countries and its implications that should be reflected in developing e-Service toolkit.

In summary, the e-Service survey conducted for ASEAN countries reveals similarities and differences simultaneously. First, survey respondents are mainly 20-30 years old followed by 31-40. Since we continued survey only after the respondent answered 'yes' to the first two screening questions, this means those who can have access to the Internet and some level of ICT literacy are relative young generations of 20-40 years old. This can be seen from the Figure 4-1. Figure 4-2 presents marital status of the respondents for each country[80].

[Figure 4.1-1] Age

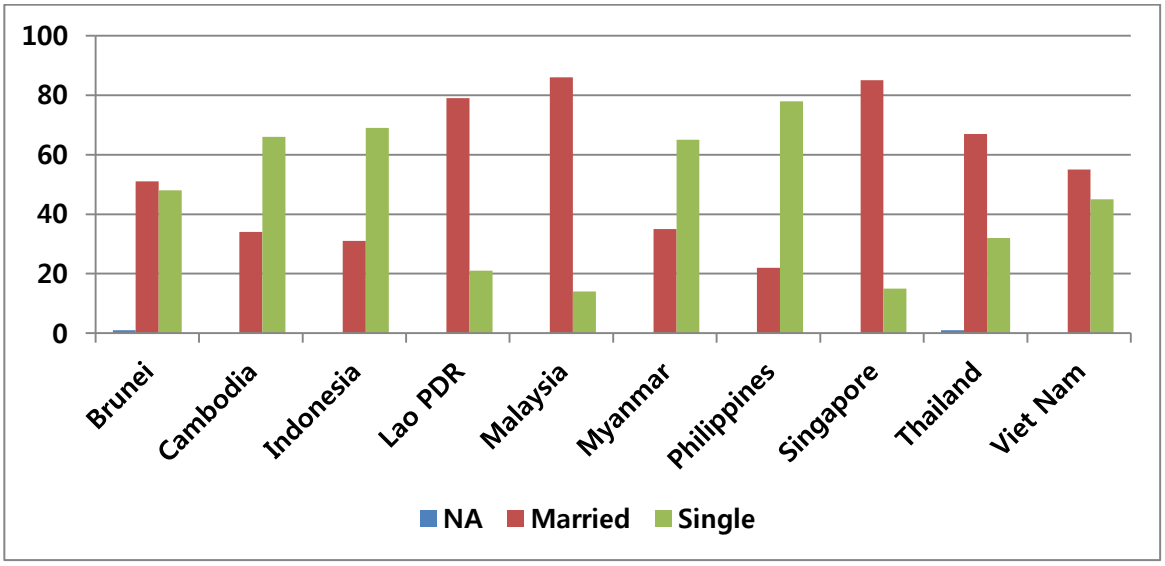


Source: Survey

[79] The survey was conducted by local researchers for 100 respondents. For Indonesia, we obtained more than surveys and we randomly select 100 responses for analysis for comparability.

[80] "NA" refers either the respondent did not answer the question or the respondent did answer the question but did not select the provided choices.

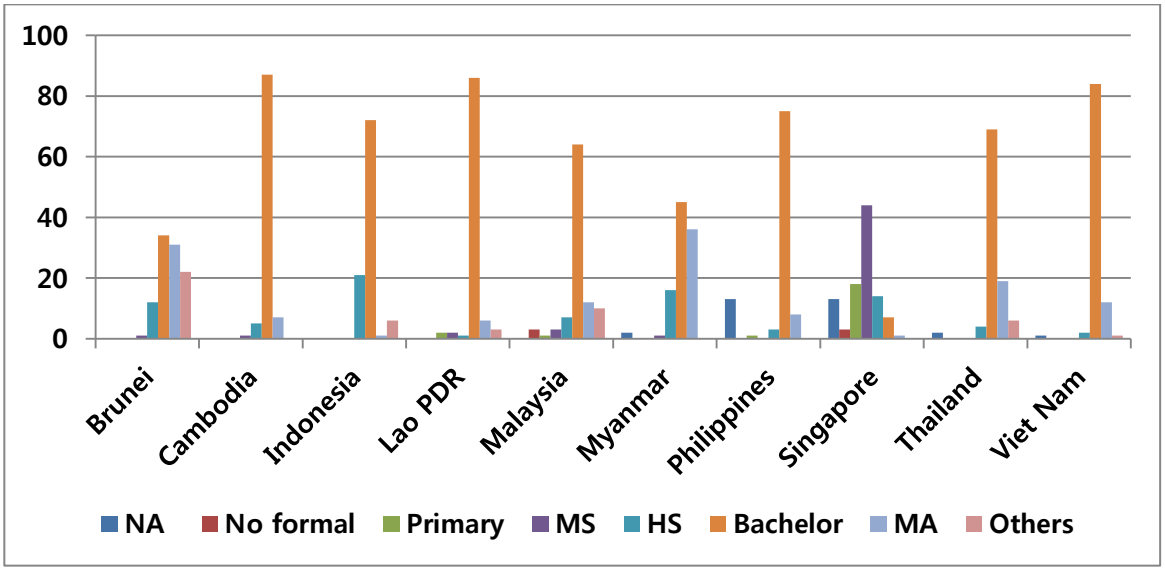
[Figure 4.1-2] Marital Status



Source: Survey

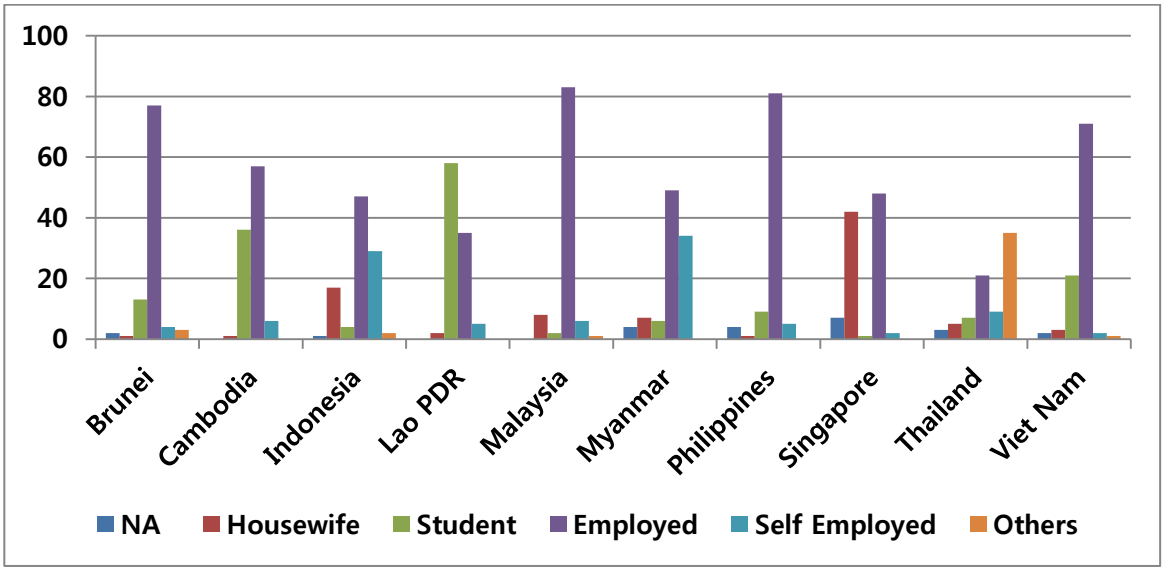
Educational attainments of the respondents are shown in the Figure 4-3. Majority of the respondents received higher education and possess bachelor degree and more. The use of e-Services also requires certain level of ICT capacity of the user. This ICT capacity includes basic literacy and numeracy. Higher education level of majority of respondents matches with the prerequisites of the e-Services and shed lights on the importance of education.

[Figure 4.1-3] Education



Source: Survey

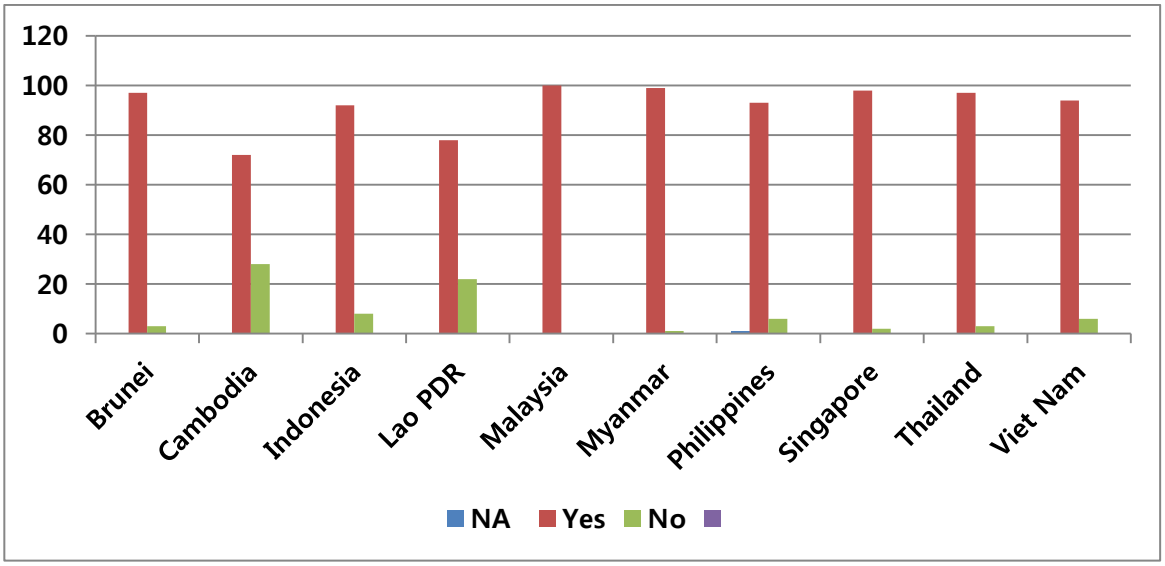
[Figure 4.1-4] Occupation



Source: Survey

Majority of the respondents are employed and students and this means they have easy access to the Inter through their workplace or school. In this sense Figure 4-4 and 4-5 match since most of the respondents answered 'yes' when they were asked whether they have easy access to the Internet.

