

1.0 Introduction

This study examines the current and future use of the Internet and E-commerce of small and medium sized companies (SMEs) in Thailand. The survey was conducted between October to December 2001.

- 1.1 Summary of Use Patterns
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 - 1.1.2 Prospective Users
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2.0 Project aim

This project has a twofold purpose. The first objective is to describe the functions and the current and future use patterns of the Internet and e-commerce among SMEs in Thailand. The second objective is to identify barriers to greater use of the Internet and e-commerce.

The study mainly focuses on the Internet users. Since the number of the Internet users among the SMEs is very low, the results should not be used as a basis to extrapolate the total number of SMEs' using the Internet or e-commerce.

3.0 Methodology

3.1 Company's size criteria

As defined by the Department of Industrial Promotion, Ministry of Industry, a small company has 5 to 50 employees; a medium company has 51 to 200 employees.

3.2 Data collection

A survey method was used. Personal in-depth interviews based on Thai version questionnaires were conducted to collect information and data. The interviews were conducted on the voluntary basis.

The targeted interviewees were either company's owners or primary decision-makers of the company. Only headquarters were interviewed. In the list of companies in each sector and city, respondents were conveniently selected. Internet users included:

- E-mail and WWW users
- Companies with websites
- Internet banking users

3.3 Sampling Frame

To select samples, resources used to shortlist companies were as follows:

- Internet searches for companies with web-sites
- E-commerce portals
- Ministry of Industry
- Ministry of Commerce
- Yellow Pages
- Classified ads in local newspapers
- Classified ads in national newspapers.
- Tourism Authority of Thailand

3.4 Samples

The samples included 200 small and medium sized companies in five regions and five sectors in Thailand. A stratified sampling approach was primary used to achieve the proportion of 75:25 between the Internet users to the non-users. However, small and medium sized Internet users in hotel, telecommunication, and IT industries are not many in some cities. Consequently, respondents from these sectors were less than other sectors. The actual proportion of samples of Internet users to non-users, thus, is 76:24.

3.4.1 City breakdown

By geography, the samples included companies in 5 regions as follows (Table 1.1):

- Northern : 40 companies in Chiang Mai
- Northeastern: 40 companies in Nakhon Ratchasima
- Central: 40 companies in Bangkok
- Eastern: 40 companies in Chonburi
- Southern: 40 companies in Phuket

Table 1.1
Respondents classified by cities

City	Small business	Medium business	Total
Bangkok	26	14	40
Chiang Mai	28	12	40
Chonburi	22	18	40
Nakhon Ratchasima	30	10	40
Phuket	32	8	40
Total	138	62	200

3.4.2 Sector breakdown

The samples included companies in 5 sectors as follows (Table 1.2):

- 43 companies in the manufacturing sector (i.e., manufacturers of industrial agricultural, and handicrafts products excluding IT and telecommunications related products)
- 45 companies in the distribution and trade sector (i.e., wholesalers, retailers, dealers, and distributors)
- 41 companies in the hotel and tourism sector (i.e., hotels and tour agencies)
- 36 companies in the business services sector (i.e., services providers excluding hotel, tour agencies, and telecommunications and IT related services)

- 35 companies in the telecommunication and IT sector (i.e., telecommunications and IT related manufacturers and services providers)

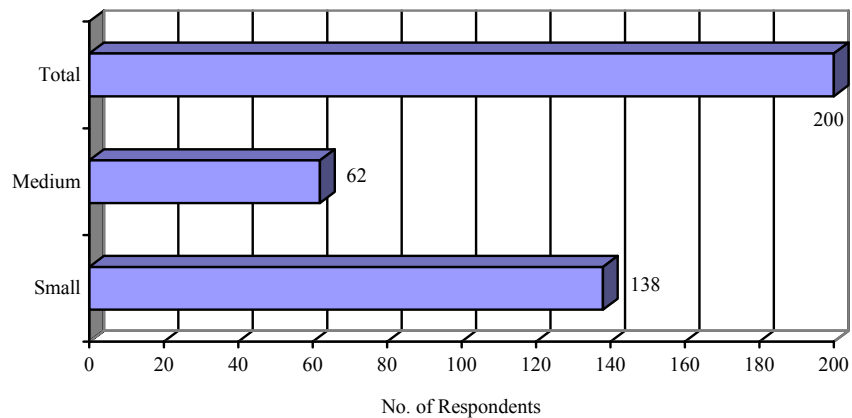
Table 1.2
Respondents classified by sector

Industry	Small business	Medium business	Total
Manufacturing	24	19	43 (21.5%)
Business services	33	12	45 (22.5%)
Distribution and Trade	27	14	41 (20.5%)
Hotel and Tourism	23	13	36 (18.0%)
Telecommunication and IT	31	4	35 (17.5%)
Total	138	62	200 (100%)

3.4.3 Size breakdown

These companies were composed of 138 small sized companies and 62 medium sized companies. Ratio between small and medium sized companies when classified by number of employees was 69:31 (Figure 1.1)

Figure 1.1
Respondents classified by size



4.0 Results of the Survey

4.1 Characteristics of respondents

4.1.1 Background

Respondents were 200 small and medium sized companies. Companies in this study included sole proprietorship, partnership, and company limited. Respondents were company owners (21.5%), IT managers (2.6%), general managers (47.7%), and others (28.2%).

From information on year of establishment, these 200 firms could be grouped into 3 groups as follows:

- younger than 10 years (40%)
- between 10 to 20 years (36%)
- 20 years or older (24%)

Strength and weakness of companies depended upon their expertise, quality of products and services, price, technology, marketing, personnel, and location.

4.1.2 Markets

73% of respondents was domestic markets oriented. They sold more than 50% of their products to local markets. Top five domestic markets for respondents in each city but Bangkok were mainly in cities in their regions and Bangkok. Respondents in Bangkok sold their products to every part of Thailand included Bangkok.

Top five foreign markets for respondents in every region were scattered. The markets included the United States, Germany, Australia, Japan, Hong Kong, Singapore, Taiwan, Malaysia, Vietnam, Cambodia, etc.

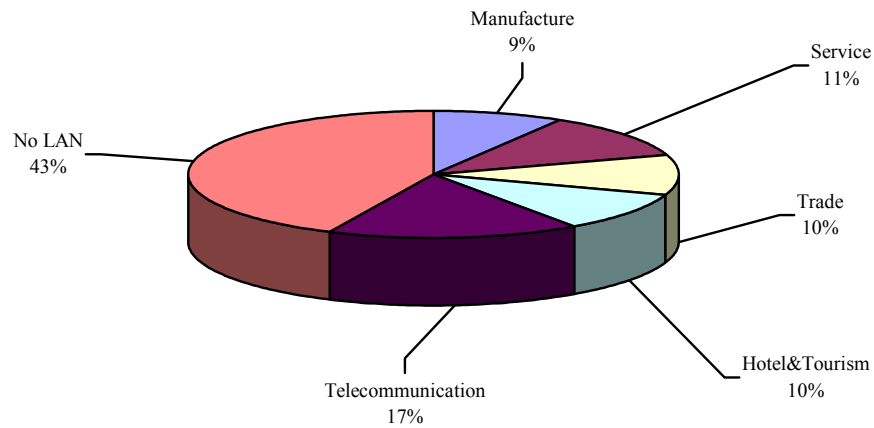
4.1.3 Usage of Personal Computers

93% of respondents had between 1 to 160 personal computers in their offices. 56.5% of these companies had 1 to 6 personal computers in their offices. 7% of respondents did not have any personal computer in their offices.

4.1.4 Usage of LAN

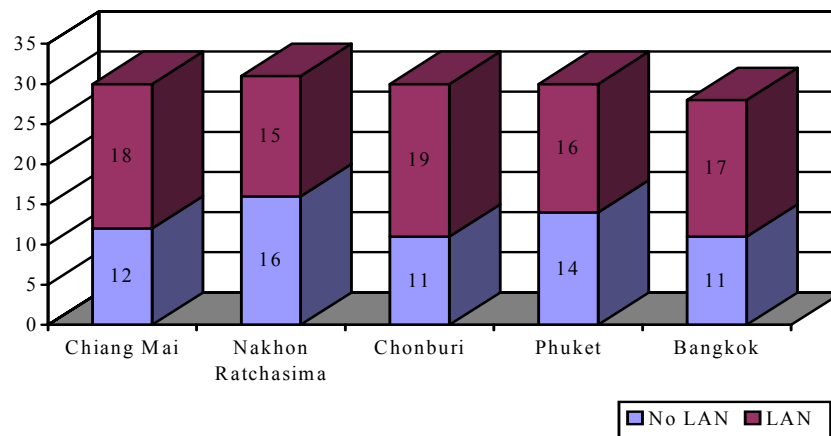
57% of companies had Local Area Network (LAN). Respondents in the telecommunication & IT sector was the largest group among the companies with LAN. Manufacturing which was the smallest group (Figure 1.2).

Figure 1.2
LAN Users by Sector



There was little difference between companies with LAN when distributed by city (Figure 1.3). The largest group was in Chonburi (22.4%). The second large group was in Chiang Mai (21.2%). The smallest group was in Nakhon Ratchasima (17.6%).

Figure 1.3
LAN Users by City



4.1.5 Proportion of Internet to non-Internet users

Respondents included 152 Internet users and 48 non-users (Table 1.3 and Table 1.4). Ratio of Internet users to non-users was 76:24 (Figure 1.4).

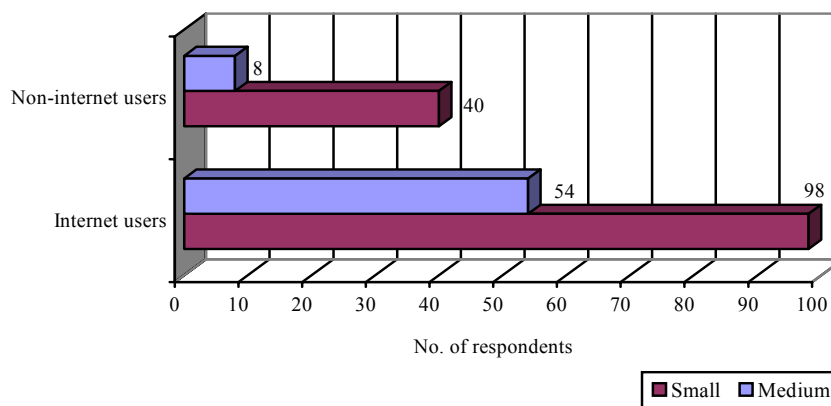
Table 1.3
Internet and non-Internet users classified by city

City	Internet users		non-Internet users		Total
	Frequency	%	Frequency	%	
Bangkok	30	15.0	10	5.0	40 (20%)
Chiang Mai	30	15.0	10	5.0	40 (20%)
Chonburi	30	15.0	10	5.0	40 (20%)
Nakhon Ratchasima	31	15.5	9	4.5	40 (20%)
Phuket	31	15.5	9	4.5	40 (20%)
Total	152	76.0	48	24.0	200 (100%)

Table 1.4
Internet and non-Internet users classified by sector

Industry	Internet users		non-Internet users		Total
	frequency	%	frequency	%	
Manufacturing	30	15.0	13	6.5	43 (21.5%)
Business services	32	16.0	13	6.5	45 (22.5%)
Distribution and Trade	30	15.0	11	5.5	41 (20.5%)
Hotel and Tourism	29	14.5	7	3.5	36 (18.0%)
Telecommunication and IT	31	15.5	4	2.0	35 (17.5%)
Total	152	76.0	48	24.0	200 (100%)

Figure 1.4
Ratio of Internet users to non-users



4.2 Internet Users and Current Use of the Internet

4.2.1 General Information

The number of Internet users in Thailand as of October 2000 according to a study conducted by the National Electronics and Computer Technology Center (NECTEC) was about 2.3 million.

There was no shortage of telephone lines. Three organizations have provided more than 4 million telephone numbers to households throughout the country.

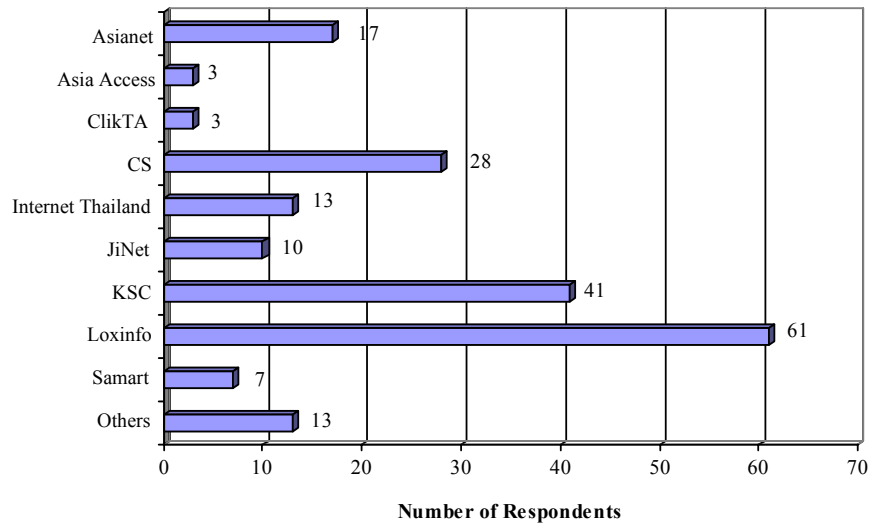
Internet Service Providers are available in every city of the study but with a limited number outside Bangkok. Apparently, the exact number of Internet Service Providers (ISP) cannot be officially stated. However, at least 25 ISPs can be identified from the Internet search as follows:

Company	Web site
A.C.T Internet Center	http://www.act.ksc.co.th
A-Net Internet	http://www.a-net.net.th/
ANEW Corporation	http://www.anew.co.th/
Asia Access	http://www.asiaaccess.net.th
Asia Infonet	http://www.asianet.co.th
Cable & Wireless Network Thailand	
Chomanan Worldnet Co Ltd.	http://www.cwn.net.th
ClickTA	
CS Internet	http://www.cscoms.com/
Data Line Thai	http://www.themead.linethai.co.th/
EZ Net	http://www.princess1.com
Far East Internet	
Idea Net	http://www.idn.co.th/
Internet KSC	http://www.ksc.net.th/
Internet Thailand	http://www.inet.co.th
Jasmine Internet	http://www.ji-net.com/
LoxInfo	http://www.loxinfo.co.th/
OhO! Web access	http://www.direct100.co.th/ofo/html
Pacific Internet Thailand	http://www.pacific.net.th/
RoyNet	
Samart Cybernet	http://www.samart.co.th/
Sawasdee Internet Service	http://sat.service.co.th/home.html
Siam Global Access	http://www.sga.net.th/
ThaiAdClick	http://www.thaiadclick.com/thai/
WorldNet	http://www.wnet.net.th/

4.2.2 Internet Users

From the survey, 152 companies are Internet users. 31.12% of these respondents had subscribed Loxinfo (Figure 1.5).

Figure 1.5
Internet Service Providers' subscribers



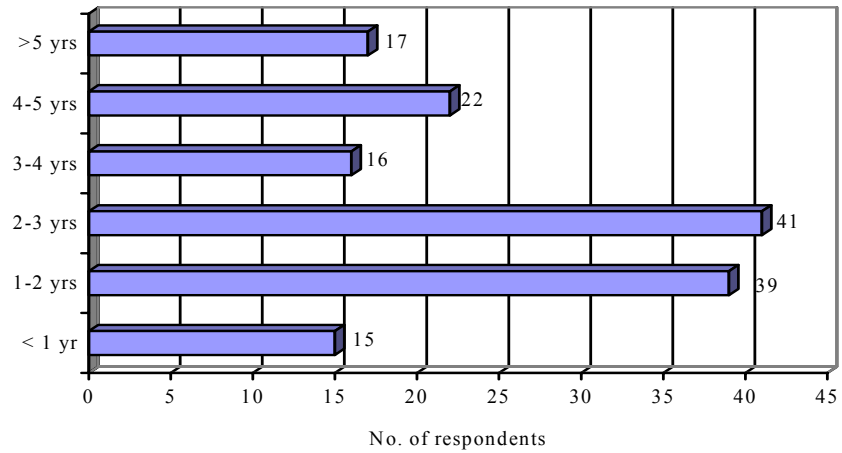
Among the 152 Internet users, 98.7% had installed the Internet in the office, 1.3% had used the Internet at Internet café.

