

International Seminar on Information and Communication Technology Statistics

Organized by:

UNSD, UNCTAD, ITU, KNSO

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Seoul, Republic of Korea

Measuring household ICT access and individual use

Sureerat Santipaporn

Chief, ICT Statistics Survey

National Statistical Office,

Ministry of Information and Communication Technology

Thailand

Thailand's Information and Communication Technology Policy

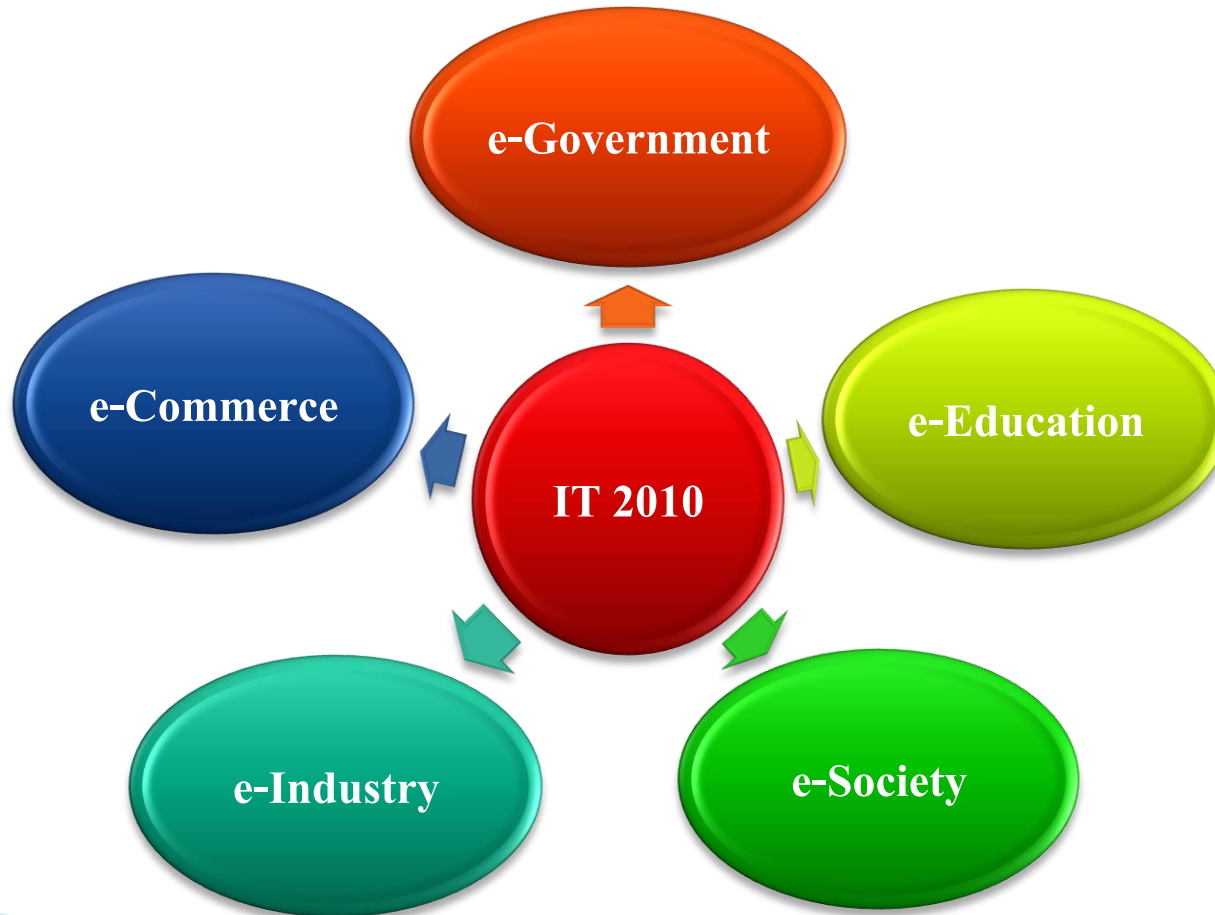
1st ICT Master Plan
(2002 – 2006)

2nd ICT Master Plan
(2009 – 2013)

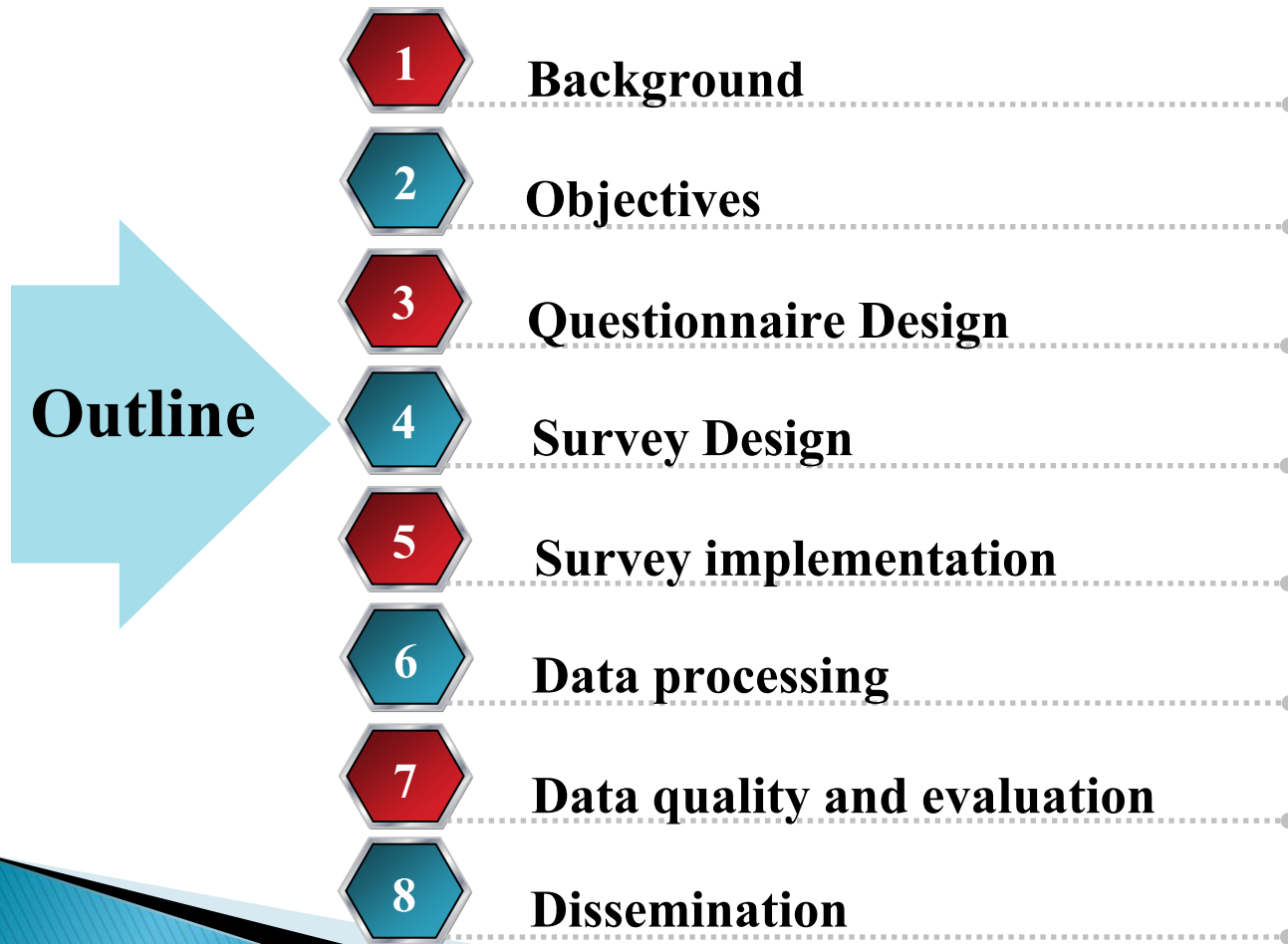
IT 2010 (2001 – 2010)

IT 2020 (2011 – 2020)

Thailand's ICT Policy for 2001 - 2010



Measuring Household ICT Access and Individual Use (ICT household Survey in Thailand)





Background



Background

ICT Household Survey has been undertaken

- ◆ The first time in 2001.
- ◆ During 2003 to 2004, the questionnaire was attached with the Labor Force Survey (LFS).
- ◆ Since 2005 the questionnaire has been separated from the LFS in order to add more questions to serve demand of users.
- ◆ This survey is conducted in the 1 st quarter (January – March) and has the same sample as the LFS.



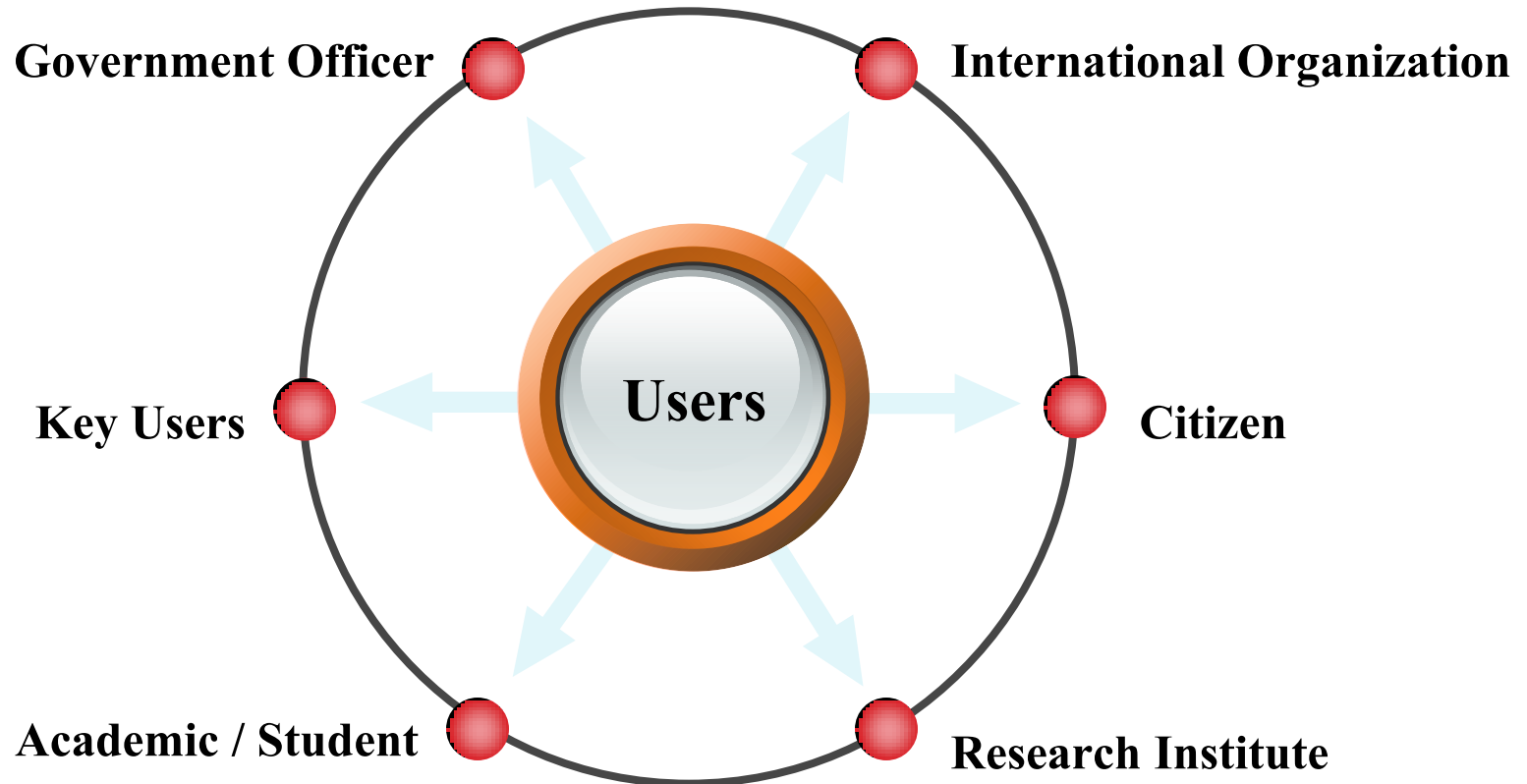
Objectives



Objectives

The objectives of this survey are to obtain the data on household ICT access and individual use for monitoring, evaluating and reformulating policies.