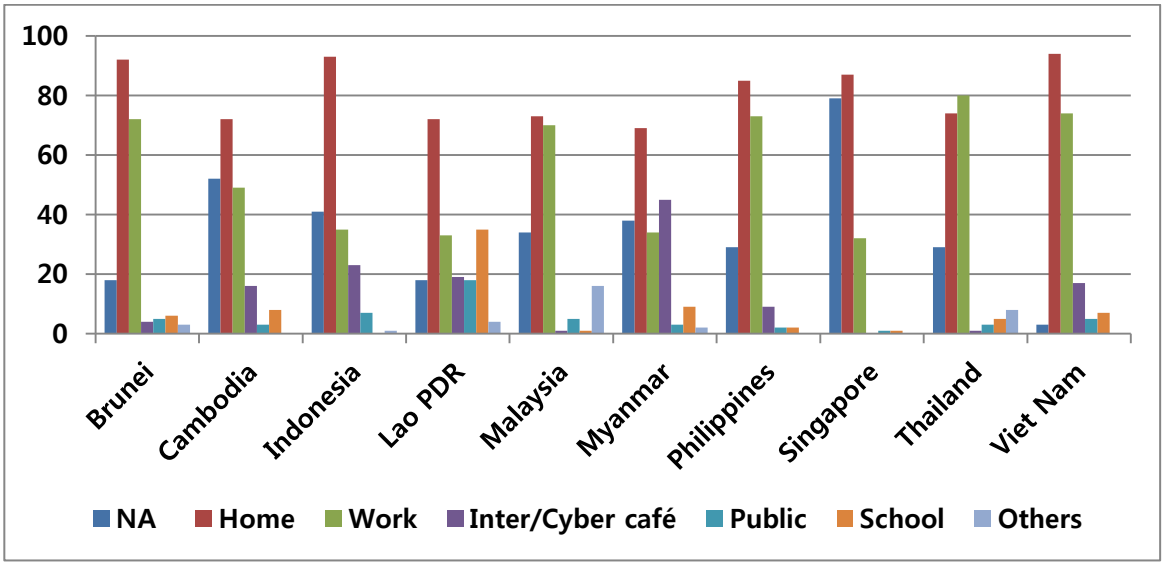
[Figure 4.1-5] Easy Access



Source: Survey

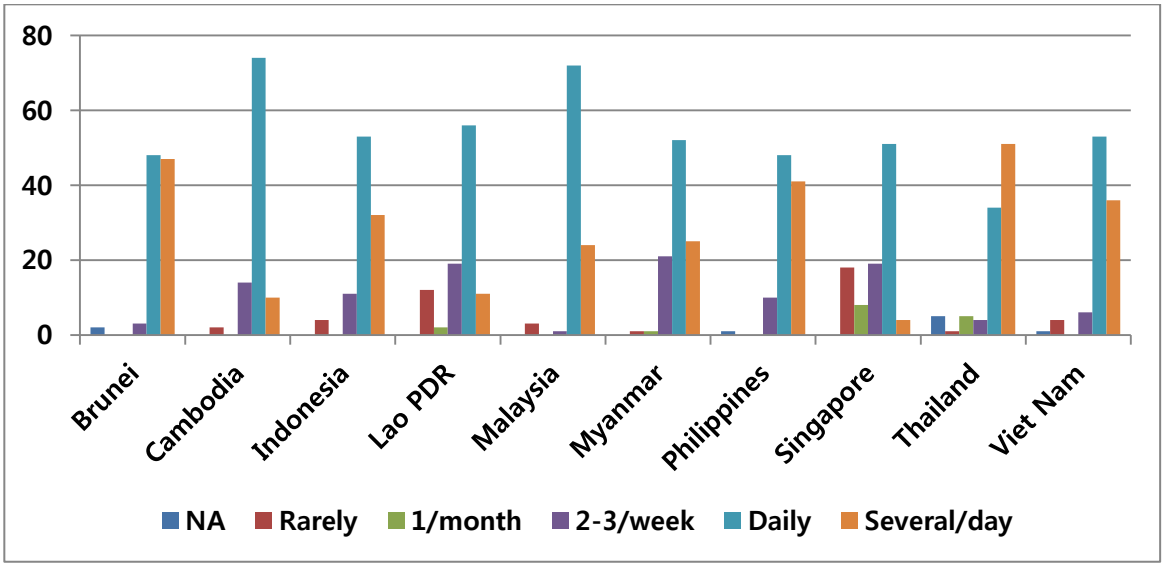
Survey shows that frequent places of Internet access are home and workplace. For this question, respondents can answer maximum two places and Figure 4-6 presents the sum of maximum two places. Other than home and workplace, frequent place of access was school.

[Figure 4.1-6] Places of Frequent Access (Sum of Maximum Two Choices)



Source: Survey

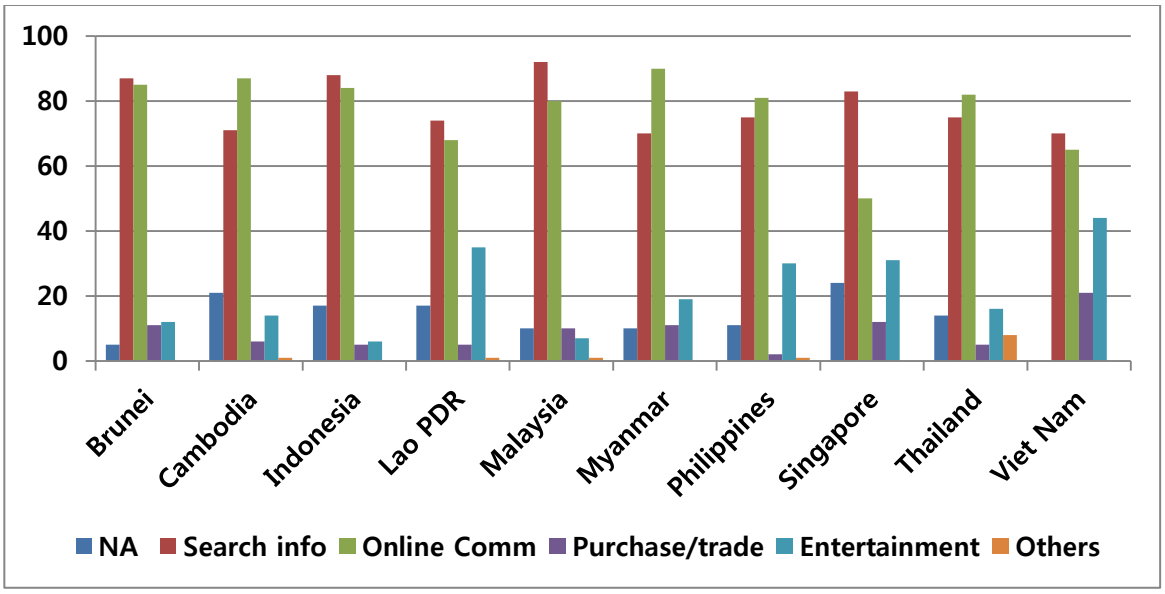
[Figure 4.1-7] Frequency of Access



Source: Survey

Figure 4-7 presents frequency of the Internet access. ICT infrastructure is differ by countries, respondent were accessing to the Internet daily. This implies that even though ICT infrastructure and ICT literacy are widely different among ASEAN member countries, respondents are actively accessing the Internet. To this end, one can expect the demand for e-Services is growing as the usage of the Internet becomes frequent.

[Figure 4.1-8] Main Purpose of the Internet Usage (Sum of Maximum Two Choices)

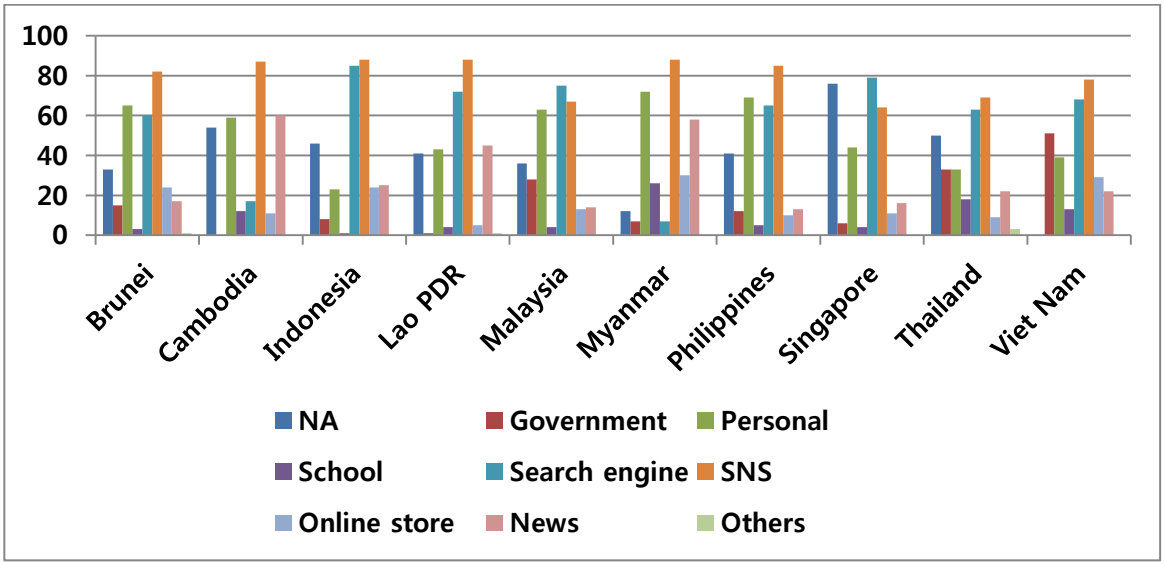


Source: Survey

Figure 4.1-8 shows main purpose of the Internet usage and many survey respondents are using the Internet for searching information and online communication. The results are sum of maximum two choices among examples. Most of the Internet users in AESN are either searching information and/or communication implies that demand for e-Services might be way larger than one thinks. We cannot consider all the seeking information cases are looking for e-services related information, at least certain amount of the search may be related. Also many people are using Internet for communication, appropriate provision of the e-Services and bidirectional communication between citizen and government through various channels not just limited to the Internet but also e-mail, SNS and etc.

One thing to note is entertainment purpose of the Internet use is quite large and even larger than purchase and trading purposes. Government may consider employing entertainment website or contents for policy advertisement, public education, and enhancing public participation since it is frequently accessed by people.

[Figure 4.1-9] Types of Frequently Visiting Website (Sum of Maximum Three Choices)

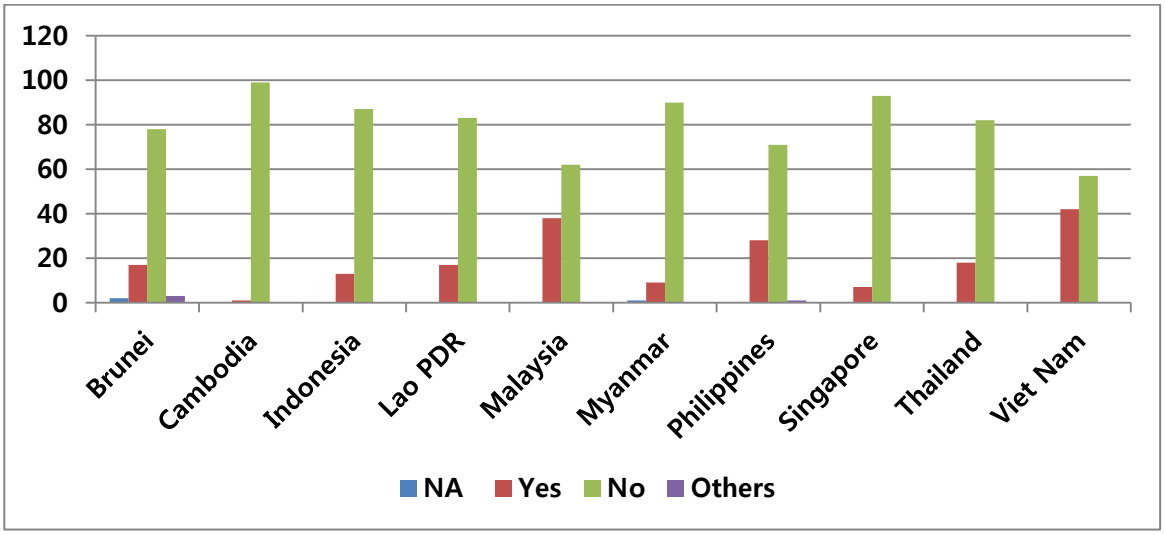


Source: Survey

For types of frequently visiting websites, SNS (e.g. Facebook etc.), personal websites (e.g. blog, email, etc.), and search engines were most frequently visited websites. Government websites were not in the top list could be a disadvantage in developing e-Services but could be wide open possibilities for the government run/sponsored websites at the same time.

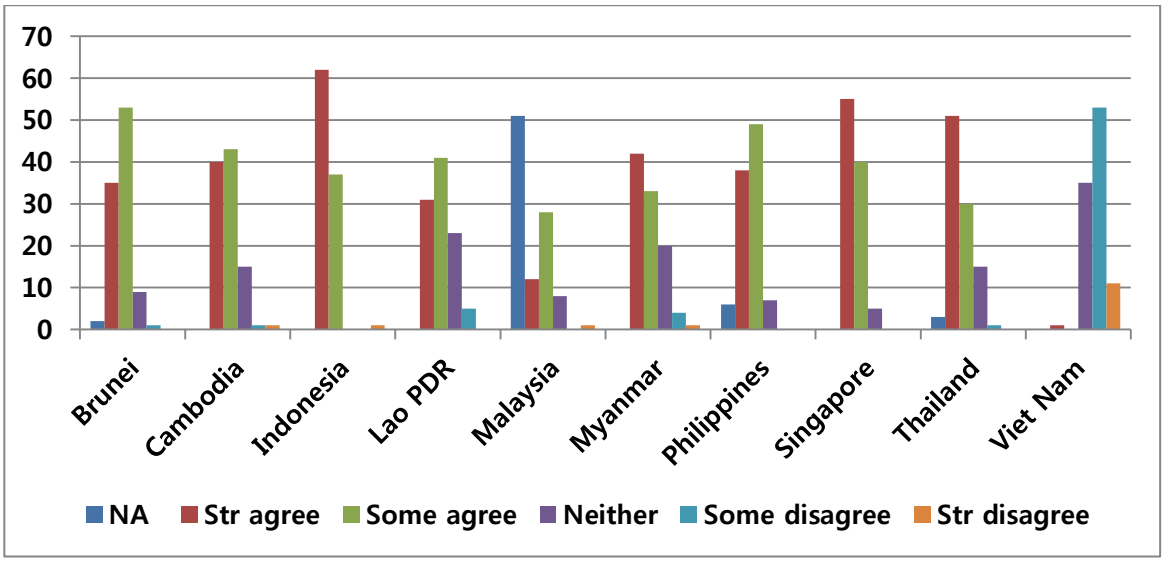
Many respondents were not aware of the existence of government websites that provide women related information or programs. Awareness of the website ranges from 42 (Vietnam) to 1 (Cambodia) and implies strong need for public relations activities by the governments. Many countries are already running websites providing women related information or programs but they are not advertised properly. This will result in low usage of the e-Services provided. In this sense fortifying public relations might be relative easy way to improve e-Service accessibility.