The company that had used the Internet at the Internet café is a manufacturer in Phuket. This company had started using the Internet for 1-2 years ago and spent less than 90 Baht (USD 2) per month. The company had had no computer in the office and would use the same Internet café because of the convenience of the location.

4.2.2.1 Number of years using the Internet

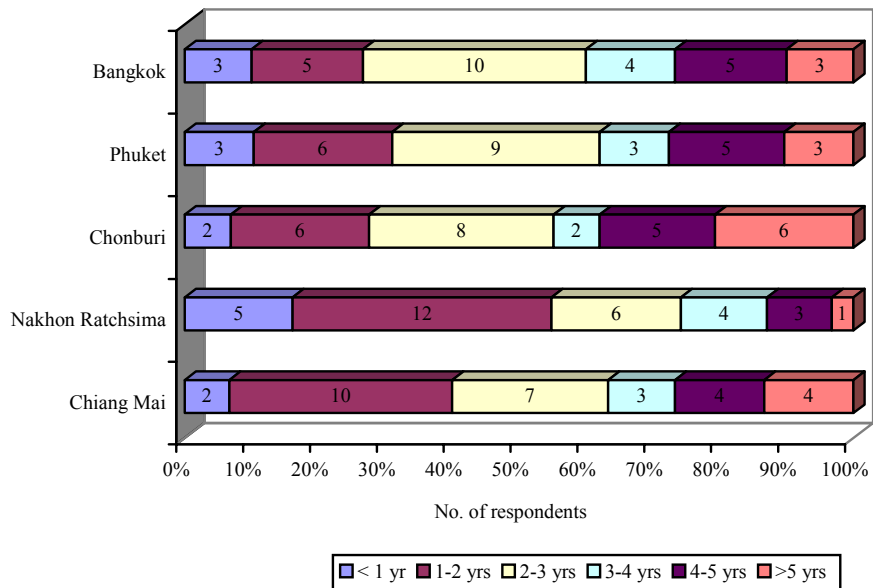
27.3% and 26% of 152 users had used the Internet for 2-3 years and 1-2 years, respectively. Only 11.3% had used the Internet over five years ago (Figure 1.6).

Figure 1.6
Number of years using the Internet



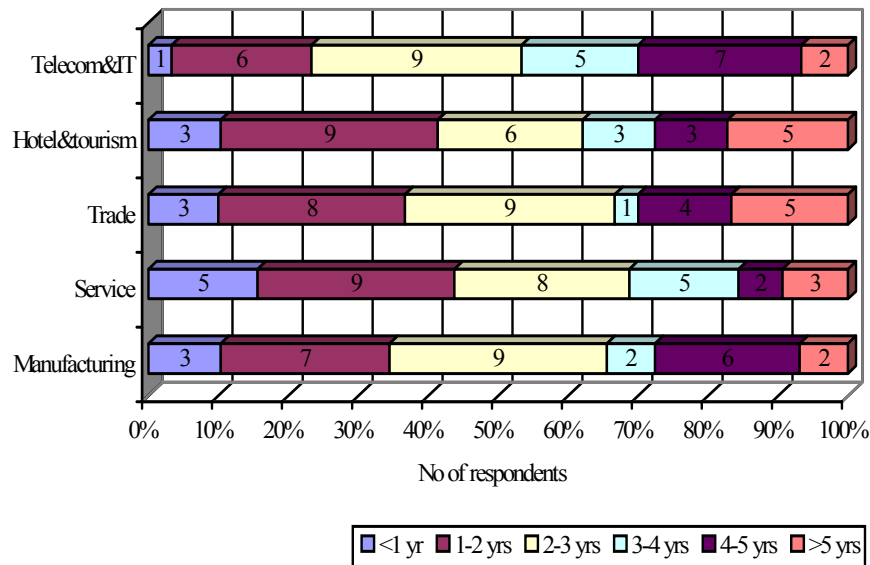
By geography (Figure 1.7), most users in Chonburi, Phuket and Bangkok had used the Internet for 2-3 years. Most Internet users in Chiang Mai and Nakhon Ratchasima had used the Internet for 1-2 years.

Figure 1.7
Number of years using the Internet by city



By sector (Figure 1.8), most companies in telecommunications & IT, manufacturing, distribution and trade sectors had used the Internet for 2-3 years. Most companies in hotel and business service sectors had used the Internet for 1-2 years.

Figure 1.8
Number of years using the Internet by sector

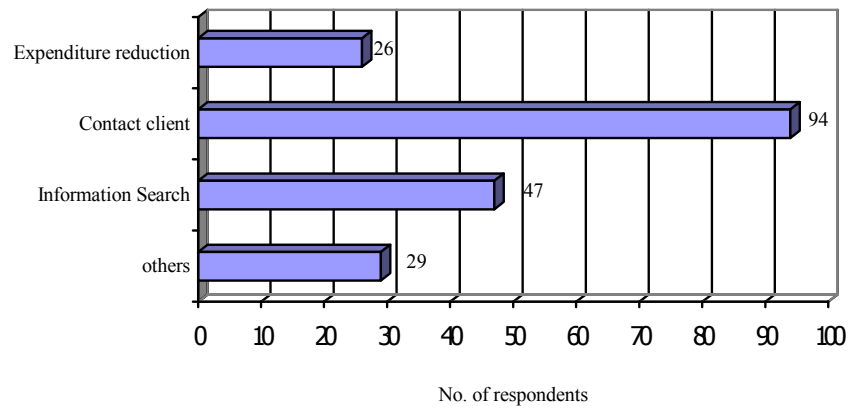


4.2.2.2 Driving forces behind using the Internet

Respondents gave various reasons to use the Internet, e.g., gateway to foreign markets, purchasing foreign products, convenient communication approach, image improvement, addition to traditional distribution channel, public relations, etc.

Three driving forces leading most companies to use the Internet (Figure 1.9) can be concluded as clients contact (62.8%), information search (31.8%), and correspondence expenditure reduction (17.6%).

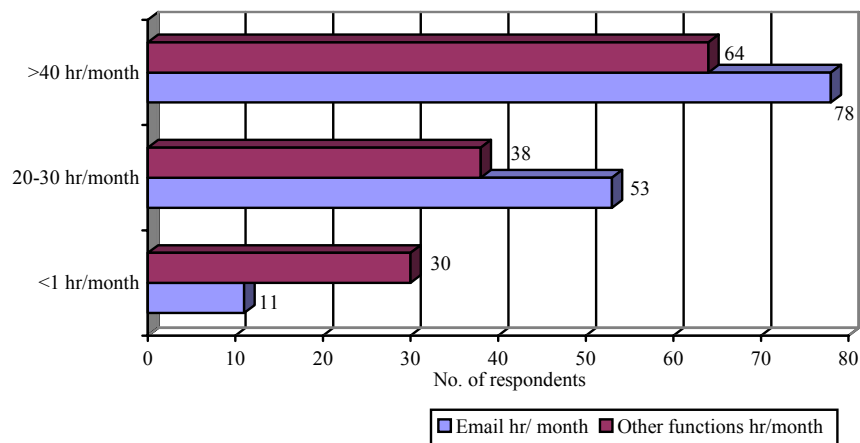
Figure 1.9
Driving forces behind using the Internet



4.2.2.3 Time spent using the Internet per month

Over 50% of companies used the email more than 40 hours per month. Almost 50% of companies used other functions of Internet more than 40 hours per month (Figure 1.10).

Figure 1.10
Time spent using the Internet per month



By sector, most companies in every industry but distribution and trade used the e-mail more than 40 hours per month. Most companies in distribution and trade sector used the e-mail 20-30 hours per month.

Companies in the hotel and tourism had fairly equal distribution of time spent using other functions of the Internet between less than 1 hour, 20-30 hours, to more than 40 hours per month. Companies in other industries mostly used other functions of the Internet more than 40 hours per month.

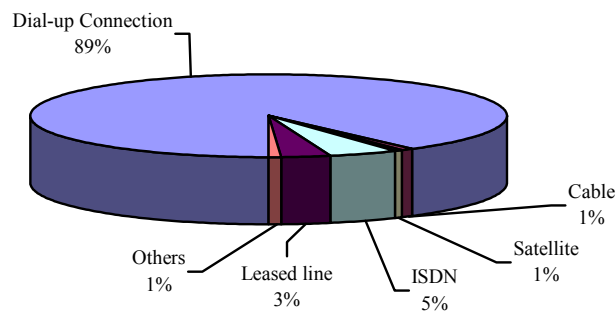
By geography, except for companies in Nakhon Ratchasima and Phuket that mostly used the email 20-30 hours per month, companies in all cities mostly used the email and the other functions of the Internet more than 40 hours per month.

4.2.2.4 Type of connection

Most companies (89.9%) had used dial-up connection to the Internet (Figure 1.11). Other connections were available but the companies considered them as too expensive when compared to activities and size of the business.

A few companies in manufacturing, business services, and distribution and trade sectors had used ISDN. Several companies in the sector of telecommunications and IT had used leased line.

Figure 1.11
Type of connection

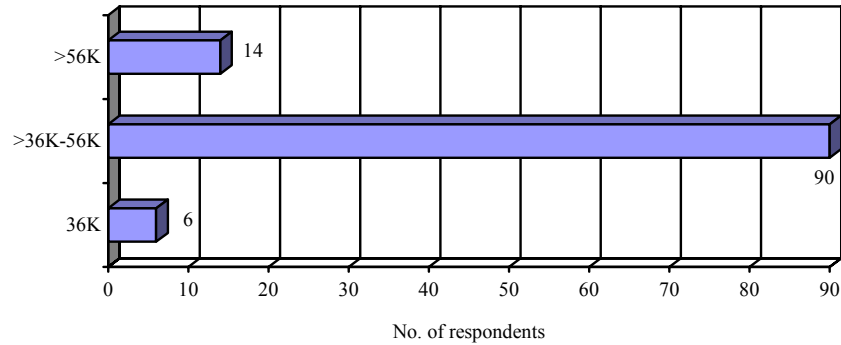


4.2.2.5 Speed evaluation

Most respondents were not certain about the average speeds received. Answers about the receiving speeds could be concluded into 3 categories (Figure 1.12): not greater than 36K (5.45%), faster than 36K but not greater than 56K (82.73%), and greater than 56K (11.82%).

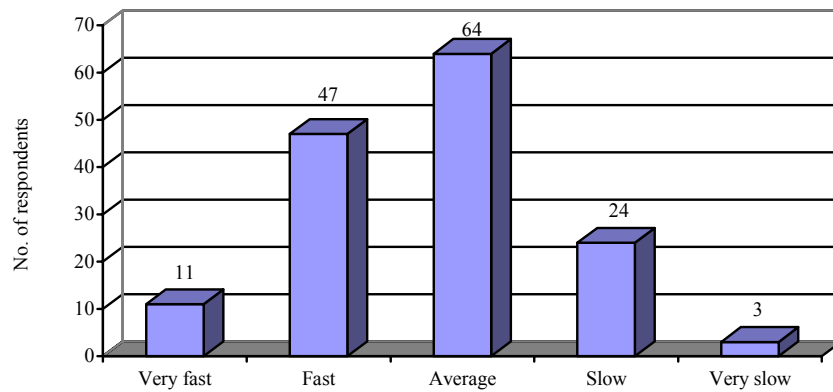
A respondent remarked that receiving speeds might depend upon the quality of the connection equipment such as computers, signal wire, modem speed, information traffic, etc.

Figure 1.12
Internet receiving speeds



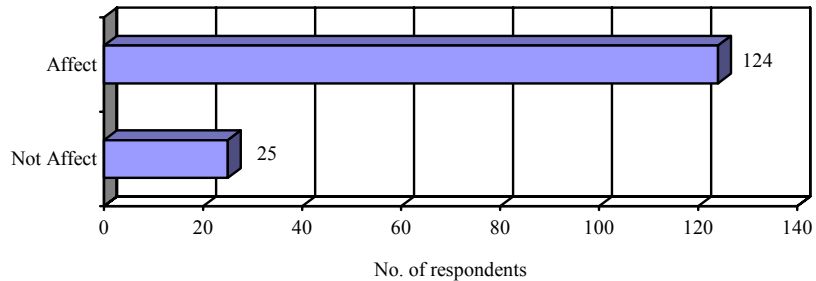
43% of respondents considered speeds of the Internet connection in Thailand were on average (Figure 1.13). 31.5% stated that the speeds of connection were fast. Only 2% argued that the connection speeds were very slow.

Figure 1.13
Receiving speeds evaluation



Most companies (83.2%) stated that speed of the Internet connection affected their decision on using the Internet (Figure 1.14). A few opinions were expressed that speed of the Internet connection would be related to time saving, cost saving, and work productivity.

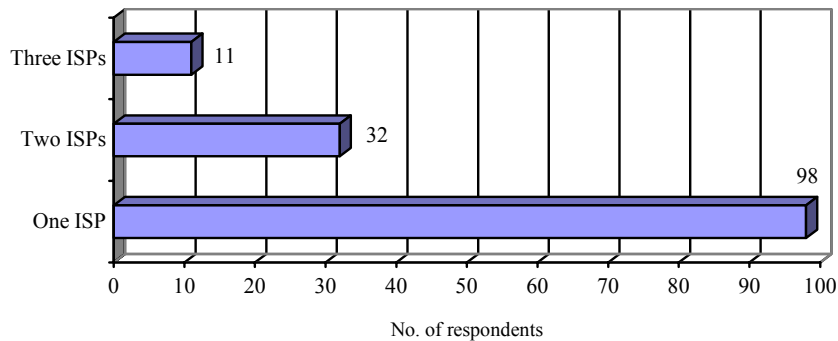
Figure 1.14
Effect of received speed toward Internet using



4.2.2.6 Number of ISPs used

Most companies (69.5%) subscribed one ISP (Figure 1.15). Only 7.8% of companies subscribed three or more ISPs.

Figure 1.15
Number of ISPs used



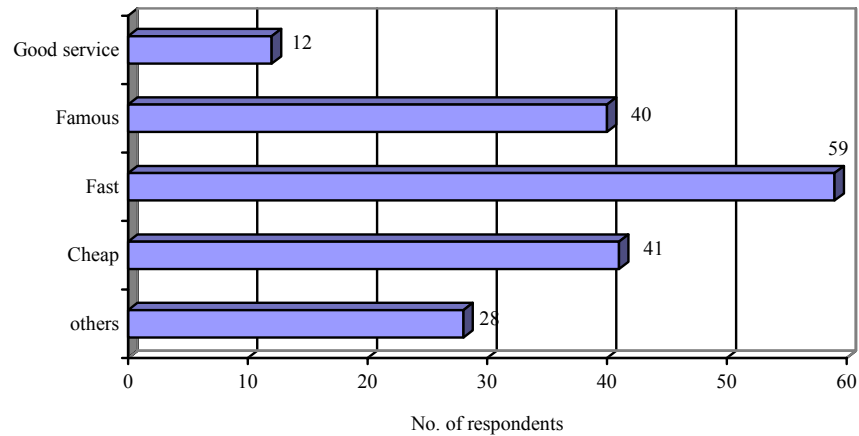
4.2.2.7 Reasons for choosing the ISP

Many ISPs were available in each city. In some cases, web designers chose the ISP for the respondents. However, companies generally chose the ISP for four reasons: good service, cheap, fast, and famous (Figure 1.16).

A number of respondents stated that the approach of the ISP's sales agents to the companies affected their selection of ISP. In many cases, those sales agents would provide information and a training program on using the Internet for the companies.

In addition, most ISPs have technical help centers in big cities. Their customers can contact them and ask for help on the telephone. Most respondents (91%) were satisfied with their ISP.