Data Users





Questionnaire Design



Questionnaire Design

Topic	Population
Section 1 : Individual characteristics	
Relationship to head of household	All individuals
Sex	All individuals
Age	All individuals
Marital Status	All individuals
Section 2 : Education Attainment	
Level of education	Individual aged 6 years ⁺

Questionnaire Design (continued)

Section 3 : Activity Status		
Employment status	(last 12 months)	Individual aged 15 years ⁺
Occupation	(last 12 months)	Individual aged 15 years ⁺
Industry	(last 12 months)	Individual aged 15 years ⁺
Work status	(last 12 months)	Individual aged 15 years ⁺
Section 4 : Computer Usage		
Computer use	(last 12 months)	Individual aged 6 years ⁺
Type of computer use	(last 12 months)	Individual aged 6 years ⁺
Location of computer use	(last 12 months)	Individual aged 6 years ⁺
Computer activities undertaken	(last 12 months)	Individual aged 6 years ⁺

Questionnaire Design (continued)

Frequently of computer use	(last 12 months)	Individual aged 6 years ⁺
Number of hours of using computer	(last 12 months)	Individual aged 6 years ⁺
Section 5 : The Internet Usage		
Internet use	(last 12 months)	Individual aged 6 years ⁺
Location of internet use	(last 12 months)	Individual aged 6 years ⁺
Device of connect to internet	(last 12 months)	Individual aged 6 years ⁺
Time of using internet	(last 12 months)	Individual aged 6 years ⁺
Frequently of internet use	(last 12 months)	Individual aged 6 years ⁺
Number of hours of using internet	(last 12 months)	Individual aged 6 years ⁺
Internet activities undertaken	(last 12 months)	Individual aged 6 years ⁺

Questionnaire Design (continued)

Purchasing goods or services via internet (last 12 months)	Individual aged 6 years ⁺
Type of goods or services purchased via internet (last 12 months)	Individual aged 6 years ⁺
Monetary value for purchasing goods or services via internet (last 12 months)	Individual aged 6 years ⁺
Reasons for not purchasing via internet (last 12 months)	Individual aged 6 years ⁺
Section 6 : Mobile phone ownership	
Number of mobile phones	Individual aged 6 years ⁺
Average for mobile phone per month	Individual aged 6 years ⁺
Type of services via mobile phone	Individual aged 6 years ⁺

Questionnaire Design (continued)

Section 7 : Household access to ICT	
Number of fixed line telephone	Head of household or representative
Number of facsimile machine	Head of household or representative
Reasons for not having computer/PDA	Head of household or representative
Household bought equipment (last 12 months)	Head of household or representative
Volume of expenditure for computer equipment (last 12 months)	Head of household or representative
Household access to the Internet	Head of household or representative
Type of Internet access services	Head of household or representative
Household needed government regulate ICT	Head of household or representative



Survey Design



➤ **Scope and coverage for households and individuals**

The scope of the households is the private households and special households

The scope of the individuals is all individuals reside in the private and special households. For individuals aged 6 years and over were asked the ICT questions

➤ **Target population and survey frame**

Target population is population projection and survey frame is population census

(Updated with Household Basic Information Survey in every 2 years)

➤ **Statistical unit**

There are two statistical units households and individuals

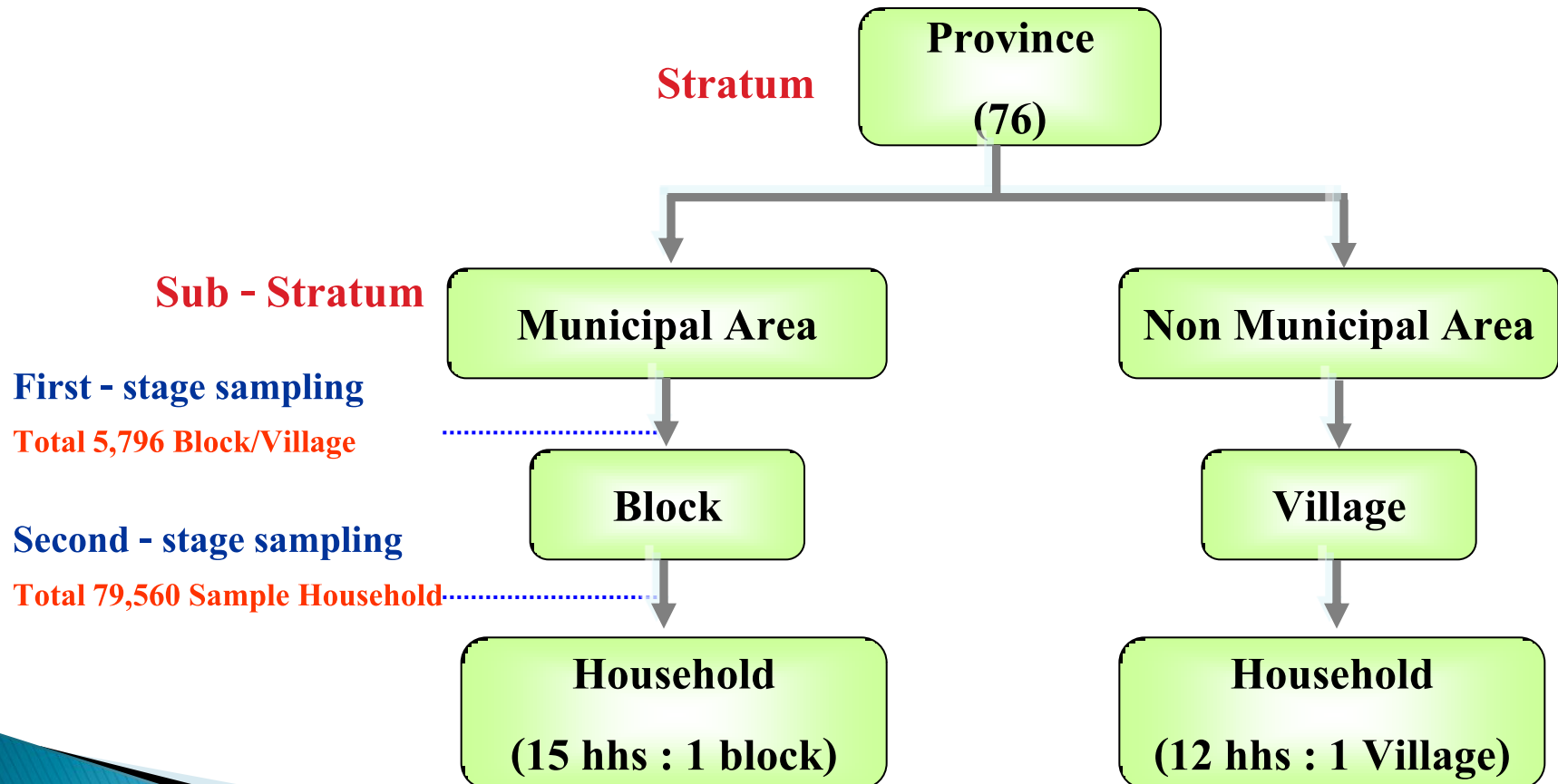
➤ **Sample design and selection**

Sample design is Stratified two - stage sampling

➤ **Data collection techniques**

Personal face-to-face interviews

Survey Methodology : Stratified two - stage sampling





Survey implementation



Survey implementation

- **Staff with diverse skills and expertise required in :**
 - **survey management**
 - **computer system development, maintenance**
 - **interviewing, supervision, training**
 - **data entry data editing**
 - **data manipulation**
- **Some resources may be centralized e.g. data entry, data processing.**
- **Training is an inclusive activity and should use the ideas of experienced staff.**



Data processing



Data processing

- **Data capture (Intelligence Character Recognition)**
- **Data editing (Range check, Check against reference data, Consistency checks)**
- **Imputation for missing data**
- **Weighting of data**
- **Tabulation data**
- **Calculate ICT household indicators**



Data quality and evaluation



Data quality and evaluation

- **Sampling error**
- **Non-sampling error**



Dissemination



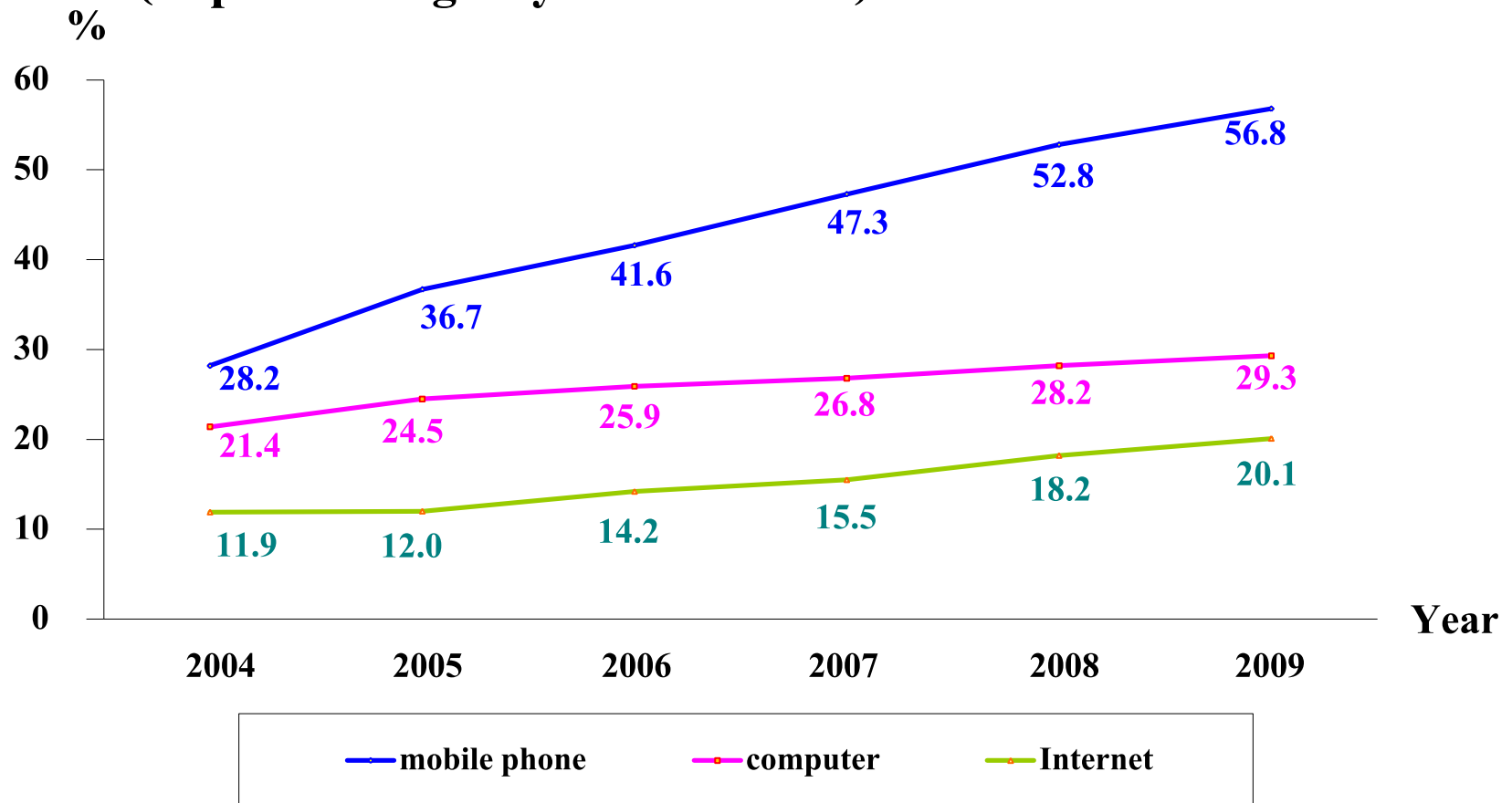
Dissemination

- **Hardcopy publication (summary and final report)**
- **Electronic publication (pdf files of hardcopy publications on website of NSO ; www.nso.go.th)**
- **CD - ROMS**

Results of ICT Household Survey

Figure Penetration and usage on ICT Devices; 2004 – 2009

(Population age 6 years and over)



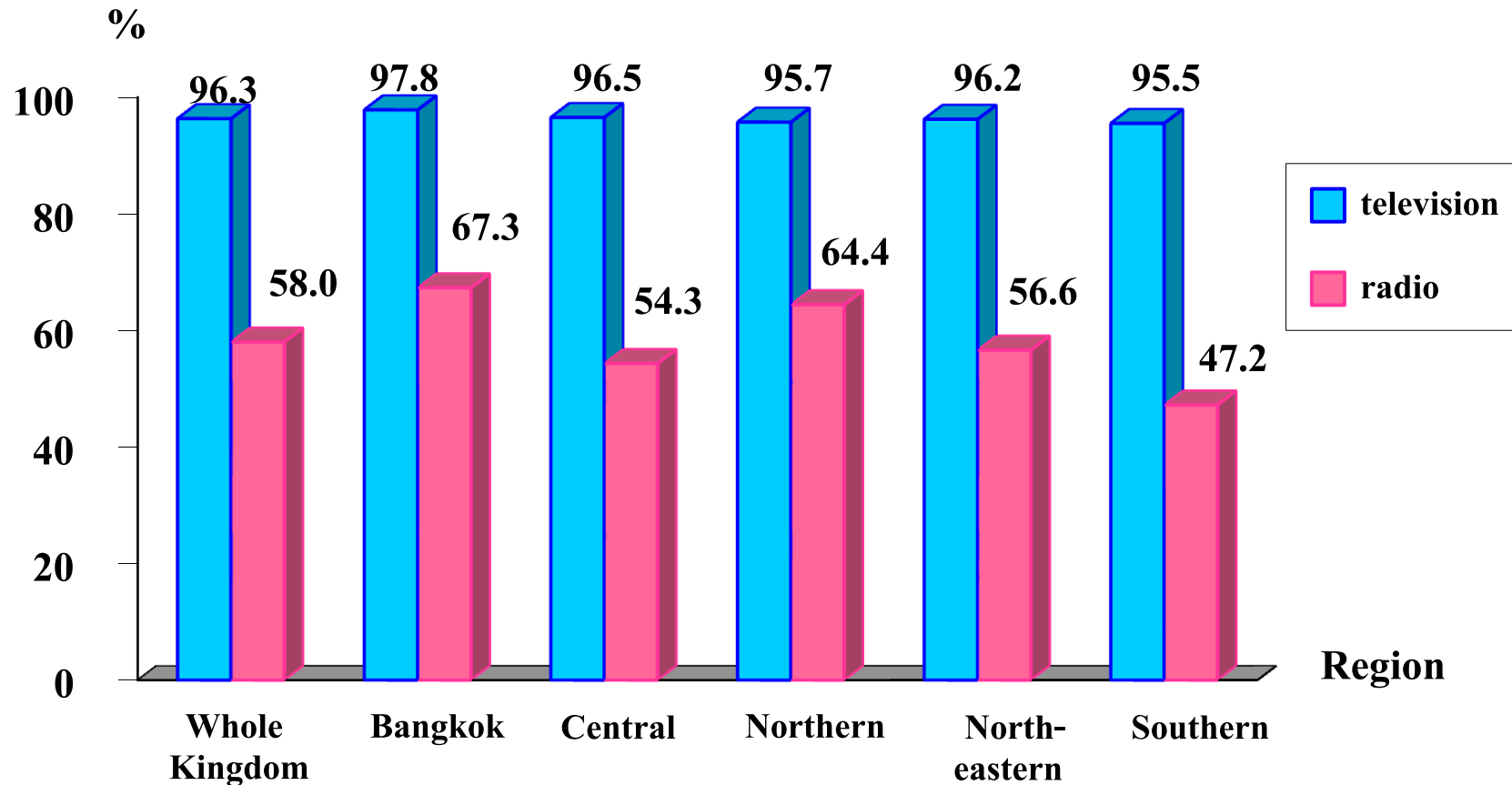
Source: ICT Household Survey, National Statistical Office.