[Figure 4.1-10] Awareness of Women Related Government Website



Source: Survey

[Figure 4.1-11] E-Service Can Improve Daily Life?

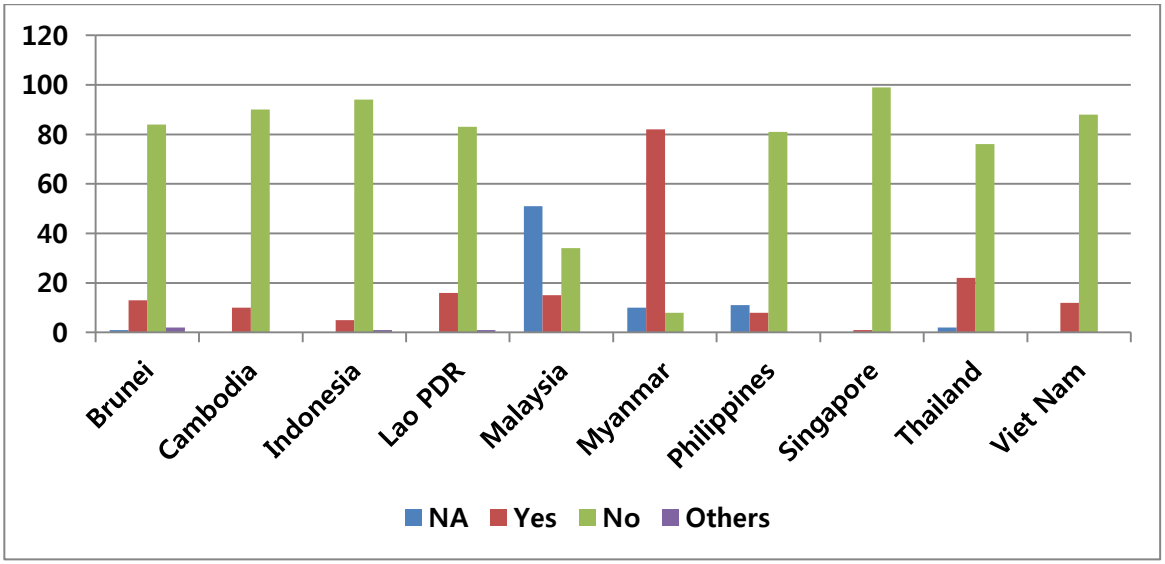


Source: Survey

The strong need of active public relations and provision of the e-Services are clear from the Figure 5-11. When they were asked whether they agree with the idea that the e-Service can improve their daily life, majority of the respondents either strongly agreed or somewhat agreed. For Indonesia, Myanmar, Singapore, and Thailand, main answer for the question was even strong. However, the case of Vietnam is little bit different from other countries that they are somewhat disagreeing to the idea that the e-Service can improve their daily life and need closer look.

Another evidence of lack of the public relations can be found from the Figure 4-12. Except Myanmar, majority of the respondents from all other countries did not aware of government policy to support women's e-Service use. Many countries more than 80 % of the respondents did not know any existence of government policy casts serious question on the efficiency of existing e-Services. Since many people did not know the existence of the e-Services, they cannot be used no matter what they are. In this sense, last three figures provide very important information about the direction of the future e-Service development in ASEAN countries.

[Figure 4.1-12] Awareness of Government Policy to Support Women's e-Service Use



Source: Survey

4.2. Implications for Future Directions of e-Services and Toolkit Development

This section analyzes implications for future directions of e-Services and toolkit development using survey data. To have further insight for this matter, we asked questions about e-Services. The role of the e-Services can be broadly categorized by two things: providing information and providing services (functions). So we asked two sets of question on this: information questions and functions questions.

There can be many more e-Service provided information but we selected representative information particularly related to women. The Information Questions (IQ) are:

1) Job opportunity

2) Talent pool
3) Micro-finance
4) Bidding opportunity
5) Livelihood related information (agriculture, fishery, livestock industry etc.)
6) Vocational training opportunity
7) Domestic/ Sexual violence or Abuse prevention
8) Child care
9) Maternity
10) Free health clinic
11) Immunization
12) Sanitation
13) HIV/AIDS.

Also we selected e-Service provided public services (functions) and the Functions Questions (FQ) are:

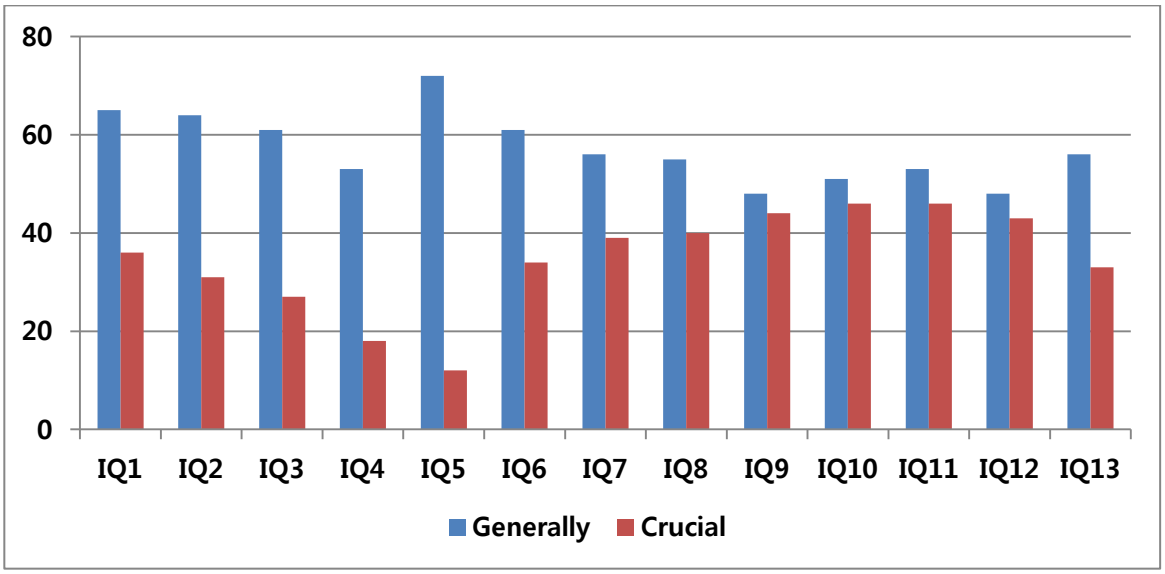
1) Online registration
2) Multiple languages
3) Mobile access options (e.g. Applications)
4) E-News letter
5) Q&A
6) Bulletin boards
7) Ombudsman
8) Downloading of online forms/documents
9) Program sign-up
10) E-learning
11) Audio/Video materials
12) Sight/Hearing accessibility for disabled person.

Upon conducting survey, respondents were asked to check whether the e-Service provided information is generally useful or crucial for their life. Also they were asked to do the same thing for are e-Service provided functions. They survey results on information questions (IQ) are presented by country followed by functions questions (FQ).

We selected thirteen information questions for the survey. From the survey, we found that respondents generally think e-Service provided information related women are important and useful even with some cross-country differences. Figure 4-13 presents results for Brunei Darussalam. In Brunei, most frequently mentioned information service that is generally useful is

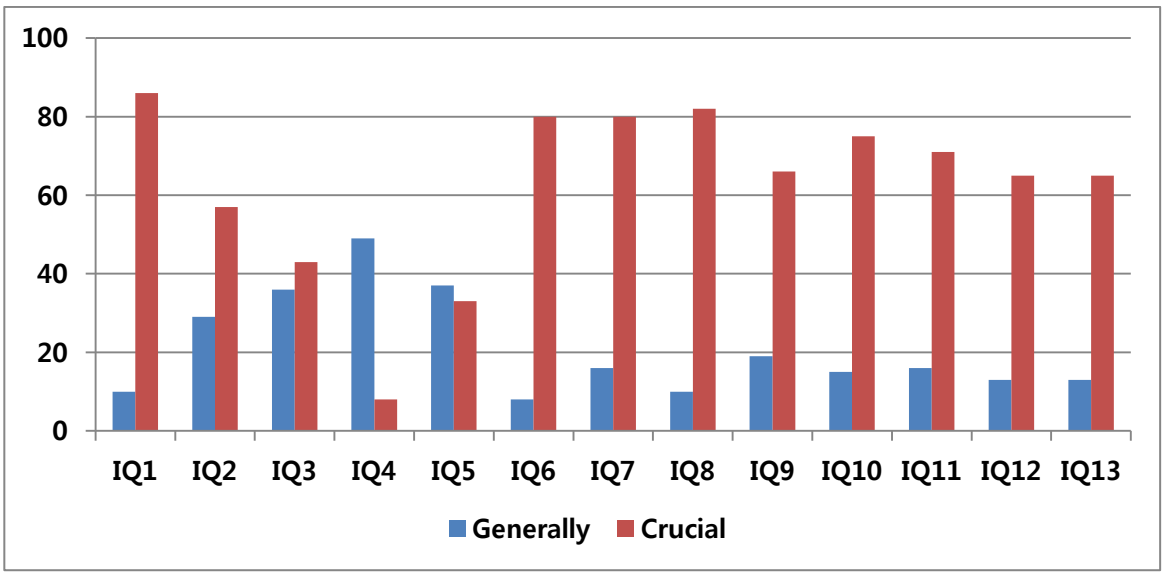
livelihood related information (IQ5) followed by job opportunity (IQ1) and talent pool (IQ2) information. For crucial use, most frequently mentioned information services are free health clinic (IQ10) and sanitation (IQ11) information. Between generally useful and crucial use, information e-Services are generally useful for all cases.