Figure 1.16
Reasons for choosing the ISP

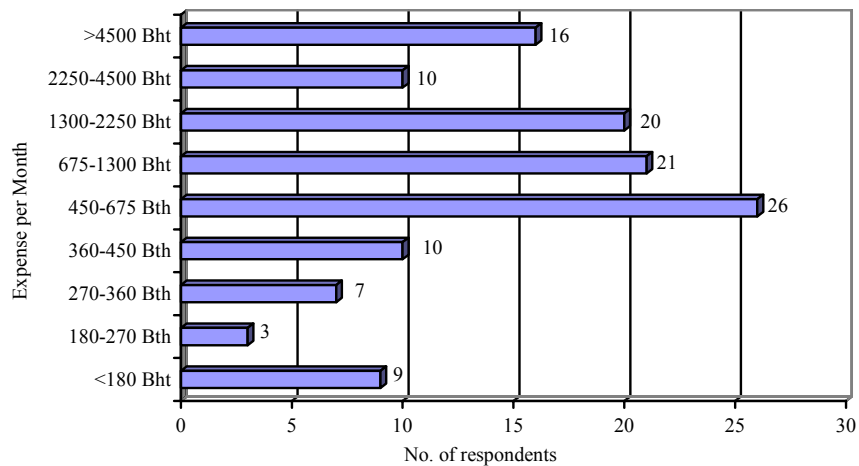


4.2.2.8 Cost of using the Internet per month

Most companies spent between 450-2,250 Baht (USD10-50) per month to the ISPs. 13.1% of companies spent more than 4,500 Baht (USD100) per month to the ISPs(Figure 1.17).

It should be noted that during the past several years, price rates of the Internet hour had changed frequently. Price tends to be lessening in the future because more ISPs will enter the industry.

Figure 1.17
Cost of using the Internet per month



4.2.2.9 Benefits of using the Internet

Most companies considered using the email (65.3%) and the other function of the Internet (37.6%) were very important in running their day-to-day business (Figure 1.18, Figure 1.19).

No different opinion was found when companies were classified either by sector or by geography.

Figure 1.18
Benefits of using the e-mail

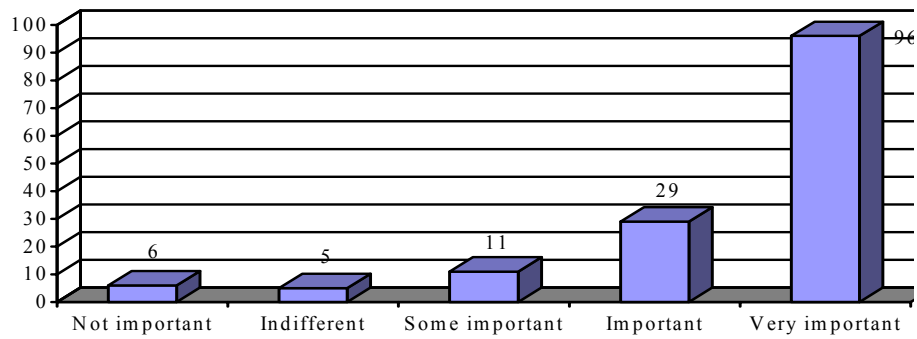
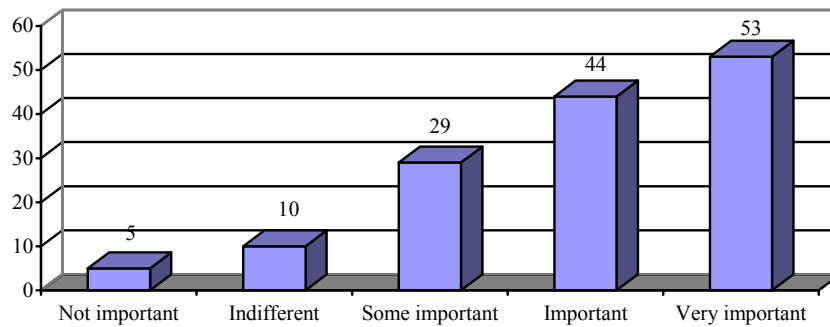


Figure 1.19
Benefits of using other function of the Internet

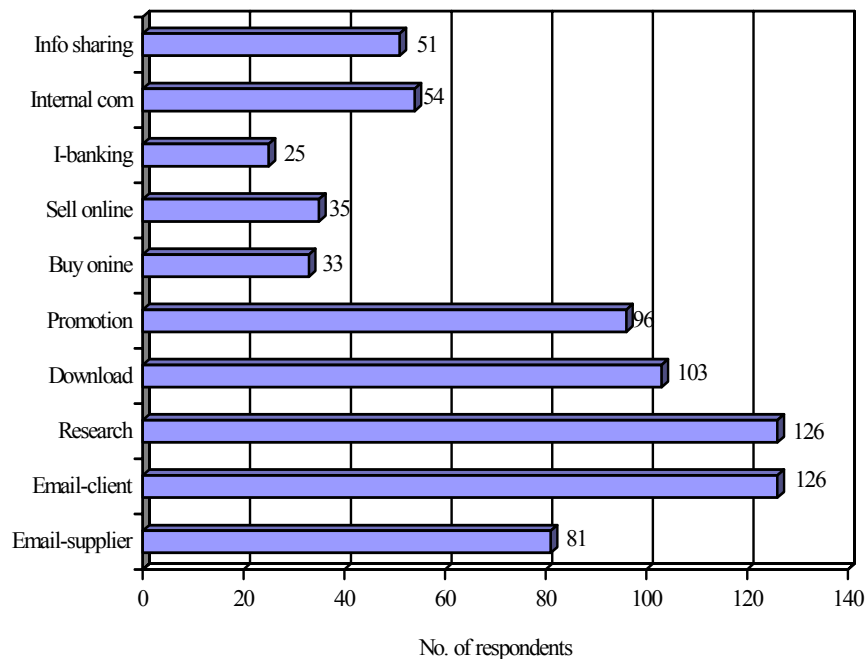


4.3 Internet Applications

Functions of the Internet that most Internet users ranked as the top three uses were as follows (Figure 1.20):

- Communication with customers (70.39%)
- Research/information search (56.58%)
- Communication with suppliers (39.47%)
- Promote company (39.47%)

Figure 1.20
Internet Applications



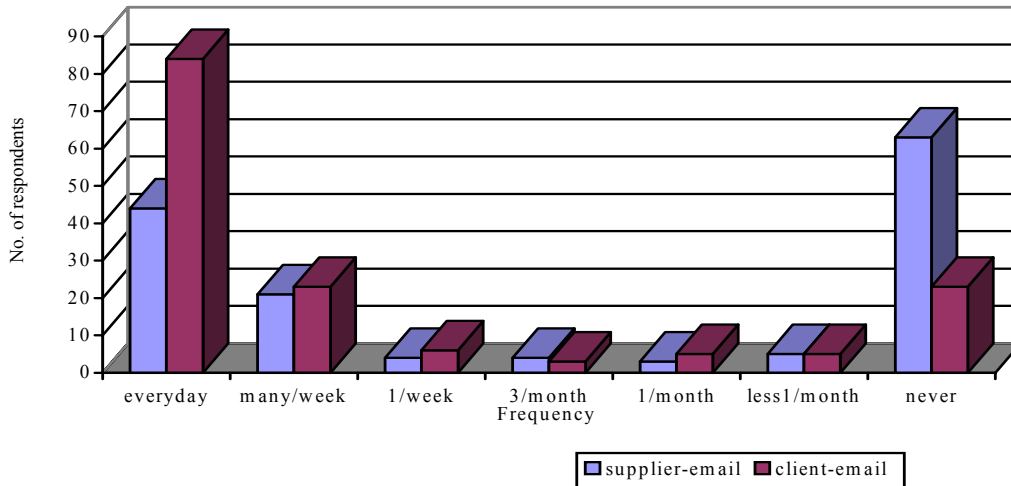
4.3.1 Email/Communication

Over 40% of the Internet users in all sectors and cities had used the e-mail daily to communicate with their suppliers and their customers.

53.28% of the Internet users had used the e-mail to communicate with their suppliers (Figure 1.21).

- 54.32% of these companies used daily
- 25.93% used several times a week

Figure 1.21
Internet use for the e-mail



82.89% of the Internet users had used the e-mail to communicate with their buyers.

- 66.67% of these companies used everyday.
- 18.25% used several times a week.

4.3.2 Research/ information search

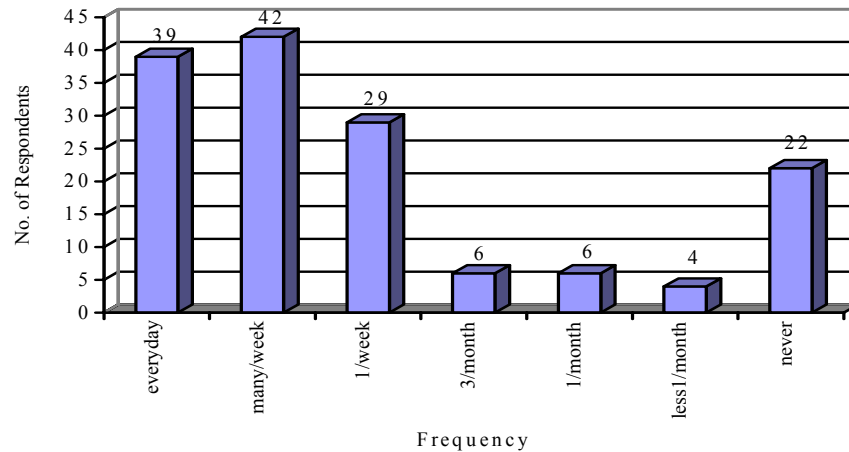
82.89% of the Internet users had used the Internet for research or information search (Figure 1.22).

- 33.33% of these companies used several times a week.
- 30.95% used daily.
- 23.01% used once a week.

By sector, most Internet users in telecommunications sector used this function daily while other sectors' used several times a week.

By geography, most Internet users in Chonburi and Phuket used this function daily while other cities' used several times a week.

Figure 1.22
Research/information search



4.3.3 Software/documents downloading

67.76% of the Internet users had used the Internet to download document (Figure 1.23).

- 24.27% once a week
- 23.3% several times a week
- 18.47% daily.

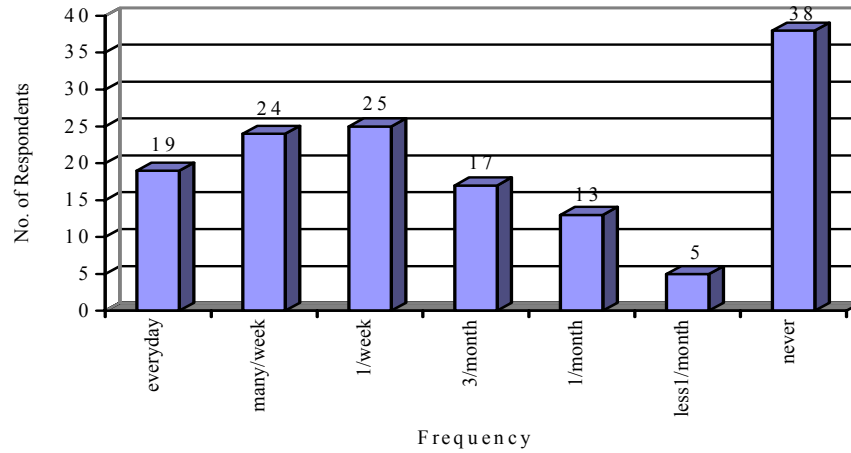
Internet users in different industries had mostly used this function differently.

- Manufacturing and business services sectors mostly used once a week.
- Telecommunications sector mostly used several times a week.
- Hotels and tourism sector might use once a month to once a week.
- Distribution and Trade sector might use once a month or several times a week.

Internet users in different cities had mostly used this function differently.

- Users in Nakhon Ratchasima and Phuket mostly used once a week.
- Users in Chiang Mai mostly used several times a week.
- Users in Chonburi mostly used everyday.
- Users in Bangkok mostly used several times a month.

Figure 1.23
Internet use for software/documents downloading



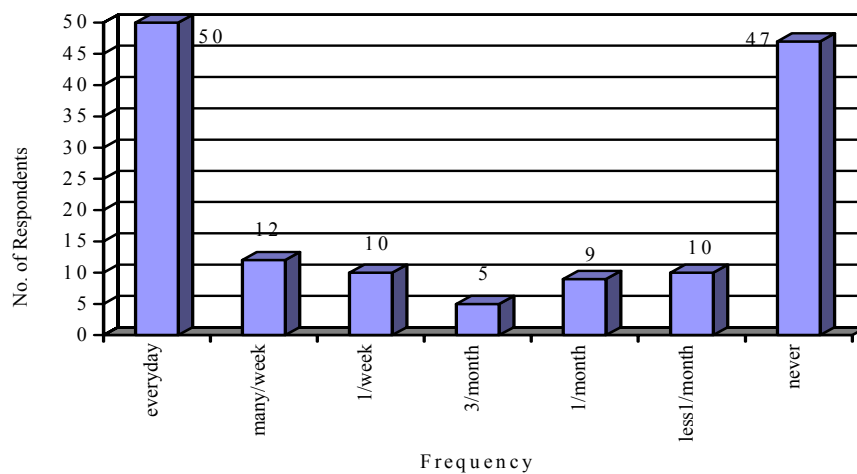
4.3.4 Company's Promotion

63.16% of the Internet users had used the Internet to promote company (Figure 1.24).

- 52.08% of these users had used daily.
- 12.5% had used several times a week.

Most of these users in all sectors and cities had used this function daily.

Figure 1.24
Internet use for promote company



4.3.5 Buying online

21.71% of the Internet users had used the Internet to buy products or services online (Figure 1.25).

- 33.33% of these users had used everyday.
- 18.18% had used less than once a month.

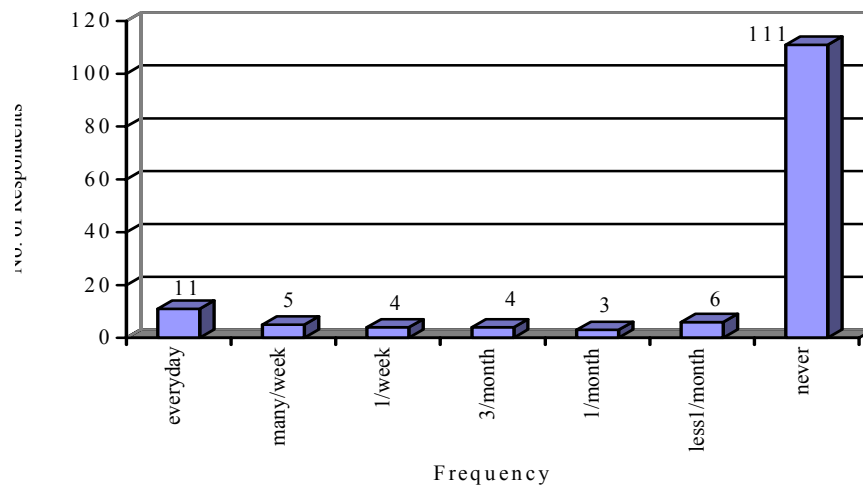
By geography:

- Respondents in Chonburi, Phuket, and Bangkok tended to use this function daily or several times a week.
- Chiang Mai tended to use this function once a month or less.
- Nakhon Ratchasima had rarely used this function.

By industry:

- Telecommunications tended to use this function more frequently than other sectors.
- Distribution and Hotel sectors were the second frequent users.

Figure 1.25
Internet use for buying online

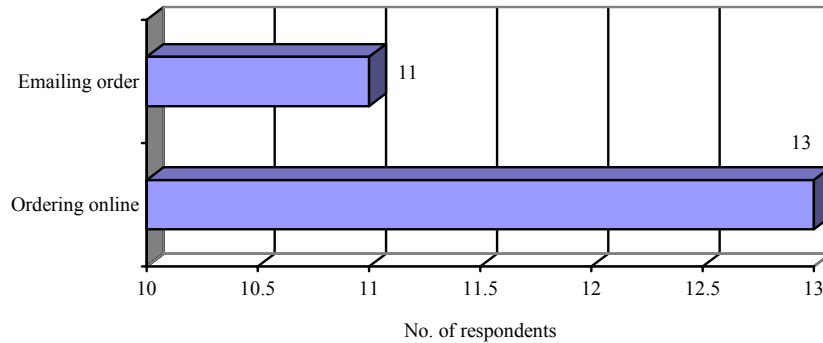


4.3.5.1 Patterns of purchasing online

15.79% of the Internet users informed that they had made purchases online. Respondents used two approaches to purchase products/services online: ordering online, emailing order (Figure 1.26).

- 54.2% of these users had ordered products or services online.
- 45.8% of these users had used e-mail to order products or services.
- Value of the purchase varied between 1,000 Baht (USD22.22) to 10,000,000 Baht (USD 222,222.22) per month.

Figure 1.26
Buying online methods



4.3.5.2 Goods/products purchased

Goods and services that were bought online could be classified into 3 major groups: IT related items, general goods, and hotel booking (Figure 1.27). 45.83% of the purchasing online informants had bought general goods including books for company use. 41.67% had bought IT and telecommunication related goods including computers, mobile phones, software. Only 1 company had booked a hotel's room online.