Table Proportion of households with internet access; 2004 - 2009

Using ICT	2004	2005	2006	2007	2008	2009
Proportion of households with internet access	5.7	6.2	7.2	7.6	8.6	9.5
Proportion of households with access to the internet by type of access						
Narrowband	-	-	26.3	21.7	22.8	24.0
Fixed broadband	-	-	52.8	58.0	48.7	55.8
Mobile broadband	-	-	-	-	4.6	7.7

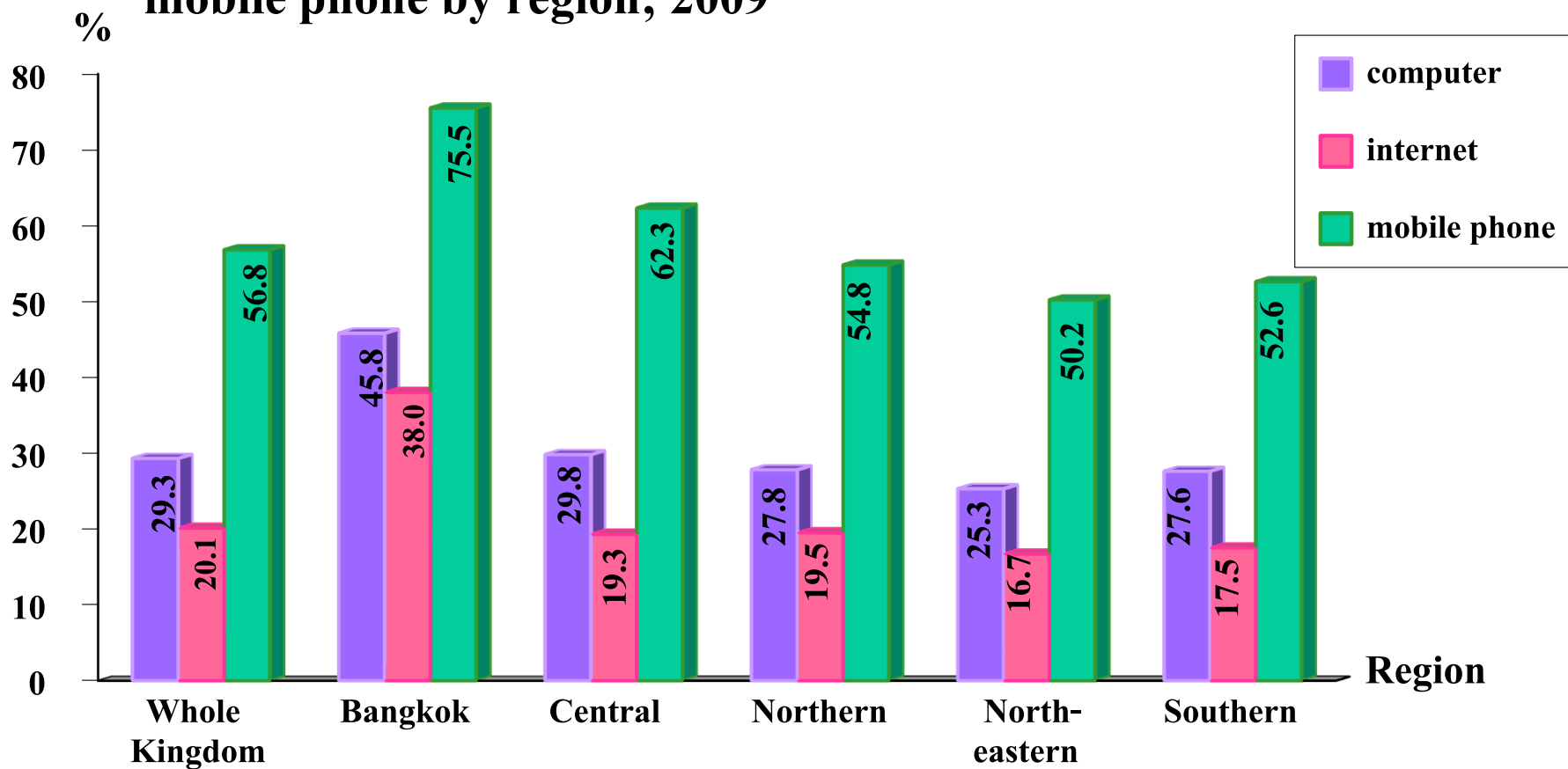
Source: ICT Household Survey, National Statistical Office.

Figure Proportion of households with television, radio; 2009



Source: ICT Household Survey, National Statistical Office.

Figure Proportion of individuals who used computer, internet and mobile phone by region; 2009



Source: ICT Household Survey, National Statistical Office.

**Table Proportion of population aged 6 years and over
who used internet by area, sex; 2004 - 2009**

Area, Sex	2004	2005	2006	2007	2008	2009
Area	11.9	12.0	14.2	15.5	18.2	20.1
Urban	21.4	21.2	23.4	24.8	29.0	32.7
Rural	7.2	8.0	10.2	11.4	13.4	14.5
Sex	11.9	12.0	14.2	15.5	18.2	20.1
Male	11.3	11.8	13.9	15.2	17.9	19.8
Female	12.4	12.2	14.6	15.9	18.5	20.4

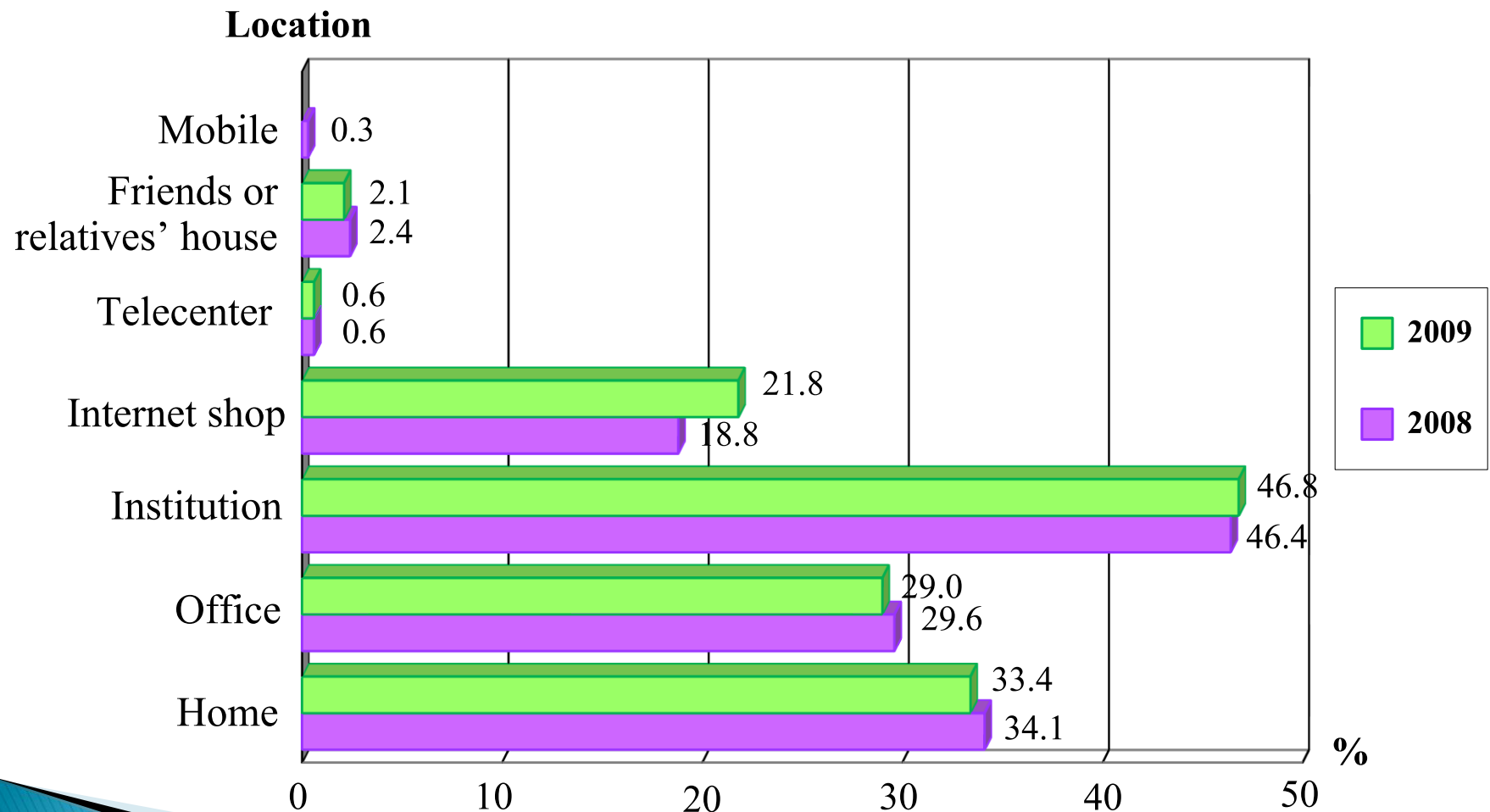
Source: ICT Household Survey, National Statistical Office.

Table Proportion of population aged 6 years and over who used internet by age group; 2004 - 2009

Age group	2004	2005	2006	2007	2008	2009
Total	11.9	12.0	14.2	15.5	18.2	20.1
6 - 14	7.2	11.8	15.5	19.3	23.6	29.0
15 - 24	32.1	31.0	36.5	39.7	44.6	47.3
25 - 34	12.2	12.4	15.2	15.9	19.4	21.5
35 - 49	7.4	7.1	8.0	8.4	10.3	11.9
50 year & over	1.9	2.0	2.5	2.9	3.4	4.0

Source: ICT Household Survey, National Statistical Office.

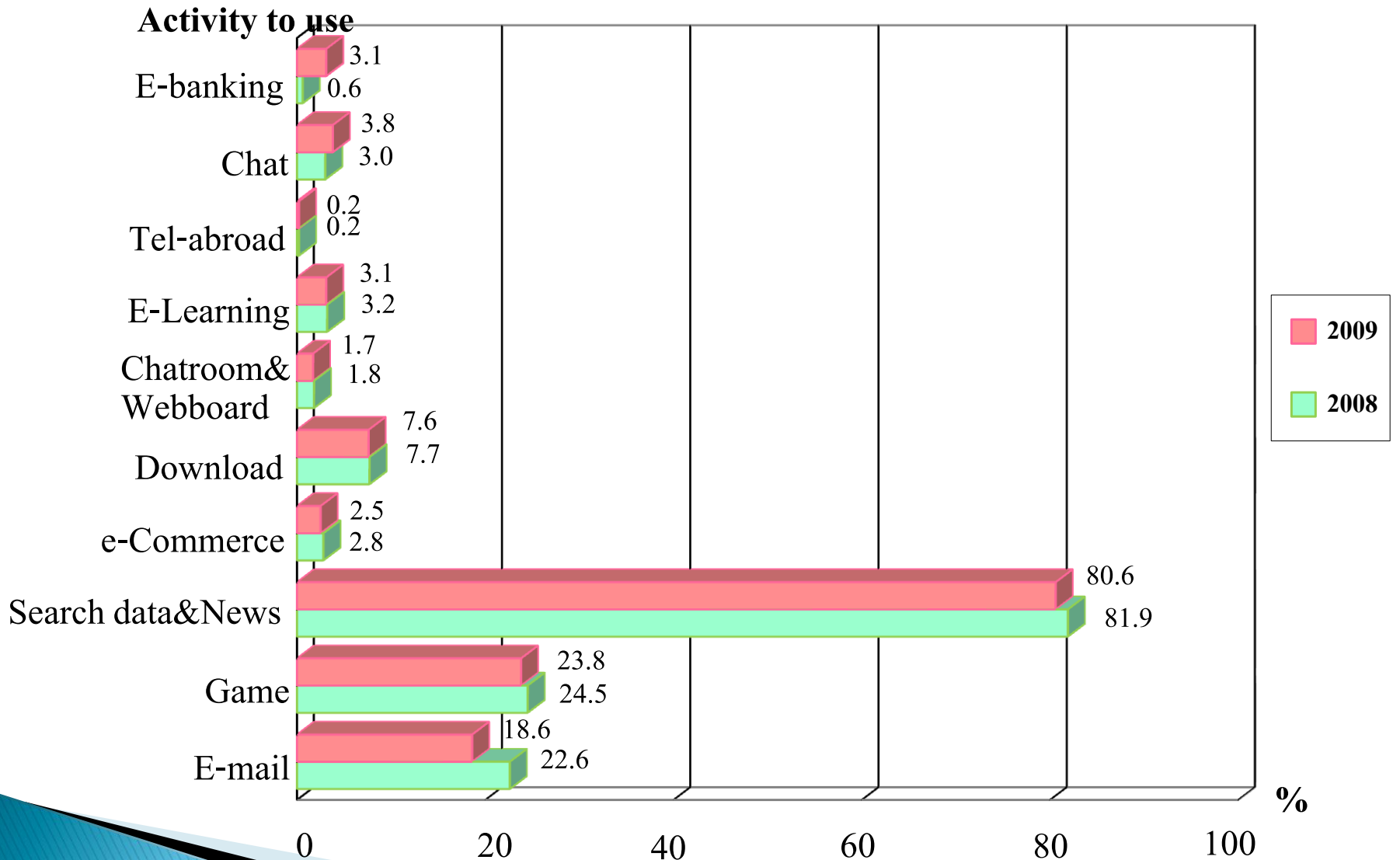
Figure Proportion of population aged 6 years and over using internet by locations; 2008 - 2009



Source: ICT Household Survey, National Statistical Office.

