

THE 2005 INFORMATION AND COMMUNICATION TECHNOLOGY SURVEY (ESTABLISHMENT)

Due attention is given to use the knowledge and technology as the country development base in order to enhance the country's competitiveness through knowledge - base learning. The National Statistical Office (NSO), as an authorized government agency, therefore, decides to conduct the first survey of Information and Communication Technology Survey in 2004. This is the 2nd Survey.

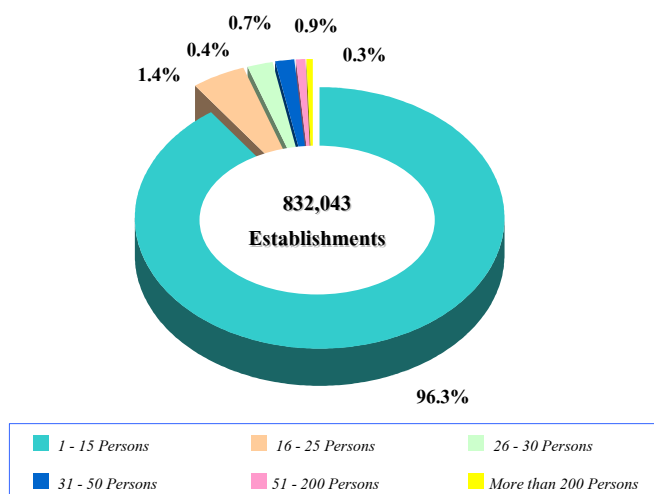
This publication presented are the results concerning information and communication technology of the establishments with at least one person engaged located **in municipal areas in the Whole Kingdom**. The coverage of the survey are business trade and services, manufacturing, construction, other land transport, activities of travel agencies and hospital. The information collected refers to the operation period of establishment during April 1, 2004 to March 31, 2005. A Stratified Systematic Sampling was adopted for the survey. Provinces were constituted strata while type of economic activities and group of establishment were constituted sub-stratum. The sampling units were establishments. The total sample establishments were 77,695 from 833,409 establishments. The major findings are as follows;

1. General Information of Establishment

1) Number and Size of Establishment

The results of the 2005 Information and Communication Technology Survey, show that there were 832,043 establishments with 1 person engaged or more, located **in municipal areas in the**

Figure H Percentage of Establishments by Size of Establishment
(Number of Persons Engaged)

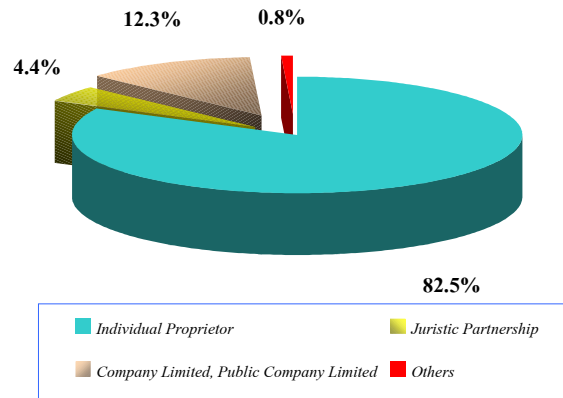


Whole Kingdom. Out of these, 801,297 establishments or 96.3 percent were small scale establishments with 1 - 15 persons. Followed by those, with 16 - 25 persons was about 11,472 establishments or 1.4 percent. For the establishments with 51 - 200 persons and 31 - 50 persons were about 0.9 and 0.7 percent respectively. While the establishments with 26 - 30 persons and the large scale establishments (more than 200 persons) were about 0.4 and 0.3 percent respectively.

2) Form of Legal Organization

For the form of legal organization, it was found that most of establishments (about 82.5 percent) were individual proprietor. Followed by those, which were in the form company limited or public company limited and juristic partnerships were about 12.3 and 4.4 percent respectively. The rest, of about 0.8 percent was government, cooperatives and others.

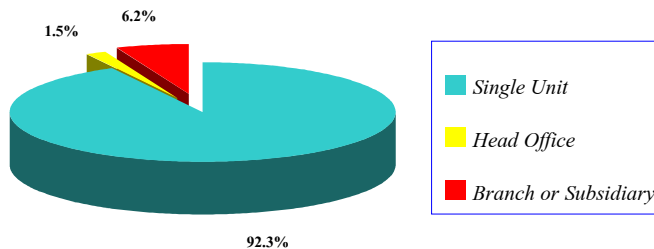
Figure I Percentage of Establishments by Form of Legal Organization



3) Form of Economic Organization

Looking at the form of economic organization (Figure J) it shows that most of establishments

Figure J Percentage of Establishments by Form of Economic Organization



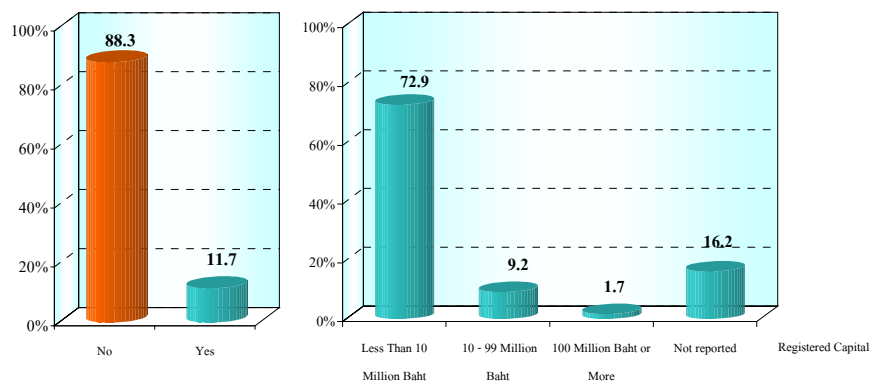
located in municipal areas in the Whole Kingdom were single unit, which had the highest proportion of about 92.3 percent. Followed by those, which were in form of branch or subsidiary and head office, of about 6.2 and 1.5 percent respectively.

4) Registered Capital

Data concerning registered capital of establishments, shows that there were totally 97,349 establishments or 11.7 percent of the totals had the registered capital. Most of them (about 72.9 percent)

had less than 10 million baht of registered capital. Followed by those, which had 10 - 99 million baht of registered capital, was about 9.2 percent. While which had 100 million baht or more of registered capital was about 1.7 percent.

