



# A Study on the Attitude of Accounting Controllers in Manufacturing Industries toward Activity-based Management

by

Ms. Duangjai Pornchaiprasartkul

A Final Report of the Three - Credit Course  
CE 6998 Project

Submitted in Partial Fulfillment  
of the Requirements for the Degree of  
Master of Science  
in Computer and Engineering Management  
Assumption University

March, 2000

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MANAGEMENT**

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Manufacturing Industries toward Activity-based Management

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## ABSTRACT

The companies around the world have some problems to allocate manufacturing overhead costs to products. The alternatives of cost-allocation bases that are used in management accounting systems are direct labor-hours, direct-labor-dollars, machine-hours, units of production and others. Many companies have been put under great pressure to provide ever higher quality products at ever lower costs. To obtain more accurate product cost information, activity-based costing (ABC) may be actually the better way to understand real costs and opportunities available to reduce the costs for bidding, etc. These are very important for managing organizations in the competitive situations.

In addition to the techniques of performing operation more efficiently by engineers, accountants, and other teamwork, Activity-based management (ABM) is the management processes that uses the information provided by activity-based cost analysis to improve organizational profitability. ABM includes performing activities more efficiently, eliminating the need to perform certain activities that do not add value for customers, improving the design of products, and developing better relationships with customer and suppliers. The goal of ABM is to satisfy customers' needs while making fewer demands on organizational resources.

This project examines the attitude of accounting controllers in manufacturing industry in several aspects such as the reasons of using and not using Activity-based management (ABM), the consequences after using it and trends in ABM employment in manufacturing firms. In the study, primary and secondary data were collected from surveys using mail questionnaires, various textbooks and accounting journals. One hundred and ninety-five samples were selected from the list of Stock Exchange of

Thailand and 63 samples responded. The evaluations from analyzing data and processing SPSS for Window reveal the attitude of accounting controllers who work in both the firms using ABM and the firms not using ABM. The results of this research suggest that ABM performs satisfactorily to cost management system in the organizations and develop effective production in the manufacturing industries in the future.

The researcher is interested in studying the results from using ABM in the manufacturing industries in Thailand. The objective of this research is to develop effective production in the manufacturing industries in the future. However, this system is not recognized enough, then the researcher studies only the well-known companies who registered in the Stock Exchange of Thailand (SET) and hope that this research would be beneficial to all readers.

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## **L INTRODUCTION**

### **1.1 Background of the Research**

Due to the competitive international business and technology advancement, the manufacturing industries in Thailand are concentrating on cost management to increase efficiency in the operation, developing quality of products, as well as the after sales services. In the past, many organizations used cost accounting system to compare revenue and expense in the operating process. However, this system can not be adjusted to use in some rapid changes in the production process and product mix. The executive managers should establish an information system that provides update, clear, and correct information in their organization. These are very useful for their managerial decisions in production management and marketing management, etc. The information system can provide strengths and weaknesses of business in time and help in setting price, target cost, product mix by using high technology to increase profits to the organizations. This information system is Activity-based Costing System or ABC, the procedure that measures the cost of objects, such as products, services and customers. ABC first assigns resources cost to the activities performed by the organization. Then activity costs are assigned to the products, services and customers who benefit from or are creating the demand for the activities. Activity-based management (ABM) is the management processes that use the information provided by Activity-based cost analysis to improve organizational profitability. ABM includes performing activities more efficiently, eliminating the need to perform certain activities that do not add value for customers, improving the design of products, and developing better relationships between customers and suppliers. The differences between ABC and ABM are presented in Table 1.1. The goal of ABM is to satisfy customers' needs while making



fewer demands on organizational resources.

Table 1.1. Differences between Activity-based Costing (ABC) and Activity-based Management (ABM).

	<b>Activity-based Management</b>	<b>Activity-based Costing</b>
Overall purpose	Provides managers and operators with economic feedback (financial and non-financial) about process efficiencies and responsibility-center performance	Allows senior managers to assess product, customer, and business-unit profitability by assigning costs based on usage of companywide resources; also measures activity and process costs and gauges capacity usage.
Cost of resources used	Actual	Standard
Frequency of updating	Continual	Periodic (quarterly, semiannual, or annual) or as sustainable changes occur
Measurement demands	Highly accurate	Estimates sufficient; more accuracy only when cost justified
Scope of system	Responsibility center	Entire value chain, from suppliers through post-sales service
Definitions of cost	Expenses actually recorded in financial system	Cost of resources used based on activity cost driver rates and practical standard capacity of organizational resources (difference between the two definitions: the cost of unused capacity plus any short-term spending variances)
Cost variability	Emphasis on short-term fixed and variable costs	Degree of variability is not a central feature; managers make almost all costs variable through Activity-based budgeting that matches resource supply to resource demand

Traditional cost systems (Table 1.2 and Figure 1.1) use volume-driven allocation bases, such as direct labor dollars, machine hours, and sales dollars, to assign organizational expenses to individual products and customers. But many of the resource demands by individual products and customers are not proportional to the volume of units produced or sold. Thus, conventional systems do not measure accurately the costs of resources used to design and produce products and to sell and deliver them to customers. Companies, including those with excellent traditional cost systems, have developed Activity-based cost systems, so they can directly link the costs of performing organizational activities to the products and customers for which these activities are performed. The system can be developed primarily to provide process cost information to product engineers to help design products that would be less expensive to manufacture. The system, however, is used to monitor production performance. The improved costing system is a means to an end. The goal is to increase profits, not to obtain more accurate costs. Companies can use ABC information to reprice their products, services, or customers so that the revenues received exceed the costs of resources used to produce products for individual customers.

Due to increasing efficiency (lowering the cost) of activities performed, continuous improvement programs, such as total quality management and cycle time reduction (just-in-time), reduce the resources required to inspect products, changeover and setup machines, and move and store materials. Successful implement programs produce major reductions in the demands for resources to perform batch and product-sustaining activities.

ABC is a part of ABM (Figure 1.2) because the organization that uses ABM must divide tasks into many activities like Cross-Functional Barriers and group them into process. The process composes of core process and support process. These processes



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would be separated into value added activity and non-value added activity. The organization should eliminate non-value added activity for providing quality product products and services to customers.

Table 1.2. Comparing Traditional Approach and ABC Approach.

<b>Traditional Approach</b>	<b>ABC Approach</b>
One or a few indirect-cost pools for each department or entire plant, usually with little homogeneity of these cost pools.	Many homogeneous indirect-cost pools because many activity areas used. Operating personnel plays a key role in designating which activity areas to use.
Indirect cost-allocation bases may or may not be cost drivers.	Indirect cost-allocation bases are much more likely to be cost drivers.
Indirect cost-allocation bases are often financial, such as direct labor costs or direct material costs.	Indirect cost-allocation bases are often non-financial variables, such as number of parts in a product or hours of test time.

Activity-based cost systems contain two important insights. First, the activities performed by many resources are not demanded in proportion to the total volume of units produced (or sold). The demands arise from the diversity and complexity of the product and customer mix. Second, Activity-based cost systems are not models of how expenses or spending vary in the short-run. ABC systems estimate the costs of resources used to perform activities for various outputs. The quantity of each activity supplied to outputs is estimated by setup hours, number of purchase orders processed, number of receipts, number of direct labor and machine hours, and number of parts maintained.

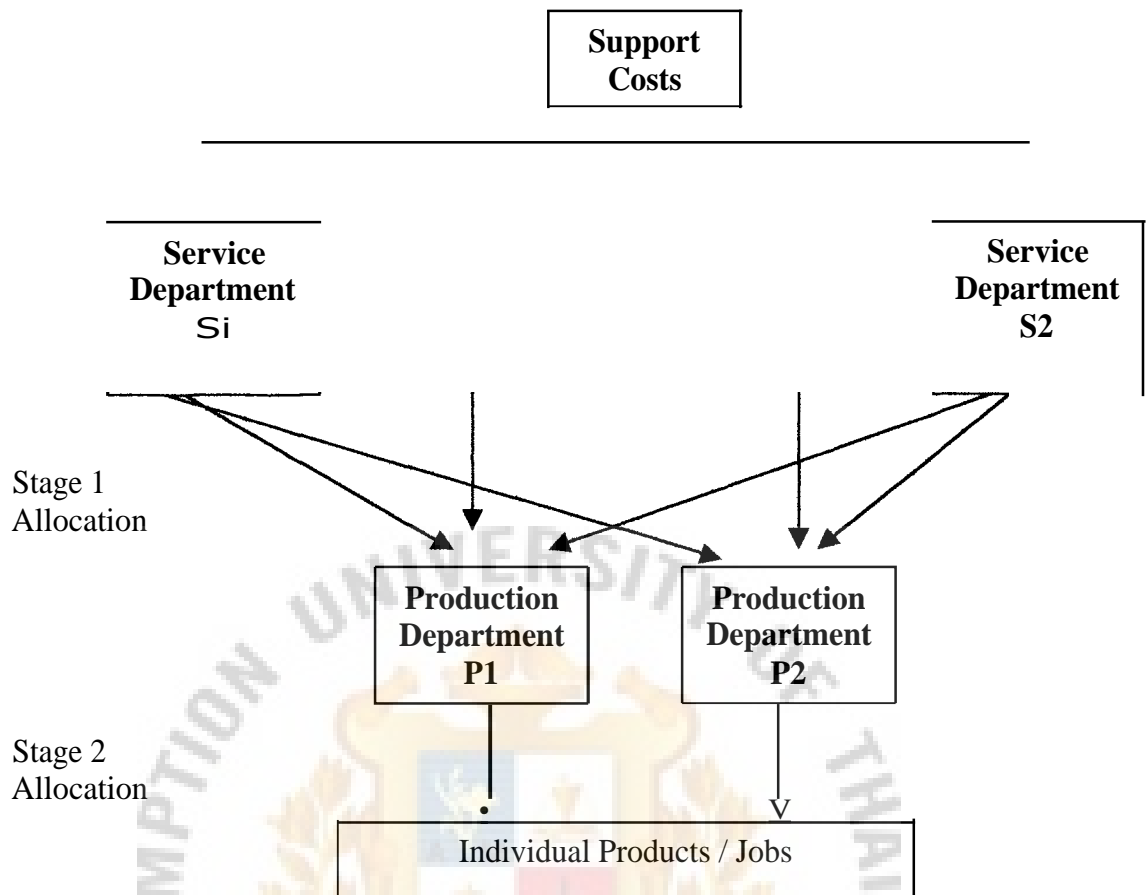


Figure 1.1. Two-stage Cost Allocation.