Note: Answer only up to two choices

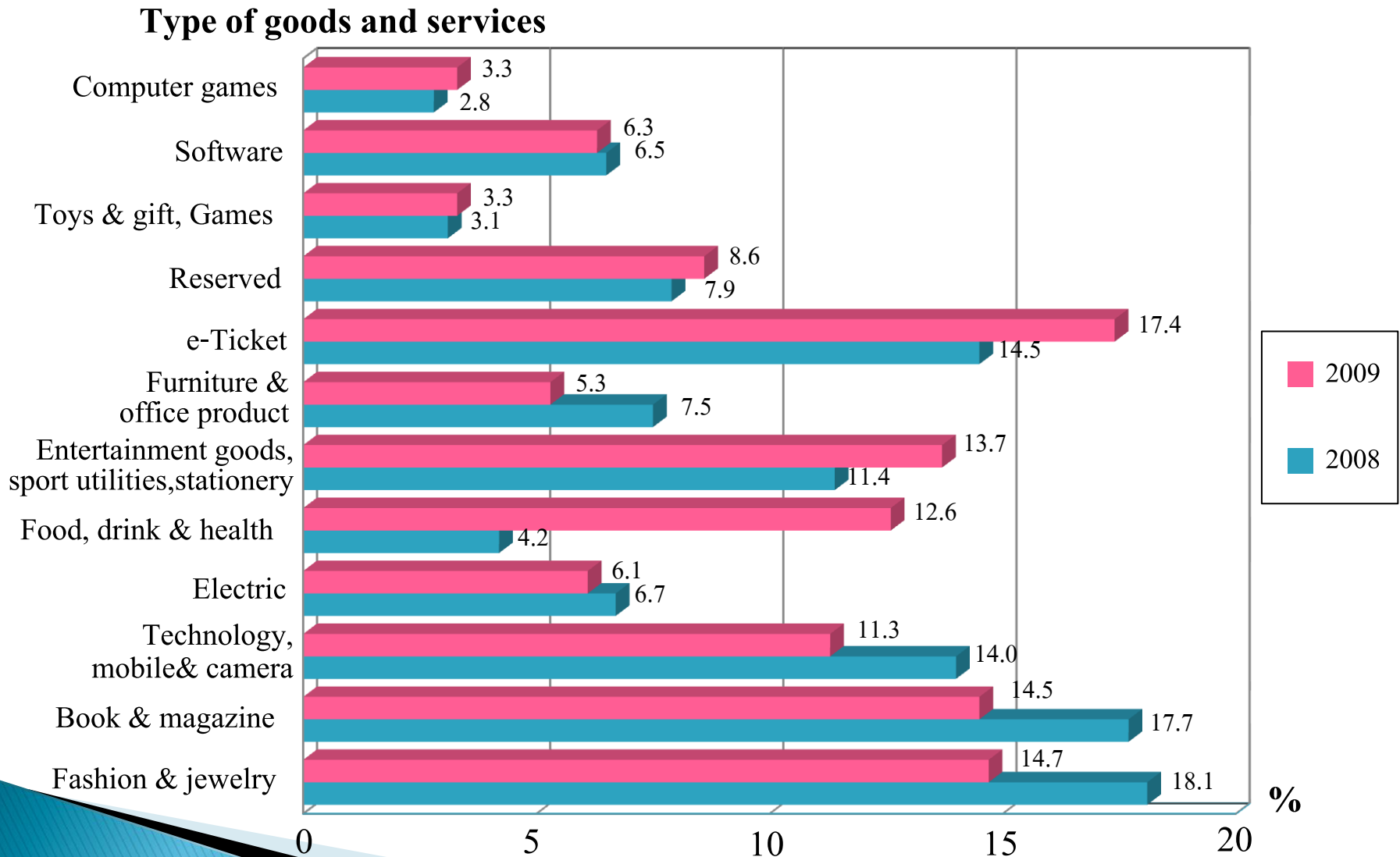
Figure Number of Internet user by activity to use 2008 - 2009



Source: ICT Household Survey, National Statistical Office.

Note: Answer only up to two choices

Figure Proportion of online purchaser by type of goods and services to buy; 2008 - 2009



Source: ICT Household Survey, National Statistical Office.

Note: Answer only up to two choices

Sources and ICT Indicators in Thailand

Concordance With Indicators Listed in
Partnership on Measuring ICT for Development

Basic Core Indicators on Access to, and Use of, ICT by Households and Individuals

Core Indicators	Proportion	Source
HH1 Proportion of households with a <u>radio</u>	58.0	a
HH2 Proportion of households with a <u>TV</u>	96.3	a
HH3 Proportion of households with <u>telephone</u> :		b
Fixed telephone only	1.7	
Mobile cellular telephone only	67.8	
Both fixed and mobile cellular telephone	19.7	
HH4 Proportion of households with a <u>computer</u>	20.3	b
HH5 Proportion of individuals who <u>used a computer (from any location) in the last 12 months</u>	29.3	b

Note: a. Household Socio-Economic Survey in 2009

b. ICT Household Survey in 2009

Core Indicators	Proportion	Source
HH6 Proportion of households with <u>Internet access at home</u>	9.5	b
HH7 Proportion of individuals who <u>used</u> the <u>Internet</u> (from any location) in the last 1 2 months	20.1	b
HH8 <u>Location of individuals who use of the Internet in the last 12 months:</u>		b, c, d
Home	33.4	
Work	29.0	
Place of education	46.8	
Another person's home	2.1	
Community Internet access facility	0.6	
Commercial Internet access facility	21.8	
Any place via a mobile cellular telephone	-	
Any place via other mobile access devices	-	

Note: b. ICT Household Survey in 2009

c. The proportion of internet user in 2009

d. Answer only up to two choices

Core Indicators	Proportion	Source
HH9 <u>Internet activities undertaken by individuals in the last 12 months (from any location):</u> Getting information about goods or services Getting information related to health or health services Getting information from general government organizations Interaction with general government organizations Sending of receiving e-mail Telephoning over the Internet/VoIP Posting information or instant messaging Purchasing or ordering goods or services Internet banking Education or learning activities Playing or downloading video games or computer games Downloading movies, images, music, watching TV or video, or listening to radio or music Reading or downloading online newspapers or magazines, electronic books	2.5 - 80.6 - 18.6 0.2 5.4 3.1 - 3.1 23.8 5.7 7.6	b, c, d

Note: b. ICT Household Survey in 2009

c. The proportion of internet user in 2009

d. Answer only up to two choices

Core Indicators	Proportion	Source
HH10 Proportion of individuals with <u>use of a mobile cellular telephone</u>	56.8	b
HH11 Proportion of households with access to the <u>internet by type of access (narrowband , broadband (fixed, mobile))</u>		b, e
Narrowband	2.3 (24.0)	
Fixed broadband	5.3 (55.8)	
Mobile broadband	0.7 (7.7)	
HH12 <u>Frequency of individual use of the internet the last 12 months (from any location):</u>		b, c
At least once a day	25.4	
At least once a week but not every day	59.8	
Less than once a week	14.8	
HHR1 Proportion of households with electricity	98.8	a

Note: c. The proportion of internet user

e. Household can answer one access service

in () is divided by households with internet access

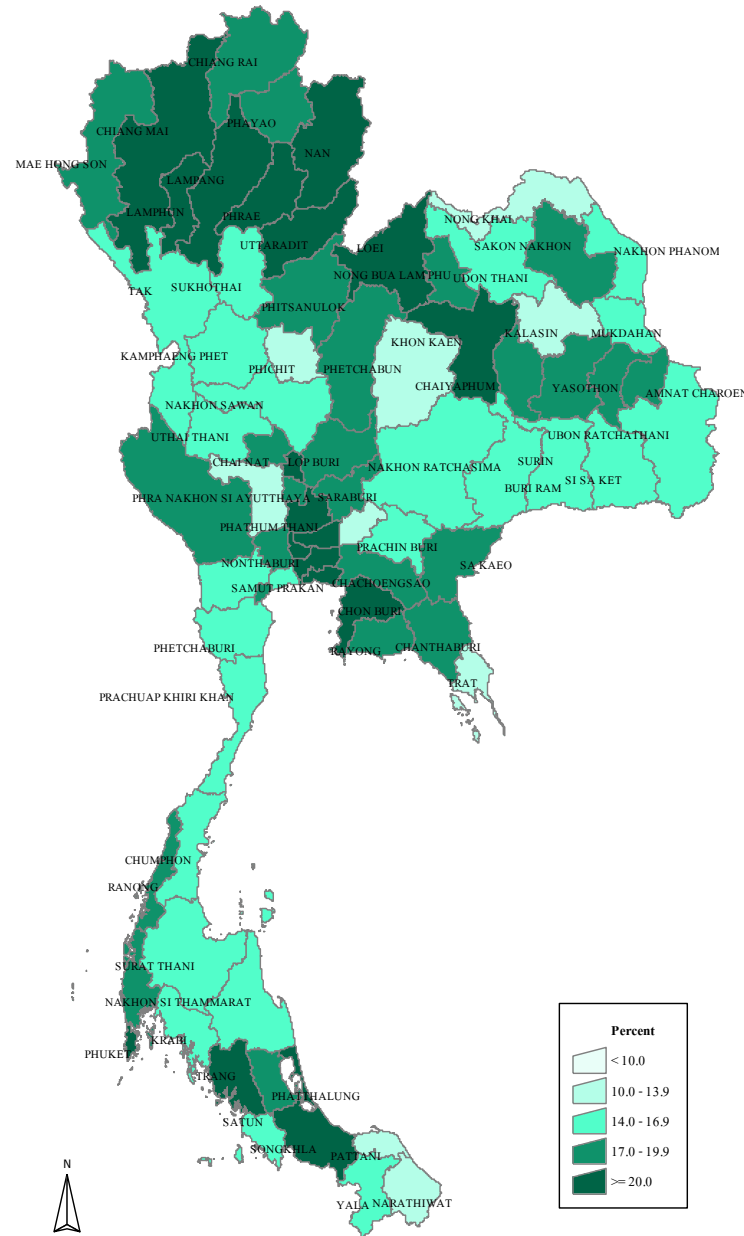
Planning for the ICT Household Survey in 2011

- Determine the purpose of the survey
- Meeting with policymakers and other data users
- Adherence to existing statistical standards
- Answering policy questions through statistical survey
- Available budget
- Timeframe
- The survey scope
- Classificatory data required
- Survey design
- Questionnaire design