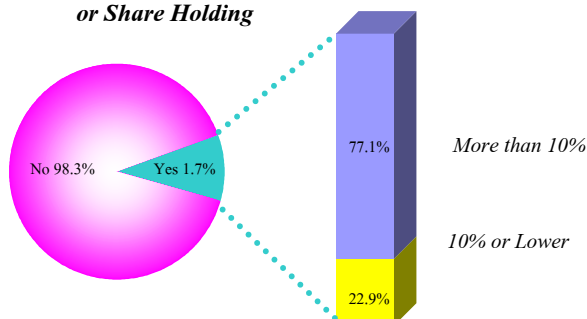
Figure K Percentage of Establishments by Registered Capital



5) Foreign Investment or Share Holding

Considering the foreign investment or share holding, most of establishments (about 98.3 percent)

Figure L Percentage of Establishments by Foreign Investment or Share Holding



had no foreign investment or share holding. About 1.7 percent did. Out of these, about 77.1 percent, had over ten percent of foreign investment or share holding and 22.9 percent had ten percent or lower of foreign investment or share holding.

2. Use of Information and Communication Technology

1) Computer

Looking at the use of information and communication technology of 832,043 establishment located in municipal areas in the Whole Kingdom (Table A), it was found that most of them (about 170,744 establishments or 20.5 percent) used of computers. There were totally 831,559 units of computer facilitated business process or 5 units per establishment and the computers connected to internet were about 392,632 units. For the number of persons using computers in their normal work routines (at least once a week), there were 896,789 or about 5 persons per establishment.

In term of size of establishment, it was found that the large scale establishments, (more than 200 persons) had the highest average of 92 computers per establishment. Followed by those with 51 - 200 persons had about 18 computers per establishment. The other sizes had less than 10 units per establishment. For the computers connected to internet, it appeared that the small scale establishments (1 - 15 persons), had the highest computers about 342,237 units and connected to the internet by 160,779 units or about 47.0 percent but they had the lowest average number of persons using computer about 2 persons per establishment. While the large scale establishments had the computers of about 242,391 units and connected to the internet by 110,348 units or about 45.5 percent but they had the highest average number of 110 persons using computer per establishment.

Table A Number and Percentage of Establishments with Use of the Computer, Number of Computers and Number of Persons Using Computer by Size of Establishment and Economic Activity

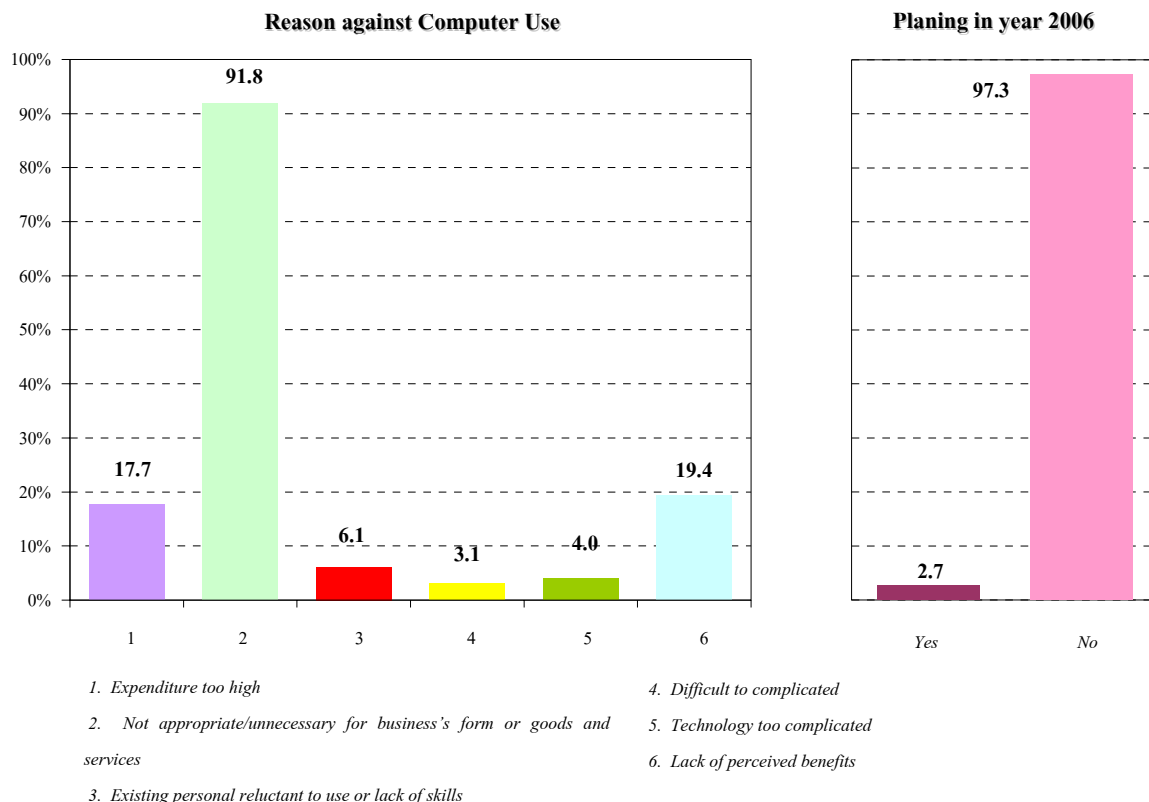
Size of Establishment / Economic Activity	Number of Establishments Use of Computer	Number of Computers (Units)			Number of Persons Using Computer (Persons)	
		Total	Per establish- ment	Connected to the Internet	Total	Per establishment
Total	170,744	831,559	4.9	392,632	896,789	5.3
Size of Establishment						
1 - 15 persons	144,062	342,237	2.4	160,779	332,895	2.3
16 - 25 persons	8,976	46,367	5.2	22,467	50,358	5.6
26 - 30 persons	2,422	17,424	7.2	9,292	18,656	7.7
31 - 50 persons	5,295	48,019	9.1	23,700	53,046	10.0
51 - 200 persons	7,351	135,122	18.4	66,047	152,490	20.7
More than 200 persons	2,639	242,391	91.8	110,348	289,344	109.6
Economic Activity						
Business Trade and Services	140,043	502,786	3.6	246,970	507,816	3.6
Manufacturing	20,621	197,064	9.6	77,747	212,360	10.3
Construction	4,560	23,514	5.2	10,832	25,719	5.6
Other Land Transport and Activities of Travel Agencies	4,161	21,826	5.2	13,732	23,032	5.5
Hospital	1,359	86,370	63.6	43,352	127,862	94.1

Considering by economic activity, it was found that the establishments engaged in *hospital activity* had the highest average of 64 computers per establishment. The followings was in *manufacturing activity* was about 10 computers per establishment. The establishments engaged in *construction and other land transport and activities of travel agencies activities* were about 5 computers per establishment. Establishments engaged in *business trade and services activity* had the lowest average of 4 computers per establishment. For the computers connected to internet, it was found that establishments engaged in *business trade and services activity* had the highest proportion of about 62.9 percent. Followed by those engaged in *manufacturing activity* of about 50.2 percent.