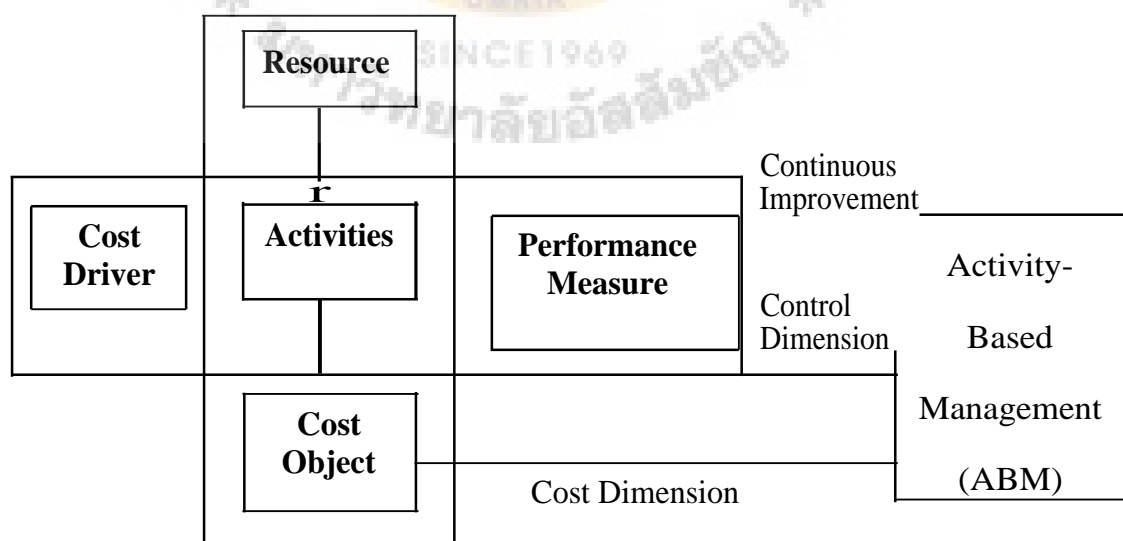


Figure 1.2. Relationship between ABC and ABM.

Identification of activity output measures is simplified by classifying activities into one of four general categories: (1) unit-level, (2) batch-level, (3) product-level, and (4) facility-level. Classifying activities into these general categories is useful because the costs of activities associated with the different levels respond to different types of activity drivers. Unit-level activities are those that are performed each time a unit produced. Grinding, polishing, and assembling are examples of unit-level activities. Batch-level activities are those that are performed each time a batch of goods is produced. Setups, inspections, production scheduling, and material handling are examples of batch-level activities. Product-level (sustaining) activities are those that are performed as needed to support the various products by a company. Engineering changes, developing product-testing procedures, marketing products, engineering processed, and expediting goods are examples of Product-level activities. Facility-level activities are those that sustain a factory's general manufacturing processes. Providing facilities, maintaining grounds, and providing plant security are examples.

ABC uses the technique that helps in managing cost efficiently and many organizations are interested in this system. The researcher is interested in studying only the well-known companies who registered in the Stock Exchange of Thailand (SET).

## **1.2 Research Objectives**

The objectives of this research are to study the attitude of accounting controllers in manufacturing industry, the reasons of using or not using Activity-based management (ABM), the consequences after using it and the trends in ABM which one adopted in manufacturing firms. The objectives are as the following:

- (<sup>1</sup>) To study the number of manufacturing firms who are registered in SET and who use Activity-based management (ABM) in their organizations



- (2) To study the motivation factors that are important to accounting controllers in their making decision to use ABM
- (3) To study the results occurred from using ABM
- (4) To study the barrier factors that influence accounting in making decision not to use ABM
- (5) To study the trends in manufacturing firms where ABM is still not in use

### **1.3 Scope of the Research**

This research focuses at the controller managers who work in the manufacturing firms in Thailand. The samples are selected from the companies registered in SET. The respondent data was edited to separate incomplete questionnaires, coded and processed by using Statistic Package for Social Sciences (SPSS) to analyze research.

### **1.4 Significance of the Research**

From the research data, the users can understand the motivating factors that are important to accounting controllers in making decision to use ABM and the barrier factors that influence their decision making in not using ABM. In addition, they can understand strengths and weaknesses after changing from traditional accounting system to ABM system and try to develop ABM system in their current business. The core benefits of ABM are cost reduction, continuous improvement, cost driver analysis (receive high quality of raw material), cost classification (value-added and non-value-added activities), and key performance measurement (quality, time, and service). These would create competitive advantage for using ABM in the organizations.

### **1.5 Limitations**

In conducting this research, I have found some limitations as below:

- (1) Some respondents are not willing to answer the questionnaires and mail back to me. They consider it a waste of time. This is the most significant problem from mail survey.
- (2) ABC and ABM system are not recognized enough, then the researcher studies only the well-known companies who registered in the Stock Exchange of Thailand (SET) and that causes small sample size.
- (3) ABM is not widely used.
- (4) Time limitations.



## II. LITERATURE REVIEW

### 2.1 Overview

In concisely, basic cost accounting concepts and techniques with an emphasis on providing information for management decision making, the management should have a better understanding of Cost Accounting and how it fits in order to be able to manage the organization's issues and measure overall performance. Traditionally, cost accounting focused on determining the cost of inventory and of goods produced. Costs were classified into functional categories, and the determination of manufacturing costs consumed much effort. While it is still important to know the costs produced, today's accountant must provide even more information. Companies like the Body Shop need accurate cost information to integrate production and retail services. Their production methods and types of products change rapidly. The flattening of the hierarchical pyramid and the empowerment of lower levels of management require operationally relevant information to support broad-based decision making from all employees. The company accountant is taking on a new role, one with broader implications and less narrow definition. It is in this way that cost accounting is evolving into cost management (Hansen and Mowen 1997).

Management accounting is the process of identifying, measuring, reporting, and analyzing information of the economic events in organizations. One example of management accounting information is the reported expenses of an operating department, such as the bakery department in a grocery store. Management accounting information is one of the primary informational sources for decision making and control in the organizations. Management accounting systems produce information that

helps workers, managers, and executives make better decisions and improve their organization's processes and performance (Reeve 1995).

Measures of the economic condition of the enterprise, such as the cost and profitability of the organization's products, services, customers, and activities, are available only from management accounting systems. This information should help employees learn how to improve the quality of operations, lower the cost of operations, and increase the responsiveness of operations for customer needs (Atkinson 1998).

With a much more competitive environment, managers in both manufacturing and service companies need to have accurate, relevant information about their actual costs. For manufacturing companies, managers need this information to help engineers design products that can be produced efficiently, signal where improvements in quality, efficiency, and speed are needed in manufacturing operations. Moreover, they need relevant information to guide product mix decisions, choose among alternative suppliers, and negotiate price, product features, quality, delivery, and service with customers.

Managers in service companies need to accurately measure the cost and profitability of their product lines, market segments, and individual products and customers. Both manufacturing and service company managers need operational control systems that will enhance the cost-improvement, quality-improvement, and process-time reduction activities of their employees (Govindarajan 1993).

## **2.2 Emerging Themes in Cost Accounting**

Traditional product costing is one type of cost accounting information systems which assigns only manufacturing costs to products. Assigning the cost of direct materials and direct labor to products poses no particular challenge. These costs can be assigned to products using direct tracing or very accurate driver tracing. In traditional

cost system, only unit-based activity drivers are used to assign costs to products. However, this method assumes that the overhead consumed by products is highly correlated with number of units produced, measured in terms of such factors as direct labor hours, machine hours, or material costs. These unit-based activity drivers assign overhead to products through the use of either plantwide or departmental rates (Hirsch 1994).

Today's economic environment has required a restructuring of cost accounting and cost management. In recent years, worldwide competitive pressures have changed the nature of economy and have caused many manufacturers to change dramatically the way in which they operate their businesses. For many firms, the benefits of more detailed, accurate cost system may now exceed its costs. Thus, the advanced cost management accounting systems are emerging (Hansen and Moven 1997). Manufacturing and service organizations are now introducing Activity-based costing, or ABC, as it is frequently called, to overcome the inability of traditional cost systems to accurately assign their indirect and support costs. Many manufacturing companies now have indirect costs that are more than five or ten times their direct labor costs. Traditional management accounting systems allocate these indirect costs to products based on direct labor and thereby, introduce enormous distortions in the costs assigned to products and customers.

Activity-based costing (ABC) systems avoid arbitrary allocations and subsequent cost distortions by, first assigning the costs of resources to the activities using the resources. Then the activity costs are assigned to the products, services, and customer, creating the demand for benefiting from the activities performed. This means that the cost of purchasing is assigned to the items purchased, the cost of designing products is assigned to the new products designed, and the cost of assisting customers is assigned

to the individual customers (Kaplan 1997). To understand clearly the use of ABC, first, identify activities in the organization, collect indirect costs in cost pools related to activities, determine an allocation base for each cost pool, allocate costs to cost object according to its use of the allocation base (Morse 1994).

Companies initially use Activity-based costing to analyze historical financial data. They assign operating expenses of the most recent period to the products and services produced and customers served during that period. This process enables managers to learn the actual costs of activities and processes performed in the last period and the profitability of the previous period's products, services, and customers. The information becomes the basis for actions, often referred to as Activity-based management or ABM in the upcoming period (Kaplan 1997). ABM includes making decisions to modify pricing, product mix, and customer mix, enhance supplier and customer relationships, improve the design of products and services, perform activities more efficiently, and eliminate the need to perform certain activities that do not create any customer value. For example, ABM includes current efforts to re-engineer and improve business processes and invest in new technologies that reduce the cost of performing critical activities (Horngren 1997).

Today leading companies also are using their Activity-based cost systems in a proactive, predictive mode. Instead of just providing historical data inputs to their Activity-based cost system, these companies are using budgeted data to estimate activity and process cost for future periods. In addition, they are estimating the future costs of producing products and servicing customers. Such forecasts enable managers to make better decisions in advance of actual events and to influence future cost behavior in a more powerful manner. For example, by using Activity-based cost systems in the budgeting processes, managers can adjust the supply of resources (people, equipment,



and facilities) in future periods to the estimated demands for activities and process for the forecasted quantity and mix of products, services, and customers (Foster 1997).



## **III. RESEARCH METHODOLOGY**

### **3.1 Source of Data**

This research study uses descriptive and survey research from 2 sources of data:

Primary Data is collected from mail questionnaires, the sampling size is selected from the controller managers who work in the manufacturing firms that are registered in SET. From this mail survey, there are 63 respondents from total 195 mailing questionnaires, which is 32.31% respondent from manufacturing firms that are registered in SET.

Secondary Data is collected from internet, journals, documents, text, SET information, etc.

### **3.2 Research Methodology**

The primary and secondary data is collected from mail survey which were send to the controller managers who work in the manufacturing firms that are registered in SET. The sampling size is 195 and the collected data in Cross-section is during June—August, 1999. The procedure for collecting data is as below:

- (1) Designing questionnaire (June-July, 1999)
- (2) Mailing questionnaires (July-August, 1999)
- (3) Collecting data from 70 respondents; following-up, checking and classifying the 63 completed questionnaires (August-September, 1999)

### **3.3 Questionnaire**

The pattern of questionnaire (refer to Appendix) aimed at studying the attitude of accounting controllers in manufacturing industries toward Activity-based management (ABM) are separated into 3 parts. Part 1 is a study on general information for controller manager and that organization. Part 2 is a study on the effects in operating and the

beneficial results from using ABM. This part is collected information from the controller manager who works in the organization where ABM is also in use. Finally, part 3 is a study on the effects and the motivating factors that help to decide not to use ABM and the method that the organization uses to allocate indirect manufacturing cost to a product. This part is collected information from the controller manager who works in the organization where ABM is not in use.