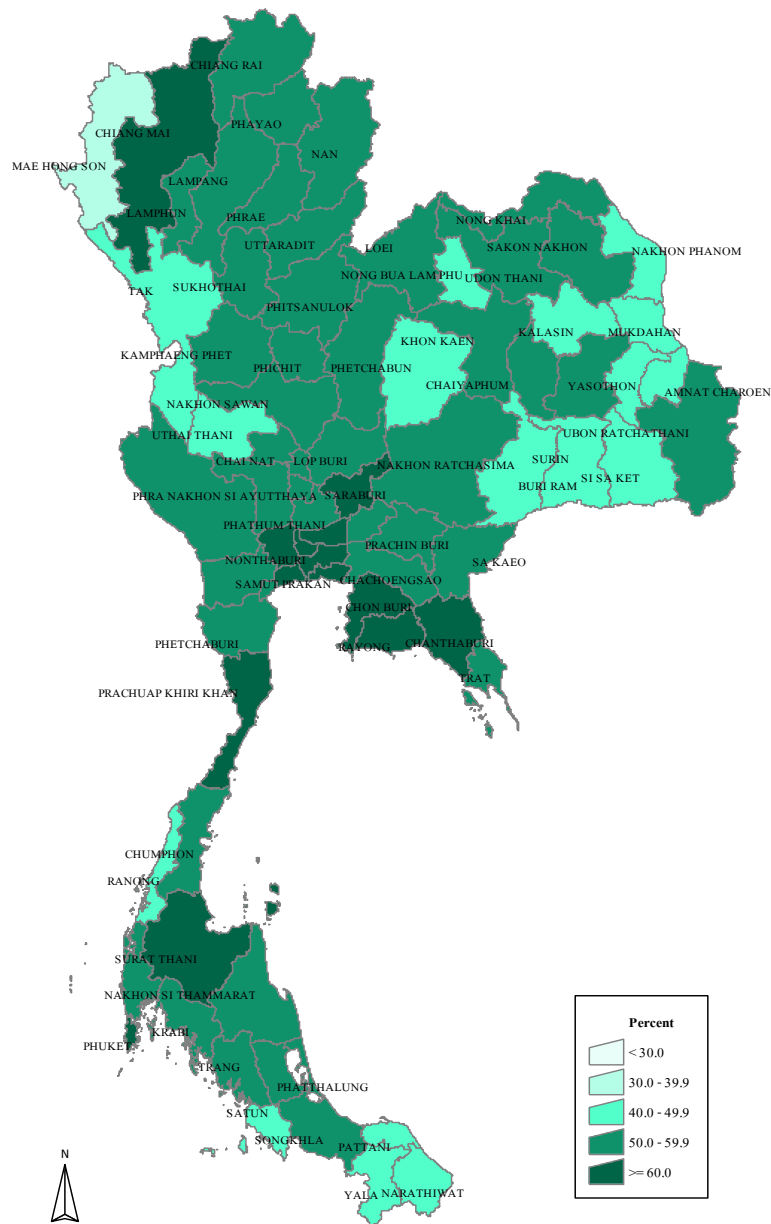
Statistical standards : some generalizations

- By “standards” we are referring to concepts, units, scope, definitions, indicators, classifications and model question
 - In the 2011 survey, the NSO will revised the classifications of
 - occupation base on ISCO-08
 - industry base on ISIC rev.4
 - Update Indicators concordance with Indicators listed in the Partnership on Measuring ICT for Development, Core ICT Indicators 2010.

Percentage of Population aged 6 years and over who used Internet in 2009

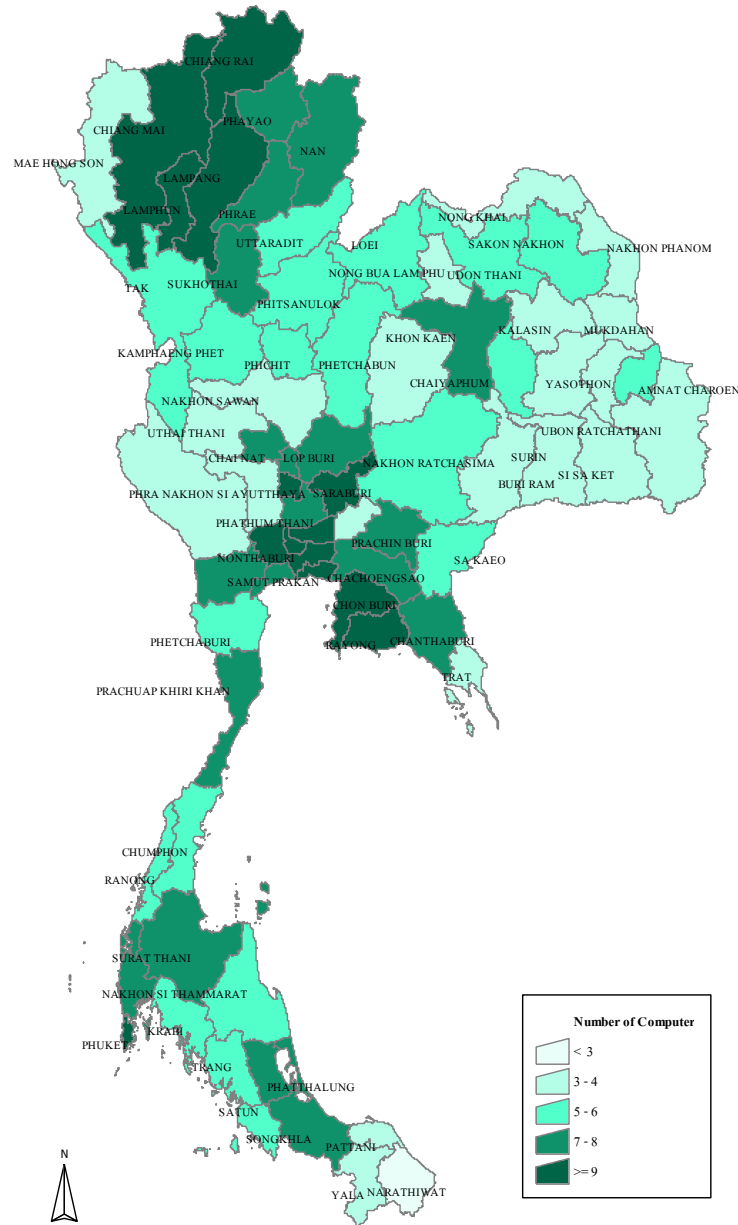


Source : ICT Household Survey in 2009



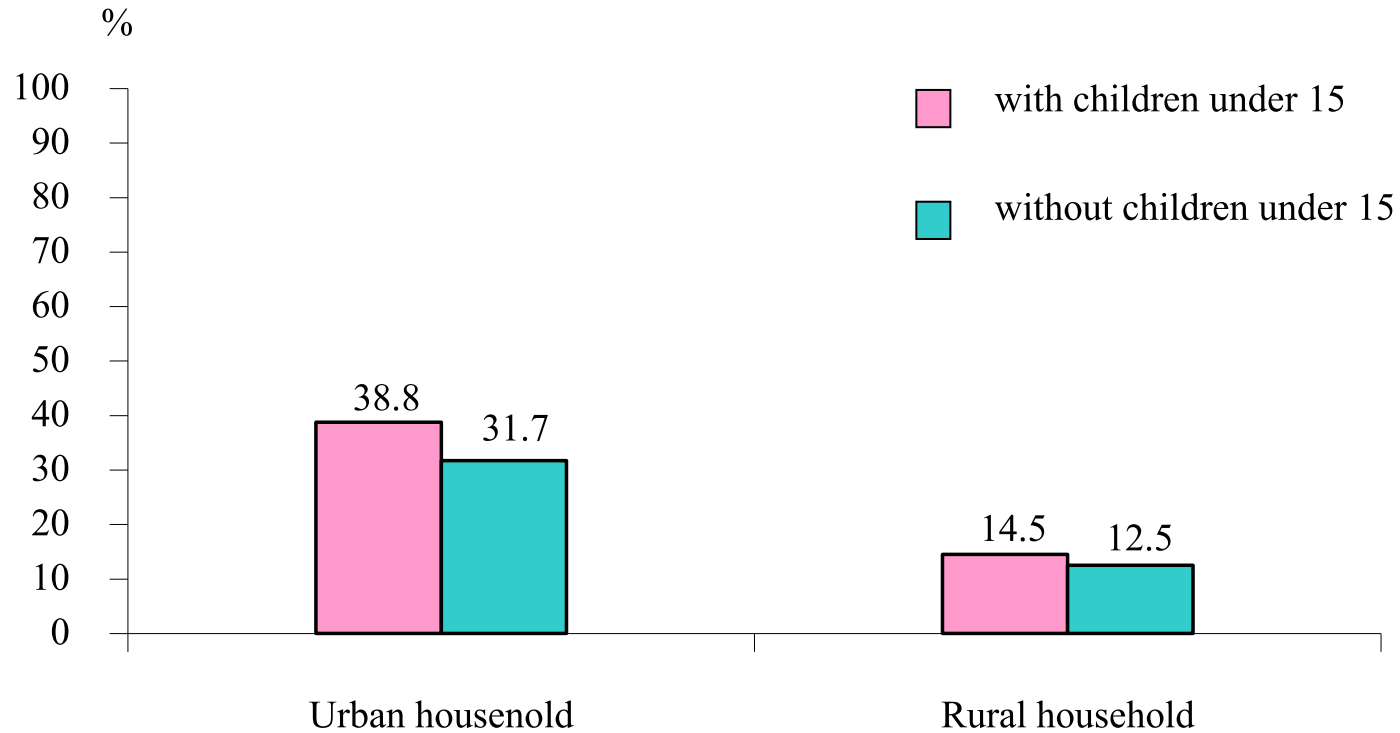
Source : ICT Household Survey in 2009

Number of Computer per 100 persons



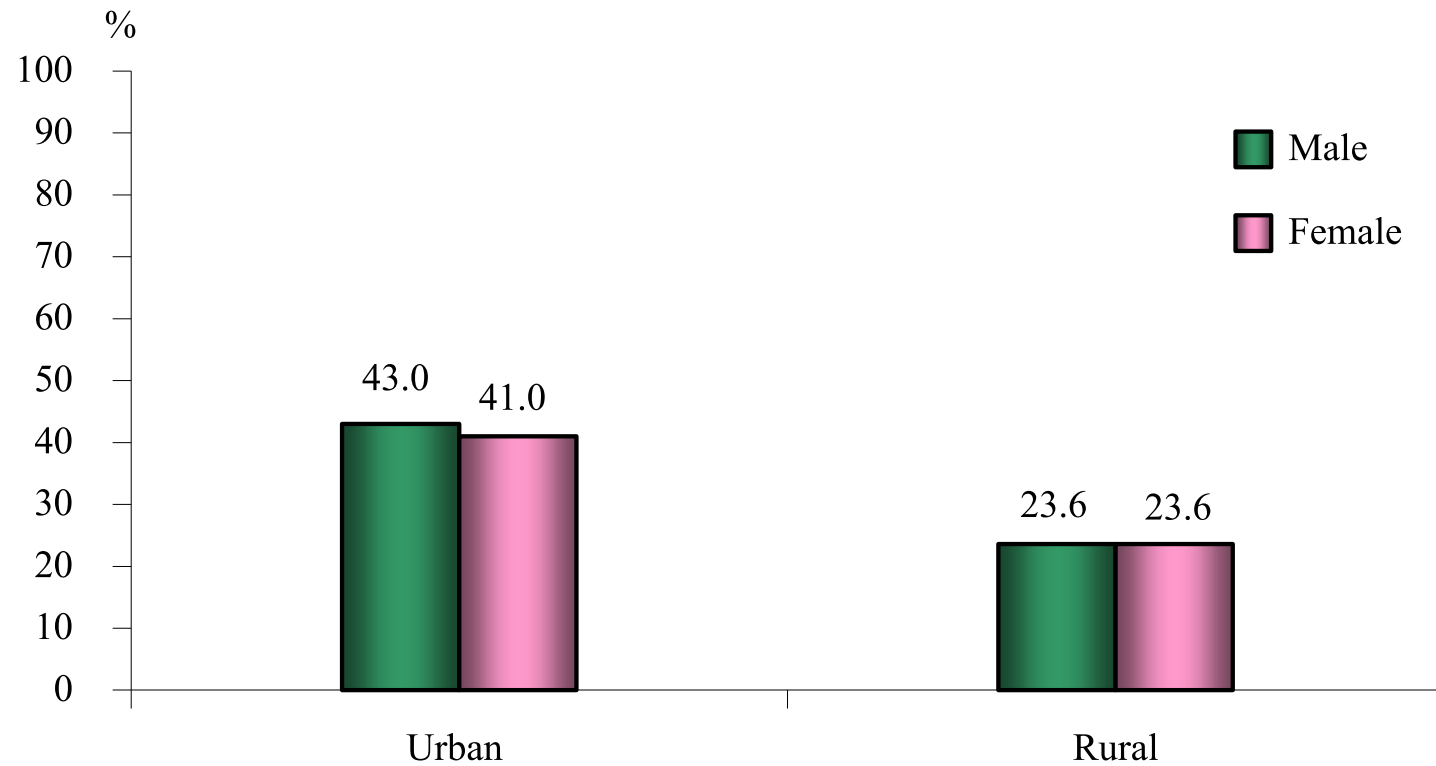
Source : ICT Household Survey in 2009

Figure Households with a computer by urban/rural location and household composition