[Figure 4.2-1] Information Questions: Brunei Darussalam



Source: Survey

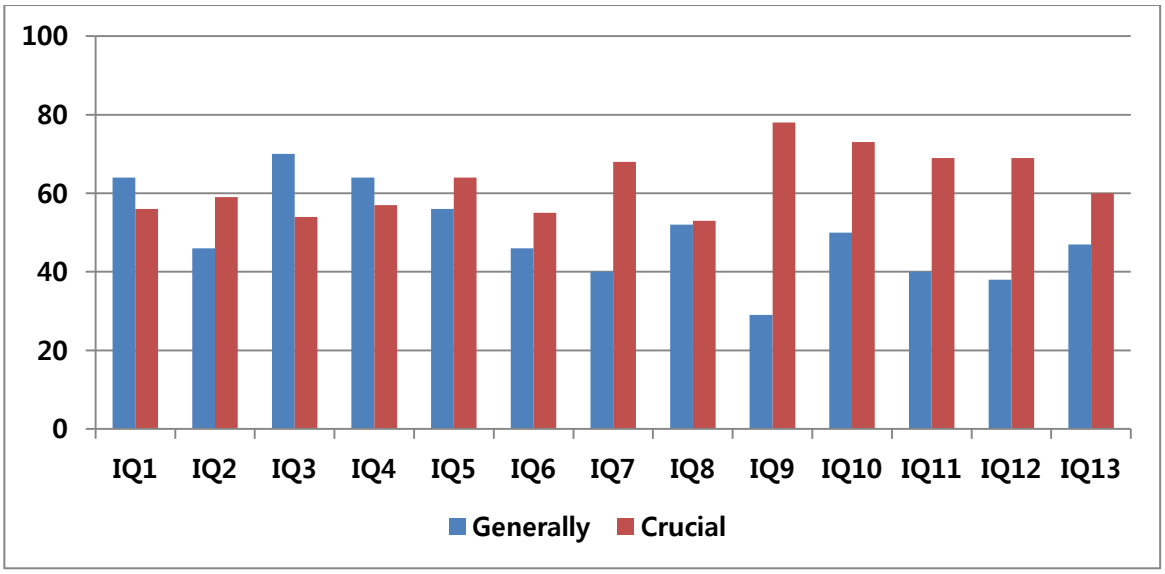
[Figure 4.2-2] Information Questions: Cambodia



Source: Survey

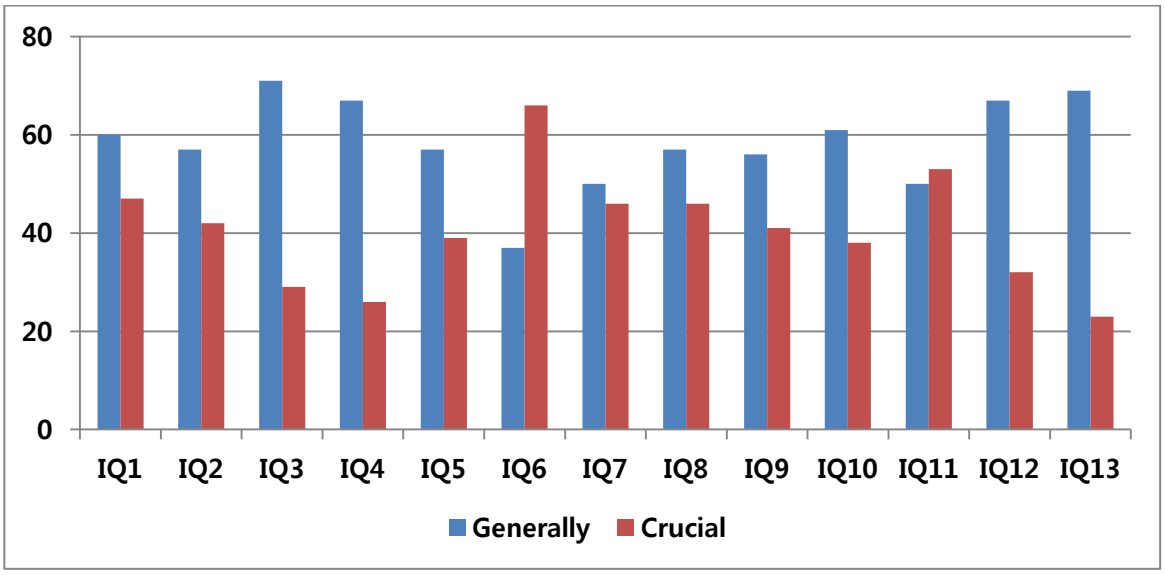
For Cambodia, information e-Services are rather crucial than in generally useful and which is quite different from Brunei. In Cambodia, most generally useful e-Service provided information is bidding opportunity information (IQ4) followed by livelihood related information (IQ5). Most frequently mentioned crucial information is job opportunity (IQ1) and vocational training (IQ6), domestic/sexual violence (IQ7), and child care (IQ8) information are almost equally popular.

[Figure 4.2-3] Information Questions: Indonesia



Source: Survey

[Figure 4.2-4] Information Questions: Lao PDR



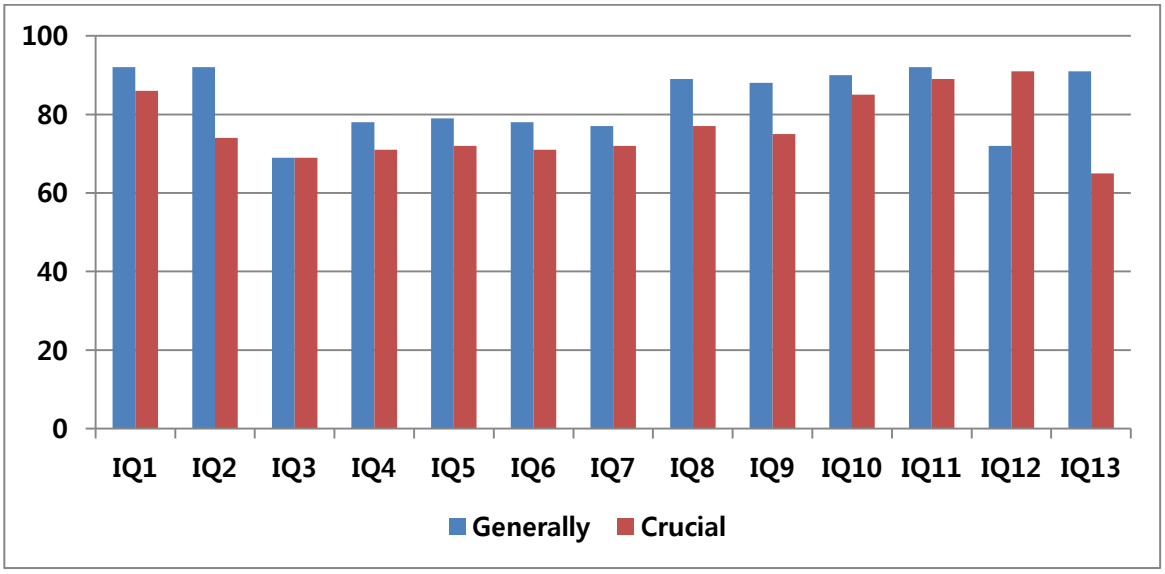
Source: Survey

For Indonesia, most frequently answered generally useful information are micro-finance (IQ3) and job opportunity (IQ1) while maternity (IQ9), free health clinic (IQ10), immunization (IQ11), and sanitation (IQ12) were mentioned most for crucial use. Usefulness of the information is mixed in the sense that about half of the information is generally useful and the other half are in crucial use.

For Lao PDR, micro-finance (IQ3) and HIV/AIDS (IQ13) information are popular among generally useful information. For crucial use, most popular information is on vocational training opportunity (IQ6).

In Malaysia, respondents selected almost all information services equally useful. Particularly, almost all information services considered important quietly evenly. Job opportunity (IQ1), talent pool (IQ2), and immunization (IQ11) information were selected slightly more than others for generally useful information. For crucial use, immunization (IQ11) got most vote followed by job opportunity (IQ1). From the survey results, it seems provision of the immunization information through e-Service framework is one direction to follow.

[Figure 4.2-5] Information Questions: Malaysia

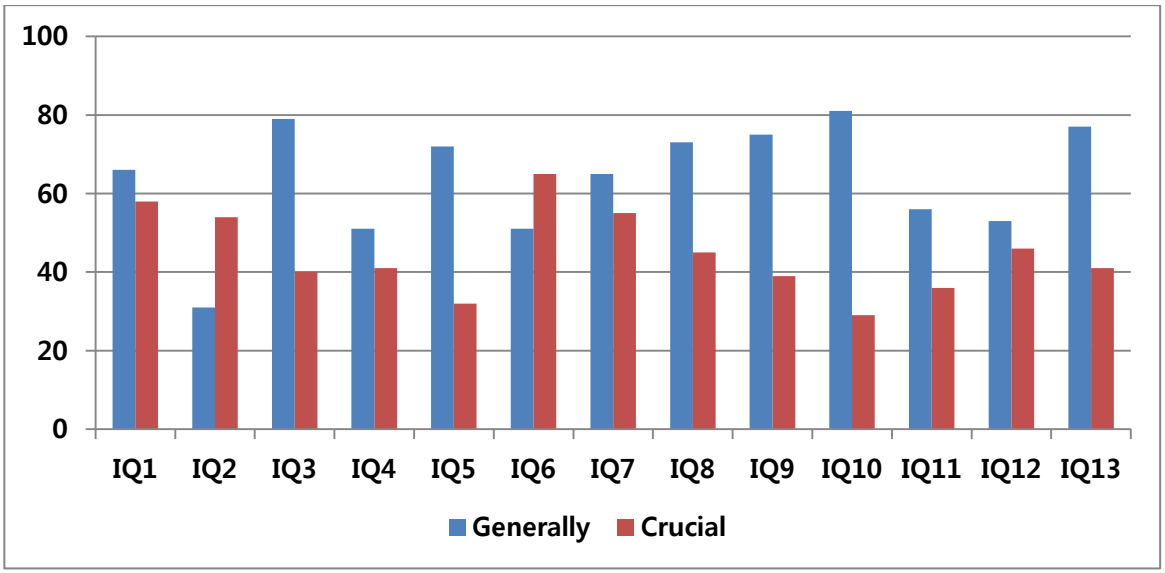


Source: Survey

For Myanmar, respondents thought that information e-Services are more generally useful than crucial use. They selected free health care (IQ10) and micro-finance (IQ3) information as generally the most useful information. For crucial use, respondents answered that job opportunity

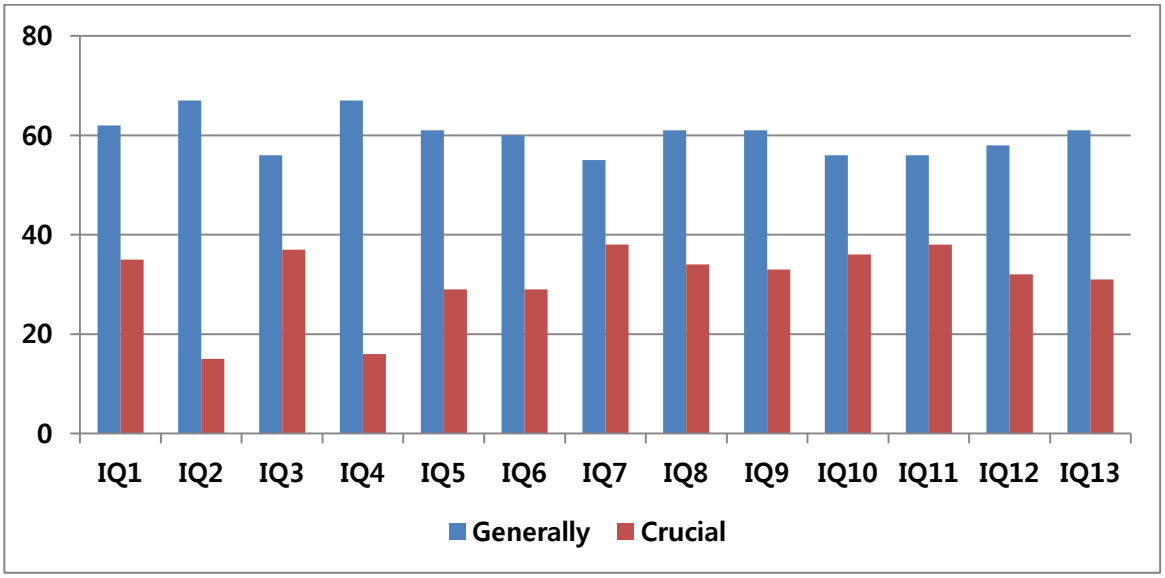
(IQ1), domestic/sexual violence or abuse prevention (IQ7), and talent pool (IQ2) are highly desirable information services.