There are 3 types of question as following:

- (1) Only one answer: The respondent can select only one answer. It is used in the general information part such as age, sex, education, working experience, capital register, etc.
- (2) Ranking question: The respondent can rank the most 3 motivating factors that are important to accounting controllers in making decision to use ABM and the barrier factors that influence their decision in not using ABM. ("1" refers to the most motivating factor)
- (3) Open-end question: The respondent can give opinion and recommendation clearly.

### **3.4 Statistical Techniques Using for Analyzing Data**

Statistical Techniques that are used to analyze data are classified into 2 categories as the following:

- (1) Descriptive Statistic (Basic Statistic) is the method for analyzing raw data by wording and information is presented in table, graph, etc. The users can understand the presentation clearly. The information would be concluded in percentage and analyzed by comparing the items of the population that the researcher is only interested in. This research is presented in three patterns as following:

- (a) Frequency table is used to present amount in each item of collected data.
- (b) Percentage table is used to show amount collected from frequency table in percentage.
- (c) Cross table is used to classify at least 2 data items at the same table to analyze relationship.

(2) Inferential Statistic is the technique used to collect data from the sampling group and this group is represented to total population and all processes that are used to conclude the population. This technique is the best decision making for the uncertain situation by using probability such as Estimation theory and Hypothesis testing. This research uses hypothesis testing tool as following:

- (a) Chi-Square test is used to analyze data from frequency table which generally classified data in nominal scale such as sex, education level, etc. and test the independence of that group.
- (b) T-test or Z-test (depend on sampling size) is used to test the proportion of data that is already expected.

### **3.5 Steps for Testing Hypothesis**

There are 6 steps for testing hypothesis as following:

- (1) Underlying assumptions are composed of the null hypothesis or zero hypothesis ( $H_0$ ) and the alternative hypothesis ( $H_1$ ) which identify clearly separated assumptions.
- (2) Identifying significant level by setting  $\alpha = 0.05$
- (3) Selecting appropriate statistic and compute the value of test statistics such as  $\chi^2$ , T, Z, and F.

- (4) Determining the critical region or rejection region that is used to reject  $H_0$  and the acceptance region that is used to accept  $H_0$
- (5) Conclusion by comparing statistic value to critical value if the statistic value is in the critical value, the conclusion is rejected null hypothesis.

### **3.6 Hypotheses**

Hypotheses that are used to analyze in this research are as following:

- (1) There are more than 50% of total companies in manufacturing industry who registered in SET and use ABM.
- (2) The controller managers in manufacturing industry who are using ABM at most 80% agree that ABM can provide efficiency operation.
- (3) The controller managers in manufacturing industry and who are not using ABM at least 80% agree that ABM give a lot of benefits to the organization.
- (4) The motivating factor that incentives the controller managers to use ABM in the organization is to the cost reduction.
- (5) The period of time in using ABM relates to cost reduction.
- (6) The period of time in using ABM relates to reduce non-value added cost.
- (7) The period of time in using ABM relates to innovation adjustment.
- (8) The period of time in using ABM relates to continuous improvement.
- (9) The motivating factor that does not incentive the controller managers to use ABM in the organization is the complexity.
- (10) There are at least 60% of total companies in manufacturing industry who registered in SET and they trend to use ABM in the future.

## IV. ANALYZING RESULTS

### 4.1 Inferential Statistic

This technique is used to collect data from the sampling group and this group represents the total population and all processes that is used to conclude the population. This technique is the best decision making for the uncertain situation and it is presented as follows:

- (1) There are more than 50% of total companies in manufacturing industry who registered in SET and use ABM.

$$H_0 : PABM_{company} \leq 0.5$$

$$H_1 : PABM_{company} > 0.5$$

$$\text{Significant level } (\alpha) = 0.05$$

Table 4.1. Processing Binomial Test from SPSS Program.

Activity-based Management	Category	N	Observed Prop.	Test Prop.	Asymp. Sig. (1-tailed)	Exact Sig. (1-tailed)
Group1	No	53	0.84	0.5	0.12	0.12
Group2	Yes	10	0.16			
Total		63	1.00			

Exactly significant from processing SPSS for windows is 0.12 but  $\alpha$  is 0.05, so significant  $> \alpha$  ( $0.12 > 0.05$ ). The conclusion is to reject  $H_1$  or accept  $H_0$  that  $PABM_{company} \leq 0.5$ . Then total companies in manufacturing industry who registered in SET and use ABM are less than 50% at significant level  $(\alpha) = 0.05$ .



- (2) The controller managers in manufacturing industry who use ABM less than 80% agree that ABM can provide efficiency operation.

$H_0 : P$  The controller managers using ABM agree that ABM can provide efficiency operation  $\geq 0.8$

$H_1 : P$  The controller managers using ABM agree that ABM can provide efficiency operation  $< 0.8$

Significant level ( $\alpha$ ) = 0.05

Table 4.2. Processing Binomial Test from SPSS Program.

Work efficiency	Category	N	Observed Prop.	Test Prop.	Asymp. Sig. (1-tailed)	Exact Sig. (1-tailed)
Group1	yes	9	1.0	0.8	0.134	0.134
Total		9	1.0			

Exactly significant from processing SPSS for windows is 0.134 but  $\alpha$  is 0.05, so significant  $> \alpha$  ( $0.134 > 0.05$ ). The conclusion is to accept  $H_0$  or fail to reject  $H_0$  that  $P$  The controller managers using ABM agree that ABM can provide efficiency operation  $\geq 0.8$ . Then the controller managers in manufacturing industry and who use ABM more than 80% agree that ABM can provide efficiency operation at significant level ( $\alpha$ ) = 0.05.

- (3) The controller managers in manufacturing industry and who are not using ABM more than 80% agree that ABM has a lot of benefits to the organization.

$H_0 : P$  The controller managers using ABM agree that ABM has a lot of benefits to the organization  $\leq 0.8$

$H_1 : P$  The controller managers using ABM agree that ABM has a lot of benefits to the organization  $> 0.8$

Significant level ( $\alpha$ ) = 0.05

From Table 4.3, exactly significant from processing SPSS for windows is 0.005 but  $\alpha$  is 0.05, so significant  $> \alpha$  ( $0.005 > 0.05$ ). The conclusion is to reject  $H_0$  or accept  $H_1$  that  $P$  The controller managers using ABM agree that ABM has a lot of benefits to the organization  $> 0.8$ . Then the controller managers in manufacturing industry who use ABM more than 80% agree that ABM has a lot of benefits to the organization at significant level ( $\alpha$ ) = 0.05.

Table 4.3. Processing Binomial Test from SPSS Program.

Advantage	Category	N	Observed Prop.	Test Prop.	Asymp. Sig. (1-tailed)	Exact Sig. (1-tailed)
Group1	yes	48	0.941176	0.8	0.10	0.005
Group2	no	3	0.100000			
Total		51	1.000000			

(4) The most important factor that incentives the controller managers to use ABM in the organization is to cost reduction.

$H_0$  : The most important factor to use ABM is to reduce cost.

$H_1$  : The most important factor to use ABM is not to reduce cost.

From the Table 4.4, the most important factor that incentives the controller managers to use ABM in the organization is the cost reduction. That means the need of reducing cost is the first reason why ABM is chosen to use. The other factors which are less important respectively are "to measure performance and control operation better" and "to reduce cycle time". The conclusion is to accept  $H_0$  or fail to reject  $H_0$  that the

Ho : The reduction non-value added activities does not depend on period of time in using ABM

Hi : The reduction non-value added activities depends on period of time in using ABM

Significant level ( $\alpha$ ) = 0.05

Table 4.5. Crosstab Table from SPSS Program Presenting Duration in Using ABM and Cost Reduction.

Using ABM duration	Cost Reduction		
	yes	Total	%
less than 1 year	1	1	11.11
1-3 years	1	1	11.11
more than 3 years	7	7	77.78
Total	9	9	100.00

From Table 4.6, exactly significant from processing SPSS for windows is 1.000 but  $\alpha$  is 0.05, so significant  $> \alpha$  ( $1.000 > 0.05$ ). The conclusion is to accept Ho or fail to reject Ho that the reduction non-value added activities does not depend on period of time in using ABM at significant level ( $\alpha$ ) = 0.05.

most important factor that incentives the controller managers to use ABM in the organization is to reduce cost.

Table 4.4. Ranking Motivating Factors That Incentives the Controller Managers to Use ABM (from Processing in Excel).

Number	Factors	Amount
1	To reduce Cost	21
2	To measure performance and control operation better	16
3	To reduce Cycle time	9
4	The results from operation will be developed and continuous improvement	7
5	To reduce Non-value Added Activity	3
6	To promote better relationship between organisation and supplier; organization and customer	1
7	Others... ..	0

- (5) The period of time in using ABM relates to cost reduction.

Ho : Cost reduction does not depend on period of time in using ABM

Hi : Cost reduction depends on period of time in using ABM

Significant level ( $\alpha$ ) = 0.05

The conclusion is to accept HO or fail to reject HO. Cost reduction factor does not depend on period of time in using ABM at significant level ( $\alpha$ ) = 0.05.

- (6) The period of time in using ABM relates to reduce non-value added activities.

Table 4.6. Processing Chi-Square Test from SPSS Program.

	Value	df	Asymp. Sig. (2-tailed)	Exact Sig. (2-tailed)	Exact Sig. (1-tailed)	Point Prob
Pearson Chi-Square	0.321	2	0.852000	1.000		
Likelihood Ratio	0.537	2	0.764000	1.000		
Fisher's Exact Test	1.708			1.000		
Linear-by-Linear	0.250	1	0.617000	1.000		
Association				1.000	0.778	0.778
N of Valid Cases	9					

(7) The period of time in using ABM relates to innovation adjustment.

Ho : The innovation adjustment does not depend on period of time in using ABM

Hi : The innovation adjustment depends on period of time in using ABM

Significant level ( $\alpha$ ) = 0.05

From Table 4.7, exactly significant from processing SPSS for windows is 1.000 but  $\alpha$  is 0.05, so significant  $> \alpha$  ( $1.000 > 0.05$ ). The conclusion is to accept Ho or fail to reject Ho that the innovation adjustment does not depend on period of time in using ABM at significant level ( $\alpha$ ) = 0.05.

Table 4.7. Processing Chi-Square Test from SPSS Program.

	Value	df	Asymp. Sig. (2-tailed)	Exact Sig. (2-tailed)	Exact Sig. (1-tailed)	Point Prob
Pearson Chi-Square	0.381	2	0.827	1.000		
Likelihood Ratio	0.622	2	0.733	1.000		
Fisher's Exact Test	1.613			1.000		
Linear-by-Linear	0.290	1	0.590	1.000	0.750	0.750
Association						
N of Valid Cases	8					

- (8) The period of time in using ABM relates to continuous improvement.

Ho : The continuous improvement does not depend on period of time in using ABM

Hi : The continuous improvement depends on period of time in using ABM

Significant level ( $\alpha$ ) = 0.05

From Table 4.8, exactly significant from processing SPSS for windows is 1.000 but  $\alpha$  is 0.05, so significant  $> \alpha$  ( $1.000 > 0.05$ ). The conclusion is to accept Ho or fail to reject Ho that the continuous improvement does not depend on period of time in using ABM at significant level ( $\alpha$ ) = 0.05.