1.1 Reasons against Computer Use and Planing in year 2006

For the reasons against computer use of the establishments located in municipal areas in the Whole Kingdom, it was found that about 91.8 percent of establishments reported being not appropriate/unnecessary for business's form or goods and services. The followings were lack of perceived benefits and too high expenditure, of about 19.4 and 17.7 percent respectively. For the establishments reported existing personal reluctant to use or lack of skills was about 6.1 percent.

Figure M Percentage of Establishments against Computer by Reason and Planing in year 2006



Note : More than 1 reason against computer can be done by an establishment.

For the plan to use the computer of establishment in year 2006, figure M, shows that there was very small proportion establishment, only 2.7 percent have planed.

2) Software Specialist

Table B, shows that there were 25,373 software specialists. Most of them (about 56.9 percent) were Developed and Maintenance Programmer. Followed by those, which was Computer Systems Designers and Analysts of about 23.7 percent. The rest of 19.4 percent was Web Programmer and Web Master

In term of size of establishments, it was found that there was 8,930 software specialists engaged in the small scale establishments (1 - 15 persons). Establishments with more than 200 persons and 51 - 200 persons had employed software specialists about 6,793 and 4,903 persons respectively. While the establishments with 26 - 30 persons had employed about 737 persons software specialists.

Considering by economic activity, it was found that establishments engaged in *business trade and service activity* had the highest number of about 16,669 persons or 65.7 percent of total software specialists. It is noticed that establishments engaged in *other land transport and activities of travel agencies activity* had the lowest of about 563 persons.

Table B Number of Software Specialist by Type, Size of Establishment and Economic Activity

Unit : Persons

Size of Establishment / Economic Activity	Total	Developed and Maintenance Programmer	Computer Systems Designers and Analysts	Web Programmer and Web master
Total	25,373	14,446	6,002	4,925
Size of Establishment				
1 - 15 persons	8,930	5,374	1,661	1,894
16 - 25 persons	1,927	1,064	546	318
26 - 30 persons	737	360	186	191
31 - 50 persons	2,083	1,190	519	374
51 - 200 persons	4,903	2,680	1,282	942
More than 200 persons	6,793	3,778	1,808	1,206
Economic Activity				
Business Trade and Services	16,669	9,617	3,546	3,505
Manufacturing	5,320	3,047	1,530	742
Construction	689	395	195	99
Other Land Transport and Activities of Travel Agencies	563	273	186	104
Hospital	2,132	1,113	545	474

3) Internet

Table C shows that most establishments located in municipal areas in the Whole Kingdom (about 52.2 percent) used of the internet and the number of persons using internet in their normal work routines (at least once a week) was about 438,873 persons or about 5 staffs per establishment.

The majority of internet using was found in the large scale establishments (more than 200 persons), about 92.8 percent and the average number of persons using internet about 50 persons per establishment. While the small scale establishments (1 - 15 persons) had the lowest proportion of the internet use, about 48.2 percent and they had the lowest number of persons using internet about 2 persons per establishment.

Table C Number and Percentage of Establishments with Using Internet and Number of Persons Using Internet by Size of Establishment and Economic Activity

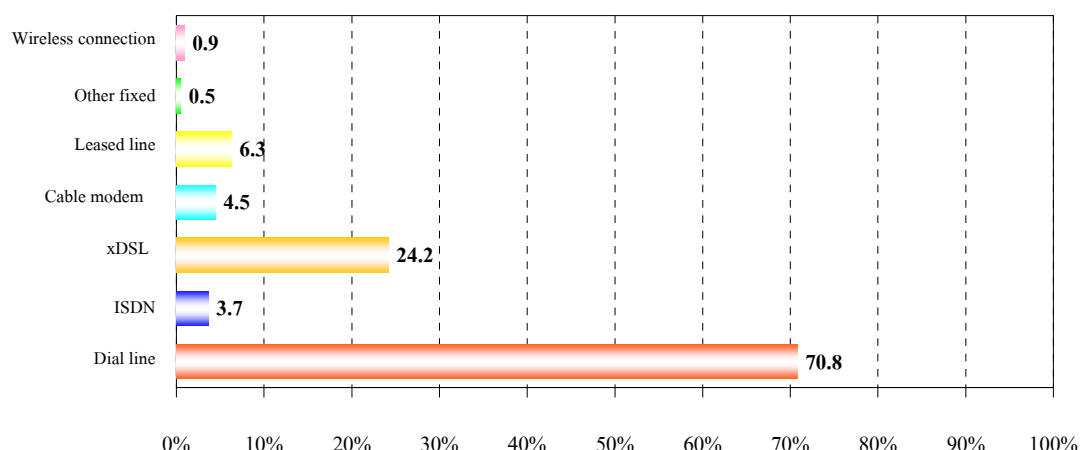
Size of Establishment / Economic Activity	Use of the Internet						Number of Persons Using Internet (Persons)	
	Total		No		Yes		Total	Per establish- ment
	Number	%	Number	%	Number	%		
Total	170,744	100.0	81,587	47.8	89,157	52.2	438,873	4.9
Size of Establishment								
1 - 15 persons	144,062	100.0	74,607	51.8	69,455	48.2	158,893	2.3
16 - 25 persons	8,976	100.0	3,387	37.7	5,589	62.3	27,725	5.0
26 - 30 persons	2,422	100.0	748	30.9	1,674	69.1	10,638	6.4
31 - 50 persons	5,295	100.0	1,376	26.0	3,919	74.0	41,387	10.6
51 - 200 persons	7,351	100.0	1,279	17.4	6,072	82.6	77,113	12.7
More than 200 persons	2,639	100.0	191	7.2	2,448	92.8	123,116	50.3
Economic Activity								
Business Trade and Services	140,043	100.0	69,503	49.6	70,540	50.4	263,961	3.7
Manufacturing	20,621	100.0	9,071	44.0	11,550	56.0	84,774	7.3
Construction	4,560	100.0	1,651	36.2	2,908	63.8	13,557	4.7
Other Land Transport and Activities of Travel Agencies	4,161	100.0	1,238	29.7	2,924	70.3	14,284	4.9
Hospital	1,359	100.0	124	9.1	1,235	90.9	62,297	50.4

Considering by economic activity, it was found that establishments engaged in *hospital activity* had the highest proportion of the internet used (about 90.9 percent). The followings engaged in *other land transport and activities of travel agencies, construction and manufacturing activities* which were about 70.3, 63.8 and 56.0 percent respectively. While the establishments engaged in *business trade and services activity* had the lowest proportion of about 50.4 percent. The highest average number of persons using internet was found in *hospital activity* of about 50 persons per establishment. The others had about 8 persons per establishment.