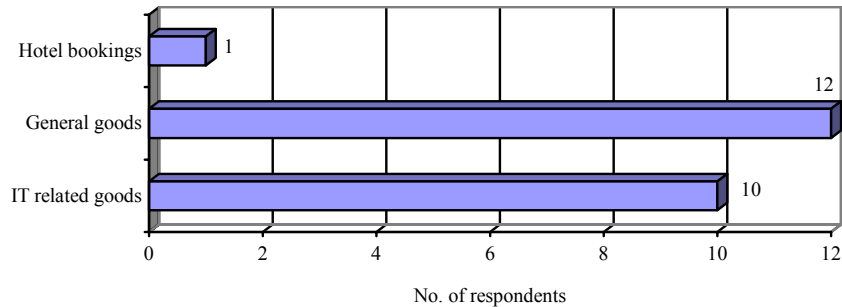
Companies did not purchase raw materials online because original paper documents were preferable as legal evidence of purchasing. In some cases, telephone and facsimile were more convenient, time saving, informative, directly interacted and reliable.

Percentage of total procurement over the Internet of most companies was not very high.

- 50% of these informants had bought 1 to 10%
- 16.67% had bought 21-30%
- 25% had bought more than 30%.

Most respondents used money transfer (61.9%) and credit card charged over the Internet (38.1%) as means of payment. Number of respondents who used money transfer was more than those who used credit card charged over the Internet in Chiang Mai, Nakhon Ratchasima, and Phuket. In all sectors, number of respondents who used money transfer was more than those who used credit card charged over the Internet.

Figure 1.27
Goods/products purchased



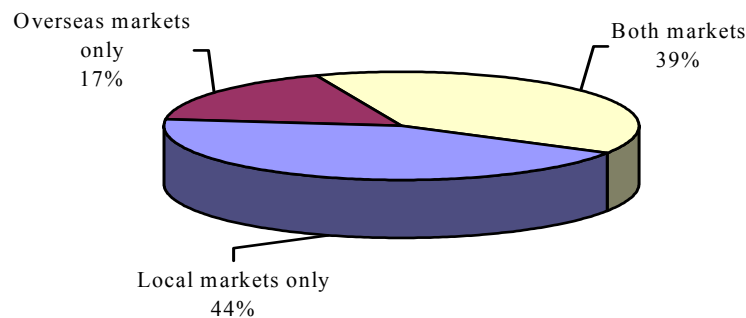
4.3.5.3 Origin of goods/services

Among companies that had purchased online (Figure 1.28)

- 43.5% bought from local markets only
- 17.4% bought from overseas only
- 39.1% bought from both markets.

Major local markets were Bangkok, Songkhla, Surat Thani. Major overseas market was the United States. Other markets included China, Singapore, Japan, Taiwan and Australia.

Figure 1.28
Origin of goods/services



4.3.5.4 Concerns of purchasing on line

Five companies or 20.83% of respondents who had purchased online concerned about payment security, payment accuracy, and conditions of payment. Two of these companies had used credit card charge over the Internet to purchase goods.

51.6% of companies that had not purchased online considered this function as not being necessary. 16.1% needed more information about this function. 9.7% felt insecure in using this function in terms of revealing credit card and the reliability of the merchandisers. Only 3.2% of companies stated that they had had no knowledge about this function.

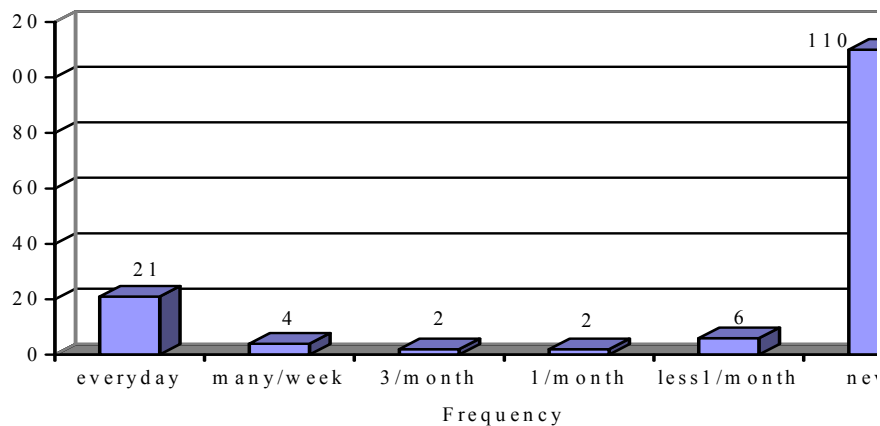
4.3.6 Selling online

23.02% of respondents had sold their products/services directly online (Figure 1.29).

- 60% of these companies used this function daily.
- 11.43% used several times a week.

Most of companies in all sectors and all cities tended to use this function daily. Number of companies that had used this function of the Internet was in the Hotel and Tourism sector more than in the other sectors. Number of companies that had used this function of the Internet was in Phuket more than in other cities.

Figure 1.29
Internet use for selling online

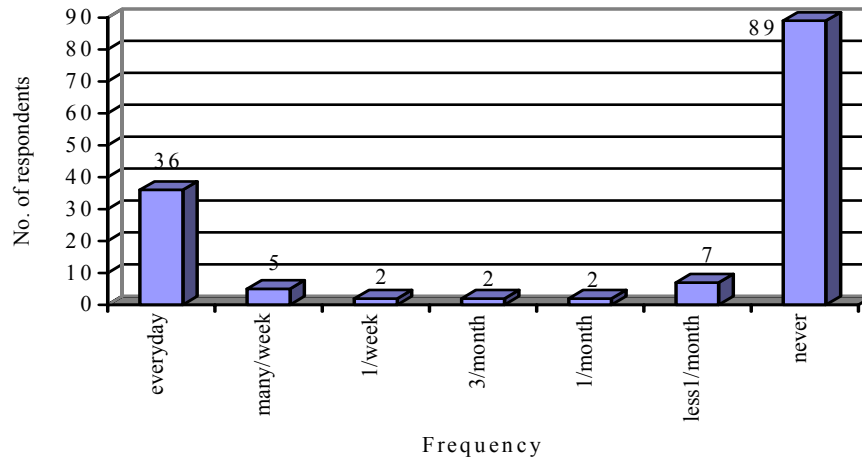


4.3.7 Internal communication

35.53% of Internet users had used the Internet for internal communication (Figure 1.30). 64.81% of these users had used this function everyday.

Most of companies in all sectors and all cities tended to use this function daily. Number of companies that had used this function of the Internet was in the Telecommunications sector more than in the other sectors. Number of companies that had used this function of the Internet was in Chonburi and Bangkok more than in other cities.

Figure 1.30
Internet use for internal communication

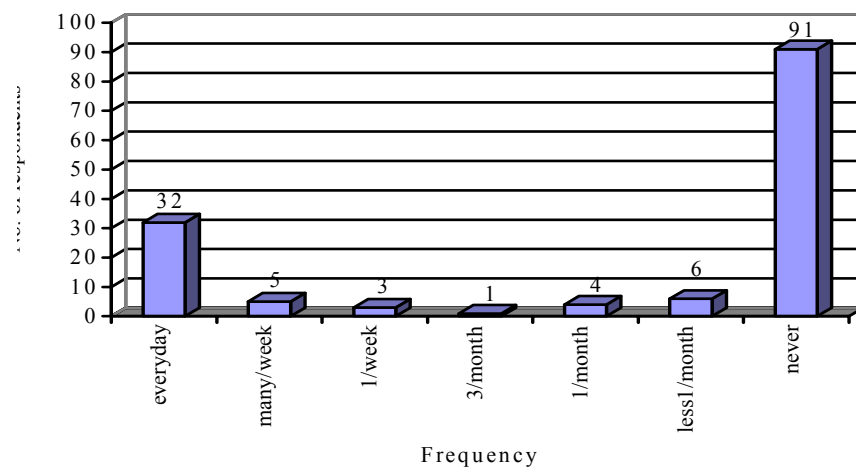


4.3.8 Information management

33.55% of Internet users had used the Internet for internal information management (Figure 1.31). 62.75% of these users had used this function daily.

Most of companies in all sectors and all cities tended to use this function everyday. Number of companies that had used this function of the Internet was in the Telecommunications sector more than in the other sectors. Number of companies that had used the Internet for information management was in Bangkok more than in other cities.

Figure 1.31
Internet use for information management

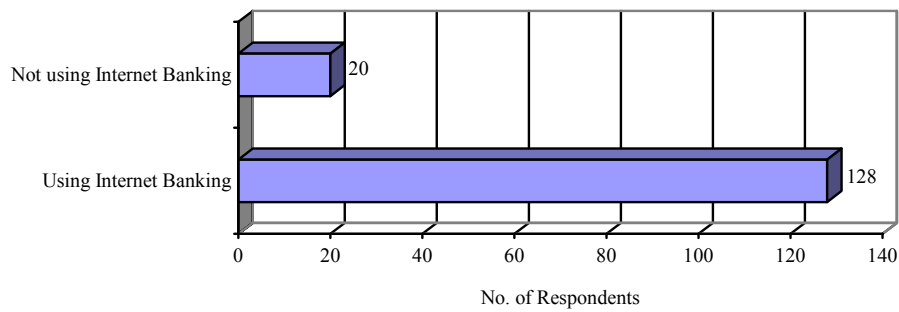


4.4 Internet banking

Twenty Internet users (13.2%) had used the Internet for Internet banking (Figure 1.32). 30% of these companies had used this function everyday.

Number of companies that had used this function of the Internet was in the Hotel and Tourism sector more than in the other sectors. Number of companies that had used this function of the Internet was in Phuket more than in other cities.

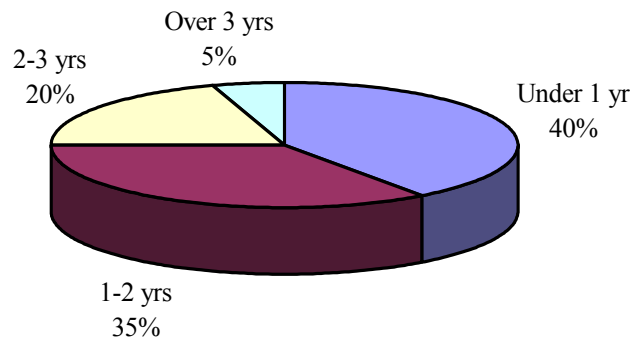
Figure 1.32
Internet use for Internet banking



4.4.1 Pattern of use

40% of the Internet banking users had started using this function for less than 1 year (Figure 1.33).

Figure 1.33
Internet banking using time



4.4.2 Banks used for Internet banking

Local banks have provided the Internet banking service recently. At present, it can be cited that there are 5 banks that provide Internet banking services. These banks include Asia Bank, Siam Commercial Bank, Thai Farmers Bank, Krung Thai Bank, and Bangkok Bank.

- The Asia Bank provides a service called “ASIA CyberBanking” through its website: www.bankasia4u.com.
- The Siam Commercial Bank (SCB) offers a service called “SCB Easy Net” for transferring information between the Bank and its customers through its website: www.scbeasy.com.
- The Thai Farmers Bank (TFB) provides “TFB e-Internet Banking” through its website: www.gotoTFB.com
- The Krung Thai Bank has “Krung Thai Internet Banking” through its website: www.ktb.co.th
- The Bangkok Bank (BBL) provides “Bualuang iBank” through its website: www.bangkokbank.com.

50% of the Internet banking users had used the Internet banking service of the Siam Commercial Bank (SCB). Thai Farmers Bank (TFB) was the second mostly used (Figure 1.34). 70% of the respondents in this group chose the bank with which they already had had an account. Reputation of the bank was also a reason for selection the bank (Figure 1.35).

Figure 1.34
Banks used for Internet banking

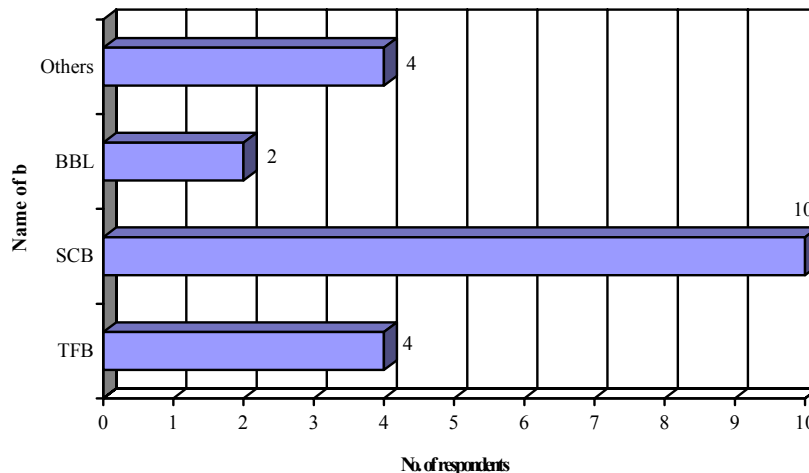
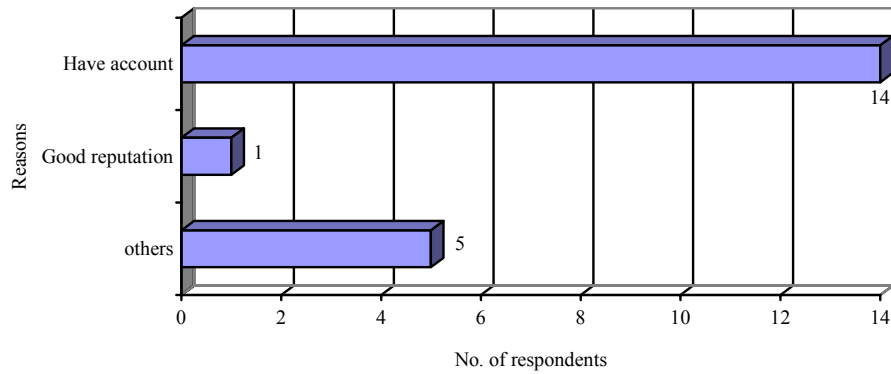


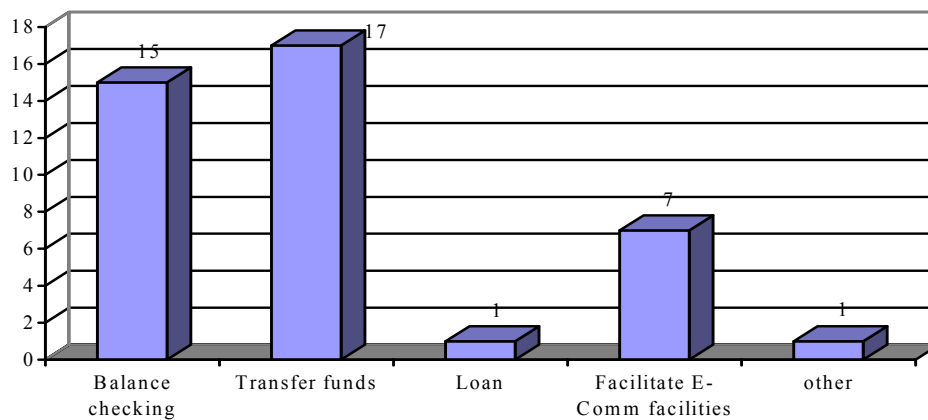
Figure 1.35
Reasons for the bank selection



4.4.3 Functions of Internet banking

Respondents unanimously found the Internet banking a useful tool. Functions of the Internet banking that most respondents had used the Internet banking to check balance, transfer funds, and facilitate e-commerce activities (Figure 1.36)

Figure 1.36
Functions of Internet banking



4.4.4 Users' concerns about using Internet banking

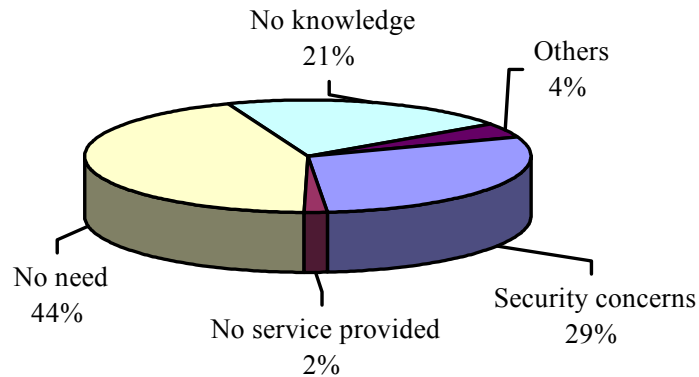
65% of the respondents had had no concerns about the Internet banking. 35% of the respondents on Internet banking had concerns about security and reliability of the transactions.