[Figure 4.2-6] Information Questions: Myanmar



Source: Survey

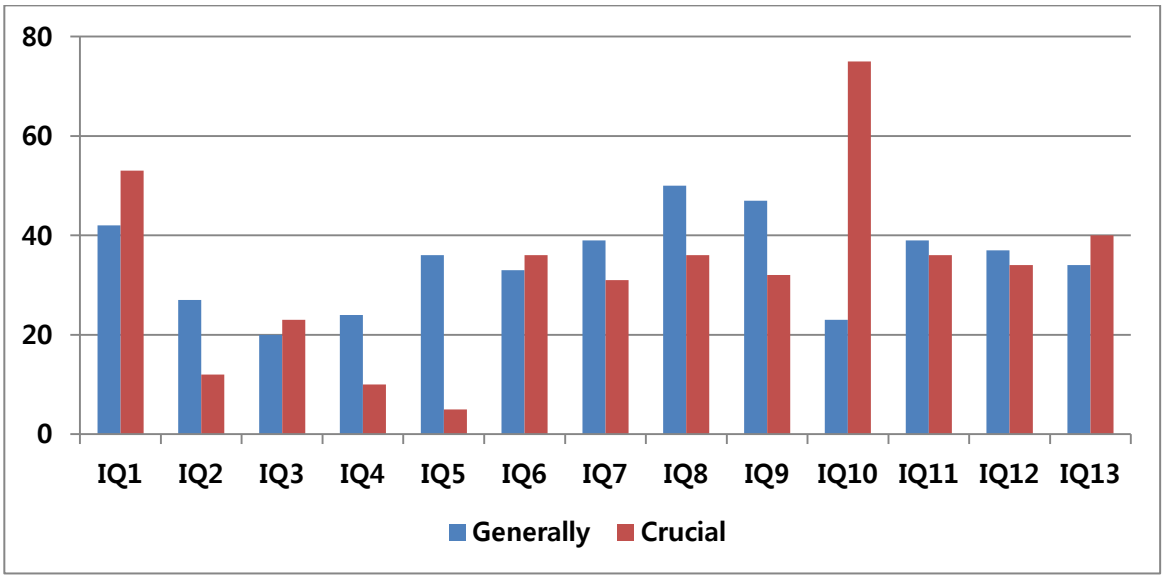
[Figure 4.2-7] Information Questions: Philippines



Source: Survey

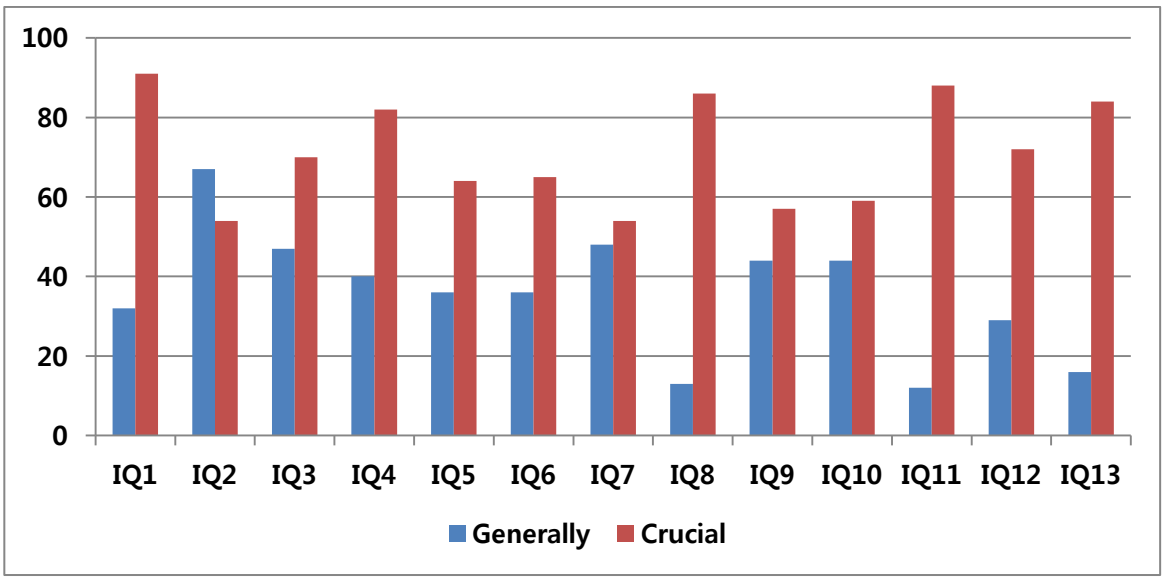
In Philippines, respondents answered talent pool (IQ2) and bidding opportunity (IQ4) information for most generally useful ones followed by job opportunity (IQ1) information. It seems economic activity related e-Services are becoming more important in Philippines. For crucial use, domestic/sexual violence or abuse prevention (IQ7) and immunization (IQ11) information were selected along with micro-finance (IQ3) information.

[Figure 4.2-8] Information Questions: Singapore



Source: Survey

[Figure 4.2-9] Information Questions: Thailand

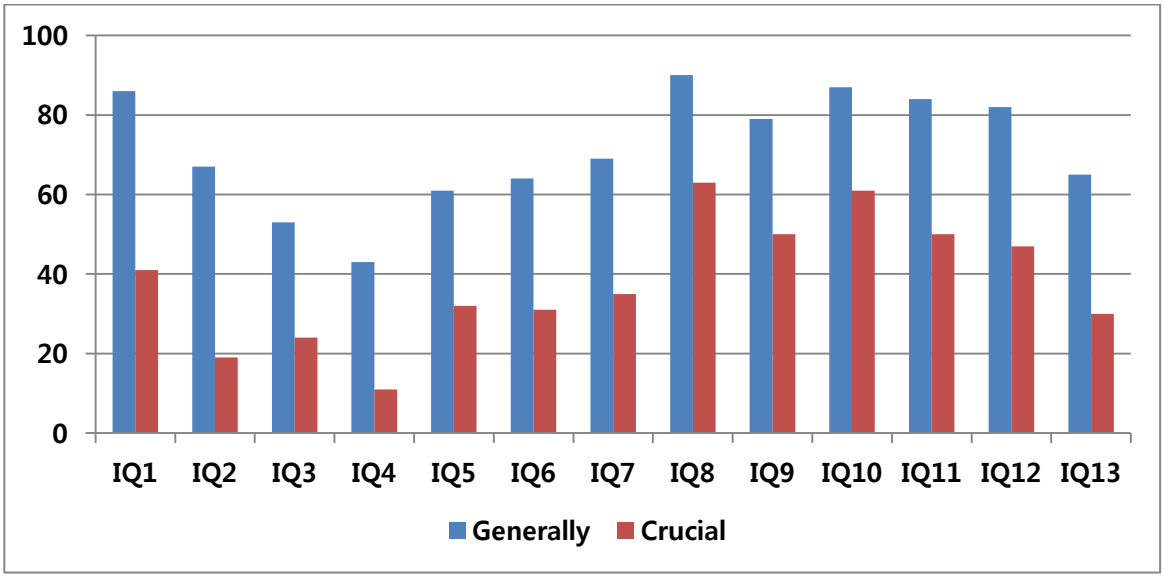


Source: Survey

Singapore respondents answered child care (IQ8) for most generally useful information provided by e-Service. For crucial use, free health care (IQ10) received most cast and job opportunity (IQ1) is the second most important information service. It seems health related information e-Services demand is higher relative to other services.

Thailand respondents answered all information services except for talent pool (IQ2) are more crucial than generally useful. They think talent pool is most generally useful. Among all the crucially useful information, job opportunity (IQ1) was the most crucial one followed by immunization (IQ11) and child care (IQ8).

[Figure 4.2-10] Information Questions: Vietnam

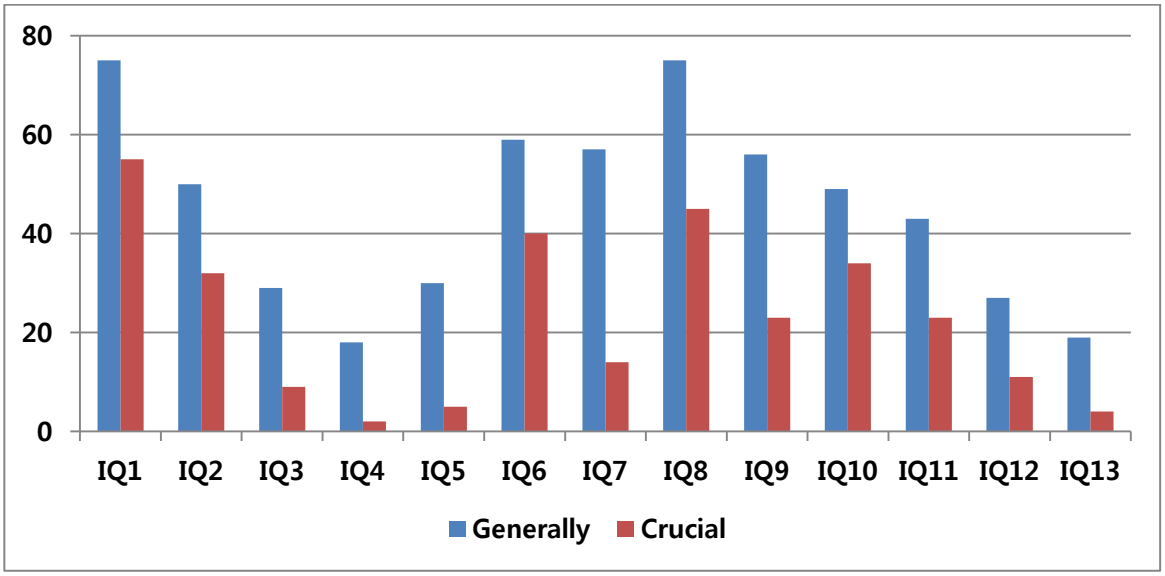


Source: Survey

For Vietnam, child care (IQ8), free health clinic (IQ10), and job opportunity (IQ1) take top places in generally useful information. Also child care (IQ8) and free health clinic (IQ10) were selected for the crucial use information. This result suggests that child and health care related information services are in high demand.

We conducted the same survey for Korea for comparison purpose. The results are shown in the Figure 4-23. In Korea, job opportunity (IQ1) and child care (IQ8) received high marks in generally useful information service and job opportunity (IQ1) was selected for crucial use. Compared to other ASEAN member countries, Koreans emphasize more on job related information when considering e-Services.

[Figure 4.2-11] Information Questions: Korea



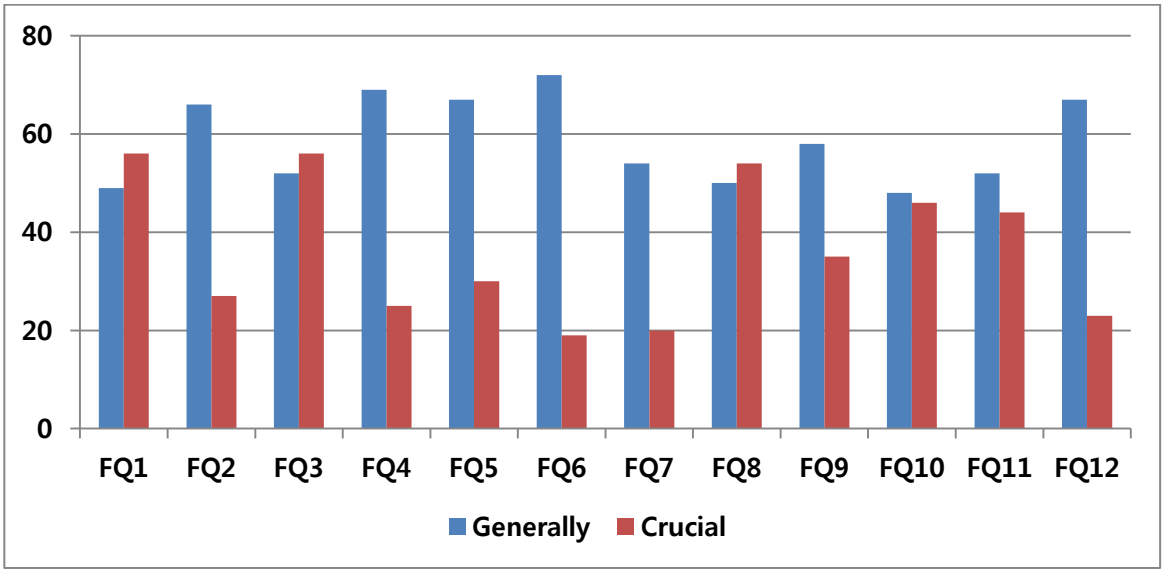
Source: Survey

Along with the provision of information another important part of the e-Service is providing functions. We selected women related functions and asked survey participants whether these functions are generally useful or crucial for their use. This time we asked twelve functions questions.

For Brunei, most of the functions are generally useful. Among all the functions provided through e-Service, bulletin board (FQ6) took the first placed and e-Newsletter (FQ4) was the next one. For crucial use, online registration (FQ1) and mobile access options (FQ3) were two most crucial functions.