3.1 Type of External Connection to the Internet

Focusing the establishments located in municipal areas in the Whole Kingdom, with used of internet (about 89,157 establishments or about 52.2 percent), it was found that most establishments (about 70.8 percent) connected to the internet by dial line. The followings was xDSL about 24.2 percent. For the connection to the internet by Leased Line, cable modem and ISDN were about 6.3, 4.5 and 3.7 percent respectively. While the connection to the internet by wireless connection i.e. mobile phones, satellite etc. and other fixed connection i.e. frame relay or VPN were very small proportion of about 0.9 and 0.5 percent respectively.

Figure N Percentage of Establishments with Using Internet by Type of External Connection to the Internet

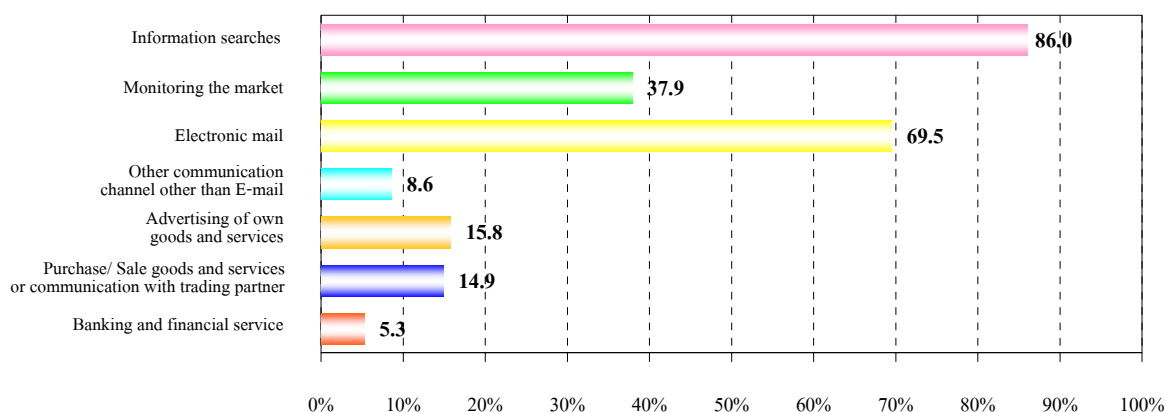


Note : More than 1 characteristic can be done by an establishment.

3.2 Purposes of Using the Internet

Considering the purposes of using the internet of establishment, Figure O shows that most of establishments (about 86.0 percent) accessed to the internet for information searches. Followed by those accessed to the internet for electronic mail, monitoring the market and advertising of own goods and services were about 69.5, 37.9 and 15.8 percent respectively. For the purchase/sale goods and services or communication with trading partner about 14.9 percent. The other purposes, each, had less than 10.0 percent.

Figure O Percentage of Establishments with Using Internet by Purposes of Using the Internet



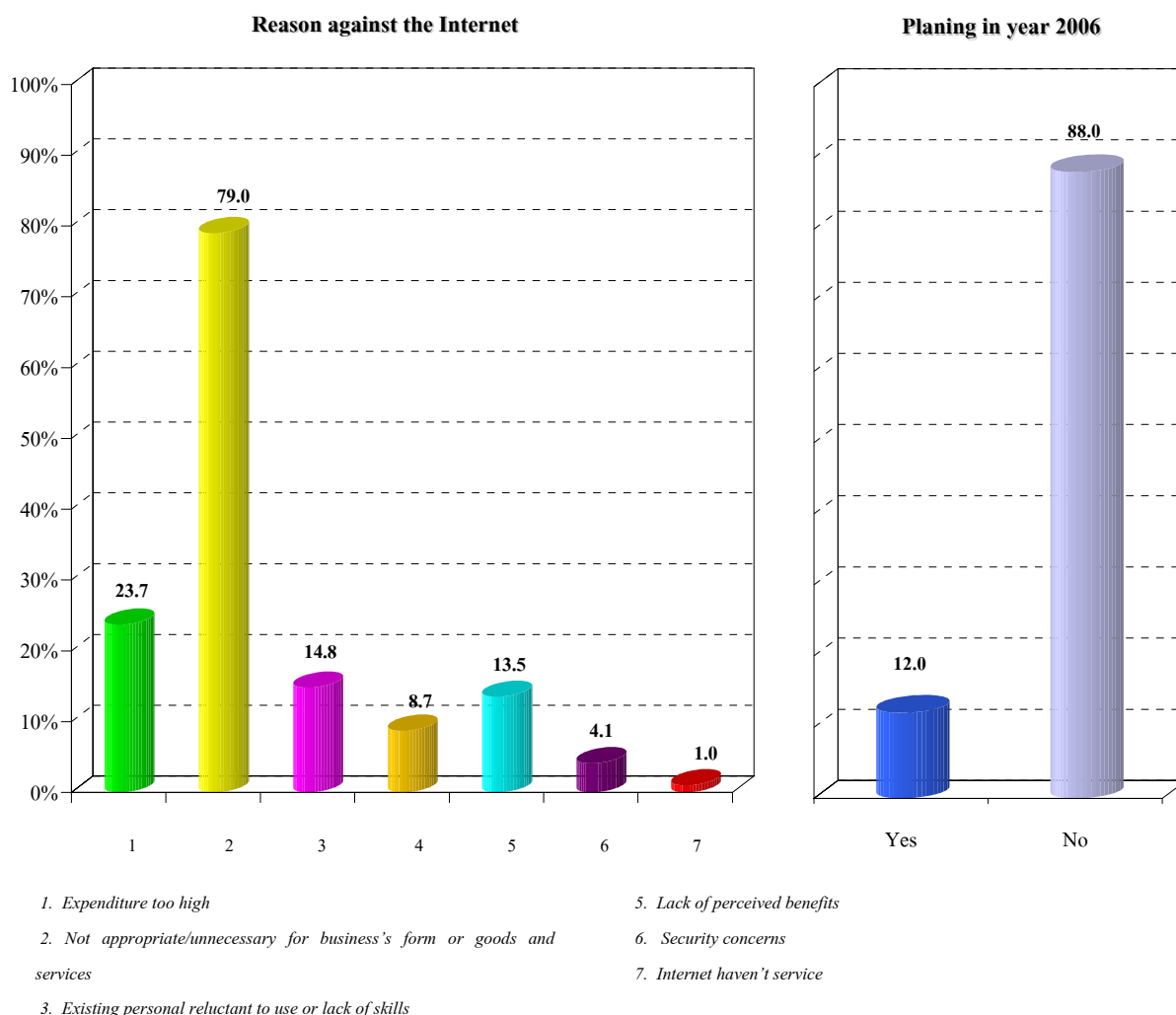
Note : More than 1 characteristic can be done by an establishment.