- (9) The motivating factor that does not incentive the controller managers to use ABM in the organization is the complexity.

Ho : The most important factor not to use ABM is the complexity.

Hi : The most important factor not to use ABM is not the complexity.

Table 4.8. Processing Chi-Square Test from SPSS Program.

	Value	df	Asymp. Sig. (2-tailed)	Exact Sig. (2-tailed)	Exact Sig. (1-tailed)	Point Probability
Pearson Chi-Square	0.321	2	0.852	1.000		
Likelihood Ratio	0.537	2	0.764	1.000		
Fisher's Exact Test	1.708			1.000		
Linear-by-Linear	0.250	1	0.617	1.000		
Association				1.000	0.778	0.778
N of Valid Cases	9					

Table 4.9. Ranking Motivating Factors That Not Incentives the Controller Managers to Use ABM.

Number	Factors	Amount
1	Lack of professional staffs that have skills in ABC and ABM	86
2	Complexity in using ABM	52
3	Employees are not ready in changing to new system	49
4	The current system is efficient and suitable for your organization	40
5	Lack of supporting from top management	18
6	Others.....	4
7	Financial resource problem	2



From Table 4.9, the most important factor that does not incentive the controller managers to use ABM in the organization is "Lack of professional staffs who are skillful in ABC and ABM". So this factor is the first reason why the controller managers decide not to use ABM. The other factors which are respectively less important respectively are "Complexity in using ABM" and "Employees are not ready to change to the new system". The conclusion is to reject  $H_0$  or accept  $H_1$ . The most important factor of not using ABM is not the complexity

(10) There are at least 60% of total companies in manufacturing industry who registered in SET and trend to use ABM in the future.

$H_0 : P_{\text{not ABM company but trend to use ABM}} \leq 0.6$

$H_1 : P_{\text{not ABM company trend to use ABM}} > 0.6$

Significant level ( $\alpha$ ) = 0.05

Table 4.10. Processing Binomial Test from SPSS Program.

Trends of using ABM	Category	N	Observed Prop.	Test Prop.	Asymp. Sig. (1-tailed)	Exact Sig. (1-tailed)
Group1	yes	40	0.769231	0.6	0.009	0.008
Group2	no	12	0.2			
Total		52	1.0			

From Table 4.10, exactly significant from processing SPSS for windows is 0.008 but  $\alpha$  is 0.05, so significant  $< \alpha$  ( $0.008 < 0.05$ ). The conclusion is to reject  $H_0$  or accept  $H_1$  that  $P_{\text{not ABM company trend to use ABM}} > 0.6$ . Then the total companies in manufacturing industry who registered in SET and have trend to use ABM are more than 60% at significant level ( $\alpha$ ) = 0.05.



## 4.2 Descriptive Statistic

Descriptive Statistic is the basic statistic that is used to describe data in frequency Table, percentage Table, and cross Table.

From the research, there are a few companies (15.6%) that used ABM in the organizations compared to the total responded manufacturing industries who registered in SET. The results can be analyzed in 3 aspects. Firstly, the general information of respondents and organizations, 63 controller managers who response the questionnaire are separated by position into Accounting Manager 36 persons (57.1%), Accounting Director 10 persons (15.9%), Chief Accountant 4 persons (6.3%) and other positions 13

Table 4.11. Frequency and Percentage of Respondent Separated by Position.

Position	Frequency	Percent	Cumulative Percentage
Accounting Manager	36	57.1	57.1
Accounting Director	10	15.9	73.0
Chief Accountant	4	6.3	79.4
Others	13	20.6	100.0
Total	63	100.0	

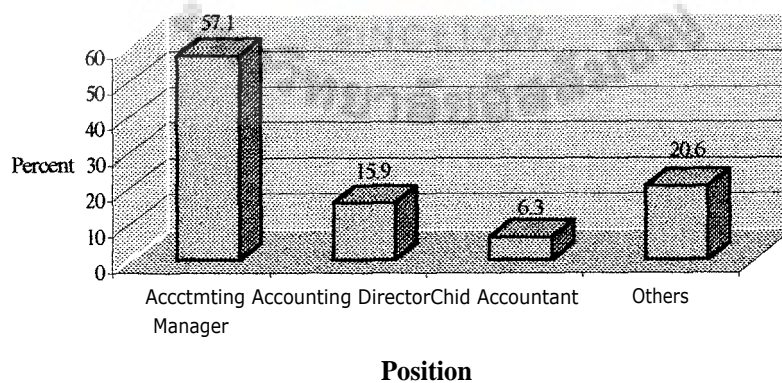


Figure 4.1. Frequency and Percentage of Respondent Separated by Position.

persons (20.6%) as referred to Table 4.11 and Figure 4.1. Most respondents are accounting managers who work in management level and have long experience especially in accounting; therefore, they can provide valuable information. The respondents are 30 males (47.6%) and 33 females (52.4%) as referred to Table 4.12 and Figure 4.2. The number of male and female are approximately equal so sex is not the major factor that affects the result analysis.

Table 4.12. Frequency and Percentage of Respondent Separated by Sex.

Sex	Frequency	Percent	Cumulative Percentage
Male	30	47.6	47.6
Female	33	52.4	100.0
Total	63	100.0	

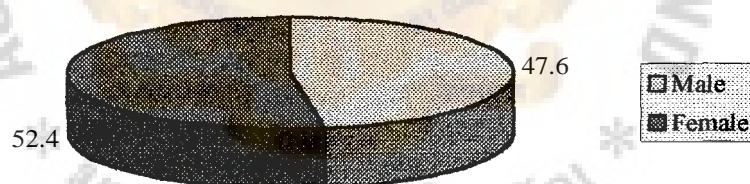


Figure 4.2. Frequency and Percentage of Respondent Separated by Sex.

The respondents from the questionnaire are separated by age into less than 30 years 4 persons (6.3%), 30-35 years 17 persons (27%), 36-40 years 15 persons (23.8%), and more than 40 years 27 persons (42.9%) as seen in Table 4.13 and Figure 4.3. Most respondents are more than 40 years old. Due to the education level, they are separated

into under Bachelor's degree 2 persons (3.2%), Bachelor's degree 29 persons (46%) and over Bachelor's degree 32 persons (50.8%) as seen in Table 4.14 and Figure 4.4.

Table 4.13. Frequency and Percentage of Respondent Separated by Age.

Age (Years)	Frequency	Percent	Cumulative Percentage
< 30	4	6.3	6.3
30-35	17	27.0	33.3
36-40	15	23.8	57.1
> 40	27	42.9	100.0
Total	63	100.0	

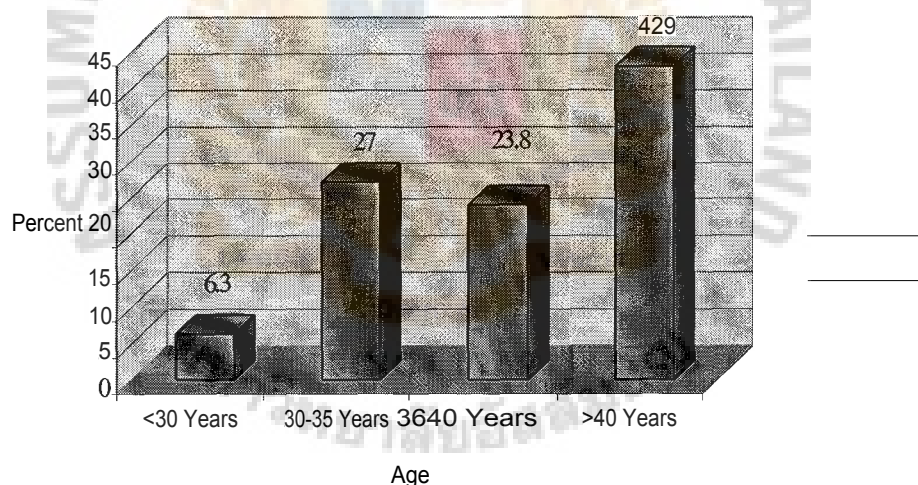


Figure 4.3. Frequency and Percentage of Respondent Separated by Age.

Table 4.14. Frequency and Percentage of Respondent Separated by Education Level.

Education Level	Frequency	Percent	Cumulative Percentage
Under Bachelor's Degree	2	3.2	3.2
Bachelor's Degree	29	46.0	49.2
Over Bachelor's Degree	32	50.8	100.0
Total	63	100.0	

Most of them graduated from higher than Bachelor's degree that means they have enough qualification and accounting skills to support their position.

Due to the working experience, they are separated into less than 3 years 2 persons (3.2%), 3-6 years 1 person (1.6%), 7-10 years 10 persons (15.9%), and more than 10 years 50 persons (79.4%) as seen in Table 4.15 and Figure 4.5. Most respondents

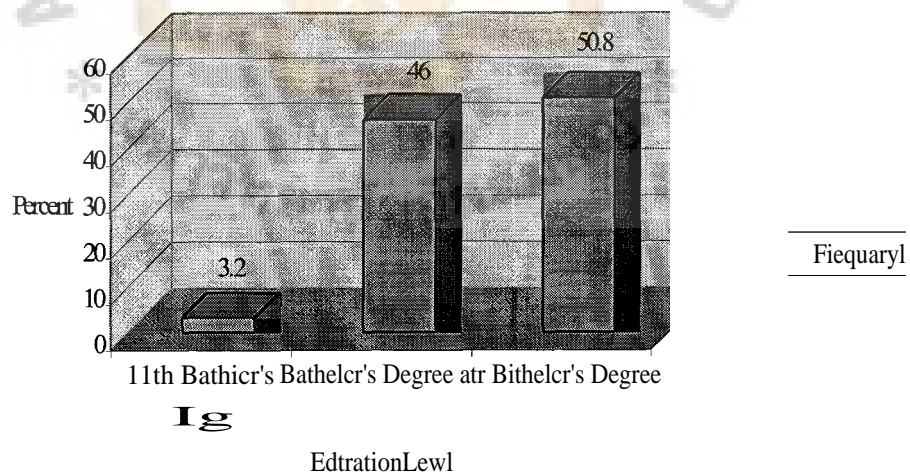


Figure 4.4. Frequency and Percentage of Respondent Separated by Education Level.

Table 4.15. Frequency and Percentage of Respondent Separated by Working Experience.

Working Experience	Frequency	Percent	Cumulative Percentage
< 3 Years	2	3.2	3.2
3-6 Years	1	1.6	4.8
7-10 Years	10	15.9	20.6
> 10 Years	50	79.4	100
Total	63	100	

have been working for more than 10 years; therefore, from their experiences and skills in accounting they can provide valuable information for this research. They can compare the differences between the traditional accounting and ABM.