4.4.5 Reasons for not to use Internet banking

Among 132 Internet users that had not currently used the Internet banking, reasons for not intend to use the Internet banking in next 12 months were as follows (Figure 1.37):

- 40.9% did not need it.
- 27.27% security concerns.
- 19.69% lack of knowledge.

Figure 1.37
Reasons for not to use Internet banking



4.4.6 Prospective users of the Internet Banking

29 from 126 respondents had intended to use Internet banking in next 12 month.

- 58.62% of these prospective users would use the Internet banking to check balance.
- 72.41% to transfer funds.
- 13.79% to obtain credit/ loans
- 34.48% to facilitate e-commerce activities.

37.93% of the prospective users would use the Internet banking service of the Siam commercial bank. 45.45% of this group would choose the bank because they were its current customers. 36.36% would choose the bank because of its reputation.

27.58 of the prospective users would use the Internet banking service of the Bangkok bank. All of respondents in this group would choose the bank because they were its current customers.

4.5 Websites

4.5.1 Classification of websites users

Amongst 152 companies that were Internet users (Figure 1.38)

- 78 companies or 51.3% had had their own website.
- 1.3% (2 companies) used to own websites in the past.
- 11.2% had website under construction.
- 7.9% had planned to make a website.
- 28.3% had not owned any website. Reasons included “no need”, “do not have knowledge”, and “not ready to own one” (Figure 1.39).

Figure 1.38
Classification of websites users

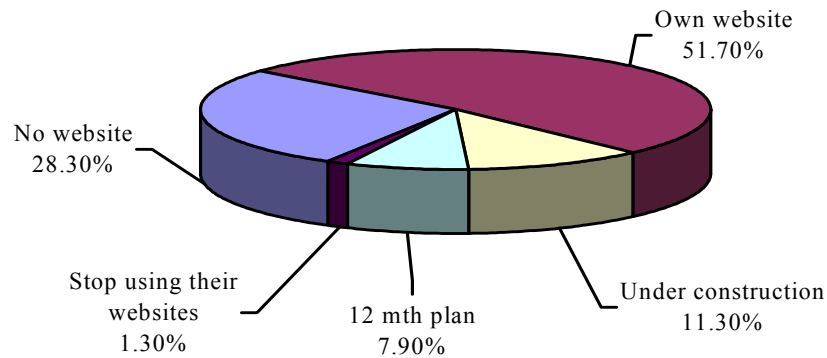
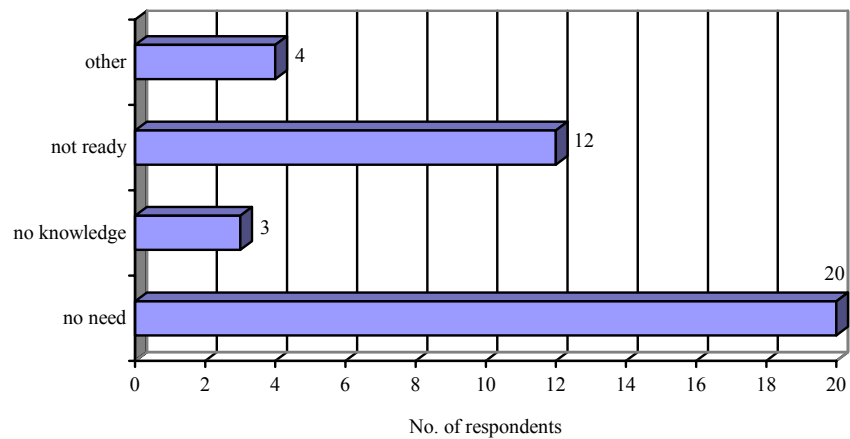


Figure 1.39
Reasons for not developing a website



4.5.2 Companies that no longer have websites

Those two respondents were in Phuket. They developed the website and stopped using the website in those years of the development. Dissatisfaction and inefficiency were reasons to quit.

One company, which was in the distribution and trade sector, developed the website in the year 1998. It had its objective to use the website to promote company to potential customers. Information on the website included company profile, address product information, and web counter. The company used its own in-house web developer to develop the website. The web-hosting company managed the website.

Another company, which was in the business services sector, developed the website in the year 2001. It aimed to use the website to sell goods over the Internet as a new channel of distribution. Information on the website included company address, product information, and product prices. The company hired a web designer to develop and manage the website.

The websites of both companies had never been maintained or updated.

4.5.3 Companies with website under construction/with a plan to make website in the next 12 months

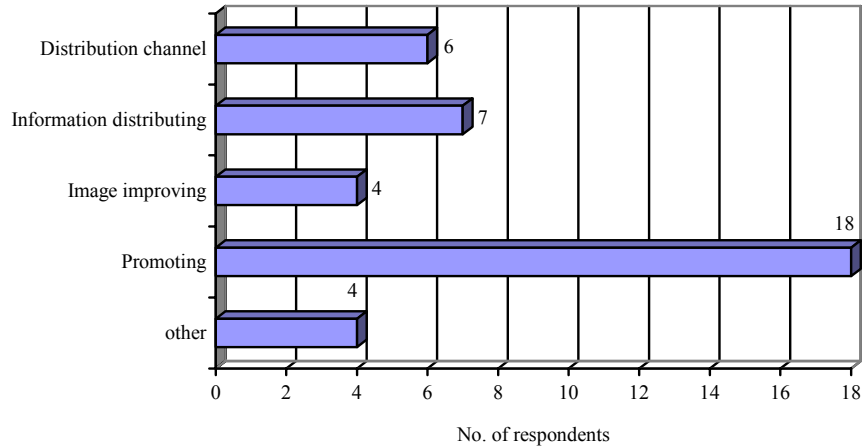
29 companies (19.1%) of the Internet users had intended to develop a website. Most of the companies were in Bangkok(27.6%) and Nakhon Ratchasima (27.6%). By sector, the largest group was companies in service sector (27.6%). The second large group was companies in manufacturing (24.1%).

4.5.3.1 Reasons for developing a website

Purposes of these companies in developing a website (Figure 1.40) included

- Promoting their company (62%)
- Distributing their company's information (24.14%)
- Establishing new distribution channel (20.69%)
- Improving their company's image (13.79%)

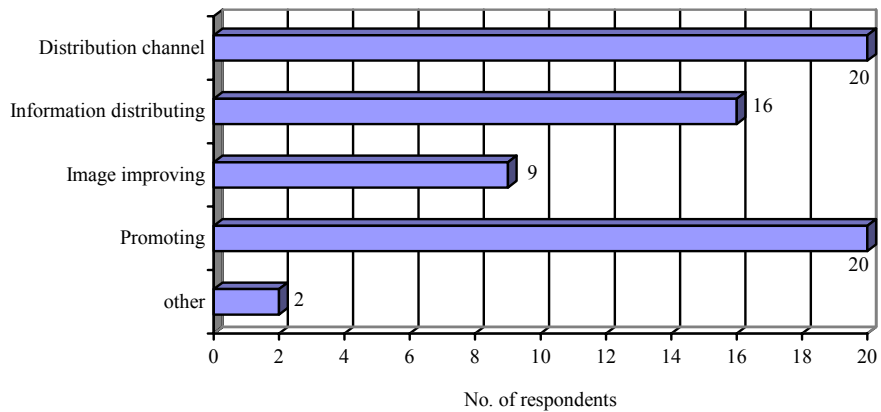
Figure 1.40
Reasons for developing a website



Benefits that these companies expected from the websites (Figure 1.41) included

- Promoting their company (69%)
- Distributing their company's information (55.2%)
- Establishing new distribution channel (69%)
- Improving their company's image (31%)

Figure 1.41
Expected benefits from websites



4.5.3.2 The development of the website

4.5.3.2.1 Developer

Respondents would use different web developers (Figure 1.42).

- in-house web designer (44.8%)
- web hosting company (24.1%)
- outsourcing web designer (24.1%)
- no idea (6.9%)

By geography, companies in Chiang Mai and Phuket planned to use web host more than other sources (Figure 1.43).

By sector, in-house web designer would be the most used in all sectors except in service sector (Figure 1.44).

Figure 1.42
Website developer in general

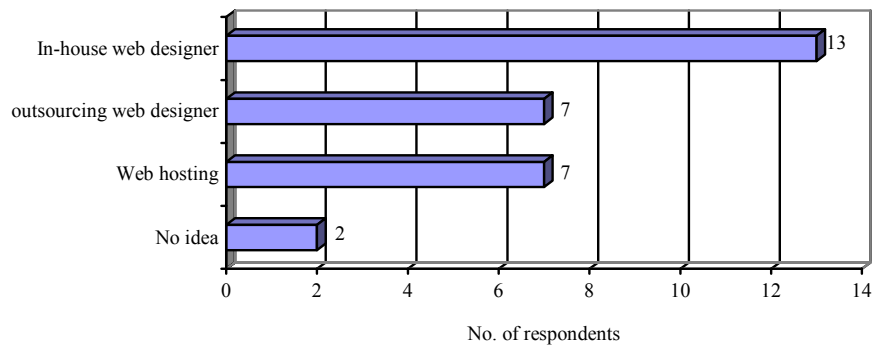


Figure 1.43
Website developer by geography

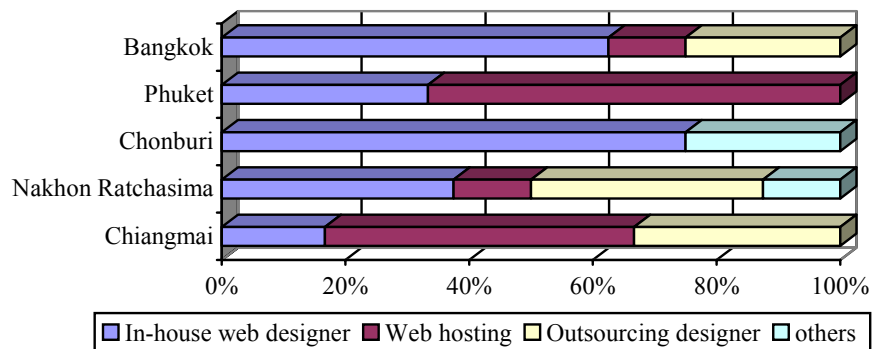
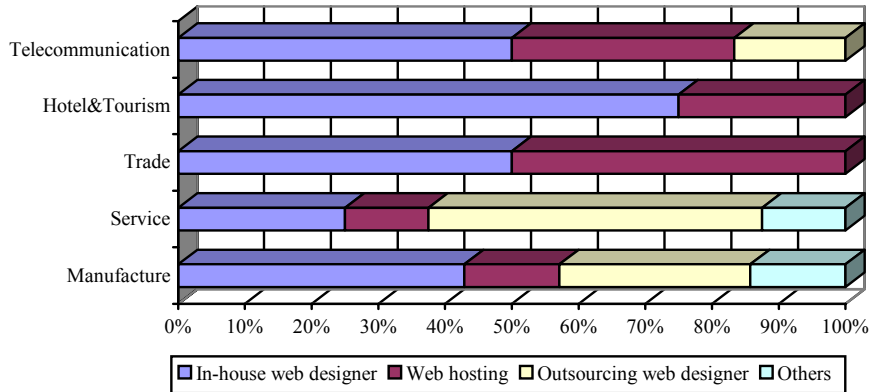


Figure 1.44
Website developer by sector



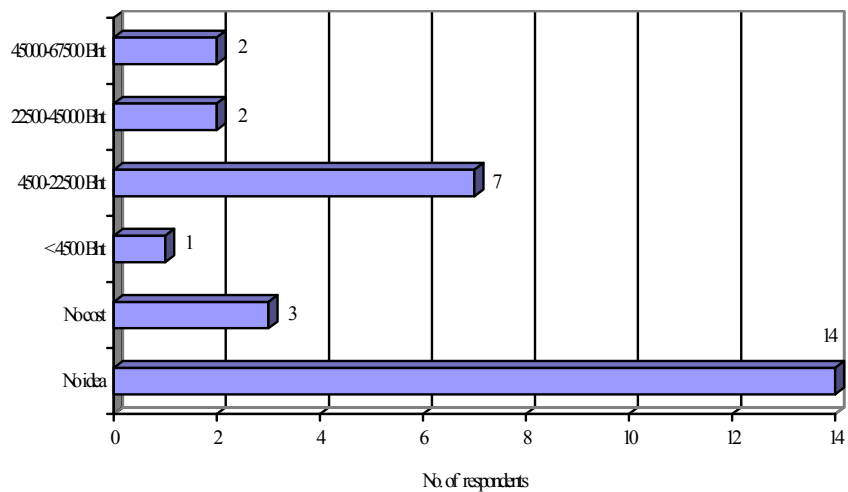
4.5.3.2.2 Search engine

Only 37.9% would register their websites with search engines, but still had no idea about which search engine would be used.

4.5.3.2.3 Cost of website development

Most companies (58.6%) would have no cost of the website development (Figure 1.45). The highest cost of web development would be between >45,000-67,500 Baht (USD 1,000-1,500).

Figure 1.45
Cost of website development

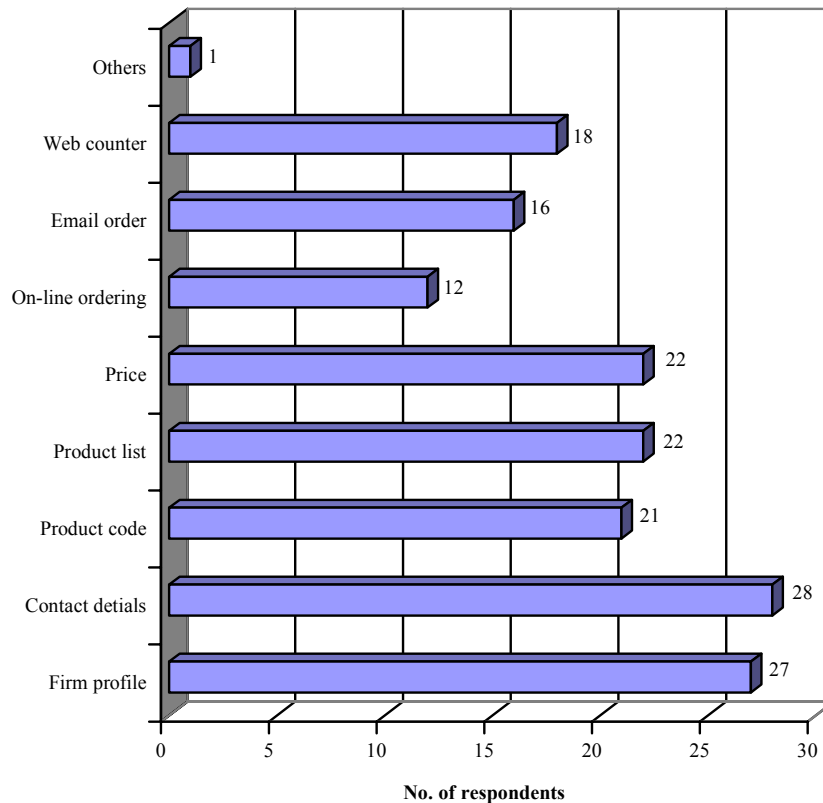


4.5.3.3 The use of the website

4.5.3.3.1 Information on the website

Most websites would contain information of company profile (93.1%) and contact details such as address and telephone number (96.6%). On-line ordering application would be the least used (41.4%). 64.3% would use web counter (Figure 1.46).