3.3 Reasons against the Internet and Planing in year 2006

The establishments located in municipal areas in the Whole Kingdom, which didn't use of the internet (about 81,587 establishments) reported the reason against Internet that it is not appropriate/unnecessary for business's form or goods and services about 79.0 percent. The followings were too high expenditure and existing personal reluctant to use or lack skills of about 23.7 and 14.8 percent respectively. About 13.5 percent of establishments reported of lack perceived benefits.

For the plan to use of the internet of establishment in year 2006 there was very small proportion establishment of about 12.0 percent that have planned.

Figure P Percentage of Establishments against the Internet by Reason and Planing in year 2006



Note : More than 1 reason against the internet can be done by an establishment.

4) Web site Presence

For the web site usage, there were 4.0 percent of the establishments located in municipal areas in the Whole Kingdom. Out of these, about 87.2 percent, had their own web site and about 13.7 percent used other web portals. (Table D)

In term of size of establishment, it appeared that the large scale establishments (more than 200 persons) had the highest proportion about 69.0 percent of use of web site. Out of these, about 82.7 percent, had their own web site and 20.4 percent used other web portals. While the establishments with 1 - 15 persons had the lowest proportion of about 2.8 percent.

Table D Number and Percentage of Establishments with Use of Web site by Size of Establishment and Economic Activity

Size of Establishment / Economic Activity	Number of Establish- ments Reported	Use of Web site ^{1/}						No	
		Total		Own Web site		Web portal			
		Number	%	Number	%	Number	%	Number	%
Total	749,077	30,206	4.0	26,342	87.2	4,127	13.7	718,872	96.0
Size of Establishment									
1 - 15 persons	725,358	20,164	2.8	17,559	87.1	2,729	13.5	705,194	97.2
16 - 25 persons	8,068	2,458	30.5	2,239	91.1	245	10.0	5,610	69.5
26 - 30 persons	2,155	719	33.3	648	90.1	76	10.6	1,437	66.7
31 - 50 persons	4,619	1,968	42.6	1,760	89.4	226	11.5	2,651	57.4
51 - 200 persons	6,426	3,205	49.9	2,737	85.4	506	15.8	3,221	50.1
More than 200 persons	2,452	1,692	69.0	1,399	82.7	346	20.4	760	31.0
Economic Activity									
Business Trade and Services	620,572	23,154	3.7	20,230	87.4	3,111	13.4	597,418	96.3
Manufacturing	104,832	4,193	4.0	3,748	89.4	493	11.8	100,639	96.0
Construction	7,138	992	13.9	852	85.9	146	14.7	6,145	86.1
Other Land Transport and Activities of Travel Agencies	15,265	1,249	8.2	1,128	90.3	131	10.5	14,016	91.8
Hospital	1,271	618	48.6	384	62.1	246	39.8	654	54.1

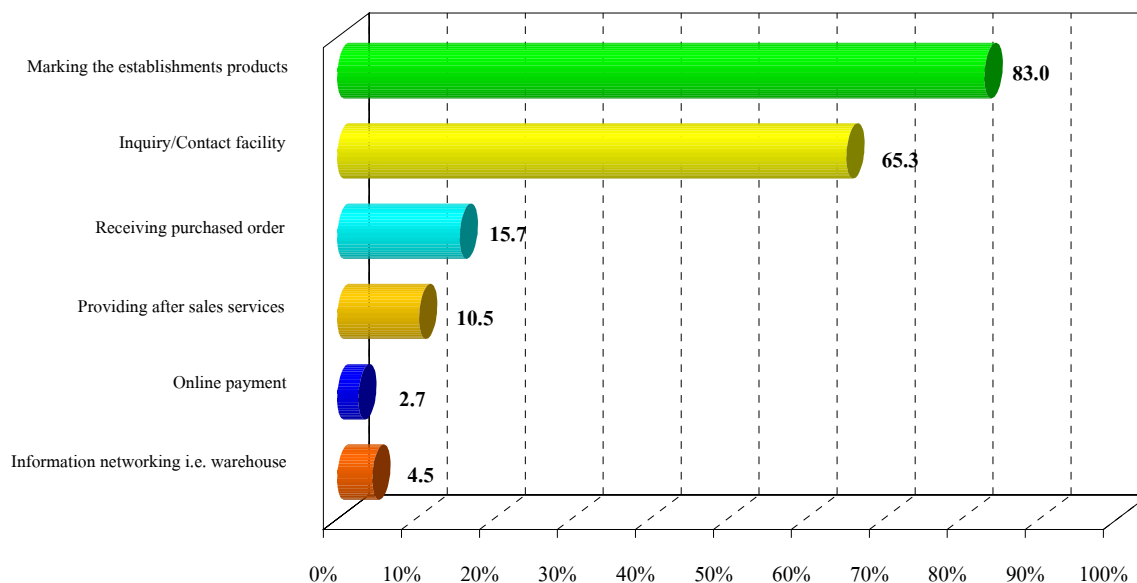
^{1/} More than 1 characteristic can be done by an establishment.

Considering by economic activity, it was found that establishments engaged in *hospital activity* had the highest proportion (about 48.6 percent) of used of web site. Followed by those engaged in *construction* and *other land transport and activities of travel agencies activities*, which were about 13.9 and 8.2 percent respectively. The establishments engaged in *manufacturing* and *business trade and services activities* were very small proportions of used of web site about 4.0 and 3.7 percent respectively.

4.1 Purposes of Using Web site

Considering the purposes of using web site of establishment, it was found that most of them (about 83.0 percent) used of web site for marketing the establishments products. The followings was inquiry or contact facility of about 65.3 percent. While those used of web site for receiving purchased order about 15.7 percent.