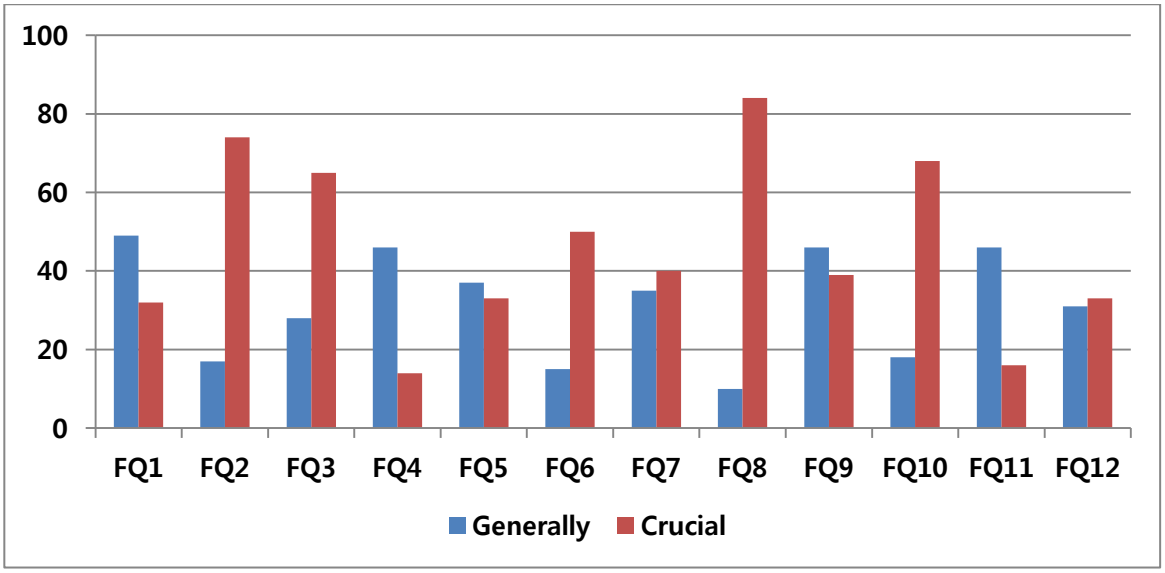
In Cambodia, respondents think online registration (FQ1) is the generally most useful function. After that e-Newsletter (FQ4), program sign-up (FQ9), and e-Learning (FQ10) were other choices. Cambodian respondents take e-Service functions as crucial for their use and many of the functions received crucial for their use choice than generally useful. Downloading online forms/documents (FQ8) was the most crucial use function and service in multiple languages (FQ2) and e-Learning (FQ10) were other crucially useful functions. From their selections, Cambodian respondents seem to prefer to receive more about convenient functions of the e-Services.

[Figure 4.2-12] Functions Questions: Brunei Darussalam



Source: Survey

[Figure 4.2-13] Functions Questions: Cambodia

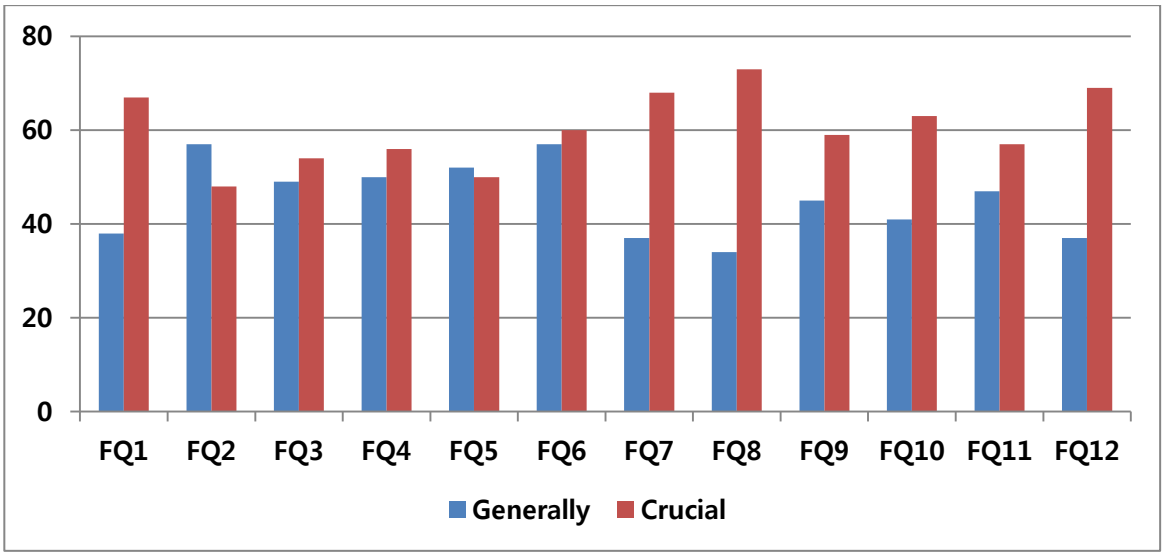


Source: Survey

Indonesian respondents considered all e-Services functions equally important. Their answers for both generally useful and crucial use functions are almost equally selected. For generally useful functions, multiple languages (FQ2) and bulletin boards (FQ6) functions received high marks followed by e-Newsletter (FQ4) function. For crucial use functions, all functions receive attentions but downloading online forms/documents (FQ8) was the top pick and sight/hearing accessibility for disabled person (FQ12), ombudsman (FQ7), and online registration (FQ1)

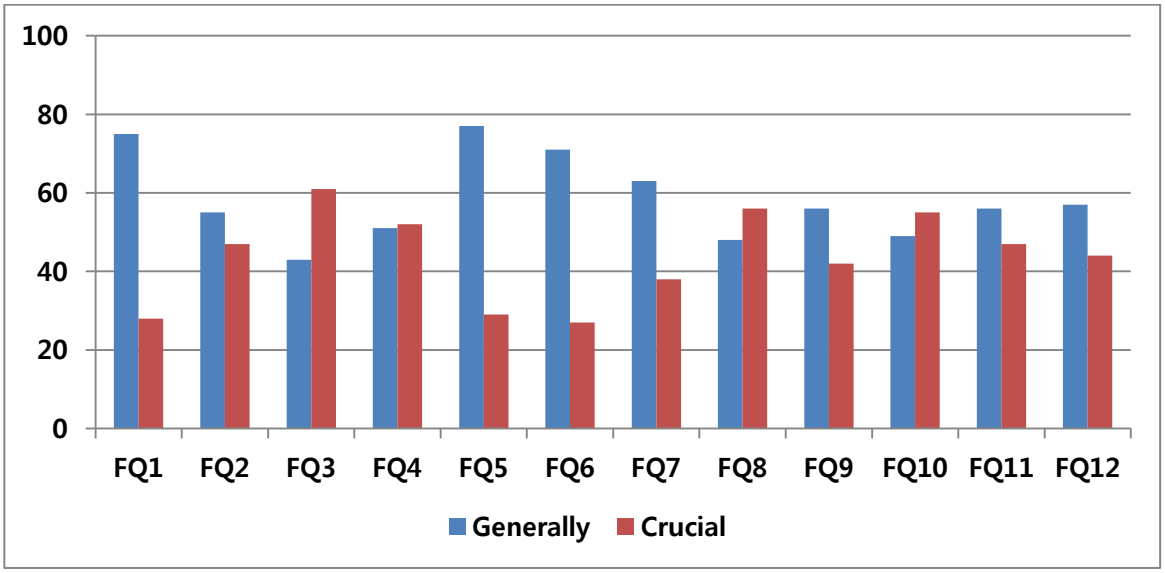
functions were other choices. For Indonesia, respondents take accessibility to the e-Services and communication functions were their top concerns.

[Figure 4.2-14] Functions Questions: Indonesia



Source: Survey

[Figure 4.2-15] Functions Questions: Lao PDR

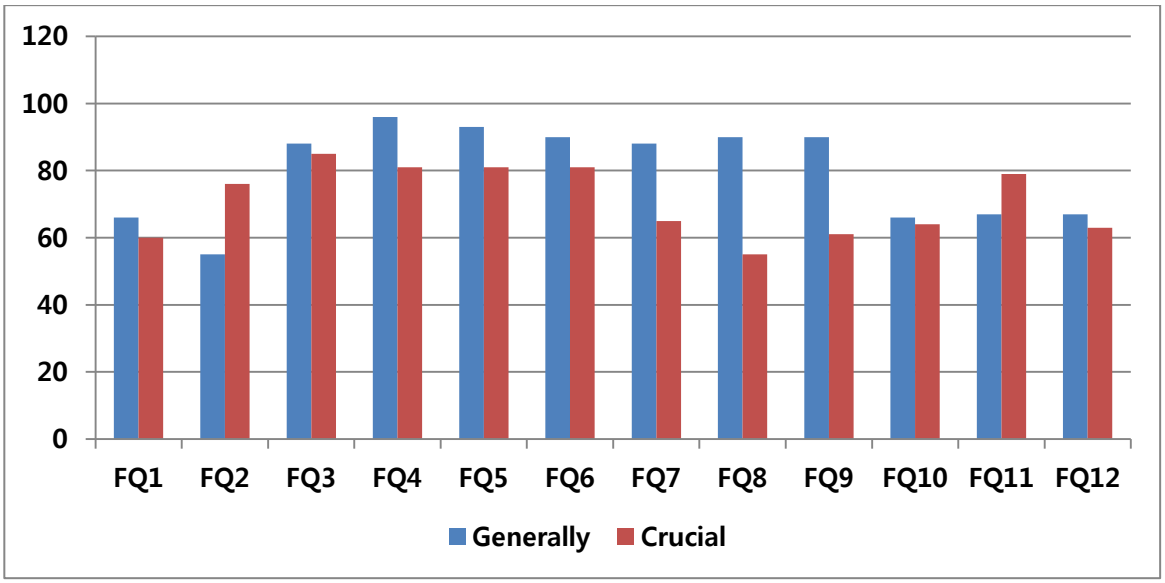


Source: Survey

For Lao PDR, respondents took e-Service functions are generally useful. They selected Q&A (FQ5) function for the most generally useful functions and online registration (FQ1) was the

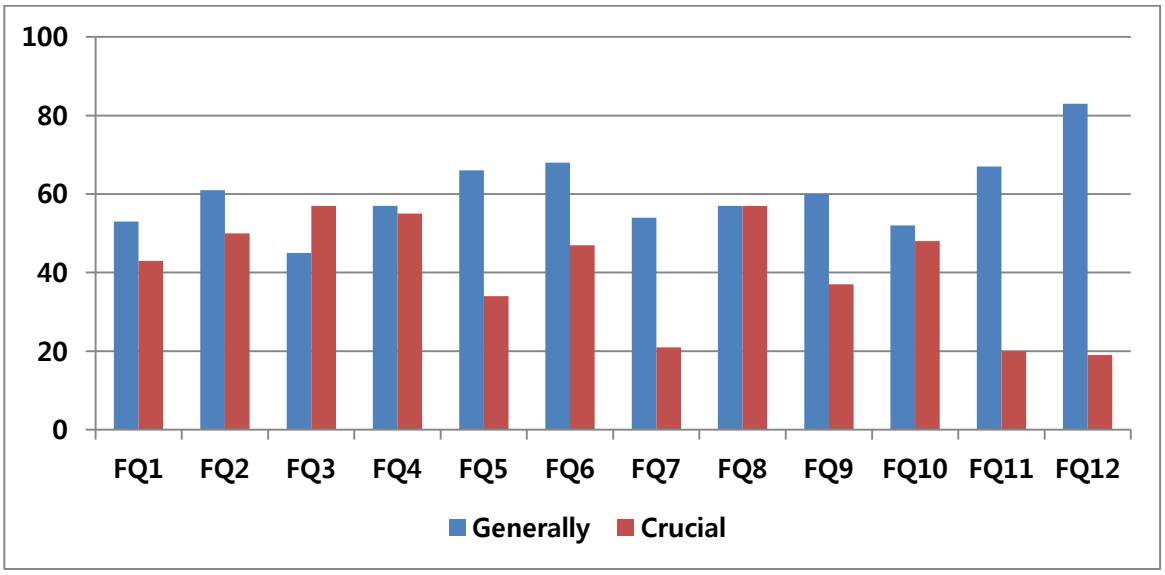
second one. For crucial use function, their choices were mobile access options (FQ3), downloading online forms/documents (FQ8), and e-Learning (FQ10).