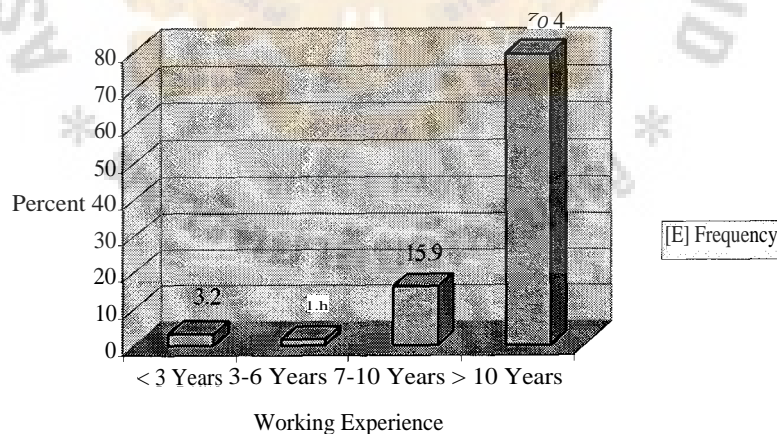


Figure 4.5. Frequency and Percentage of Respondent Separated by Working Experience.



From 63 controller managers, they are separated by categories of manufacturing Industry into Agricultural Business 6 persons (9.5%), Construction and Decoration 7 persons (11.1%), Chemical Product and Plastic 6 persons (9.5%), Electronics Equipment and Computer 1 person (1.6%), Electronic Parts 5 persons (7.9%), Food and Beverages 8 persons (12.7%), Household 1 person (1.6%), Jewelry and Accessories 1 person (1.6%), Tools and Machines 1 person (1.6%), Package 4 persons (6.3%), Drugs and Cosmetics 1 person (1.6%), Printing 1 person (1.6%), Package 4 persons (6.3%), Cloths and Shoes 14 persons (22.2%), and Vehicles and Equipment 5 persons (7.9%) as seen in Table 4.16 and Figure 4.6. Most of them are in cloths and shoes manufacturing industries, the results will mainly obtain the influence and some factors from this industry.

To determine the size of the company from the capital register, they are separated into 50 persons (79.4%) in less than 1,000 million bahts capital register firms, 8 person (12.7%) in 1,000-3,000 million bahts capital register firms, 2 persons (3.2%) in 3,001-5,000 million bahts capital register firms, and 3 persons (4.8%) in more than 5,000 million bahts capital register firms as referred to Table 4.17 and Figure 4.7. Most of them are small and medium size companies that have less than 1,000 million bahts capital register when compared to the manufacturing companies in SET. From the survey, most of the companies have number of year operation between 16 and 30 years as seen in Table 4.18 and Figure 4.8. This can be interpreted that these companies have long time operation. So the information that we gained is supposed to be of sufficient value.

Out of 63 controller managers who response the questionnaire, they are 10 persons who are using ABM (15.9%) and 53 persons (84.1%) who are not using ABM as seen in Table 4.19 and Figure 4.9. There are a few companies that used ABM

because it is a new management technique, some accounting managers still do not know ABM, and some are resistant to changes.

Table 4.16. Frequency and Percentage of Respondent Separated by Types of Manufacturing Industry.

Types of Manufacturing Industry	Frequency	Percent	Cumulative Percentage
Agricultural Business	6	9.5	9.5
Construction and Decoration	7	11.1	20.6
Chemical Product and Plastic	6	9.5	30.2
Electronics Equipment and Computer	1	1.6	31.7
Electronic Parts	5	7.9	39.7
Food and Beverages	8	12.7	52.4
Household	1	1.6	54.0
Jewelry and Accessories	1	1.6	55.6
Tools and Machines	1	1.6	57.1
Package	4	6.3	63.5
Drugs and Cosmetics	1	1.6	65.1
Printing	1	1.6	66.7
Paper	2	3.2	69.8
Cloths and Shoes	14	22.2	92.1
Vehicles and Equipment	5	7.9	100.0
Total	63	100.0	

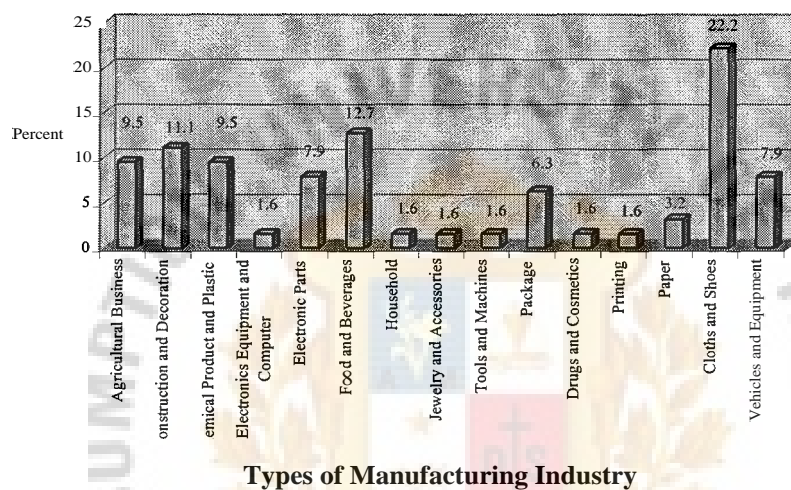


Figure 4.6. Frequency and Percentage of Respondent Separated by Types of Manufacturing Industry.

Table 4.17. Frequency and Percentage of Respondent Separated by Capital Register.

Capital Register (Million Baht)	Frequency	Percent	Cumulative Percentage
< 1,000	50	79.4	79.4
1,000-3,000	8	12.7	92.1
3,001-5,000	2	3.2	95.2
> 5,000	3	4.8	100
Total	63	100	

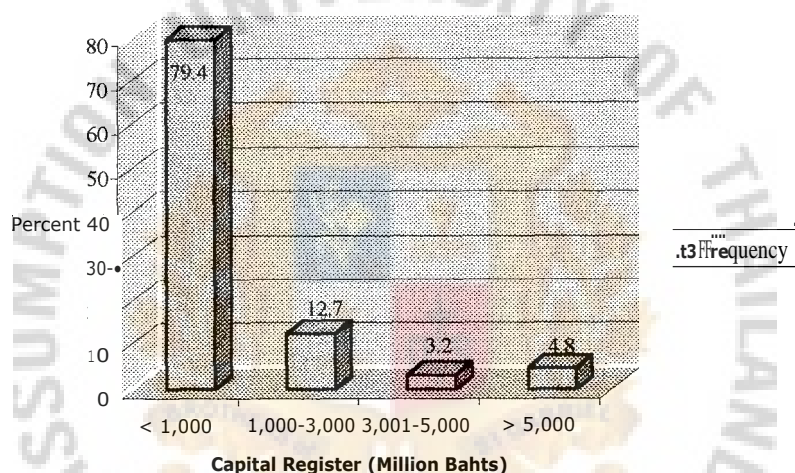


Figure 4.7. Frequency and Percentage of Respondent Separated by Capital Register.

Table 4.18. Frequency and Percentage of Respondent Separated by Number of Year Operation.

Number of Year Operation	Frequency	Percent	Cumulative Percentage
< 5 Years	1	1.6	1.6
5-15 Years	16	25.4	27
16-30 Years	29	46	73
> 30 Years	17	27	100
Total	63	100	

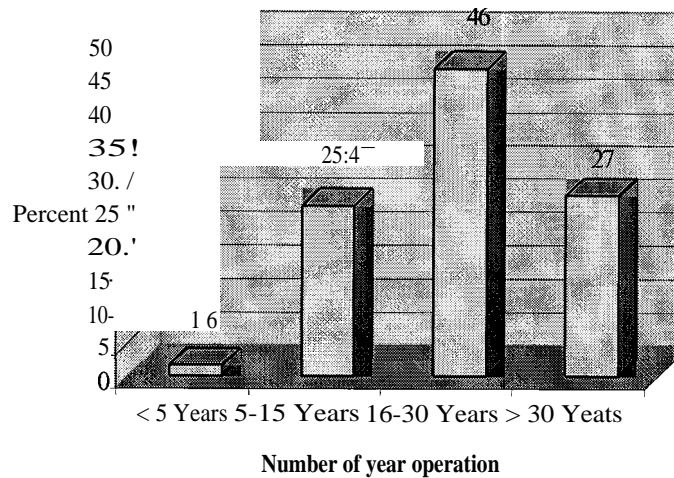


Figure 4.8. Frequency and Percentage of Respondent Separated by Number of Year Operation.

Table 4.19. Frequency and Percentage of Respondent Separated by Organization Using or Not Using ABM.

Type	Amount	Percent	Cumulative Percentage
Organization Using ABM	10	15.9	15.9
Organization Not Using ABM	53	84.1	100
Total	63	100	

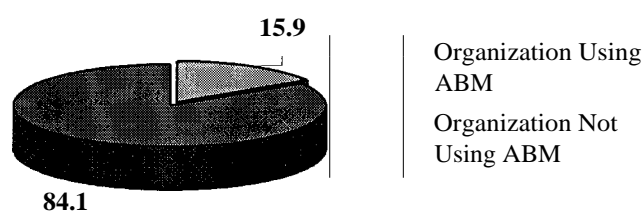


Figure 4.9. Frequency and Percentage of Respondent Separated by Organization Using or Not Using ABM.

In addition, there are 10 organizations (100%) that using ABM separated by categories of manufacturing industry: these are Jewelry and Accessories (100%), Construction and Decoration (28.6%), Food and Beverages (25%), Cloths and Shoes (21.4%), Vehicles and Equipment (20%), and Chemical Product and Plastic (16.7%) as seen in Table 4.20 and Figure 4.10.

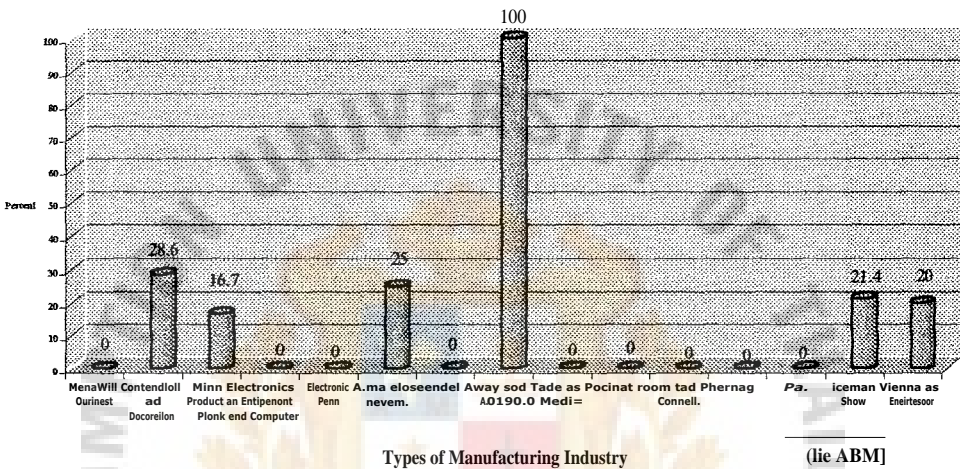


Figure 4.10. Percentage of Organization That Use ABM Separated by Types of Manufacturing Industry\_

Most companies using ABM are in the type of Jewelry and Accessories Industry, Construction and Decoration, and Food and Beverages. Most of them are very large organizations as referred to capital register which is more than 3,001 million bahts as seen in Table 4.21 and Figure 4.11, so they are more concerned about the errors of to calculating product cost per unit. ABC can explain that calculation every cost of production by volume is mistaken. ABC is a model for consumption of resources that provides information of how to use existing resources. It is not a model of organizing spending. Management can forecast any resource changes that results from management decisions by using ABC information. However, the total organizations who still do not use ABM are in Agricultural Business, Electronics Equipment and Computer,



Electronic Parts, Household, Tools and Machines, Package, Drugs and Cosmetics, Printing, and Paper. as seen in Table 4.20. Some of them are planning to use in the future.