Figure Q Percentage of Establishments Use of Web site by Purpose



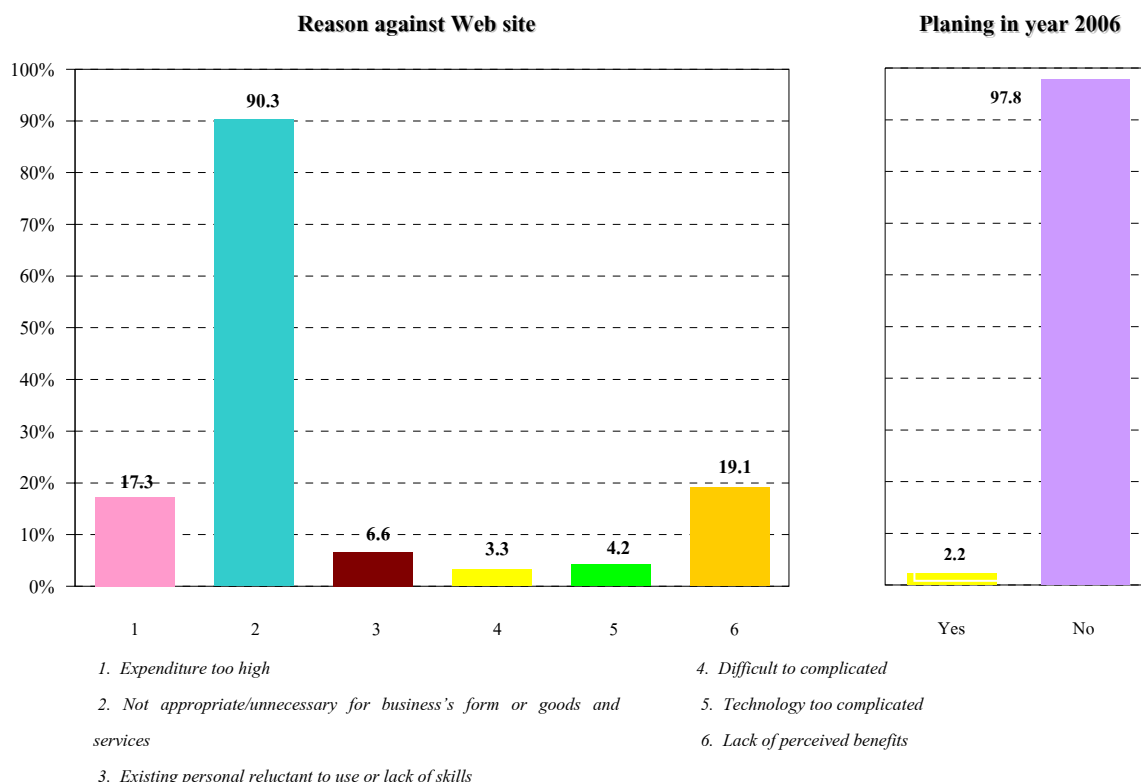
Note : More than 1 characteristic can be done by an establishment.

4.2 Reasons against Web site and Planing in year 2006

The establishments located in municipal areas in the Whole Kingdom, which didn't use of web site, about 718,872 establishments, reported that it is not appropriate/unnecessary for business's form or goods and service with the high proportion of about 90.3 percent. The followings were *lack of perceived benefits* and *expenditure is too high* of about 19.1 and 17.3 percent respectively.

Looked at the plan to use of web site of establishments in year 2006, it was found that there was very small proportion of about 2.2 percent.

Figure R Percentage of Establishments against Web site by Reasons and Planing in year 2006



Note : More than 1 characteristic with reason against web site can be done by an establishment.

5) Purchases via Internet and Payment via Internet

Table E shows that establishments located in municipal areas in the Whole Kingdom was very small proportion of purchasing via internet about 1.3 percent. Out of these, the payment via internet was about 21.6 percent.

In term of size of establishment, it was found that the large scale establishments (more than 200 persons) had the highest proportion of purchasing via internet about 19.6 percent. Followed by those with 51 - 200 persons was about 12.3 percent. For the payment via internet, it was found that establishments with 26 - 30 persons had the highest proportion about 22.4 of the purchasing via internet.

Considering by economic activity, it was found that establishments engaged in *hospital activity* had the highest proportion of purchases via internet of about 8.0 percent. Followed by those engaged in *construction* and *other land transport and activities of agencies activities* were about 2.3 and 1.4 percent respectively. The establishments engaged in *business trade and services* and *manufacturing activities* were not much different of about 1.3 and 1.2 percent respectively. For the payment via internet, it was found that establishments engaged in *other land transport and activities of travel agencies activity* had the highest proportion of about 30.6 percent.

Table E Percentage of Establishments with Purchase via Internet and Payment via Internet by Size of Establishment and Economic Activity

Size of Establishment / Economic Activity	Number of Establishments Reported	No Purchases	Purchases via Internet		
			Total	Payment via Internet	No Payment
Total	749,077	98.7	1.3	21.6	78.4
Size of Establishment					
1 - 15 persons	725,358	99.0	1.0	22.0	78.0
16 - 25 persons	8,068	92.0	8.0	21.1	78.9
26 - 30 persons	2,155	90.3	9.7	22.4	77.6
31 - 50 persons	4,619	88.2	11.8	20.1	79.9
51 - 200 persons	6,426	87.7	12.3	20.3	79.7
More than 200 persons	2,452	80.4	19.6	20.8	79.2
Economic Activity					
Business Trade and Services	620,572	98.7	1.3	22.1	77.9
Manufacturing	104,832	98.8	1.2	16.7	83.3
Construction	7,138	97.7	2.3	21.7	78.3
Other Land Transport and Activities of Travel Agencies	15,265	98.6	1.4	30.6	69.4
Hospital	1,271	92.0	8.0	21.6	78.4

6) Sales via Internet and Receivable via Internet

Table F shows that establishments located in municipal areas in the Whole Kingdom was very small proportion of sales via internet, about 0.8 percent. The receivable via internet was about 20.8 percent.

In term of size of establishments, it appeared that the large scale establishments (more than 200 persons) had the highest proportion of sales via internet of about 20.7 percent. Followed by those with 51 - 200 persons which was about 11.8 percent. The small scale establishments had low proportion of about 0.5 percent. For the receivable via internet, it was found that establishments with 1 - 15 persons had the highest proportion of receivable via internet of about 24.2 percent of sales via internet. Followed by those with 16 - 25 persons was about 19.7 percent.

Considering by economic activity, it was found that establishments engaged in *other land transport and activities of travel agencies activity* had the highest proportion of sales via internet, which was about 1.8 percent. Followed by those engaged in *construction and manufacturing activities* were about 1.4 and 1.3 percent respectively. While the *hospital and business trade and service activities* had small proportion less than 1.1 percent. For the receivable via internet was found that establishments engaged in *business trade and services activity* had the highest proportion of receivable via internet about 24.6 percent. The lowest proportion of receivable via internet was found in *construction activity* of about 10.6 percent.