[Figure 4.2-16] Functions Questions: Malaysia



Source: Survey

[Figure 4.2-17] Functions Questions: Myanmar

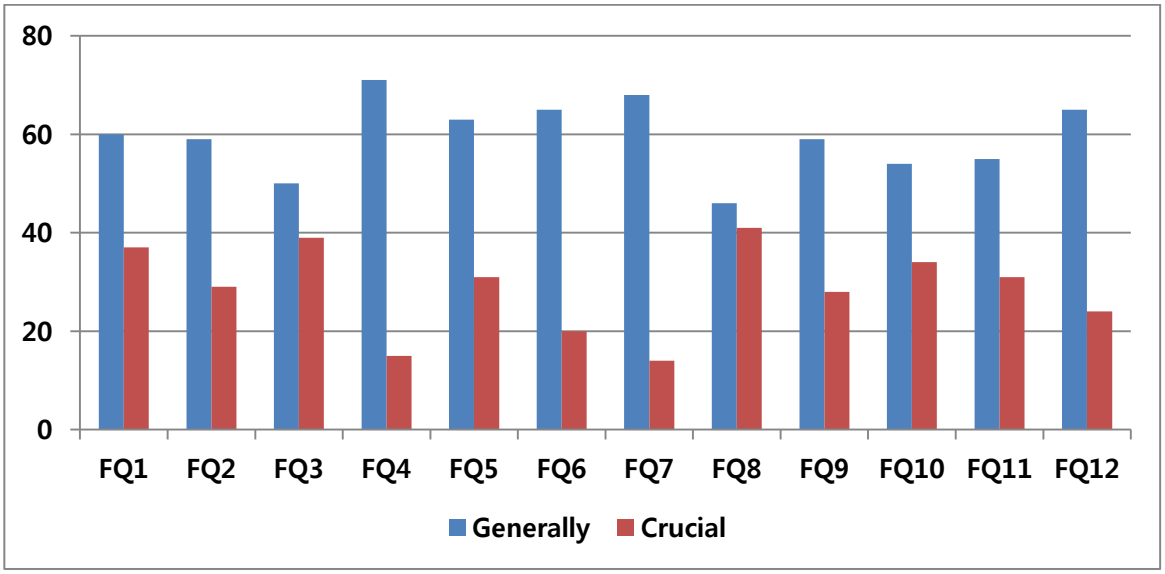


Source: Survey

Malaysian respondents selected answers quite evenly and take all the functions very seriously. For generally useful function, top choice was e-Newsletter (FQ4) and also they selected Q&A (FQ5) very closely. Bulletin board (FQ6), downloading online forms/documents (FQ8), and program sign-up (FQ9) were selected with equal frequency. Their selections for crucial use are slightly different. They selected mobile access options (FQ3) as the most crucial one. After that e-Newsletter (FQ4), Q&A (FQ5), and bulletin board (FQ6) functions were equally selected. From the survey, it seems Malaysian respondents put importance on bidirectional service functions of the e-Services.

Myanmar respondents answered sight/hearing accessibility for disabled person (FQ12) is the most generally useful function of the e-Services. With some gap, they selected bulletin board (FQ6), audio/video materials (FQ11), and Q&A (FQ5). For crucial use functions mobile access options (FQ3) and downloading online forms/documents (FQ8) were equally selected for most crucial ones. Another choice for crucial use was e-Newsletter (FQ4) function. From the survey accessibility and bidirectional communication functions are considered key functions of the e-Services.

[Figure 4.2-18] Functions Questions: Philippines



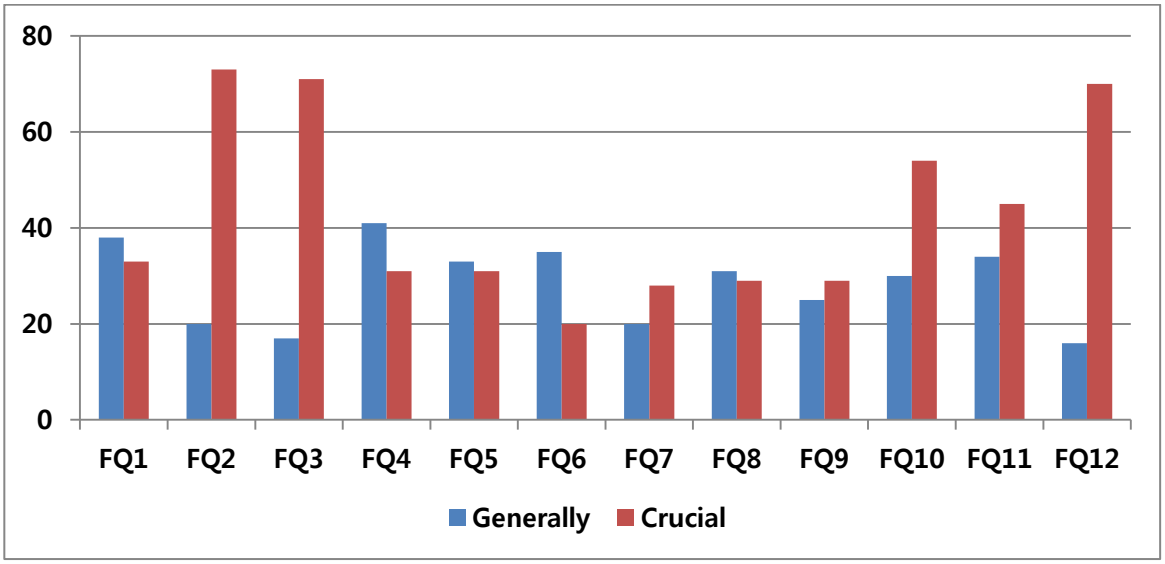
Source: Survey

For Philippines, e-Newsletter (FQ4) was the most generally useful function followed by ombudsman (FQ7), bulletin board (FQ6), and sight/hearing accessibility for disabled person (FQ12). For crucial use, survey respondents selected downloading online forms/documents (FQ8),

mobile access options (FQ3), and online registration (FQ1) functions. The survey suggests that accessibility and participation are two generally useful functions of the e-Services and convenience is crucially useful function.

Singapore takes is one of the top ranked country in the 2014 e-Government Survey. Respondents consider many e-Service functions are crucial. They selected e-Newsletter (FQ4) and online registration (FQ1) for generally useful functions of the e-Services. More interesting thing is the crucial use functions. They answered multiple languages (FQ2), mobile access options (FQ3), and sight/hearing accessibility for disabled person (FQ12) functions are crucially useful functions of the e-Services with very high frequencies. From the survey, respondents think accessibility is the key factor for the e-Services.

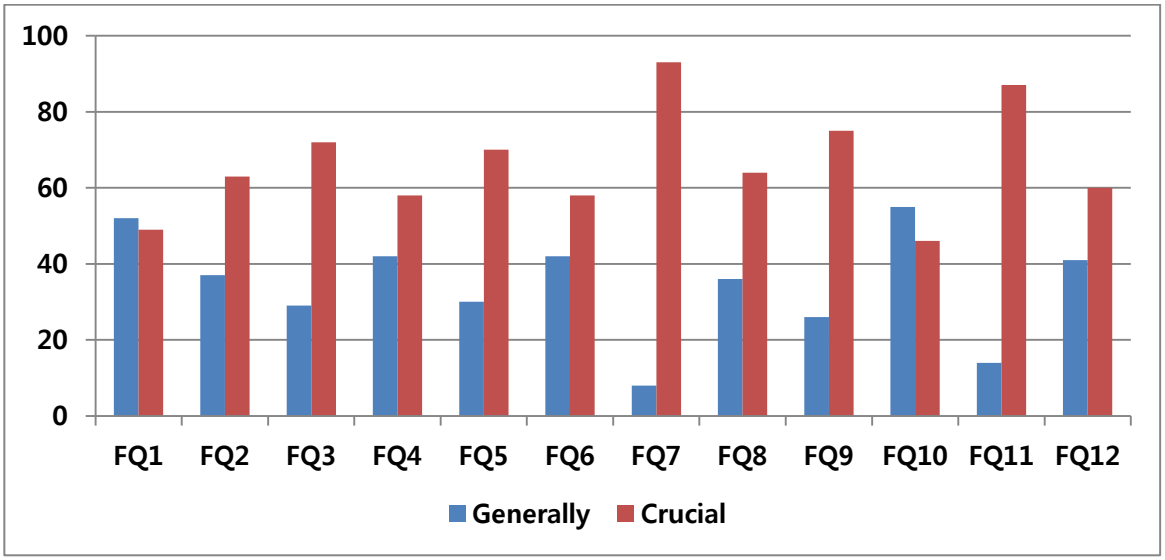
[Figure 4.2-19] Functions Questions: Singapore



Source: Survey

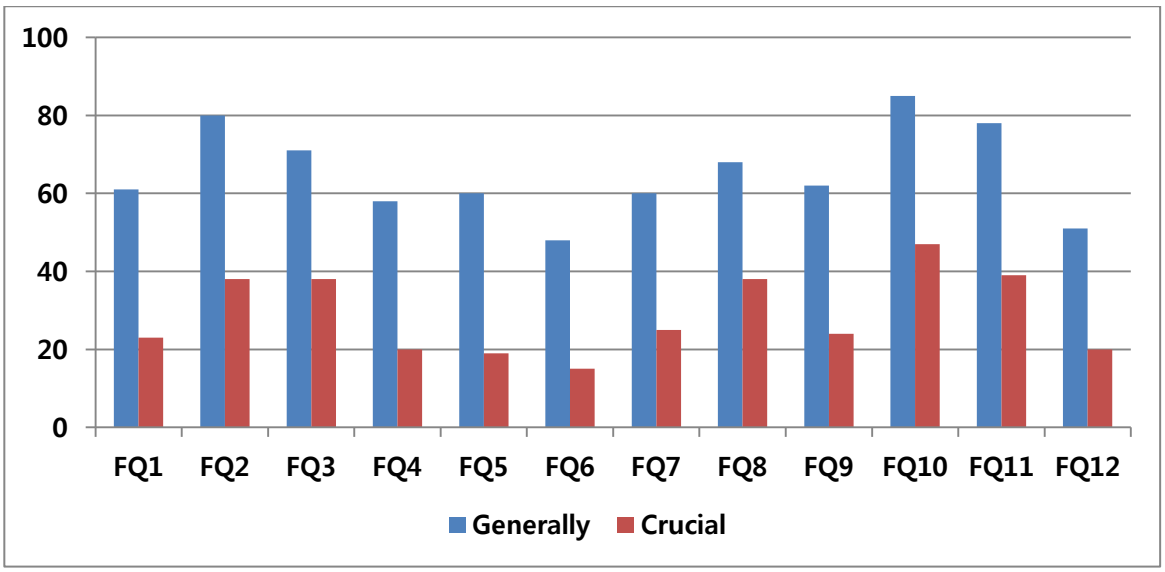
For Thailand, e-learning (FQ10) is the most generally useful function and online registration (FQ1) is the next one. In general, like Cambodia and Indonesia, Thailand takes functions provided through e-Services as crucially useful. They selected ombudsman (FQ7) as the most crucially useful function and audio/video materials (FQ11) was the second one. From the survey, it seems respondents in Thailand consider participation function of the e-Services as the most important one.