Table 4.20. Percentage of Organization That Use ABM Separated by Types of Manufacturing Industry.

Types of Manufacturing Industry	Activity-based Management (ABM)			
	Use		Not Use	
	Amount	Percent	Amount	Percent
Agricultural Business	0	0.0	6	100.0
Construction and Decoration	2	28.6	5	71.4
Chemical Product and Plastic	1	16.7	5	83.3
Electronics Equipment and Computer	0	0.0	1	100.0
Electronic Parts	0	0.0	5	100.0
Food and Beverages	2	25.0	6	75.0
Household	0	0.0	1	100.0
Jewelry and Accessories	1	100.0	0	0.0
Tools and Machines	0	0.0	1	100.0
Package	0	0.0	4	100.0
Drugs and Cosmetics	0	0.0	1	100.0
Printing	0	0.0	1	100.0
Paper	0	0.0	2	100.0
Cloths and Shoes	3	21.4	11	78.6
Vehicles and Equipment	1	20.0	4	80.0

To determine working experience, the largest respondents who are in the companies that used ABM have been working for 5-15 years as seen in Table 4.22 and Figure 4.12. Consequently, the controller managers who have more experience are



conservative and may not stimulate the companies to use any new technique such as ABM.

Table 4.21. Relationship between Capital Register and Using Activity-based Management (ABM) in the Organization.

Capital Register (Million Baht)	Activity-based Management (ABM)			
	Use		Not Use	
	Amount	Percent	Amount	Percent
< 1,000	6	12	44	88
1,000 - 3,000	2	25	6	75
3,001 - 5,000	1	50	1	50
> 5,000	1	33.3	2	66.7

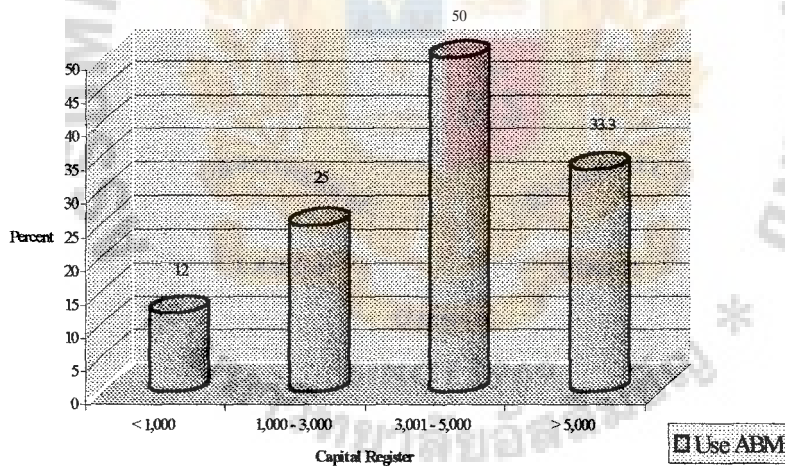


Figure 4.11. Relationship between Capital Register and Using Activity-based Management (ABM) in the Organization.

Secondly, the information is only from the organizations using ABM. The benefits of using ABM are as follows: cost reduction, continuous improvement, cost driver analysis, performance measurement (quality, time, service and cost) and cost classification into value—added activity and non-value added activity. These benefit also

help to reduce the operating time, direct labor hours, and they also decrease the production as well as operation costs. The company can efficiently and effectively produce products responding to the demands of customer in controlled time and costs. It is easier to seek for root causes when high production costs occur because ABM concept is to clearly separate cost by activities; thus, the business will become flexible and will adjusted to the innovation that is relevant to management using information from ABC in managerial decision such as planning, budgeting etc. Moreover, the methods of classifying activities are rather difficult in practice, especially when the companies are conservative or do not have standard planning.

Table 4.22. Relationship between Working Experience and Using Activity-based Management (ABM) in the Organization.

Working Experience (Years)	Activity-based Management(ABM)			
	Use		Not Use	
	Amount	Percent	Amount	Percent
< 5	0	0	1	100
5 - 15	4	25	12	75
16 - 30	3	10.3	26	89.7
> 30	3	17.6	14	82.4

The information from the questionnaires present that the controller managers who have more working experience agree that using ABM can improve higher efficiency operation in their organization as seen in Table 4.23 and Figure 4.13.

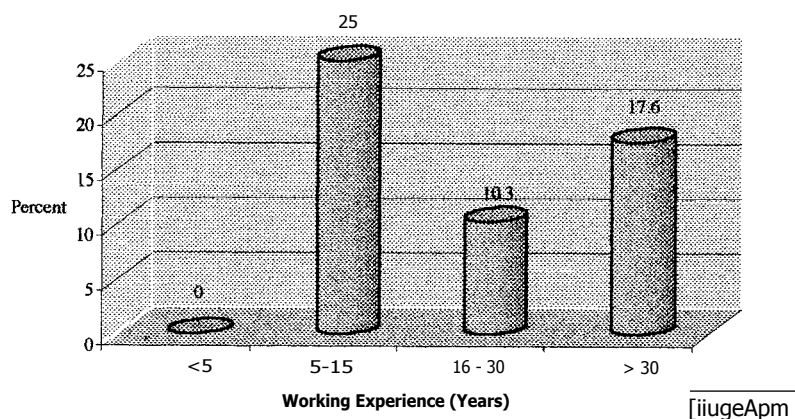


Figure 4.12. Relationship between Working Experience and Using Activity-based Management (ABM) in the Organization.

Table 4.23. Relationship between Working Experience and Attitude of Using Activity-based Management (ABM) That Improve Higher Efficiency Operation in the Organization.

Working Experience (Years)	Higher Efficiency Operation	
	Agree	
	Amount	Percent
<3	0	0
3 - 6	0	0
7 —10	2	22.2
> 10	7	77.8
Total	9	100

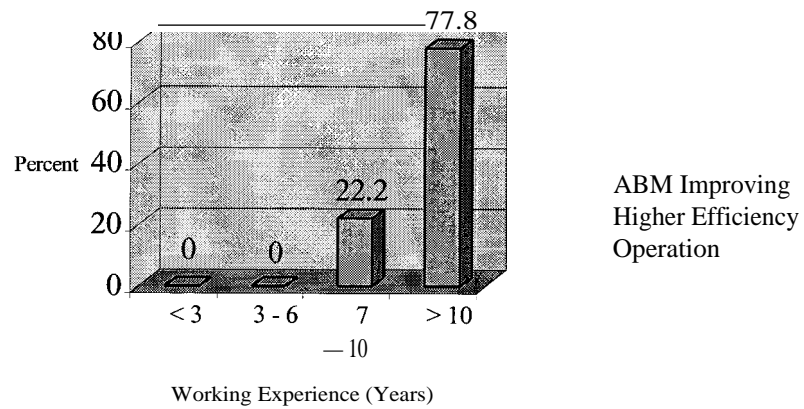


Figure 4.13. Relationship between Working Experience and Attitude of Using Activity-based Management (ABM) That Improve Higher Efficiency Operation in the Organization.

There are 20% of the firms operating ABM in the organizations for less than 1 year, 10% that operating between 1-3 years, and 70% operating for more than 3 years as referred to Table 4.24 and Figure 4.14. The trend of using ABM increases because a lot of firms have learned of ABM from journals, textbooks, and further study, etc.

Table 4.24. Percentage of Organization Using ABM for Period of Time.

Organization Using ABM for (Years)	Amount	Percent
< 1	2	20
1-3	1	10
> 3	7	70
Total	10	100

Total firms in any level of time using ABM agree that using ABM can improve higher efficiency operation as seen in Table 4.25 and Figure 4.15 and also agree that it can reduce cost in the organization as referred to Table 4.26 and Figure 4.26.

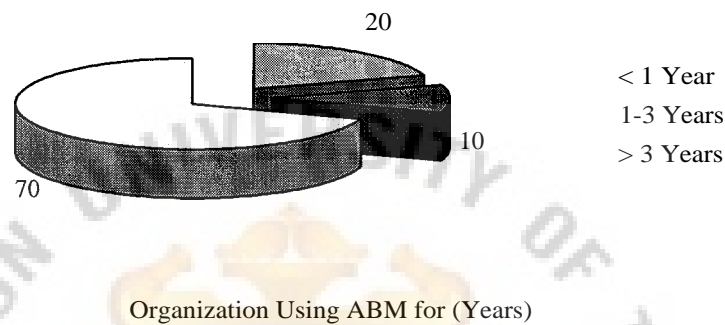


Figure 4.14. Percentage of Organization Using ABM for Period of Time.

To determine the relationship between the period of time in ABM and the result that reduces non-value added activity in the organization, most firms agree. However, a few firms that use ABM for more than 3 years think that using ABM can not reduce non-value added activities as seen in Table 4.27 and Figure 4.17. The cause is the difficulty of classifying activities in operation especially in complex organization. Those few firms may need to consult the outside technician in ABM in order to be able to plan and establish correct steps in ABM. This can help reduce non-value added activities in the organization.

Table 4.25. Relationship between Period of Time in Using Activity-based Management (ABM) and Result That Improve Higher Efficiency Operation in the Organization.

Organization Using ABM for (Years)	Higher Efficiency Operation			
	Yes		No	
	Amount	Percent	Amount	Percent
<1	2	100	0	0
1 – 3	1	100	0	0
>3	6	100	0	0

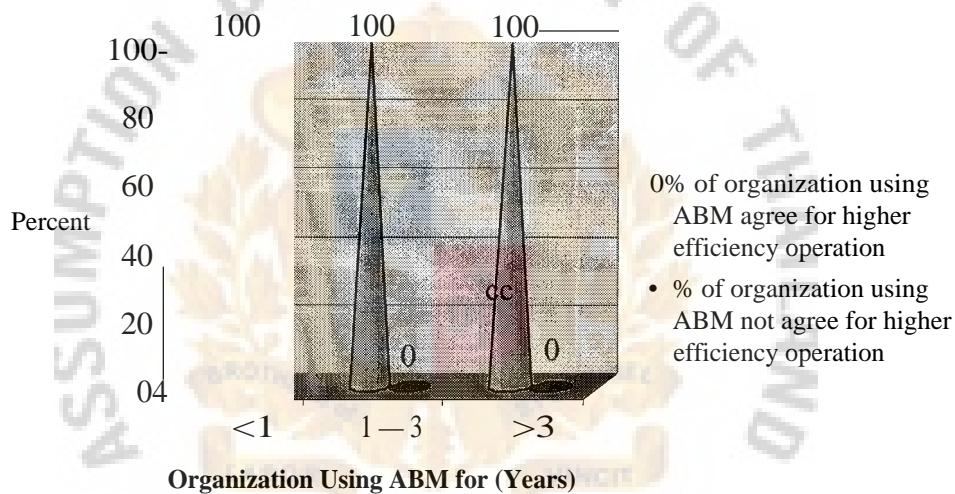


Figure 4.15. Relationship between Period of Time in Using Activity-based Management (ABM) and Result That Improve Higher Efficiency Operation in the Organization.