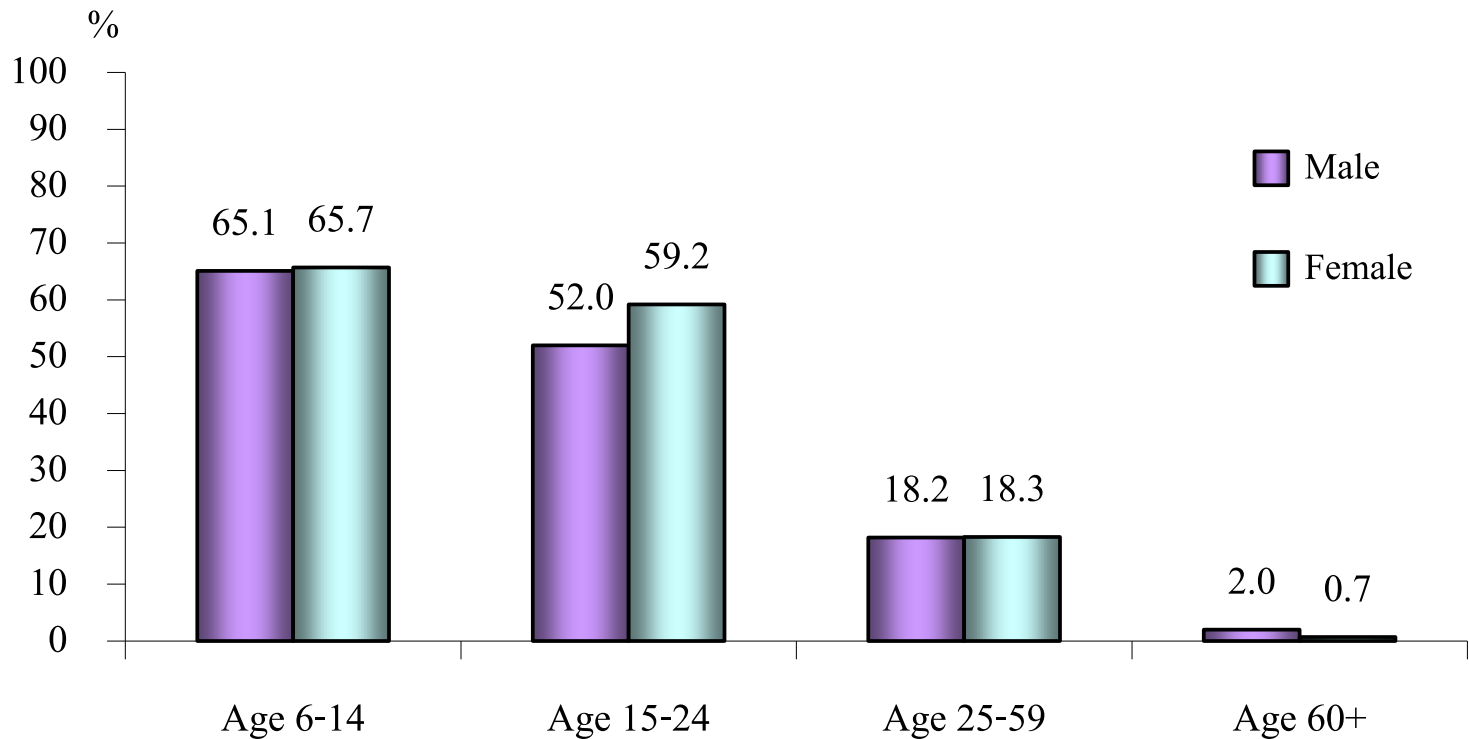
Source : ICT Household Survey in 2009, NSO, Thailand

Figure Individuals who used a computer (from any location) in the last 12 month, by gender and urban/rural location



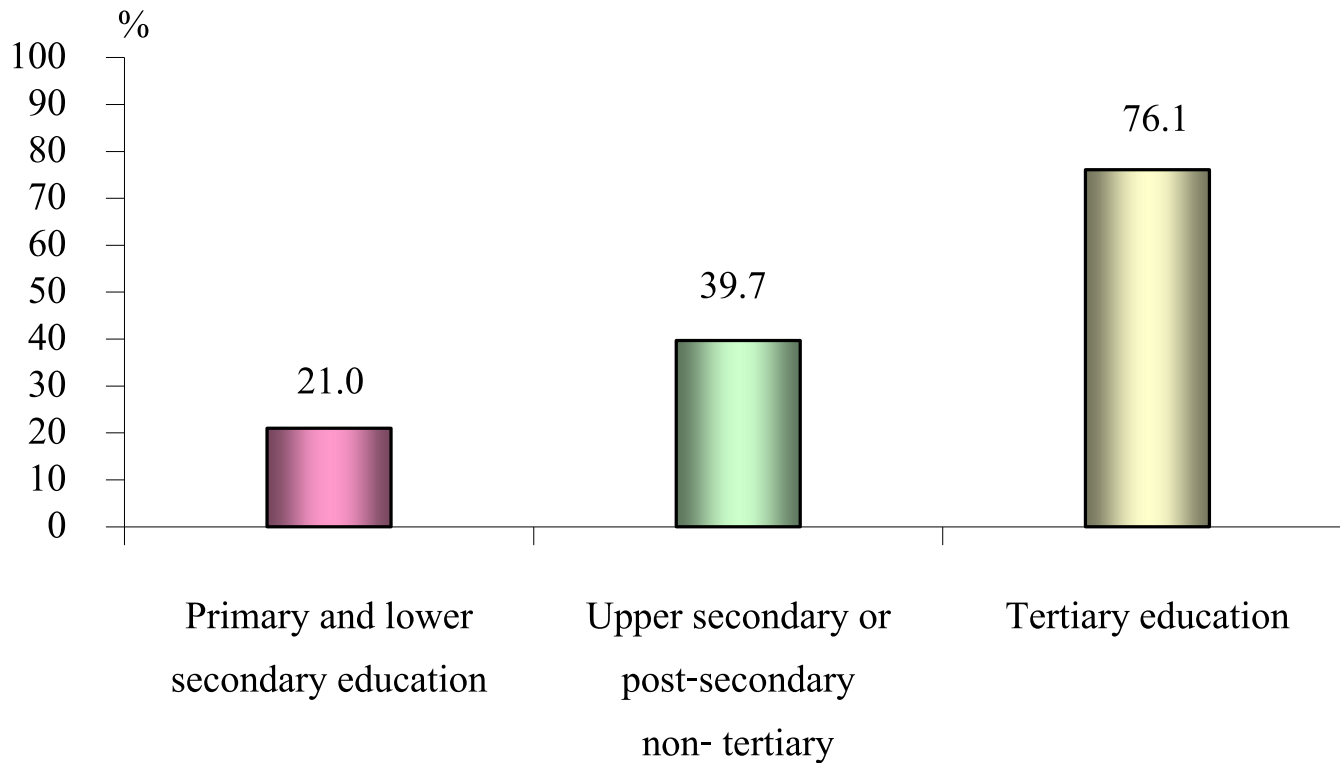
Source : ICT Household Survey in 2009, NSO, Thailand

Figure Individuals who used a computer (from any location) in the last 12 month, by age and gender



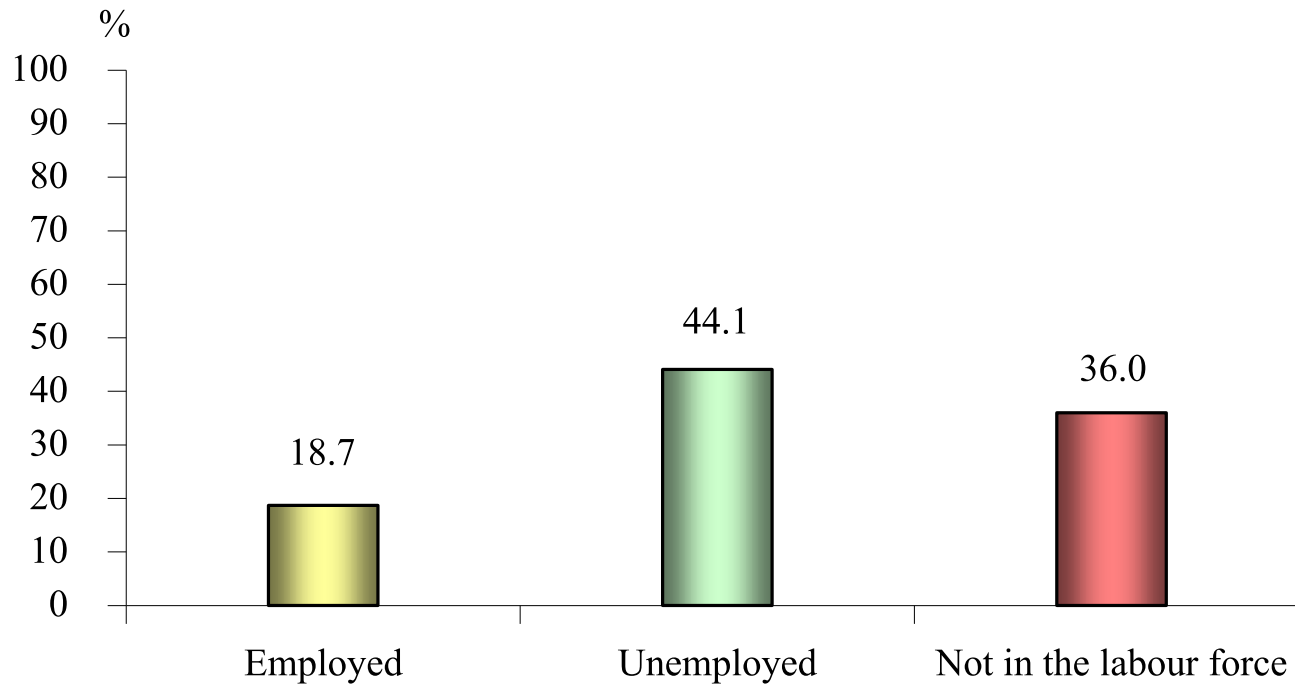
Source : ICT Household Survey in 2009, NSO, Thailand

Figure Individuals who used a computer (from any location) in the last 12 month,
by level of education



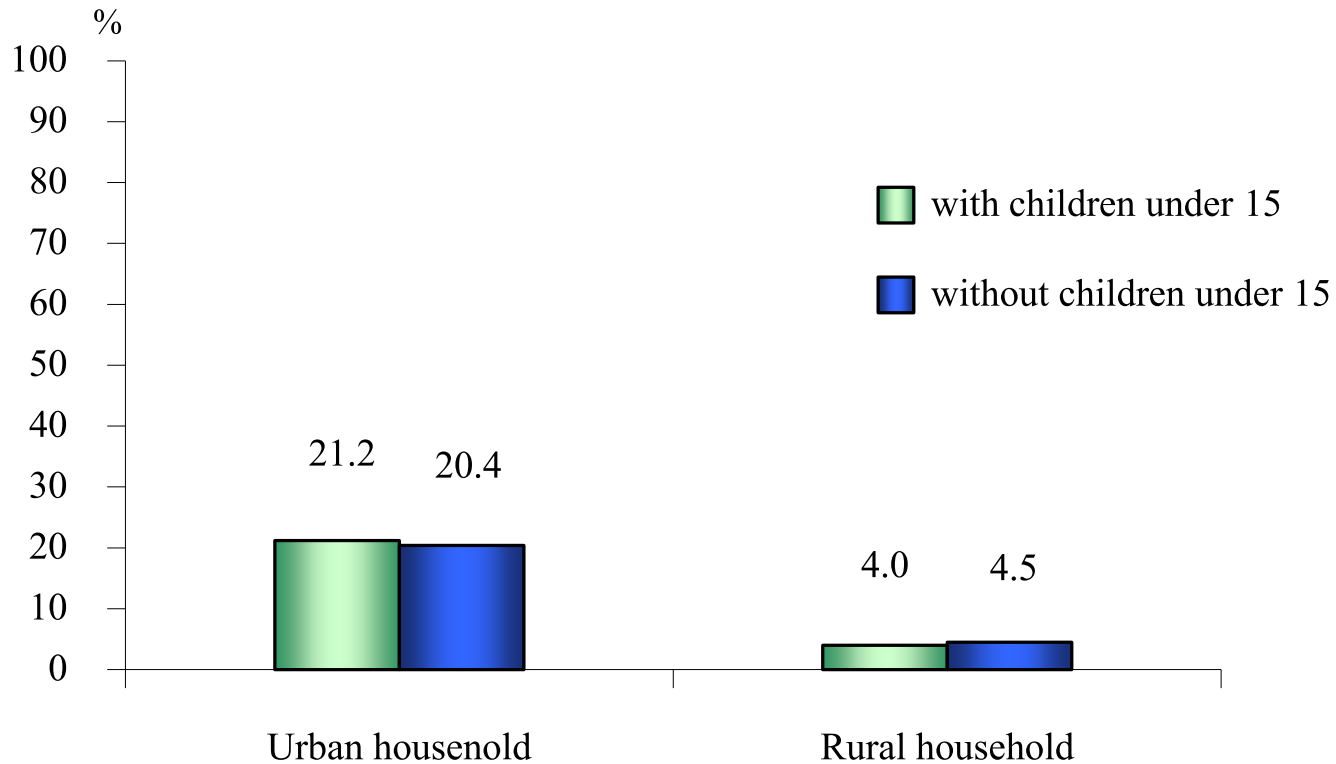
Source : ICT Household Survey in 2009, NSO, Thailand

Figure Individuals who used a computer (from any location) in the last 12 months,
by labour force status