[Figure 4.2-20] Functions Questions: Thailand



Source: Survey

[Figure 4.2-21] Functions Questions: Vietnam



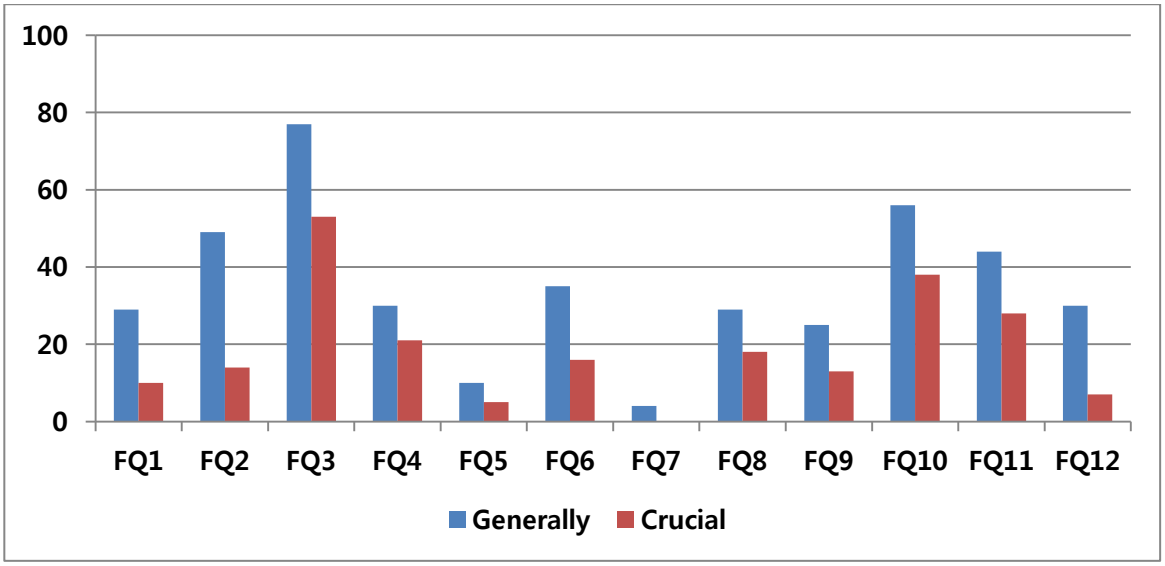
Source: Survey

Vietnam takes e-Service provided functions are generally useful. Respondents selected e-learning (FQ10) for most generally useful function and multiple languages (FQ2) and audio/video materials (FQ11) were other choices. They also selected e-learning (FQ10) is the most crucially useful function of the e-Services. Other choices for crucial use are audio/video materials (FQ11), multiple languages (FQ2), mobile access options (FQ3), and downloading online

forms/documents (FQ8). Survey suggests that education function of the e-Services is the key component for Vietnam and should be reflected when developing future e-Services.

For comparison purpose, we conducted the same survey for Korea and the results are summarized in the Figure 4-34. It can be seen from the figure that like other countries Koreans think e-Service provided functions are quite useful. One interesting thing is that Korean respondents think mobile access option (FQ3) is the most useful function provided by e-Services.

[Figure 4.2-22] Functions Questions: Korea



Source: Survey

5. Concluding Remarks

This research report tries to understand and obtain implications for i) current status of e-Services, ii) country specific (potential) demand for e-Services, and iii) future directions of e-Services. For this we conducted survey on current and future of the e-Services for ASEAN countries and found several interesting points.

By analyzing survey data collected from the ASEAN countries, we found several important implications that we should take into account when developing and providing e-Services. The first one is the importance of the public relations. Many countries were paying more attention on providing/expanding e-Services and developing ICT infrastructures. However, the survey implies that many cases people are not aware of the existing e-Services and websites providing women related information or policies. As a result, even though e-Services are already provided many people did not know whether the services are provided and/or where to start. Of course, expanding e-Service capacity and developing ICT infrastructure is definitely a direction to follow but focusing on public relations and proper advertisement and education is almost equally important and efficient path to follow. Active and appropriate public relations can enhance people's awareness about the existing e-Services. This will improve accessibility to the e-Services without expanding capacity. In this sense, expanding e-Service capacity and public relations-education are two pillars of the e-Services.

Another important implication we obtained from the survey is homogenous perception on e-Service usefulness but heterogenous demand for e-Services among ASEAN countries. We should not neglect cross-country commonalities toward e-Services. Respondents from all countries agree that e-Services are useful and can improve daily life. However, at the same time individual countries are facing idiosyncratic circumstances as well as possessing different ICT environment. In some countries, people use multiple languages while some countries are using one. Not just language, education, infrastructure, size of country and many more things are different.

Following tables summarize survey results on e-Service information and functions and provide useful insight for future demand for e-Services. As can be seen from the tables people from different countries prefer different information and functions provided through e-Services. However, the survey reveals some commonalities in e-Service demand. Highly demanded areas are mobile access and health related information provision. Any future development plan for e-Service should reflect these areas. Another service that showed high demand is one-stop service or no-stop virtual government office services. Even though this is not the ultimate goal of the e-

Services, many people expect convenient government services and this function of the e-Services should receive attention.

Of course, these findings are based on the survey we conducted and the survey itself is not a perfect one and there is a long way to go but still we can get some useful information out of that. The survey provides us simple but important implication for e-Services. Co-existence of homogeneity and heterogeneity in e-Services should be accounted for better provision.

[Table 5-1] Suggested Directions for E-Service Information

Country	Category	E-Service Information
Brunei Darussalam	General	Livelihood related information, Job opportunity, Talent pool
	Crucial	Free health clinic, Sanitation
Cambodia	General	Bidding opportunity, Livelihood related information
	Crucial	Job opportunity, Vocational training, Domestic/sexual violence or abuse prevention, Child care
Indonesia	General	Job opportunity
	Crucial	Maternity, Free health clinic, Immunization, Sanitation
Lao PDR	General	Micro-finance, HIV/AIDS
	Crucial	Vocational training
Malaysia	General	Job opportunity, Talent pool, Immunization
	Crucial	Immunization, Job opportunity
Myanmar	General	Free health care, Micro-finance
	Crucial	Job opportunity, Domestic/sexual violence or abuse prevention, Talent pool
Philippines	General	Talent pool, Bidding opportunity, Job opportunity
	Crucial	Domestic/sexual violence or abuse prevention, Immunization
Singapore	General	Child care
	Crucial	Free health care, Job opportunity
Thailand	General	Talent pool
	Crucial	Job opportunity, Immunization, Child car
Vietnam	General	Child care, Free health clinic, Job opportunity
	Crucial	Child care, Free health clinic

[Table 5-2] Suggested Directions for E-Service Functions

Country	Category	E-Service Functions
Brunei Darussalam	General	Bulletin board, E-News letter
	Crucial	Online registration, Mobile access options
Cambodia	General	Online registration, E-Newsletter, Program sign-up, E-Learning
	Crucial	Downloading online forms/documents, Multiple languages, E-Learning
Indonesia	General	Multiple languages, Bulletin boards, E-News letter
	Crucial	Downloading online forms/documents, Sight/hearing accessibility for disabled person, Ombudsman, Online registration
Lao PDR	General	Q&A, Online registration
	Crucial	Mobile access options, Downloading online forms/documents, E-Learning
Malaysia	General	E-Newsletter, Q&A, Bulletin board, Downloading online forms/documents, Program sign-up
	Crucial	Mobile access options, E-Newsletter, Q&A, Bulletin board
Myanmar	General	Sight/hearing accessibility for disabled person, Bulletin board, Audio/video materials, Q&A
	Crucial	Mobile access options, Downloading online forms/documents, E-News letter
Philippines	General	E-Newsletter, Ombudsman, Bulletin board, Sight/hearing accessibility for disabled person
	Crucial	Downloading online forms/documents, Mobile access options, Online registration
Singapore	General	E-Newsletter, Online registration
	Crucial	Multiple languages, Mobile access options, Sight/hearing accessibility for disabled person
Thailand	General	E-learning, Online registration
	Crucial	Ombudsman, Audio/video materials
Vietnam	General	E-learning, Multiple languages, Audio/video materials
	Crucial	E-learning, Audio/video materials, Multiple languages, Mobile access options, Downloading online forms/documents

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Appendix: Survey Questionnaire

The Asia Pacific Women's Information Network Center (APWINC) at Sookmyung Women's University of Korea has been carrying out the project ' **Development and Delivery of Livelihood-based e-Service for ASEAN Women**' supported by Association of Southeast Asian Nations (ASEAN) and Ministry of Foreign Affairs (MOFA), Korea.

This survey is designed to identify e-Service usage of ASEAN women and their needs to promote their livelihood.

In order to ensure the accuracy of this data, we politely ask you to answer all of the following questions as detailed as possible.

The information gathered by this survey will be used by APWINC for RESEARCH PURPOSES ONLY, and not for any commercial venture. Thank you very much for your participation in this survey.

July 2014

APWINC at Sookmyung Women's University, Korea (http://www.women.or.kr)

Contact Information

For any additional questions or concerns please contact APWINC at:

Email: apwinc@sm.ac.kr / TEL: 82-2-710-9886

0. Screening

0-1 Do you know how to use the Internet?

① Yes ②No (If you select ②, please end this survey)

0-2 Do you use the Internet?

① Yes ②No (If you select ②, please end this survey)

1. Personal Data

1-1 Country: _____

1-2 Province: _____

1-3 Age

① 20- 30Yrs ② 31- 40Yrs ③ 41- 50Yrs ④ Above 51Yrs

1-4 Marital status

① Married ② Single

1-5 If you have children

Number of children: _____ (____ Girls, ____ Boys)

Age of your youngest child: (_____) Years

1-6 Education

① No formal education ② Primary ③ Middle School ④ High School

⑤ Bachelor's Degree ⑥ Master's Degree ⑦ Others: _____

1-7 Occupation

① Housewife (Unemployed) ② Student ③ Employed ④ Self employed

⑤ Others: _____

1-8 Monthly Household Income in your currency _____

(Approximately)

(*for the researcher: after receive the paper from the respondents, please convert the answer into **USD**)

2. Familiarity with the Internet

2-1 Do you have an easy access to the Internet?

① Yes ② No

2-2 Where do you most frequently access the Internet? (Please limit your response to TWO)

① Home ② Work ③ Internet/Cyber café ④ Public facilities (Telecenter, Library etc.)
⑤ School ⑥ Others: _____

2-3 How often do you use the Internet?

① Rarely ② Once a month ③ 2-3 times a week ④ Daily ⑤ Several times a day

2-4 What is your main purpose of the Internet usage? (Please limit your response to TWO)

① Searching Information ② Online Communication (i.e. email, chat)
③ Purchasing or trading of goods and services ④ Entertainment (i.e. music, video)
⑤ Others (Please specify: _____)

2-5 What types of websites you visit the most? (Please limit your response to THREE)

① Government ② Personal (e.g. blog, email, user-generated site) ③ School
④ Search Engine ⑤ Social Networking (e.g. Facebook etc.) ⑥ Online Store
⑦ News ⑧ Others: _____

3. Perception and Usage Status of e-Service

(*e-Service refers to the online public service division. E.g. a website provided by a ministry or its affiliated organizations *for the researcher: Please give specific e-Service examples in your countries for better understanding of respondents)

3-1 Are you aware of any government websites providing women related information or programs in your country?

① Yes ② No ③ Others: _____

3-1-1 If you choose ① Yes, please specify the website name or hosting government department.

Website Name (or address): _____
Department Name: _____

3-2 Have you ever visited the website you mentioned in Question 3-1?

① Yes ② No ③ Yes, but can't remember.

3-2-1 If you choose ① Yes, please rate your level of satisfaction with the website.

① Strongly dissatisfied ② Somewhat dissatisfied ③ Neither satisfied nor dissatisfied

④ Somewhat satisfied ⑤ Strongly satisfied

3-2-1-1 If you were dissatisfied (select ①, ②), why?

_____

3-2-1-2 If you were satisfied (select ④, ⑤), why?

_____

3-3 Do you agree with the idea that the development of e-Service in your daily life can make your life better?

① Strongly agree ② Somewhat agree ③ Neither agree nor disagree

④ Somewhat disagree ⑤ Strongly disagree

3-4 Are you aware of any government policy to support women's e-Service use in your country?

① Yes ② No ③ Others:_____

4. Needs of e-Service

If a government provides new e-Service to women with various information types and functions, what would be your general or crucial needs? Please check [√] the box that is most applicable to you.

Categories	Instruction	
Information	Check [√] if you think this information will be **generally useful.**	Check [√] if you think this information will be **crucial for your use**.
Job opportunity		
Talent pool		

Micro-finance		
Bidding opportunity		
Livelihood related information (agriculture, fishery, livestock industry etc.)		
Vocational training opportunity		
Domestic/ Sexual violence or Abuse prevention		
Child care		
Maternity		
Free health clinic		
Immunization		
Sanitation		
HIV/AIDS		
Functions	Check [√] if you think this function will be **generally useful.**	Check [√] if you think this function will be **crucial for your use**.
Online registration		
Multiple languages		
Mobile access options (e.g. Applications)		
e-News letter		
Q&A		
Bulletin boards		
Ombudsman		

Downloading of online forms/documents		
Program sign-up		
E-learning		
Audio/Video materials		
Sight/Hearing accessibility for disabled person		

If you have any comments or suggestions for promoting your livelihood through e-Services, please write them here.

_____

_____

_____

_____

We greatly appreciate your feedback.
Thank you very much for your cooperation!

Preliminary Research on
Development and Delivery of Livelihood-based e-Service for ASEAN Women

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