

*A Foresight Study on “The Roles of IT for SMEs in Thailand”
By the Industrial Promotion Foundation*

In the advanced economic system, new employment opportunities each year come from small and medium enterprises: SMEs, rather than large enterprises. It is also found that new development of technology, products and services that impact future economic growth also comes from SMEs.

SMEs take the role to create new products and services as well as business, which is the important mechanism to prevent monopolizing the market. Therefore, government has to realize the importance of SMEs in order to support the persistence and the efficiency of manufacturing, commercial and services cycle of large business. The country’s macro development strategy that emphasizes on the SMEs becomes major basement to motivate the strength of country development.

The rapidly changing market and technology environments, especially the information technology, greatly affect SMEs on how they develop their products and services and how they manage and run the business for effectiveness. They need timely adjustment in order to strengthen their capability and to survive in the world market competition.

This project is supported by the APEC Center for Technology Foresight. The center has granted budget for research study to the Industrial Promotion Foundation who acts as the operator for long term connection development between the entrepreneur and the researcher. The foundation has been working this project closely with the Department of Industrial Promotion, Ministry of Industry. The project is a survey study of Thai SMEs and their various perspectives about information technology; impacts on their business, their future plans of IT application, future views of business and SMEs and useful government measures. A purpose of this project is to promote awareness among SMEs of the roles and impacts of information technology (IT) on their business, but the ultimate goal is to use the research findings to shape IT policies and to ensure that such IT policies will mostly benefit to SMEs.

Survey Methodology

The project has selected the Delphi Survey to be the main methodology due to its following characteristics:

1. Using the anonymity technique that the questionnaire collectors do not know the surveyed and person to be selected. The communication only passes through the questionnaire that respondents will not be depressed by others nor be influenced by personality.
2. Using the iteration technique that same questionnaire will be sent several times in order that the interviewee has chance to change the answer after knowing other opinions until the information will be stabilized.
3. Using the controlled feedback technique that the feedback will be controlled by the working committee and the technique committee, in order to screen the related aspects and feedback to the interviewee for answer in next

questionnaire that the interviewee will know the overall opinions and reason of agree or disagree.

4. Using the statistical group response that the overall feedback opinion will be calculated by statistical distribution technique.

The requirements for the respondent groups:

- Must be the entrepreneur of SMEs.
- Must have various experiences in different businesses.
- The sample was distributed among different level of education background.
- All respondents are to be kept confidential.

Owing to various businesses of SMEs in the country but the questionnaire survey needs to be applied in order to get the clear picture of actual business of SMEs, the researcher has to identify the target group of SMEs.

In Thailand, a five-year Industrial Restructuring Plan (IRP), 13 priority industrial sectors were selected because these represented 95% of the total existing factories and employed three million workers. And 13 priority industrial sectors group into 4 categories by importance and urgency for development. There are 5 utmost importance and urgency industrial sectors, however the 3 sectors were selected for being agent of SMEs, namely Electrical/Electronics Industry, Automobile Industry and Food Industry.

The reason to choose the first two industries is that they need high technology and management, earn significant income to the country as the major export, as well as it is government policy to promote Thailand as the electrical circuit manufacture and automobile assemble center. For food industry, it required lower technology and labor intensive, which represent the low technology industry.

Project Implementation (January 2002-March 2003)

The Foresight Project on “The Roles of IT for SMEs” implementation consisted of the following steps:

- (1) Interviewing the IT specialists in order to specify the important aspects of the study and use as the frame work to identify the question topics and opinion investigation. The specialist group is selected from IT institutions, agencies responsible for SMEs promotion and IT development, private sector and the associations related to IT.
- (2) Interviewing a few target entrepreneurs in order to apply the result for evaluation and identify the basic questionnaires and Delphi questionnaires.
- (3) Using Delphi Technique for preliminary data survey and opinion investigation in the 3 target industrial groups.
- (4) Carrying out 4 seminars in different regions in order to motivate respondents and increase responding rate.
- (5) Carrying out 1 seminar in central area in order to report the result of foresight project and evaluating for recommendations of policy

planning which will be submitted to the Department of Industry Promotion.

The working committee has prepared 2 parts of the questionnaires. Part I consists of 20 basic questions about the organization and it currently uses IT and Delphi part consists of 29 questions in 4 areas: Government policy, IT Applications, Vision of their own business and Future status of SMEs. 4 criteria for rating are:

1. Importance: how important the topic question is towards the industry or information technology development.
2. Urgency : how urgent the topic question is needed to be realized.
3. Possibility : how likely the topic is to be realized.
4. Barrier : what is the greatest barrier of all for the topic to be realized?
The barriers for rating are management, financial, manpower, facilities and no significant barrier.

The survey was sent to 2,000 SMEs in the three areas. In the first round, there were 290 respondents (14.5%). After the first survey came back, the researcher analyzed and evaluated the data and sent the second round survey and 197 replied (68%). The outcomes were analyzed again also according to the following eight sub-groups:

1. Conclusion of all 3 industrial groups.
2. Only electric/electronic industry group
3. Only automobile industry group
4. Only food industry group
5. Only manufacturing industry group
6. Group of SMEs with high potential of IT use
7. Group of SMEs with medium potential of IT use
8. Group of SMEs with low potential of IT use

Some Outcomes

Only some key results of the 2-round Delphi survey are mentioned here.

According to the 'Importance' Aspect

Six sub-groups have the same opinion that "government should improve SMEs personnel by arranging IT courses through institution, except for the sixth group of high potential IT use which stated that "the ability to (use IT to help) evaluate real capital" is the most important. On the other hand, low potential of IT use group pointed out that "public sector should invest on the development of software and distribute it at low cost, in order to facilitate the SMEs business" is the most important.

According to the Urgent Aspect

The same topic, "public sector should invest on the development of software and distribute at low cost in order to facilitate the SMEs business" was ranked the most urgent among these groups; electric/electronic, manufacturing and low potential of IT use.

For automobile, food and medium IT potential groups, “the public sector should improve SMEs personnel by arranging IT courses through the institution” got the highest rating for urgency.

High potential information technology group ranked that “government should quickly enact E-commerce law so that SMEs can utilize the E-commerce” the highest urgency.

The Possibility Aspect

Six out of 8 groups pointed that “the public sector should invest on the development of software and distribute at low cost in order to facilitate the SMEs business” is most likely to happen. But electric/electronic industry group response has different opinion that “the public sector should establish the supply chain management for SMEs, so that SMEs can adopt it for use” has the highest likeliness to occur. Lastly, the high potential information technology group pointed out that “bank or financial institutions of the state should be the main mechanism to support IT investment budget to SMEs” has the highest possibility to take place.

Barriers

The most important barrier as mentioned in 25 out of 29 questions is the management ability.

Investment barrier was mentioned in 2 topics: “public sector should improve SMEs personnel by arranging IT course through institution” and “private sector will be provided IT through government promotion at the beginning”; and manpower barrier on “50% of labor in industrial sector work with computer”.

Conclusion and implications for DIP

- Government should not only have a clear supporting direction about Information Technology for SMEs but also put Information Technology in action immediately.
- SMEs agree that in the area of Information Technology, they need full support from the government sector than to depend on their own especially on personnel training and software.

“Government policy is the key for the development of IT for SMEs in Thailand”

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