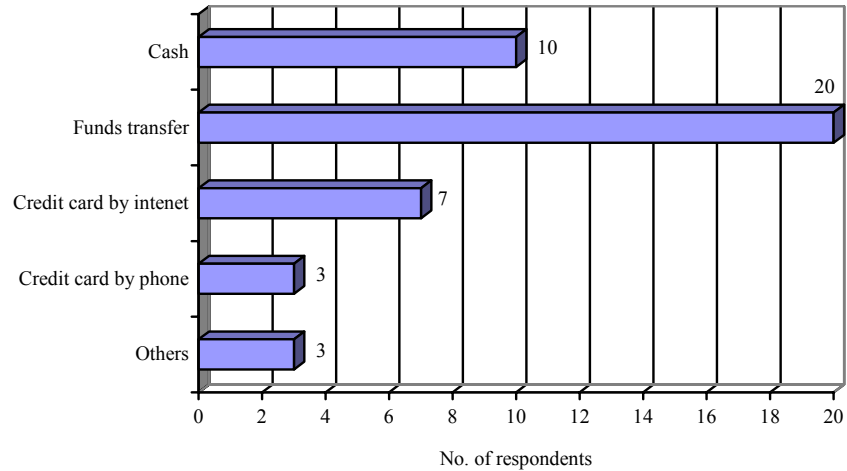
Figure 1.46
Website information



4.5.3.3.2 Payment methods

Most companies had received the payment by funds transfer (80%). Only 37% had received the payment by cash (Figure 1.47).

Figure 1.47
Payment methods



4.5.4 Companies with website

Among 78 website users, most of the website users were found in Chiang Mai (25.64%). Website users in Nakhon Ratchasima were found less than in other cities (Figure 1.48).

By sector, most website users were found in the hotel and tourism sector (25.64%). Website users in the manufacturing sector were found less than in other sectors (Figure 1.49)

Figure 1.48
Website Users by city

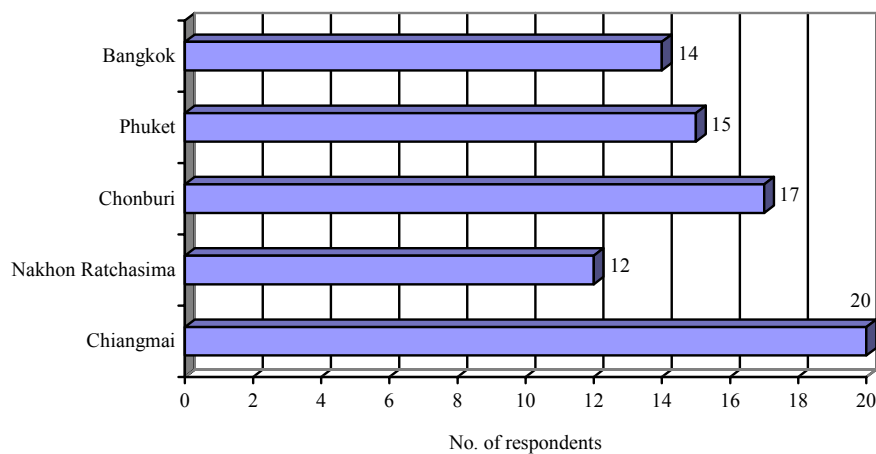
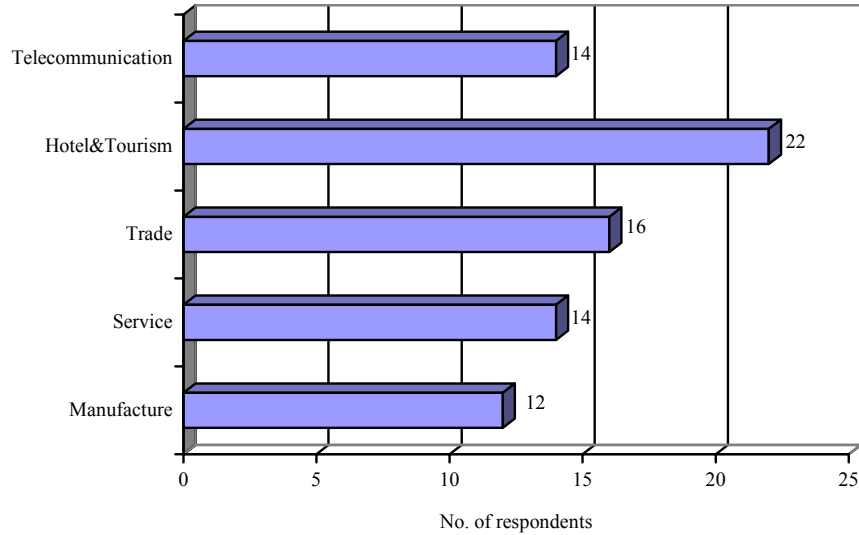


Figure 1.49
Website Users by sector

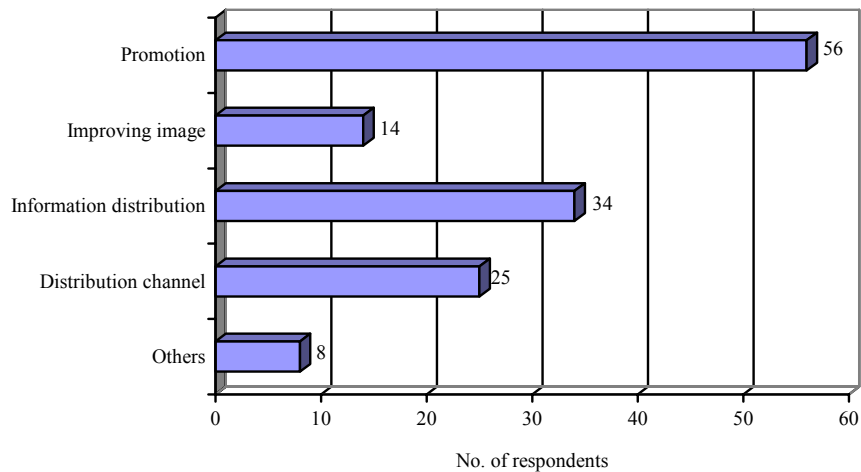


4.5.4.1 Driving force for developing websites

Reasons to make a company website (Figure 1.50) included:

- Company's promotion (71.8%)
- Company's information distribution (43.6%)

Figure 1.50
Driving force for developing websites



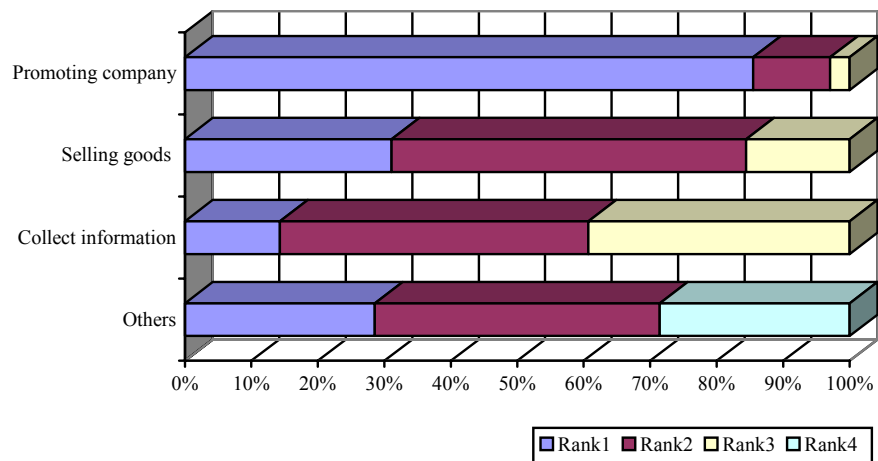
4.5.4.2 Purposes of the websites

75.64% of 78 respondents ranked promoting company to potential customers as the first current primary purpose of the site.

17.95% ranked selling goods over the Internet as the first current primary purpose of the site.

Collecting visitor information for database was the least primary purpose among the three purposes (Figure 1.51).

Figure 1.51
Purposes of the websites



4.5.4.3 Importance of website for promotion and sales

51.3% considered that the website was very important to the promotion and the sale of the company.

Respondents who favored using websites cited that their sale amount and customers had increased. Customers had had more information about the company. Company’s image had been improved. Foreign markets could be easily reached. Market expansion could be easily conducted. Communication between the companies and their customers was more cost effective, time saving, and convenient.

On the contrary, some respondents argued that websites had not help increasing either sale amount or number of customers.

By geography, number of companies that deemed the website very important to the promotion of the company was greater in Chiang Mai than in other cities

(Figure 1.52). However, number of companies that deemed the website very important to the sale of the company was greater in Chonburi than in other cities (Figure 1.53).

By sector, the website was very important to the sale of the companies in manufacturing and hotel sectors and was very important to the promotion of companies in all sectors (Figure 1.54 and Figure 1.55).

Figure 1.52
Importance of website to promotion of the company by city

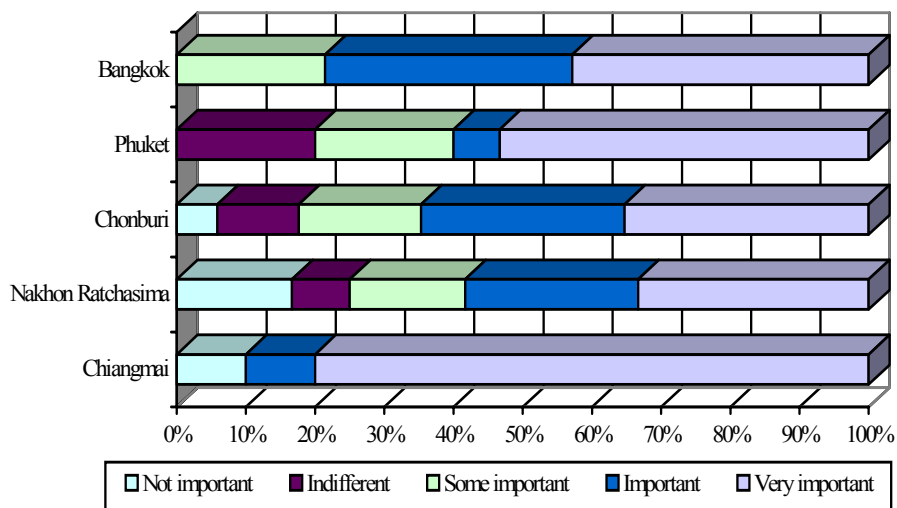


Figure 1.53
Importance of website to sale of the company by city

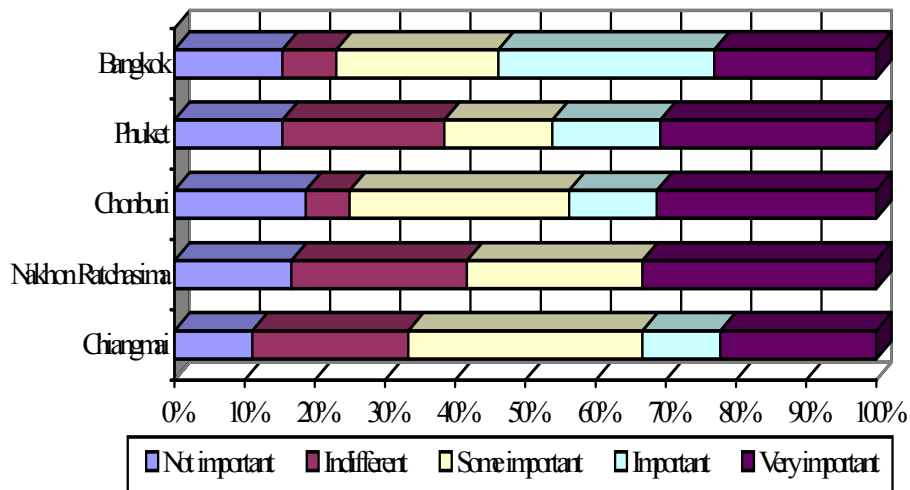


Figure 1.54
Importance of website to promotion of the company by sector

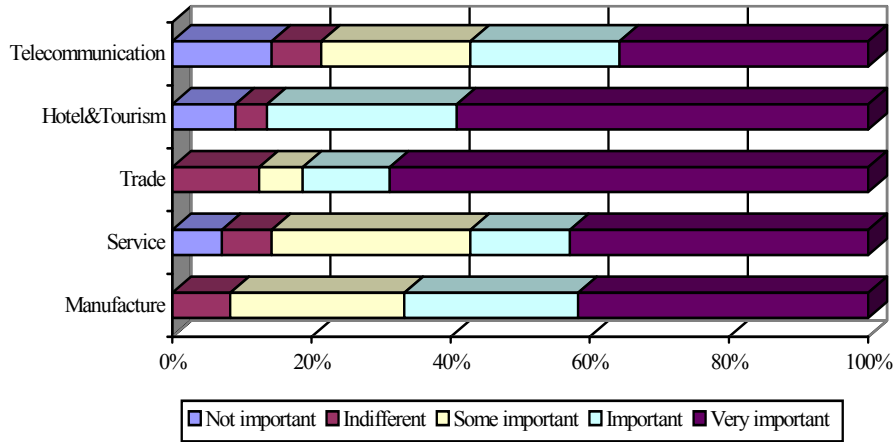
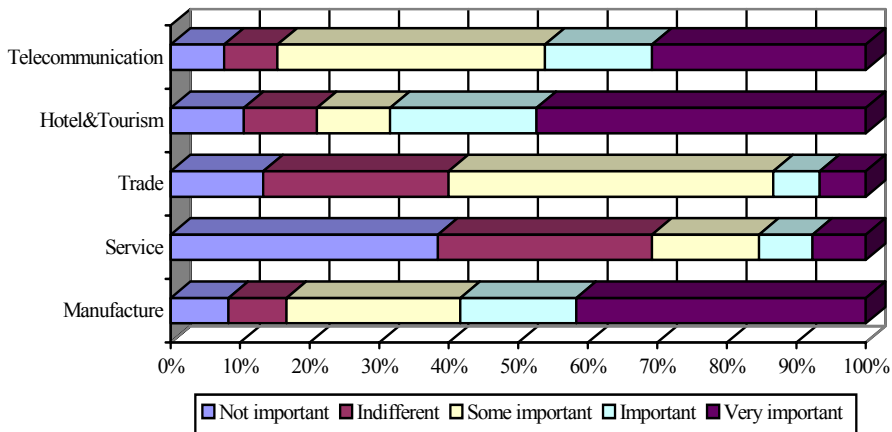


Figure 1.55
Importance of website to sale of the company by sector

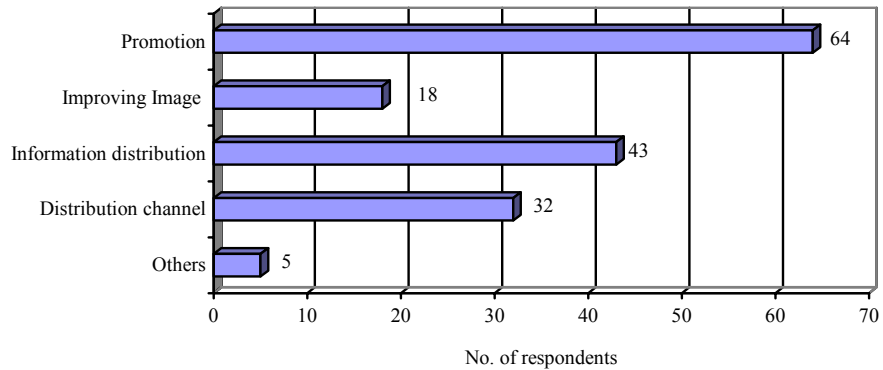


4.5.4.4 Benefits from the websites

Four common benefits cited by the web users can be concluded as follows (Figure 1.56):

- Promotion (82.1% of the web users)
- Information distribution (55.13%)
- New distribution channel (41%)
- Improving company's image (23%)

Figure 1.56
Benefits of the website



4.5.4.5 The use of the website

Most respondents had had the website for not longer than 3 years (Figure 1.57). 44.9% of these 78 companies had registered the website with search engines.

Most companies had had company profile and contact details such as address and telephone number on their websites. Only 25.6% had on-line ordering application on their websites (Figure 1.58).

Most respondents (41%) had no ideas about the amount of web visitors per month. The rest of the respondents stated the number of visitors between 10 to 5,000.

52% of respondents did not know about the amount of hits per month and the average time spent per visitor. The others stated the number of hits between 10 to 50,000 and the average time spent per visit between 4 to 70 minutes.