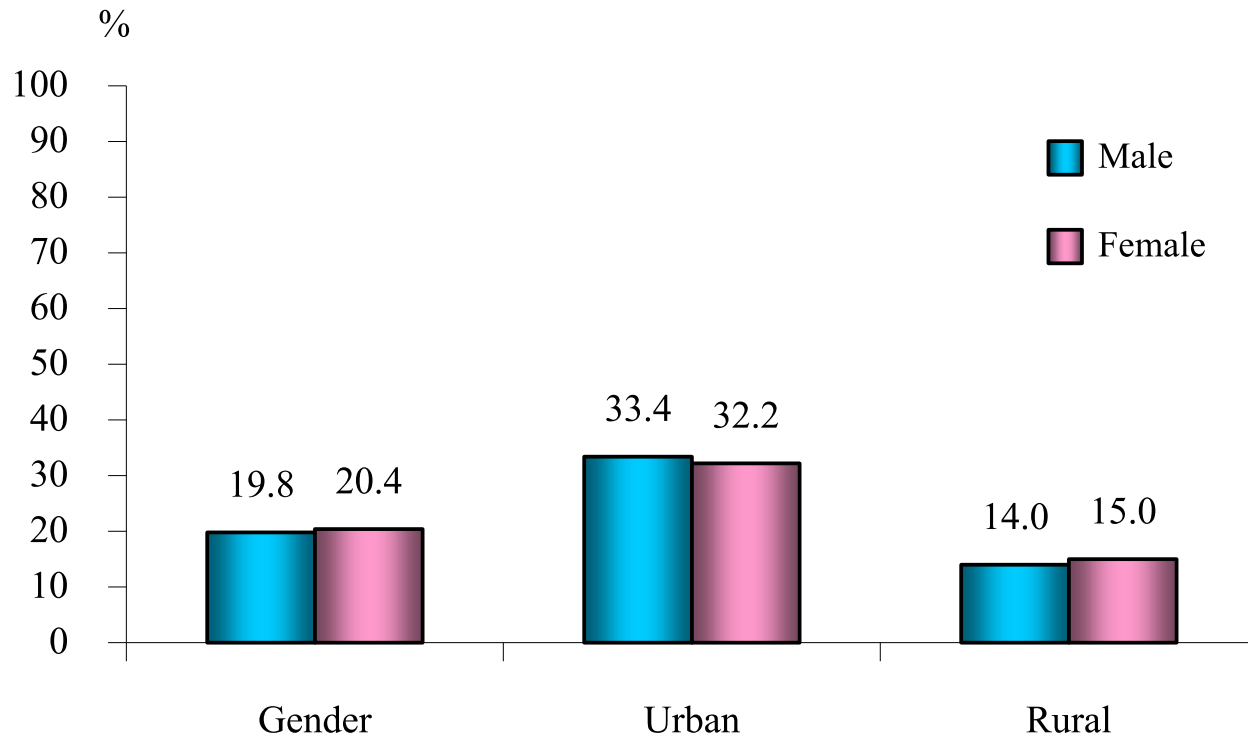
Source : ICT Household Survey in 2009, NSO, Thailand

Figure Households with Internet access at home by urban/rural location and household composition



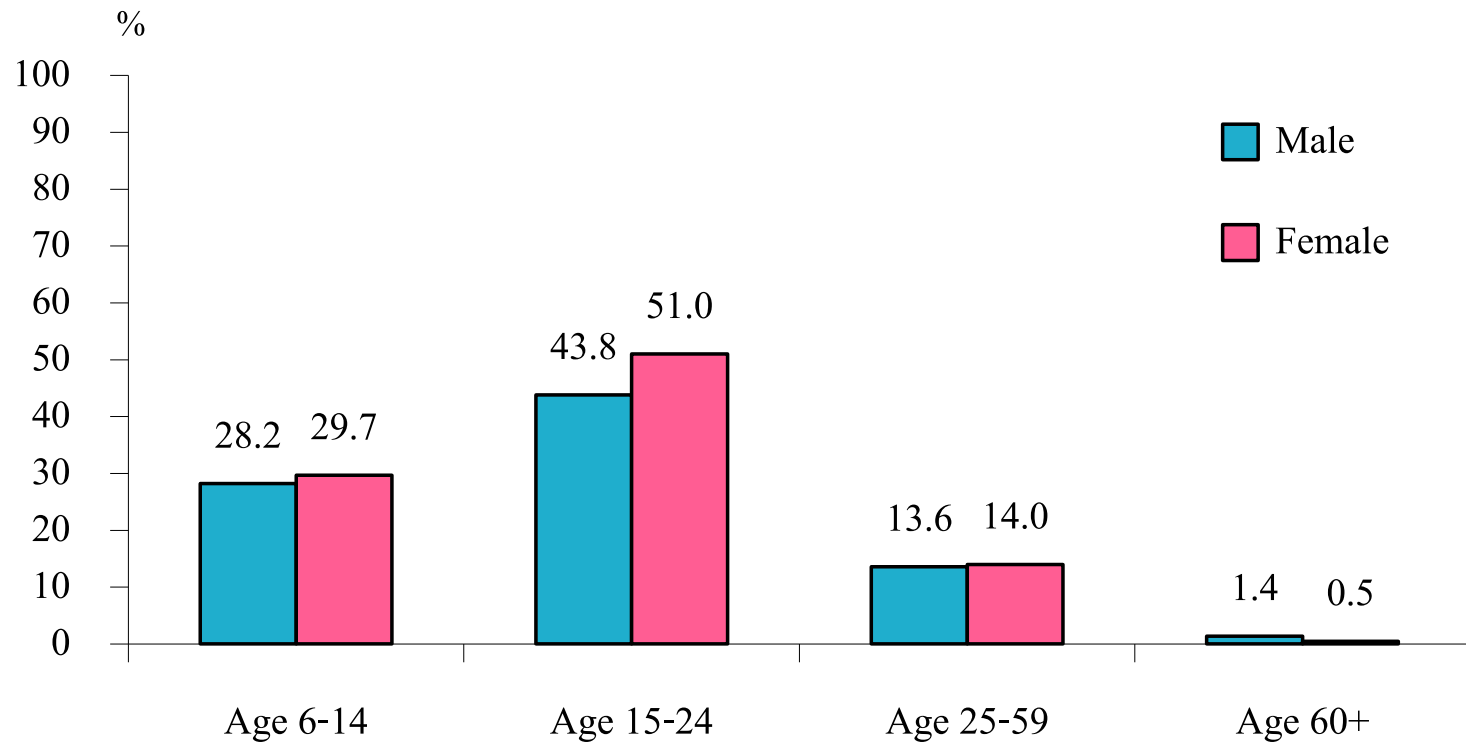
Source : ICT Household Survey in 2009, NSO, Thailand

Figure Individuals who used the Internet (from any location) in the last 12 months, by gender and urban/rural location



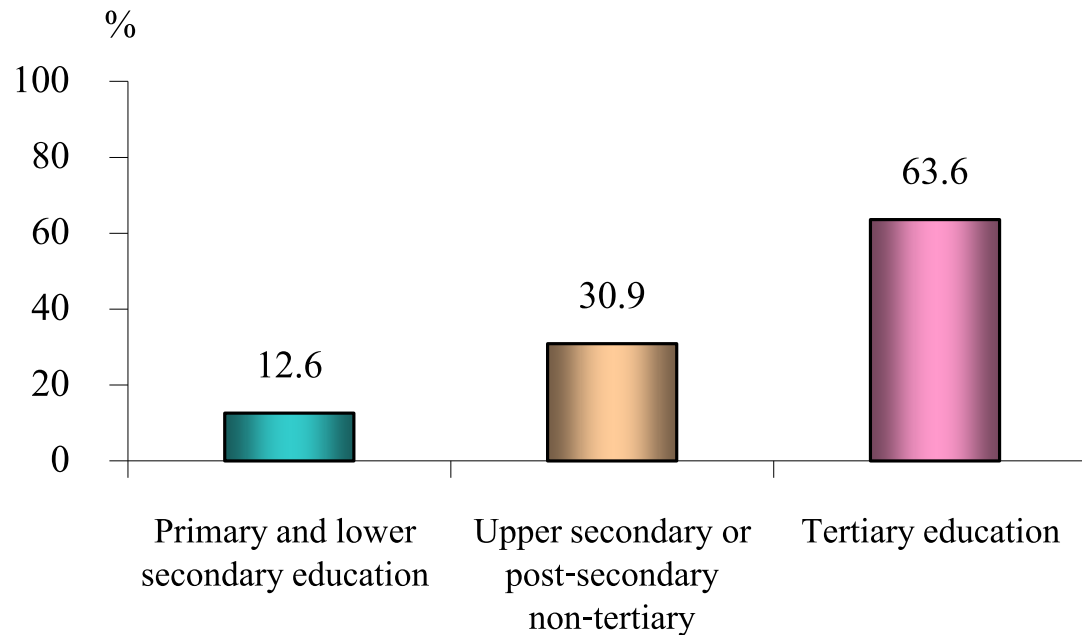
Source : ICT Household Survey in 2009, NSO, Thailand

Figure Individuals who used the Internet (from any location) in the last 12 months, by age and gender



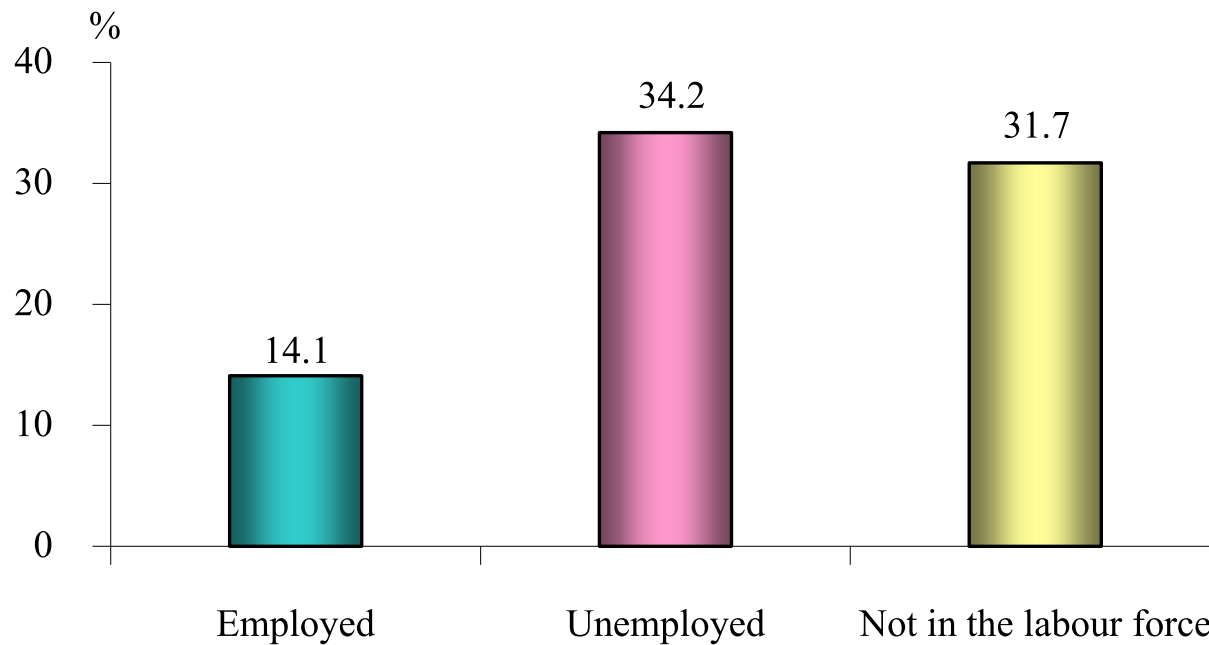
Source : ICT Household Survey in 2009, NSO, Thailand

Figure Individuals who used the Internet (from any location) in the last 12 months, by level of education (%)



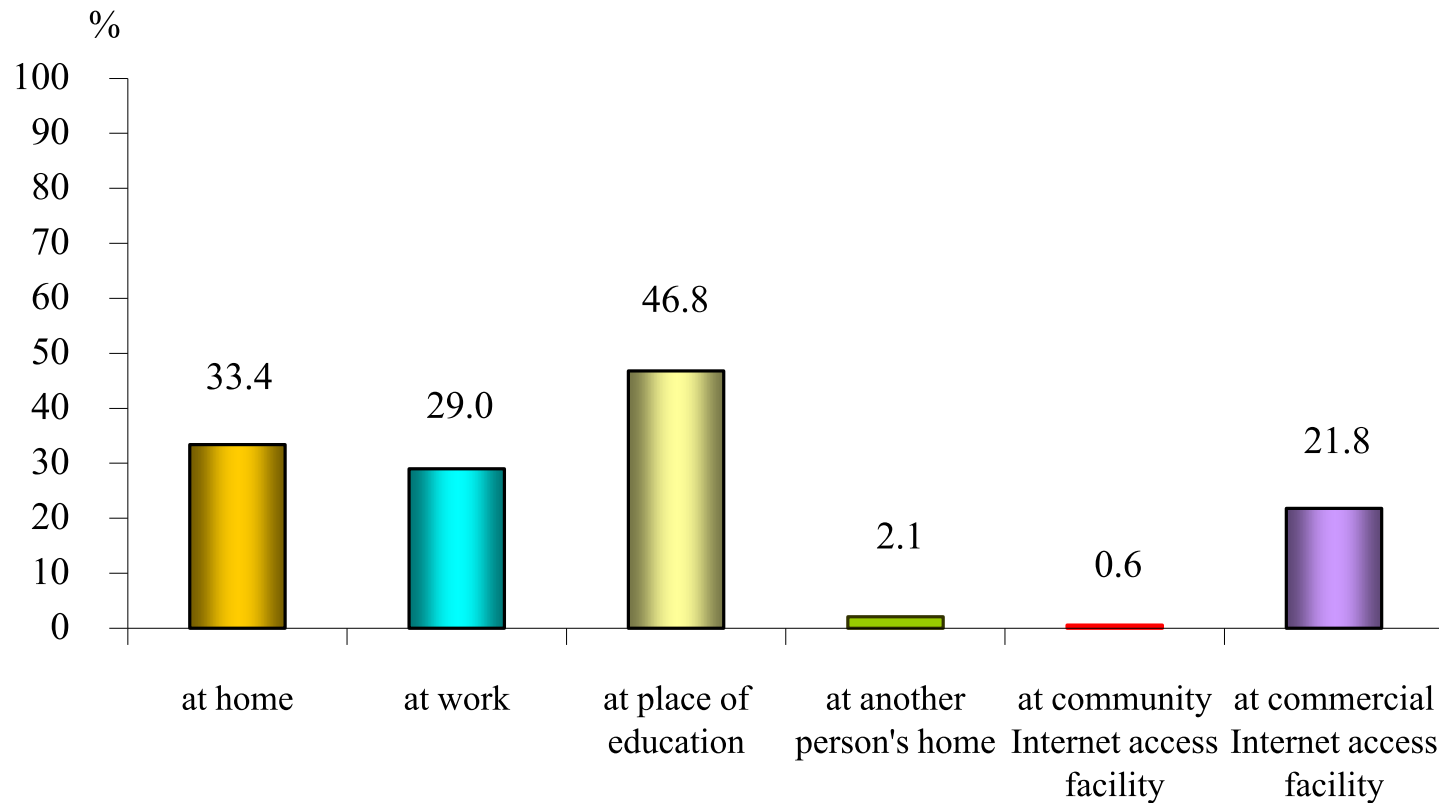
Source : ICT Household Survey in 2009, NSO, Thailand