Table F Percentage of Establishments with Sale via Internet and Receivable via Internet by Size of Establishment and Economic Activity

Size of Establishment / Economic Activity	Number of Establishments	No Sales	Sales via Internet		
			Total	Receivable via Internet	No Receivable
Total	749,077	99.2	0.8	20.8	79.2
Size of Establishment					
1 - 15 persons	725,358	99.5	0.5	24.2	75.8
16 - 25 persons	8,068	94.8	5.2	19.7	80.3
26 - 30 persons	2,155	93.8	6.2	17.1	82.9
31 - 50 persons	4,619	91.6	8.4	13.8	86.2
51 - 200 persons	6,426	88.2	11.8	12.6	87.4
More than 200 persons	2,452	79.3	20.7	16.8	83.2
Economic Activity					
Business trade and services	620,572	99.4	0.6	24.6	75.4
Manufacturing	104,832	98.7	1.3	11.9	88.1
Construction	7,138	98.6	1.4	10.6	89.4
Other Land Transport and Activities of Travel Agencies	15,265	98.2	1.8	14.0	86.0
Hospital	1,271	99.0	1.0	23.0	77.0

7) Use of EDI or Other Computer Mediated Networks

Table G illustrates the use of EDI or other computer mediated networks of the establishments located in municipal areas in the Whole Kingdom. There was very small proportion about 0.4 percent and the rest, of about 99.6 percent didn't. Out of these, about 0.7 percent have planed to use EDI or computer mediated networks in year 2006.

In term of size of establishment, it was found that the large scale establishments (more than 200 persons) had the highest proportion of used of EDI of about 17.2 percent. Followed by those with 51 - 200 persons, 26 - 30 persons and 31 - 50 percent were about 5.0, 3.3 and 2.7 percent respectively. The other sizes had small proportion less than 2.5 percent. It is noticeable that the large scale establishments have planed to use of EDI in the year 2006 with the highest proportion, about 7.8 percent.

Considering by economic activity, it was found that the establishments engaged in *other land transport and activities of travel agencies activity* had the highest proportion of used of EDI than the others of about 1.0 percent. The followings engaged in *hospital activity* was about 0.9 percent. The *manufacturing* and *construction* activities had the same proportions of about 0.5 percent. The *business trade and services activity* was small proportion of about 0.4 percent. It is noted that *hospital activity* has planed to use of EDI in the year 2006 with the highest proportion, 11.0 percent.

Table G Percentage of Establishments with Use of EDI or Other Computer Mediated Networks by Size of Establishment and Economic Activity

Size of Establishment / Economic Activity	Number of Establishments		Use of EDI or Other Computer Mediated Networks							
			Yes		No					
	Number				Total		Plan to Use EDI in 2006		No Plan	
			Number	%	Number	%	Number	%	Number	%
Total	832,043	100.0	3,434	0.4	828,610	99.6	5,686	0.7	822,923	99.3
Size of Establishment										
1 - 15 persons	801,297	100.0	2,094	0.3	799,203	99.7	4,587	0.6	794,616	99.4
16 - 25 persons	11,472	100.0	238	2.1	11,234	97.9	247	2.2	10,987	97.8
26 - 30 persons	2,911	100.0	96	3.3	2,816	96.7	101	3.6	2,715	96.4
31 - 50 persons	6,006	100.0	162	2.7	5,844	97.3	197	3.4	5,647	96.6
51 - 200 persons	7,711	100.0	389	5.0	7,322	95.0	384	5.2	6,938	94.8
More than 200 persons	2,646	100.0	455	17.2	2,191	82.8	171	7.8	2,020	92.2
Economic Activity										
Business Trade and Services	691,237	100.0	2,656	0.4	688,581	99.6	4,637	0.7	683,944	99.3
Manufacturing	113,999	100.0	558	0.5	113,442	99.5	676	0.6	112,766	99.4
Construction	8,791	100.0	42	0.5	8,749	99.5	112	1.3	8,636	98.7
Other Land Transport and Activities of Travel Agencies	16,621	100.0	165	1.0	16,457	99.0	109	0.7	16,348	99.3
Hospital	1,395	100.0	13	0.9	1,382	99.1	152	11.0	1,229	89.0

8) Barriers on the Use of ICT

Considering the barriers on the used of ICT which comprises of 3 issues i.e. barriers on the use of ICT in general, use of internet and the internet sales. The results of survey are as follows;

Barriers on the use of ICT in general : the establishments reported that expenditure is too high and technology was change too fast had the same proportions of about 9.9 percent. The existing personal reluctant to use or lack of skill and difficult to recruit qualified personal were about 7.9 and 7.0 percent respectively.

Barriers on the used of internet : the establishments reported that connecting to the internet cost is too high by 6.9 percent. The followings were technology is too complicated and security concerns of about 6.5 and 5.8 percent respectively. The data communication is to slow or unstable by 5.1 percent. The lost working time because of irrelevant surfing was about 3.6 percent.

Barriers on the internet sales : the establishments reported that business's form or goods and services are not applicable for internet sales by 4.0 percent. The followings were customers are not ready to use e-commerce of about 3.1 percent. The expenses of developing and maintaining web site and e-commerce are too high had the same proportions of about 3.0 percent. While the security problem payments concerning was about 2.9 percent. (See detail in Table H)

Table H Percentage of Establishments with Important Barriers on the Use of ICT by Economic Activity

Barriers	Total	Business Trade and Services	Manufacturing	Construction	Other Land Transport and Activities of Travel Agencies	Hospital Activities
Number of Establishments	832,043	691,237	113,999	8,791	16,621	1,395
✧ The Use of ICT in General						
<i>Expenditure too high</i>	9.9	10.1	9.0	11.6	8.2	28.4
<i>Technology too fast change</i>	9.9	10.0	8.5	14.6	7.7	26.5
<i>Existing personal reluctant to use or lack of skill</i>	7.9	8.0	7.0	10.7	5.7	33.1
<i>Difficult to recruit qualified personal</i>	7.0	7.1	6.2	10.4	5.0	30.6
✧ The Use of Internet						
<i>Connecting to the internet cost too high</i>	6.9	7.1	5.4	8.4	7.3	22.7
<i>Technology is too complicated</i>	6.5	6.7	5.2	9.2	6.8	18.6
<i>Security concerns</i>	5.8	5.7	5.1	11.2	7.4	40.1
<i>Data communication is to slow or unstable</i>	5.1	5.1	4.0	10.1	6.0	33.1
<i>Lost working time because of irrelevant surfing</i>	3.6	3.6	3.0	6.9	4.4	22.2
✧ To Internet Sales						
<i>Goods and service not applicable for internet sales</i>	4.0	4.1	3.4	6.1	2.6	8.7
<i>Customer not ready to use e-commerce</i>	3.1	3.2	2.5	5.4	2.8	10.5
<i>Expenses of developing and maintaining web site too high</i>	3.0	3.0	2.4	5.3	3.3	9.5
<i>Expenses of developing and maintaining an e-commerce too high</i>	3.0	3.0	2.4	4.9	3.1	9.8
<i>Security problem payments concerning</i>	2.9	2.9	2.5	4.5	2.3	9.3
<i>Uncertainty concerning contracts, terms of delivery and guarantee</i>	2.7	2.8	2.3	4.4	2.4	8.9
<i>Logistical problems</i>	2.4	2.5	2.0	4.4	2.0	6.9
<i>Law or regulation concerning e-commerce is not complete</i>	2.2	2.2	1.9	4.1	2.3	9.2

3. Data Comparison Among Regions

Comparison of the use of information and communication technology of establishments, with one person engaged or more among regions, the major findings (Table I) are as follows;

Computer Used, the results of the survey found that establishments in Bangkok had the highest proportion of using the computer, of about 29.3 percent. Followed by those in Vicinity had about 24.0 percent. Other regions had the proportion, less than 20.0 percent of using the computer.