Figure 1.57
Number of years of using the website

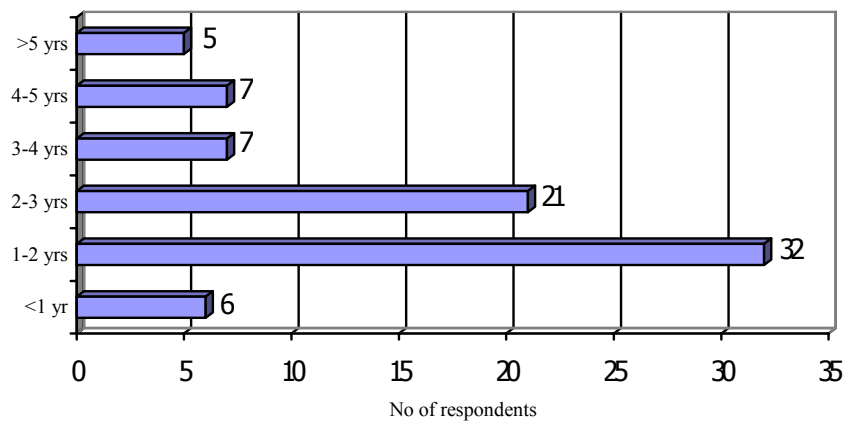
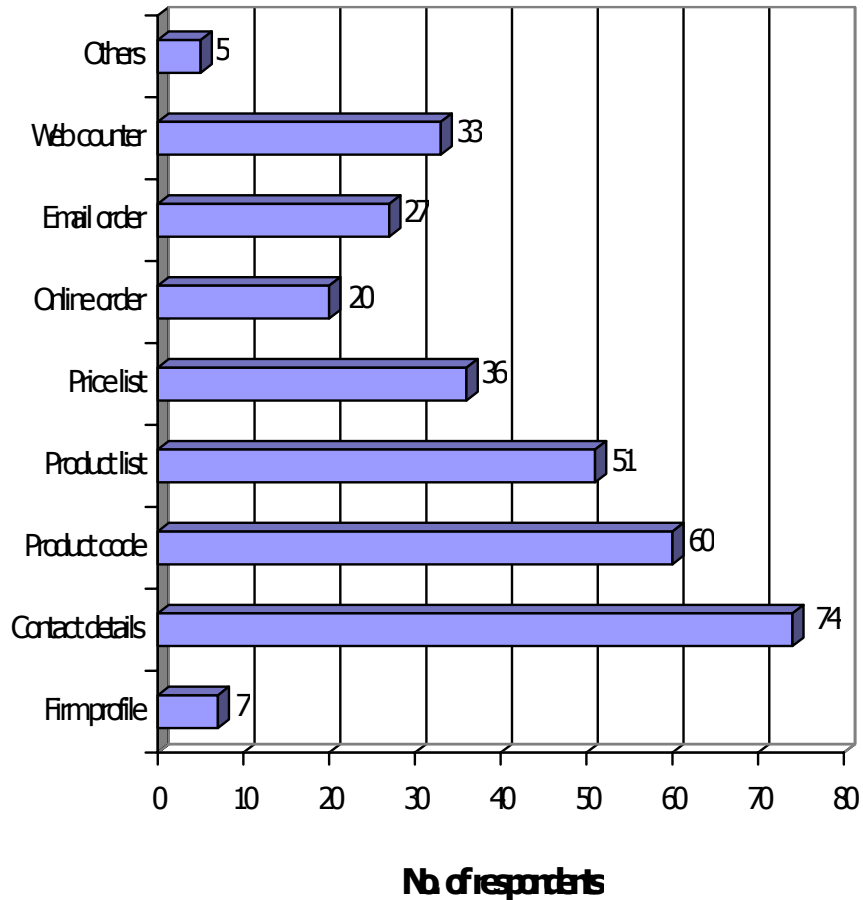


Figure 1.58
Information on the website



4.5.4.6 Website developing

41% of website owners had their websites developed by in-house web designers. 34.62% of the website owners had their websites developed by web-hosting companies (Figure 1.59).

34.6% of the companies with websites had no cost of developing their website (Figure 1.60). 24.35% of the companies spent between 4,500 baht (USD 100) to 22,500 Baht (USD 500) to develop a website.

Figure 1.59
Website developer

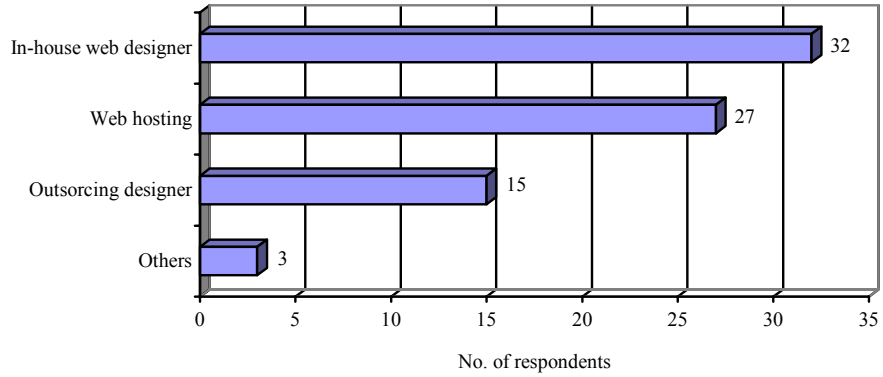
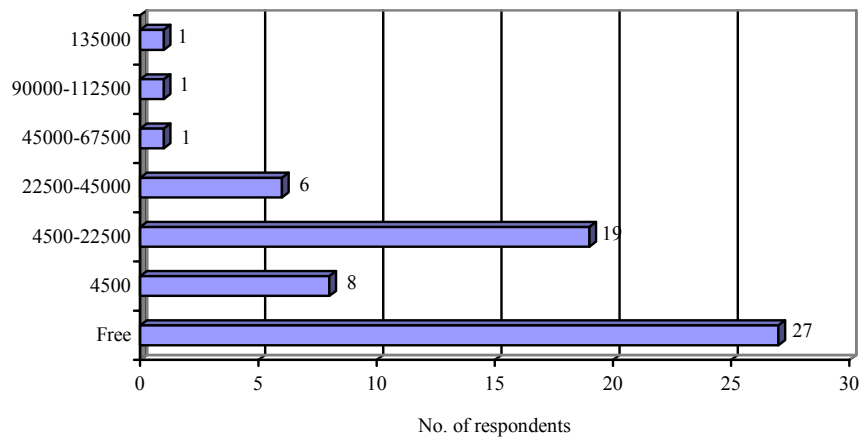


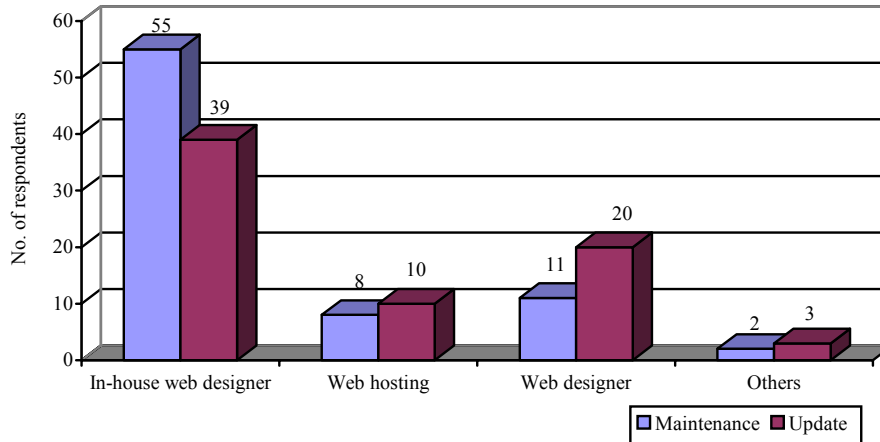
Figure 1.60
Cost of developing the website



4.5.4.7 Maintenance and updating

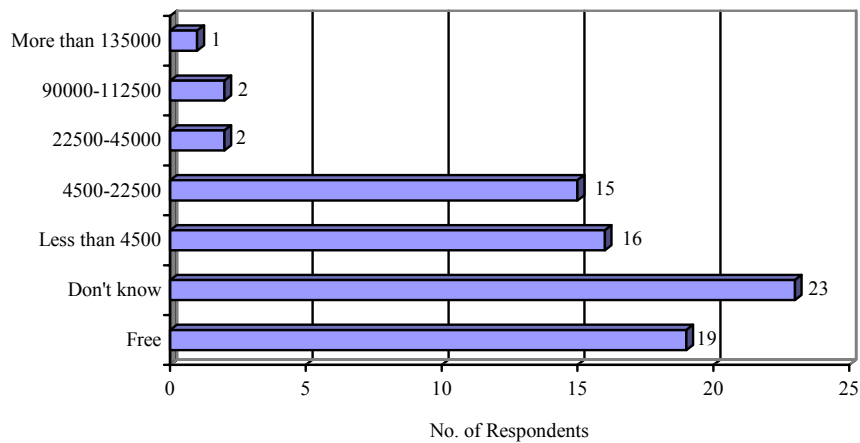
70.5% of the web users had their websites either maintained or updated in-house (Figure 1.61).

Figure 1.61
Sources of website maintenance and updating



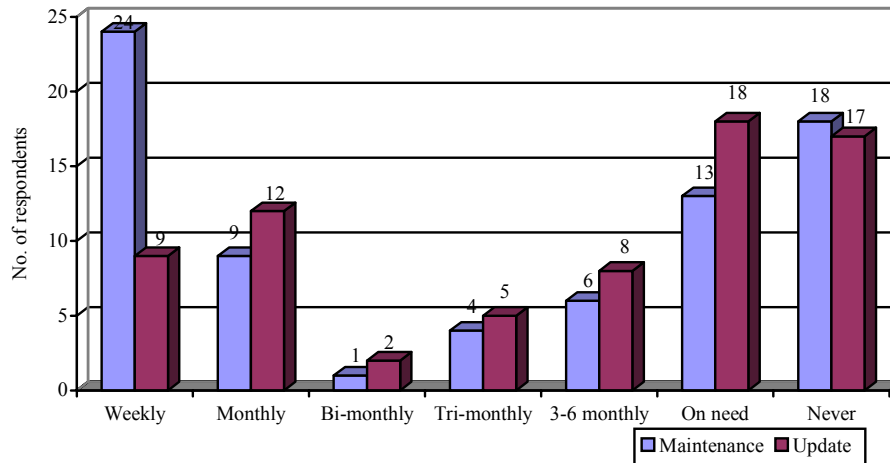
Most respondents with the website (29.48%) did not know how much the company had spent to maintain or update the website per annum. 14.35% of the companies had had no cost of the website maintenance and the updating (Figure 1.62). 21.79% spent between 4,500 Baht (USD100) to 22,500 Baht (USD500).

Figure 1.62
Cost of Website maintenance and updating



Most web users had their websites maintained (30.76%) once a week and updated (23%) on need basis (Figure 1.63).

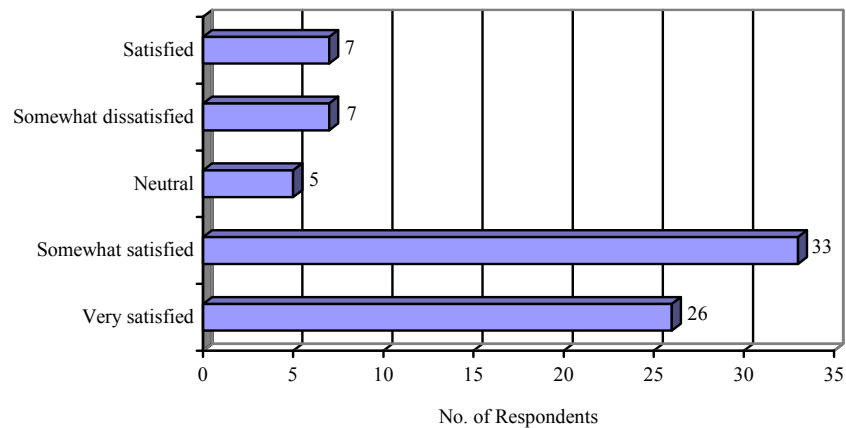
Figure 1.63
Time of Website maintenance and updating



4.5.4.8 Satisfaction with website

76.9% of the web users considered their websites were worth the money and time that they required. 42.30% of the web users were somewhat satisfied with their current website (Figure 1.64).

Figure 1.64
Satisfaction with website



Although most of the web users were somewhat to very satisfied with their current websites, 89.7% of the companies had intended to improve their websites.

Respondents were satisfied with their websites because they enable the companies to provide information to their customers or to introduce themselves to new remote foreign markets. Moreover, the websites had improved the image of the companies.

However, respondents stated that the websites were not as effective as they should have been. Experts or skillful web designers were required to make the web interesting, up-to-date in terms of information and interaction techniques, and satisfactory to customers. Information in English language should have been more added.

4.5.4.9 Selling goods online

46.15% of respondents with website (36 companies) had sold goods through the Internet (Figure 1.65). 38.89% (14 companies) of these respondents had 1 to 10% of their monthly sales through the Internet.

Number of respondents with “ordering by e-mail” and “on-line ordering application” on their website that had sold goods through the Internet was found in hotel and tourism sector more than in other sectors. Whereas, the amount of the sellers in distribution and trade sector was less than in other sectors.

Most companies had received the payment by means of cash or bank transfer (Figure 1.66). Using credit card over the telephone was the least used means of payment.

Respondents with on-line ordering application on their website had received the payment through bank transfer more than by other payment methods (Figure 1.67). Respondents with ordering by e-mail on the website had also received the payment through bank transfer more than by other payment methods.

Figure 1.65
Percent of monthly sales online

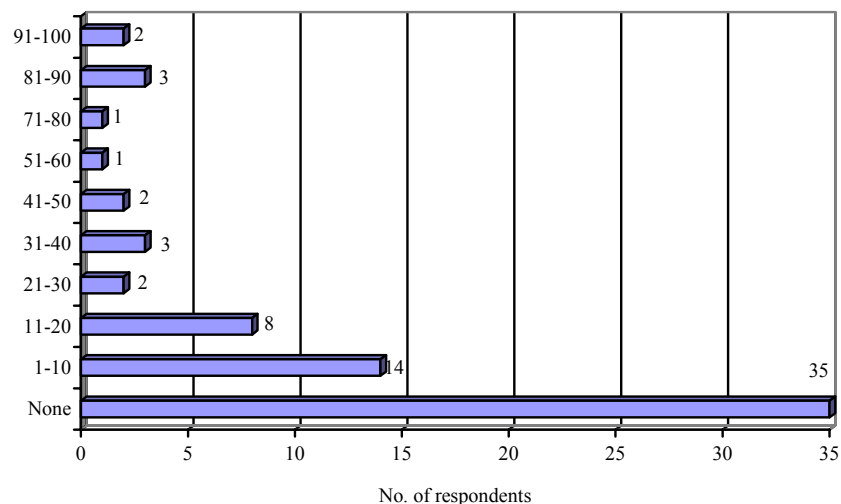


Figure 1.66
Payment methods

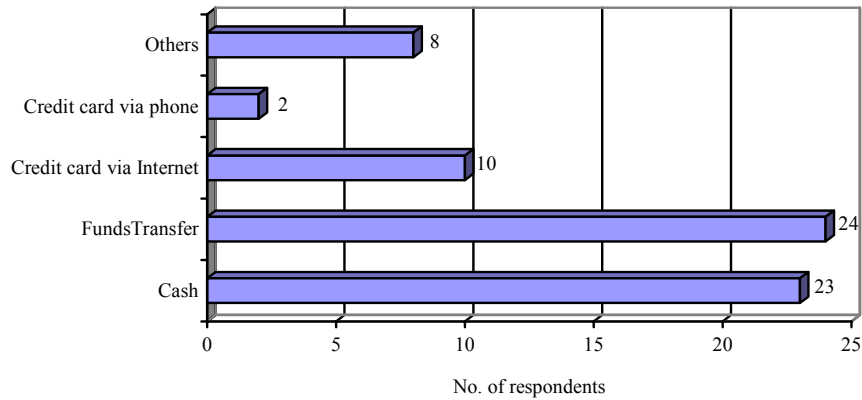
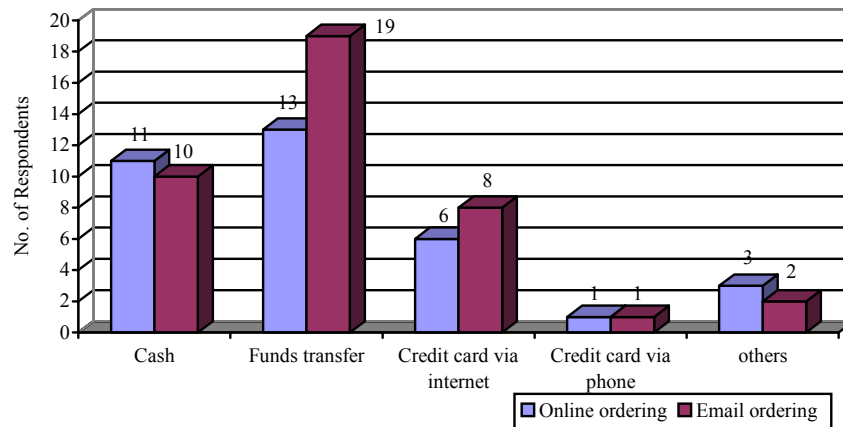