Figure Individuals who used the Internet (from any location) in the last 12 months,
by labour force status



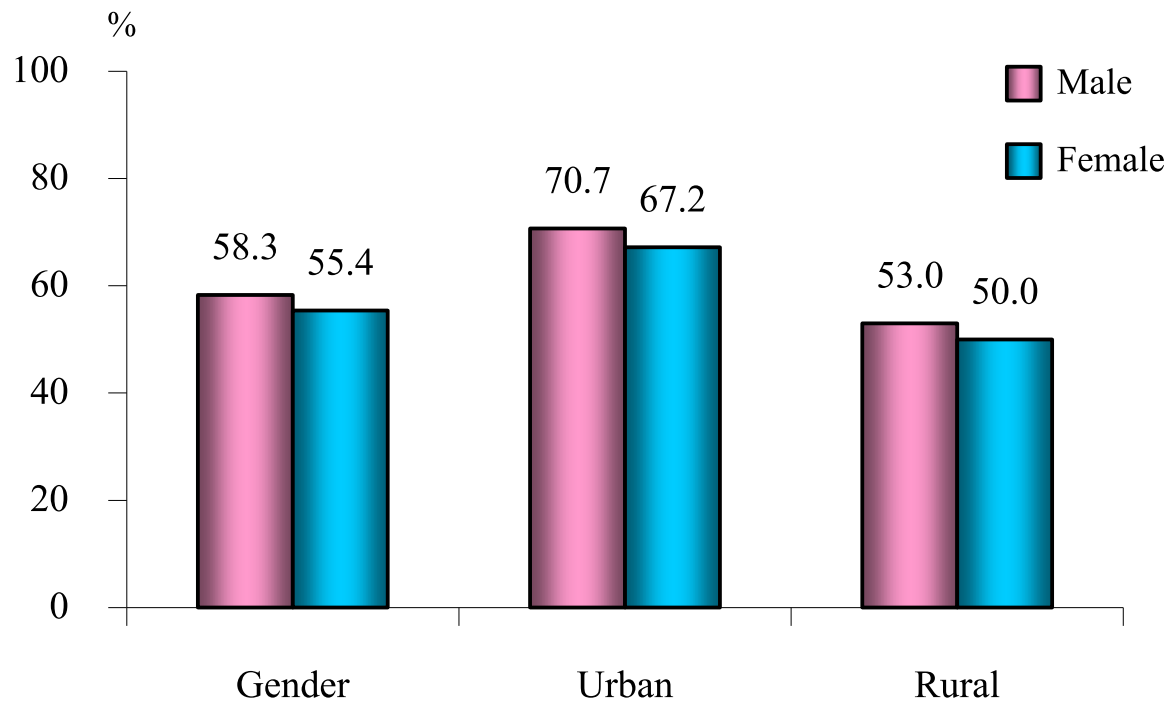
Source : ICT Household Survey in 2009, NSO, Thailand

Figure Individuals who used the Internet in the last 12 months, by location of use



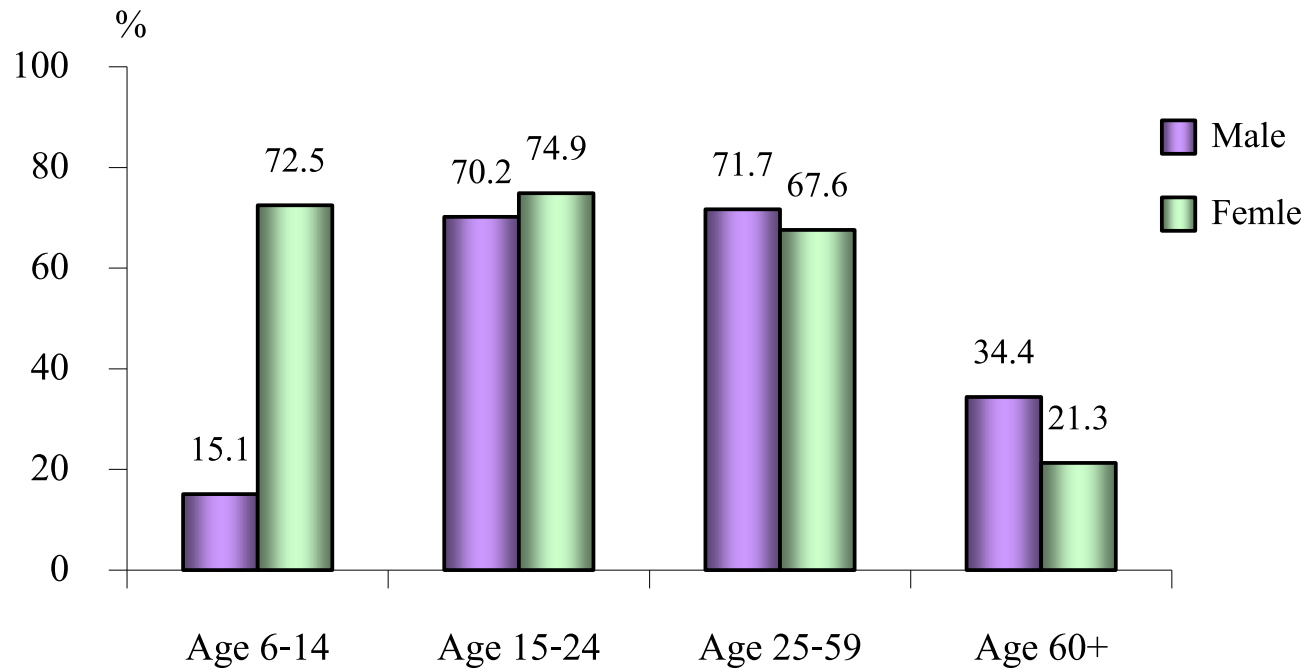
Source : ICT Household Survey in 2009, NSO, Thailand

Figure Individuals who used a mobile cellular telephone in the last 12 months,
by gender and urban/rural location



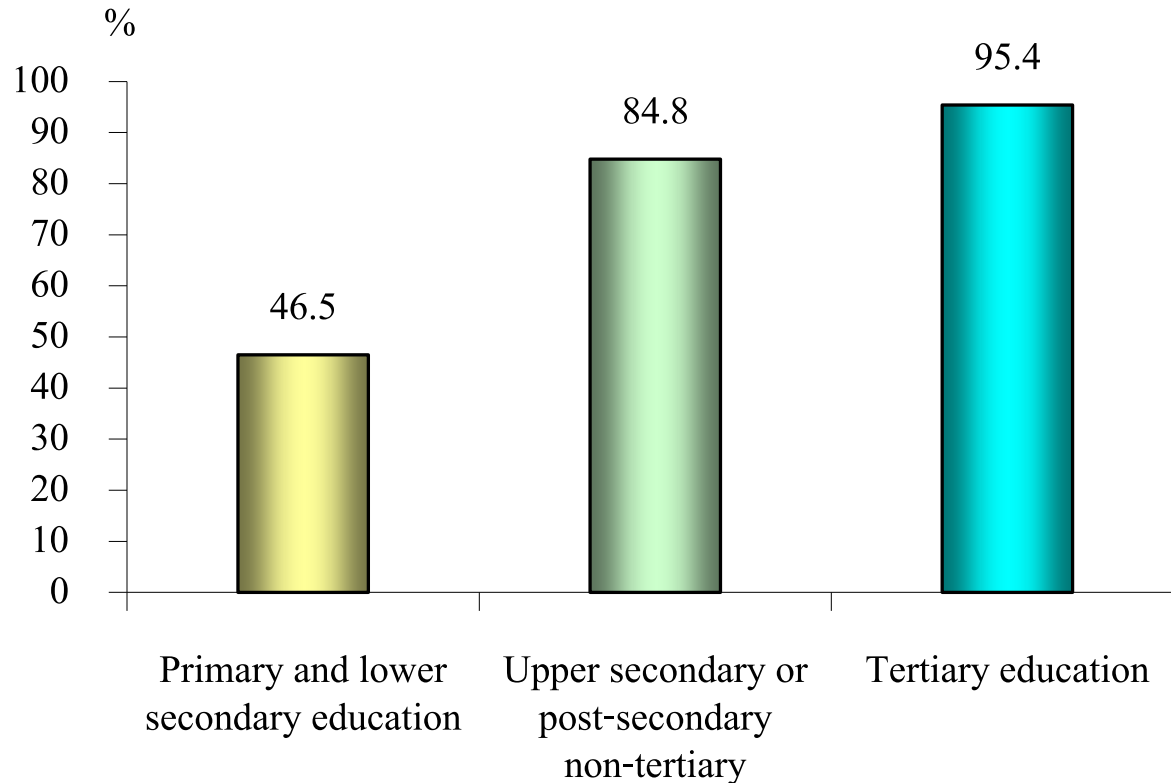
Source : ICT Household Survey in 2009, NSO, Thailand

Figure Individuals who used a mobile cellular telephone in the last 12 months,
by age and gender



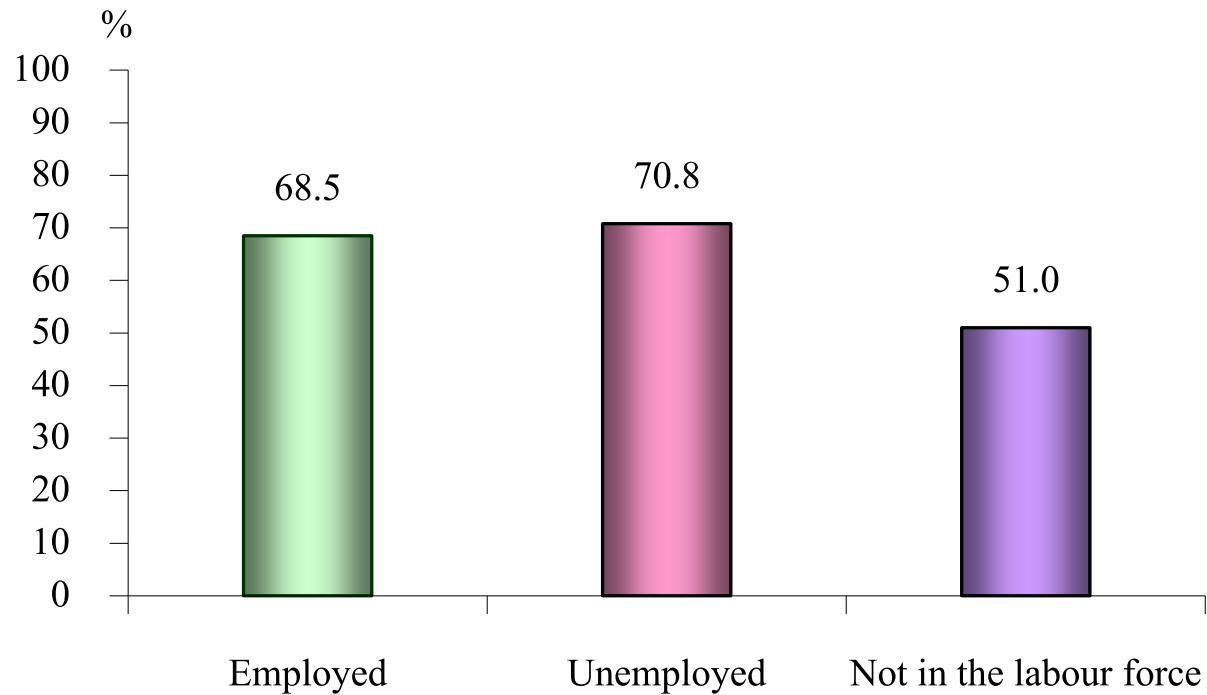
Source : ICT Household Survey in 2009, NSO, Thailand

Figure Individuals who used a mobile cellular telephone in the last 12 months,
by level of education



Source : ICT Household Survey in 2009, NSO, Thailand

Figure Individuals who used a mobile cellular telephone in the last 12 months,
by labour force status



Source : ICT Household Survey in 2009, NSO, Thailand

THANK YOU!

A large, light gray globe with a grid of latitude and longitude lines is positioned in the background on the right side of the slide. The text 'THANK YOU!' is overlaid on the globe and has a reflection effect below it.

Organized by:

UNSD, UNCTAD, ITU, KNSO