To determine the relationship between the period of time in ABM and the result in continuous improvement in the organization, most firms agree as referred in Table 4.28 and Figure 4.18 because actually, they can improve strategies in marketing and designing product by encouraging value-added activity and eliminating non value-added activity. In addition, they can use performance measurement concept to consider non



Table 4.26. Relationship between Period of Time in Using Activity-based Management (ABM) and Result That Reduce Cost in the Organization.

Organization Using ABM for (Years)	To Reduce Cost			
	Yes		No	
	Amount	Percent	Amount	Percent
< 1	1	100	0	0
1 – 3	1	100	0	0
> 3	7	100	0	0

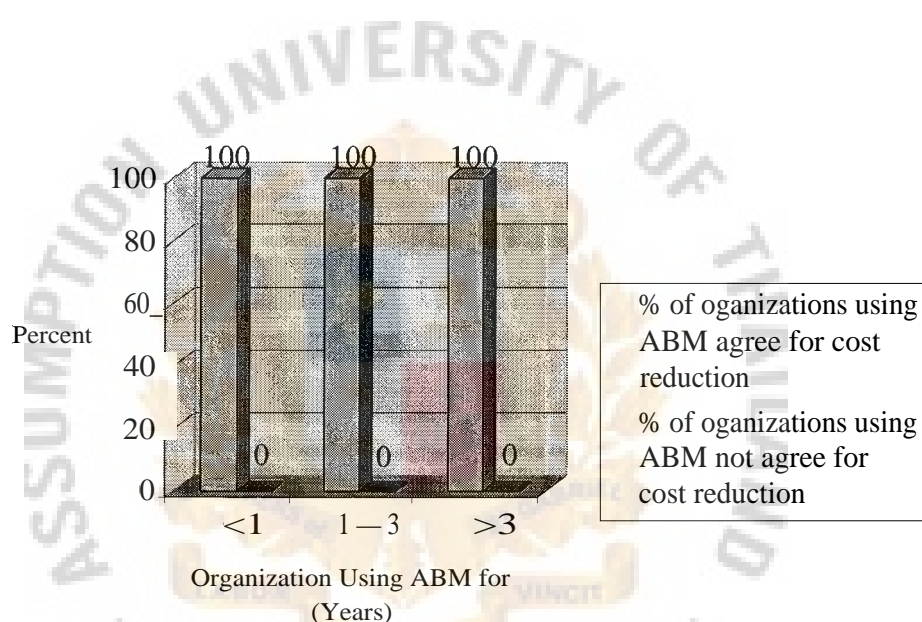


Figure 4.16. Relationship between Period of Time in Using Activity-based Management (ABM) and Result That Reduce Cost in the Organization.

Table 4.27. Relationship between Period of Time in Using Activity-based Management (ABM) and Result That Reduce Non-value Added Activity in the Organization.

Organization Using ABM for (Years)	To Reduce Non-value Added Activity			
	Yes		No	
	Amount	Percent	Amount	Percent
< 1	1	100	0	0
1 — 3	1	100	0	0
> 3	6	85.7	1	14.3

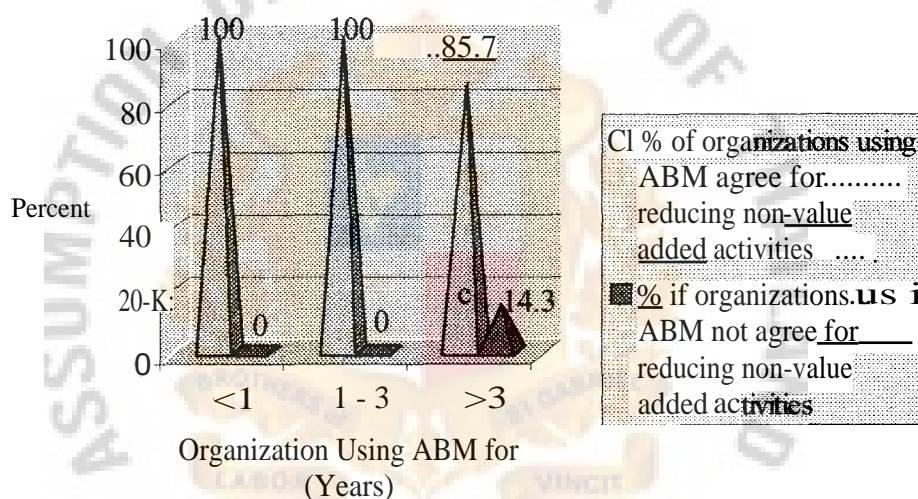


Figure 4.17. Relationship between Period of Time in Using Activity-based Management (ABM) and Result That Reduce Non-value Added Activity in the Organization.

financial information that are quality, time, and service. Then the organization should set practical performance for the activities and try to improve continually.

Concerning flexibility copes with innovations. Most firms agree because they can use ABC information to define cost and improve innovative operations in any activities. For example, the management team must analyze the root cause of defective products



by using ABC information and take corrective action if they use the number of such products to measure performance as seen in Table 4.29 and Figure 4.19.

To determine the relationship between the period of time in using Activity-based Management (ABM) and the result that follows the cost of activity more easily, most firms agree as seen in Table 4.30 and Figure 4.20 because they can use ABC information to define cost and improve innovative operations in any activities. For example, the management team should analyze the root cause of defective products by using ABC information and taking corrective action to reduce waste if they use the number of such products to measure performance. Another example, when the business needs to expand or discontinue any product lines, such cost can be efficiently recognized from the use of ABM in term accuracy and fast response result. Consequently, ABM makes benefit in decision making process in channel distribution, pricing and cost reduction. However, only a few firms that use ABM for more than 3 years think that using ABM can not follow cost of activity more easily.

Table 4.28. Relationship between Period of Time in Using Activity-based Management (ABM) and Result in Continuous Improvement in the Organization.

Organization Using ABM for (Years)	To Continuous Improvement			
	Yes		No	
	Amount	Percent	Amount	Percent
< 1	1	100	0	0
1 – 3	1	100	0	0
> 3	6	85.7	1	14.3

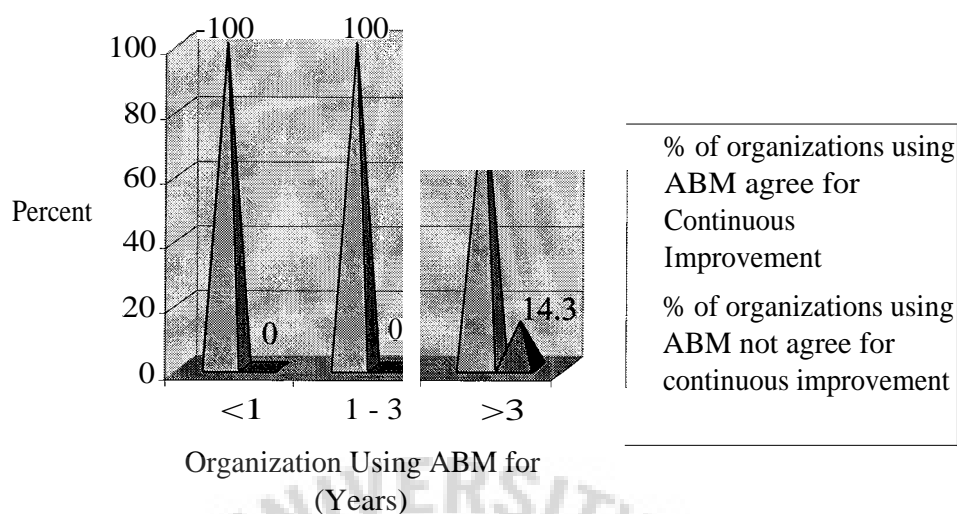


Figure 4.18. Relationship between Period of Time in Using Activity-based Management (ABM) and Result in Continuous Improvement in the Organization.

Table 4.29. Relationship between Period of Time in Using Activity-based Management (ABM) and Result in Being Flexible Enough to Adjust in Order to Cope with Innovations.

Organization Using ABM for(Years)	To be Flexible Enough to Adjust in Order to Cope with Innovations			
	Yes		No	
	Amount	Percent	Amount	Percent
< 1	1	100	0	0
1 - 3	1	100	0	0
> 3	5	83.3	1	16.7

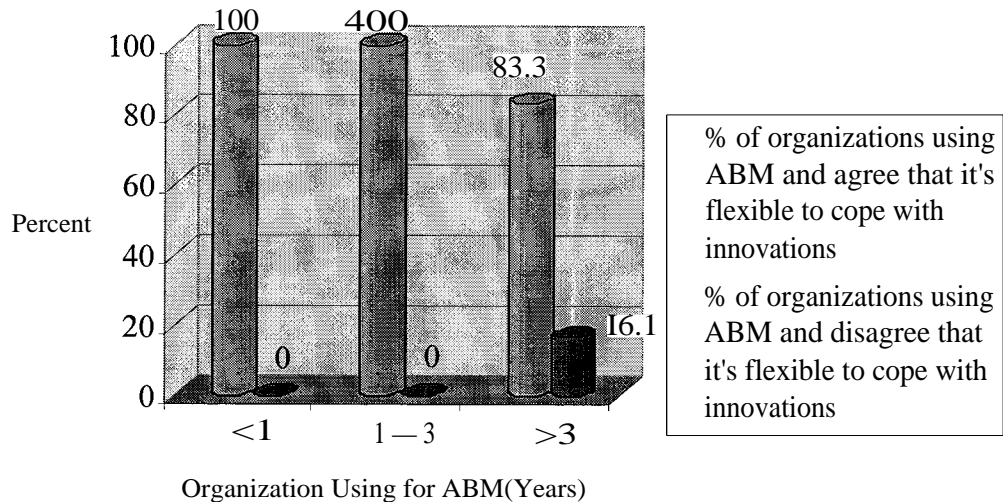


Figure 4.19. Relationship between Period of Time in Using Activity-based Management (ABM) and Result in Being Flexible Enough to Adjust in Order to Cope with Innovations.

To determine the relationship between the period of time in ABM and the result that can allocate cost to each product more correctly, all of the firms agree because ABC provides a process to classify activities into four levels including unit level, batch level, process level and facility level. Then, the cost is allocated to those activities upon the correlation in each level. Also, the cost activity is assigned on the product. This approach produces the accuracy of product costing as seen in Table 4.31 and Figure 4.21.

To determine the relationship between the period of time in ABM and the result that makes higher profit in the organization, most firms with long experience in using ABM agree on this issue since they can bring the information from ABM in term of accuracy and up-to-date information for management to analyze and make competitive advantages in pricing as referred to Table 4.32 and Figure 4.22. Also using ABM can eliminate non value-added activity in result of low product cost, enhance customer satisfaction, and make higher profit toward organization.

Table 4.30. Relationship between Period of Time in Using Activity-based Management (ABM) and Result That Measure and Follow Cost of Activity Easier.