Figure 1.67
Payment methods for online and e-mail ordering



4.5.5 Barriers

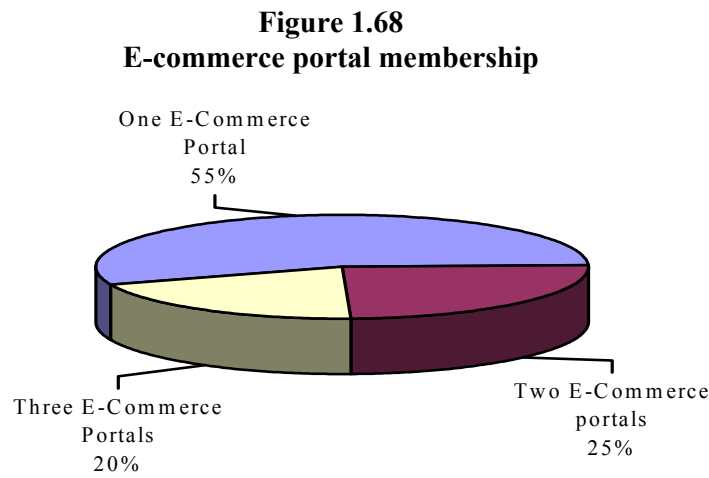
Selling goods over the Internet had been facing barriers including

- Communication misunderstanding
- Information and business transaction security,
- Speed of connection
- Language
- Maintaining and updating information
- Difficulty in tracking customers information
- Security for internet payment systems
- Credibility

4.6 E-commerce portals

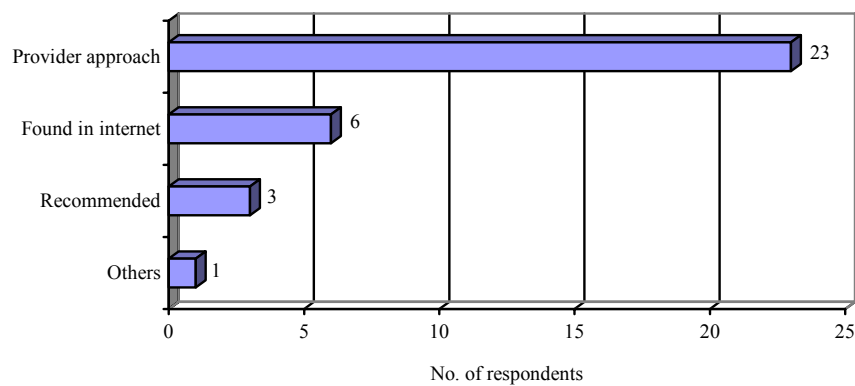
4.6.1 Number of e-commerce portals joined

13.2 % of 152 respondents was a member of an e-commerce portal (20 companies). In a few cases that the respondents ascertained about the name of the e-commerce portal the company had used. Most of these respondents (55%) had joined only one e-commerce portal (Figure 1.68).



In most cases, respondent found out about the e-commerce portal because the provider approached them (Figure 1.69). There were cases that respondents found out about the e-commerce portal through the net or were recommended by others.

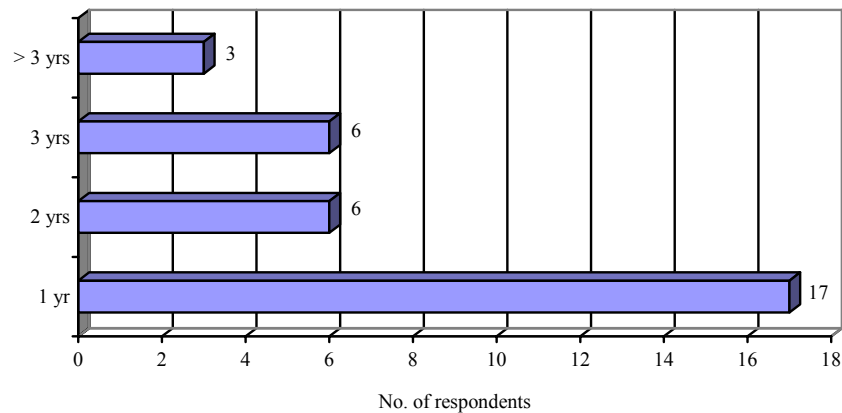
Figure 1.69
Discovering e-commerce portal



4.6.2 Time of the membership of the e-commerce portal

53.12% of the e-commerce portal's members had joined the portal for one year (Figure 1.70). There were cases that respondents had joined the e-commerce portal for longer than three years.

Figure 1.70
Time of the membership of the e-commerce portal



4.6.3 Service of the e-commerce portal

Most e-commerce portal provided company listing and selling products services (Figure 1.71). There were fewer cases that the e-commerce portal provided buying products or on-line transaction support services.

Respondents stated that they expected the price of the service of the e-commerce portal be lowered. Respondents also expected the speed of services, useful information, fully integrated services, and insurance to be improved or offered. Some respondents suggested that the e-commerce portal should help promoting their websites.

Most respondents were satisfied with services of their e-commerce portals (Figure 1.72).

Most respondents (84.8%) would continue using their e-commerce portals (Figure 1.73). Those who would stop using the e-commerce portal complained about unsatisfactory services of the portal.

In four cases, the services of e-commerce portals were out of charge. In other cases, joining fee was between 2,500-5,000 Baht (USD 55-111). Annual fee was between 2,000-50,000 Baht (USD 44-1111). Transaction fee was between 3,600-

7,000 Baht (USD 80-155). Most respondents considered the price reasonable, cheap, or very cheap.

Seven respondents (35.5%) knew that their competitors had been members of e-commerce portals but could not identify the portal.

Figure 1.71
Services of the e-commerce portal

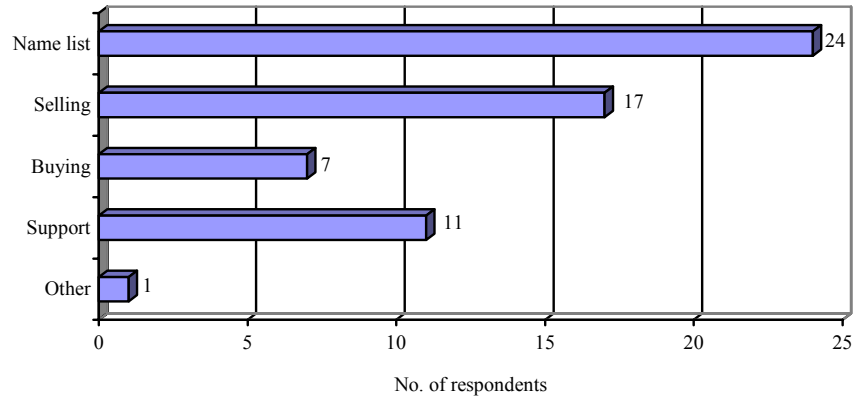


Figure 1.72
Satisfaction with the e-commerce portal

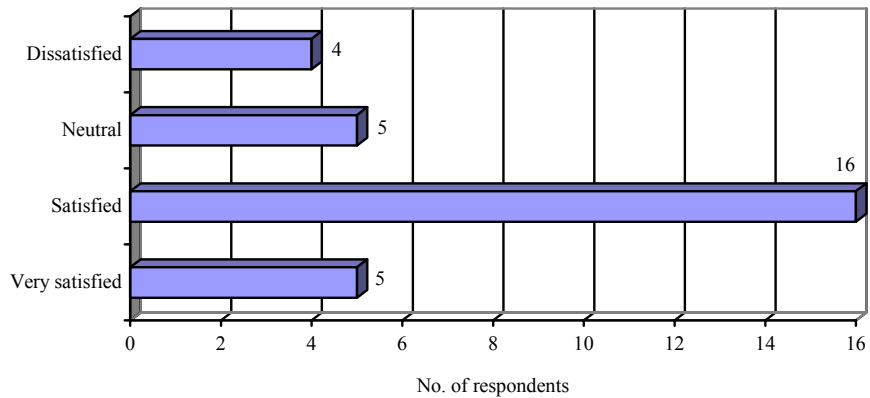
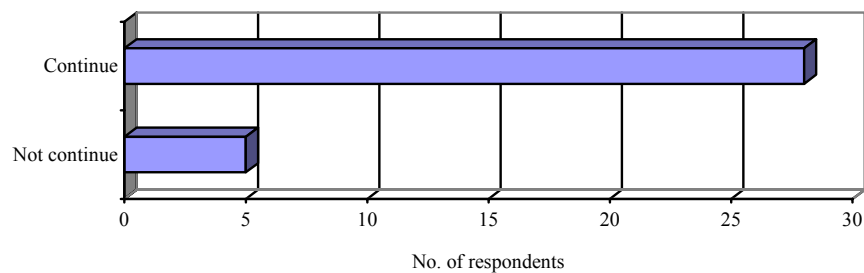


Figure 1.73
Continuation of using the e-commerce portal

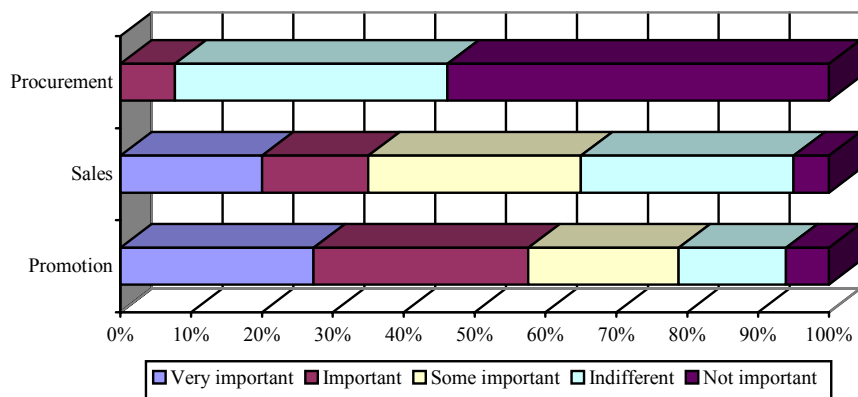


4.6.4 Importance of the e-commerce portal to companies

57.55% of the e-commerce portal members considered the portal either important or very important to the promotion (Figure 1.74).

92.3% considered the e-commerce portal either not important or indifferent to the procurement. The importance of the e-commerce portal to sales was inconclusive.

Figure 1.74
Importance of the e-commerce portal to companies



4.6.5 Non e-commerce portal users

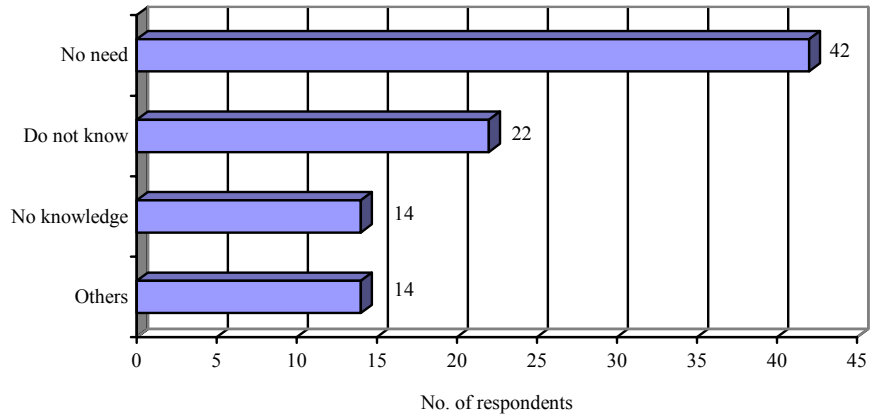
Twenty-seven companies or 20.45% of the 132 non-users had considered using an e-commerce portal.

- 40.7% was planning to join in the next 12 months
- 14.8% considered the e-commerce portal too expensive
- 7.4% stated that the portal did not offer a useful service to their companies.
- The others had problems such as the quality of their websites, and the uncertainty about information and transaction security.

Eighty-eight respondents who had never considered joining e-commerce portal had given various reasons (Figure 1.75):

- No need (46.6%)
- Have no idea about the e-commerce portal (23.9%)
- Have no knowledge about using the e-commerce portal (13.6%)
- Other reasons included “no foreign markets” and “do not want to have more additional expense”.

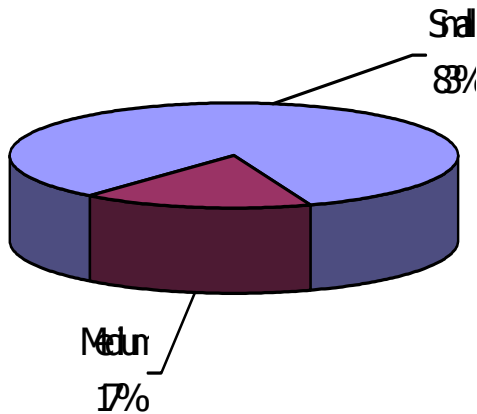
Figure 1.75
Reasons for not joining e-commerce portal



5.0 Non Internet users

48 companies were non-Internet users whose characteristics were presented in Figure 1.4 and Figure 1.5. Ratio of small to medium sized companies was 83:17 (Figure 1.76)

Figure 1.76
Non-Internet users classified by size



Among the 48 non-Internet users:

- 47 companies (97.9%) had had telephone
- 13 companies (27%) had had no computer in the office.
- Most companies (37.5%) had had 1 computer in the office. 18.75% had had 2 computers. The others had had between three to eight computers in the office.

Twenty-two companies (45.8%) had decided not to use the Internet in the next 12 months. Reasons included:

- No need (77.27% or 17 companies)
- Have no idea about the Internet (54.5% or 12 companies)

Among these 48 companies, 14 companies (29.2%) had used the Internet at home for private use. Thirteen companies had not intended to develop a website in the next 12 months. Reasons included:

- 45.5% cited “not essential for the business”
- 22.7% cited “lack of educated personnel”
- 13.6% cited “lack of finances”
- 9.1% cited “internet too slow”
- 9.1% had other various answers.

Fifteen companies had not considered joining an e-commerce portal. Reasons included:

- No need (66.67%)
- Do not have knowledge (20%)
- Not ready(6.67%)

6.0 Prospective Internet users

6.1 Internet

Twenty-six companies (54.2%) of 48 non-Internet users had decided to use the Internet in the next 12 months. Reasons included:

- Cost saving communication tool (3.8%)
- To communicate with customers (69.2%)
- Information search (23%)

88.5% of these respondents would use the in-office Internet. 11.5% would use at the Internet café or other places.

The most important function of the Internet that was first ranked by the respondents was to promote company. The second most important function was e-mail to communicate with customers. The third most important function was e-mail to communicate with suppliers. The least important function of the Internet was the Internet Banking.

Most companies (84.6%) had proposed to use dial-up to connect to the Internet. One company would use ISDN whereas another one would use wireless.

Most respondents (73%) would spend between more than 450 Baht (USD 10) up to more than 4,500 baht (USD 100) monthly for the Internet. Many respondents had had no idea yet about the monthly expense.

6.2 Website

Thirteen companies of 48 non-Internet users had intended to use the website in the next 12 months. Reasons included:

- To promote company
- To improve image of the company
- To distribute information
- To provide alternative distribution channel

Most websites would contain information on company profile, contact detail, product information, and product lines. About 50% of the websites would have web counter, on-line ordering application and ordering by e-mail functions.

Respondents stated that the most important benefits that the websites brought to the company included “promotion of the company”, “improvement of the company’s image”, “provision alternative source of information”, and “provision of alternative distribution channel”.

Respondents would have different types of web developer:

- In-house (15.38%)
- Web-hosting company (69.23%)
- Web designer (15.38%)

The websites would be managed by:

- In-house (30.76%)
- Web-hosting company (38.46%)
- Web designer (7.69%)
- Not sure (23%)

Most respondents (46%) had intended to spend between 4,500 baht (USD 100) to 45,000 Baht (USD 500).

6.3 E-commerce portal

Eight companies had considered joining a e-commerce portal in the near future. These companies had expected to have more sales, more customers, and more time saving in selling interaction.