Considering **the average computer per establishment** in each region, it appeared that establishments in Bangkok had the highest average of 6 computers per establishment. The other regions were not much different, that is, there were about 5 computers per establishment in Vicinity, and Central region. The establishments in Northern and Northeastern regions had average of about 4 computers per establishment. In Southern region had the lowest average of about 3 computer per establishment.

The average **number of persons using computers in their normal work routines** in each regions, it was found that establishments in Bangkok and Vicinity had the highest average number of about 6 persons. The average number of persons using computers in Central region of about 5 persons per establishment. The establishments in Northern and Northeastern regions had average number of 4 persons per establishment. In Southern region had the lowest average number of 3 persons per establishment.

Internet Used, there was about 52.2 percent of the establishment used Internet in the nation and 438,873 staffs or about 5 staffs per establishment using internet in their normal work routines (at least once a week). Considering by regions, it was found that establishments in Bangkok had the highest proportion, of about 58.9 percent and there were the average number of persons using internet about 6 persons. The other regions had less than 54.0 percent of using internet.

Web site Used, there was very small proportion of about 4.0 percent. Considering the web site usage by region, it was found that establishments in Bangkok had the highest proportion of about 8.4 percent. The other regions were not much different, that is, there were about 3.4, 3.2, 2.2 and 2.0 percent in Vicinity, Southern, Northern and Central region respectively. In Northeastern region had the lowest proportion of about 1.3 percent of establishment using web site.

Purchases via Internet, there was vary small proportion of about 1.3 percent. For the payment via internet, there was very small proportion about 21.6 percent with purchases via internet.

Considering the purchasing via internet in each region, it was found that establishments in Southern region had the highest proportions of about 1.9 percent. In Vicinity, Northern region and Bangkok were about 1.6, 1.4 and 1.3 percent respectively. While establishments in Central and Northeastern region had the same proportion of about 0.9 percent.

For the payment via internet in each regions, it was found that establishment in Northeastern and Southern region had the highest proportion of about 29.5 of purchases via internet. The followings were in Northern, Central region and Vicinity of about 27.6, 21.1 and 19.1 percent respectively. Bangkok had the lowest proportion, of about 11.4 percent.

Sales via Internet, there was very small proportion of about 0.8 percent and the receivable via internet was also small proportion, about 20.8 percent. Considering by regions, it was found that establishments in Bangkok had the highest proportion of selling via internet of about 1.2 percent. Followed by those in Vicinity and Southern region had the same proportion of about 0.8 percent. The other regions had less than 0.6 percent.

For the receivable via internet in each regions, it was found that establishments in Northern region had the highest proportion of receivable via internet of about 43.7 percent of selling via internet. The followings were in Southern and Central regions of about 29.0 and 23.1 percent respectively. The other regions had less than 18.0 Percent.

Use of EDI or Other Computer Mediated Networks (other than internet), there was very small proportion of about 0.4 percent, especially establishments in Bangkok and Southern region had the highest proportions of about 0.6 percent. Other regions had less than 0.3 percent.

Table I Percentage of Establishments by Use Information and Communication Technology and Region

Information and Communication Technology	Whole Kingdom	Bangkok	Vicinity	Central region	Northern region	Northeastern region	Southern region
Number of Establishments	832,043	247,115	78,849	132,320	117,903	150,773	105,083
Computer	100.0	100.0	100.0	100.0	100.0	100.0	100.0
No	79.5	70.7	76.0	83.2	84.2	86.2	83.2
Yes	20.5	29.3	24.0	16.8	15.8	13.8	16.8
● <i>Number of Computer (Units)</i>	831,559	414,311	100,353	106,101	74,637	76,585	59,572
<i>Average per Establishment (Units)</i>	4.9	5.7	5.3	4.8	4.0	3.7	3.4
<i>Connected to the Internet (Units)</i>	392,632	211,266	40,625	45,369	38,015	30,890	26,468
● <i>Number of Persons Using Computer (Persons)</i>	896,789	461,109	112,677	116,948	72,137	76,026	57,892
<i>Average per Establishment (Persons)</i>	5.3	6.4	5.9	5.3	3.9	3.6	3.3
Internet	100.0	100.0	100.0	100.0	100.0	100.0	100.0
No	47.8	41.1	51.5	54.1	46.6	59.0	51.3
Yes	52.2	58.9	48.5	45.9	53.4	41.0	48.7
<i>Number of Persons Using Internet (Persons)</i>	438,873	249,273	44,653	49,582	35,494	33,714	26,158
<i>Average per Establishment (Persons)</i>	4.9	5.8	4.9	4.9	3.6	3.9	3.0
Web site	100.0	100.0	100.0	100.0	100.0	100.0	100.0
No	96.0	91.6	96.6	98.0	97.8	98.7	96.8
Yes	4.0	8.4	3.4	2.0	2.2	1.3	3.2
Purchases via Internet	100.0	100.0	100.0	100.0	100.0	100.0	100.0
No	98.7	98.7	98.4	99.1	98.6	99.1	98.1
Yes	1.3	1.3	1.6	0.9	1.4	0.9	1.9
Payment via Internet	100.0	100.0	100.0	100.0	100.0	100.0	100.0
No	78.4	88.6	80.9	78.9	72.4	70.5	70.5
Yes	21.6	11.4	19.1	21.1	27.6	29.5	29.5
Sales via Internet	100.0	100.0	100.0	100.0	100.0	100.0	100.0
No	99.2	98.8	99.2	99.6	99.4	99.6	99.2
Yes	0.8	1.2	0.8	0.4	0.6	0.4	0.8
Receivables via Internet	100.0	100.0	100.0	100.0	100.0	100.0	100.0
No	79.2	85.1	91.0	76.9	56.3	82.7	71.0
Yes	20.8	14.9	9.0	23.1	43.7	17.3	29.0
Use of EDI or Other Computer Mediated Networks	100.0	100.0	100.0	100.0	100.0	100.0	100.0
No	99.6	99.4	99.7	99.8	99.7	99.8	99.4
Yes	0.4	0.6	0.3	0.2	0.3	0.2	0.6