Organization Using ABM for (Years)	To Measure and Follow Cost of Activity Easier			
	Yes		No	
	Amount	Percent	Amount	Percent
< 1	1	100	0	0
1 – 3	1	100	0	0
> 3	6	85.7	1	14.3

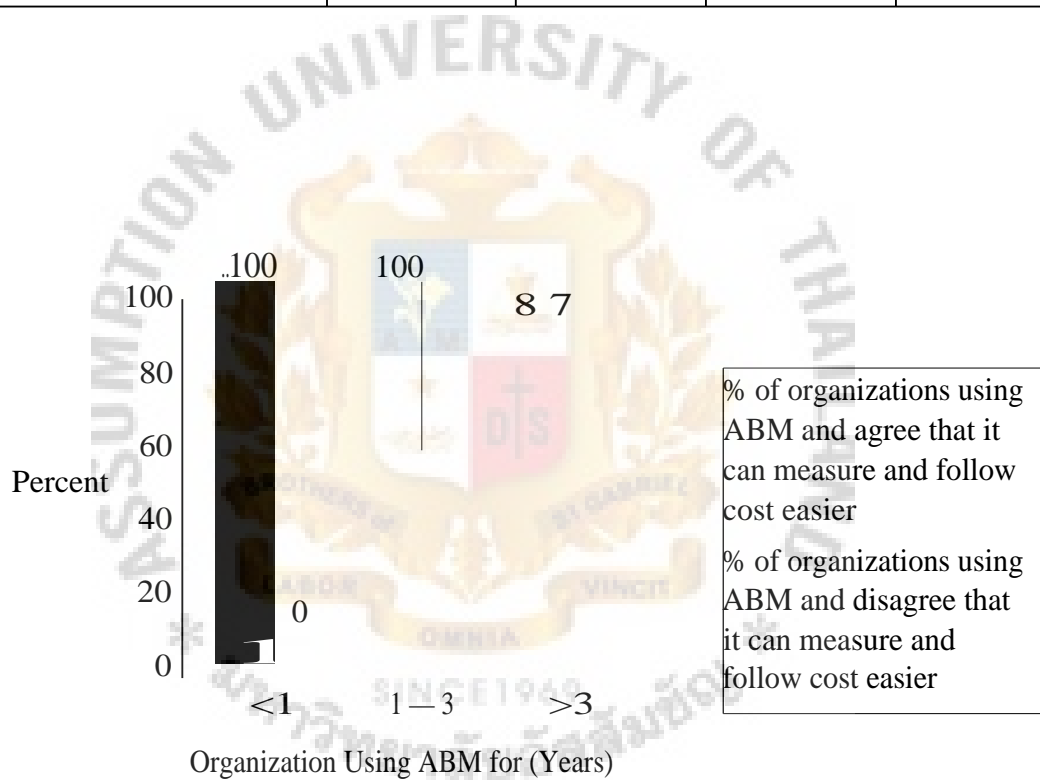


Figure 4.20. Relationship between Period of Time in Using Activity-based Management (ABM) and Result That Measure and Follow Cost of Activity Easier.

Table 4.31. Relationship between Period of Time in Using Activity-based Management (ABM) and Result That Allocate Cost to Each Product More Correctly.

Organization Using ABM for (Years)	To Allocate Cost to Each Product More Correctly			
	Yes		No	
	Amount	Percent	Amount	Percent
< 1	1	100	0	0
1 — 3	1	100	0	0
> 3	7	100	0	0

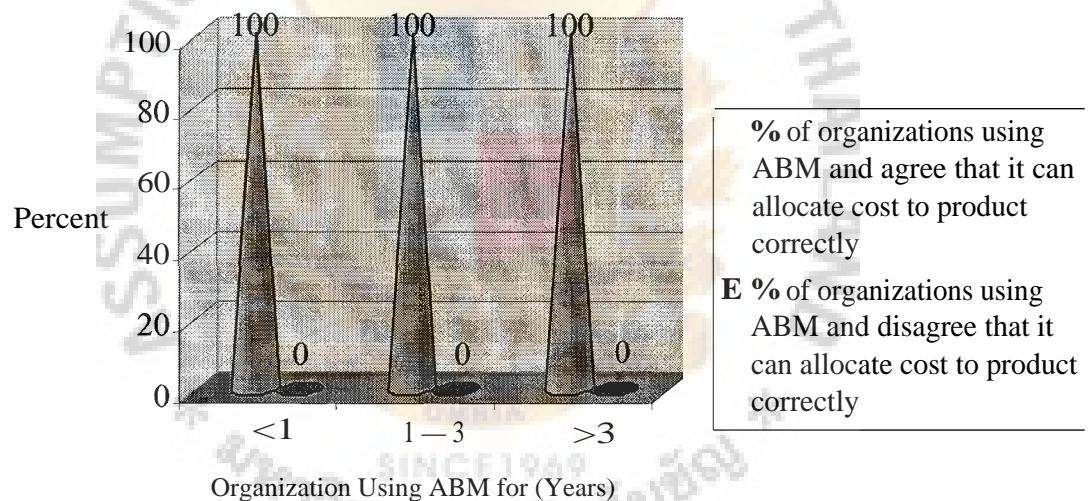


Figure 4.21. Relationship between Period of Time in Using Activity-based Management (ABM) and Result That Allocate Cost to Each Product More Correctly.

Table 4.32. Relationship between Period of Time in Using Activity-based Management (ABM) and Result That Make Higher Profit in the Organization.

Organization Using ABM for (Years)	To Make Higher Profit			
	Yes		No	
	Amount	Percent	Amount	Percent
< 1	1	100	0	0
1 — 3	0	0	1	100
> 3	7	100	0	0

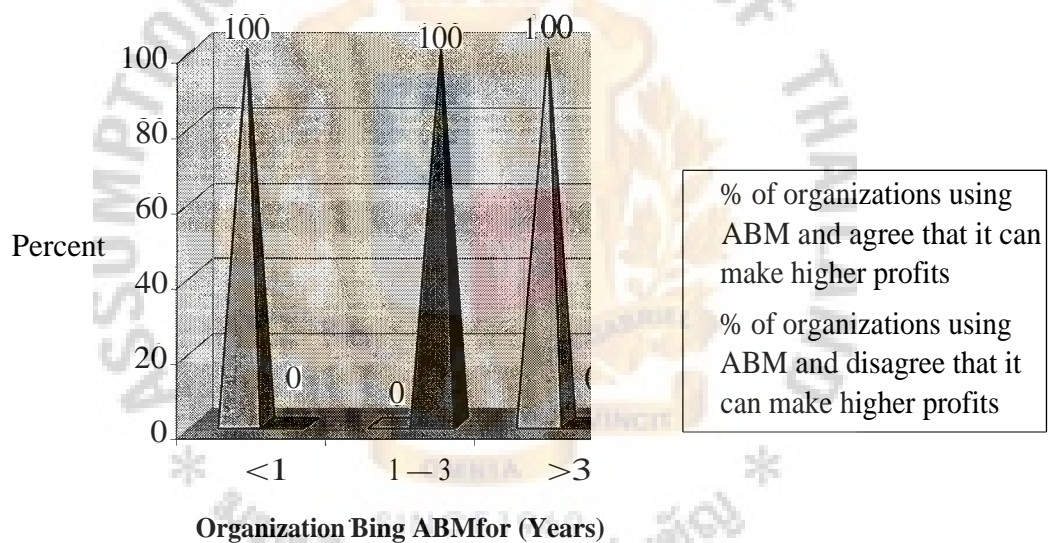


Figure 4.22. Relationship between Period of Time in Using Activity-based Management (ABM) and Result That Make Higher Profit in the Organization.

To determine the relationship between the period of time in using ABM and result in management planning and effective decision-making in the organization, all firms agree as seen in Table 4.33 and Figure 4.23. Using ABM provides accurate and update information for management to make decision and planning in competitive situation.



The management team can improve product quality and decide to promote the product line that makes higher contribution margins to the company.

Table 4.33. Relationship between Period of Time in Using Activity-based Management (ABM) and Result in Management Planning and Decision-making Effectively in the Organization.

Organization Using ABM for (Years)	For Management Planning and Decision-Making Effectively			
	Yes		No	
	Amount	Percent	Amount	Percent
< 1	1	100	0	0
1— 3	1	100	0	0
> 3	7	100	0	0

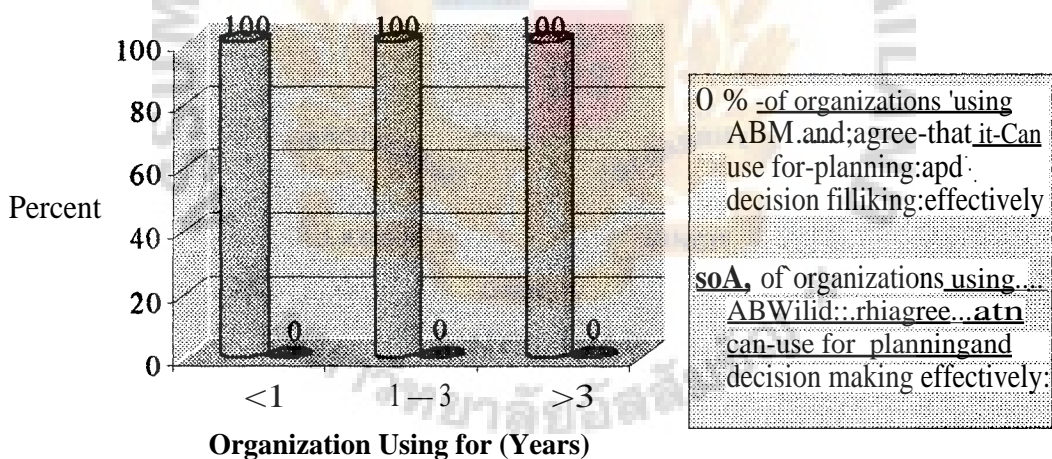


Figure 4.23. Relationship between Period of Time in Using Activity-based Management (ABM) and Result in Management Planning and Decision-making Effectively in the Organization.

To determine the relationship between the period of time in using ABM and result in forecasting cost budgeting in activities more accuracy in the organization, all firms agree as seen in Table 2.34 and Figure 2.24. Management can analyze activities to allocate internal resource for maximizing benefits and define that amount to be

operating standard cost in advance for the activities. The steps for evaluating cost budgeting are determining budgeting, following the actual operation, comparing to the budget, and deciding to increase value-added activities and eliminate non value-added activities. This method can evaluate performance of the employees who are responsible for those activities.

Finally, for the information of organizations who do not use ABM, general controller managers know ABC and ABM as seen in Table 4.35 and Figure 4.25. Most of the controller managers agree that ABM can generate a lot of benefits to the organization as referred to Table 4.36 and Figure 4.26. ABM is the technique that helps reduce cost of error, especially in competitive market. When the competitive situation

Table 4.34. Relationship between Period of Time in Using Activity-based Management (ABM) and Result in Forecasting Cost Budgeting in Activities More Accuracy in the Organization.

Organization Using ABM for (Years)	To Forecast Cost Budgeting in Activities More Accuracy			
	Yes		No	
	Amount	Percent	Amount	Percent
< 1	1	100	0	0
1 – 3	1	100	0	0
> 3	7	100	0	0

occurs strongly, the cost of errors increase, because the competitors have an opportunity to take benefits from the companies who have decided mistakenly. For instance, some product lines have low profit margins because of unsuitable overhead cost allocation. Those products must consume too much overhead cost, so the management makes a wrong decision by discontinuing the production of those products. Then the competitors can use this strategy to increase market shares.



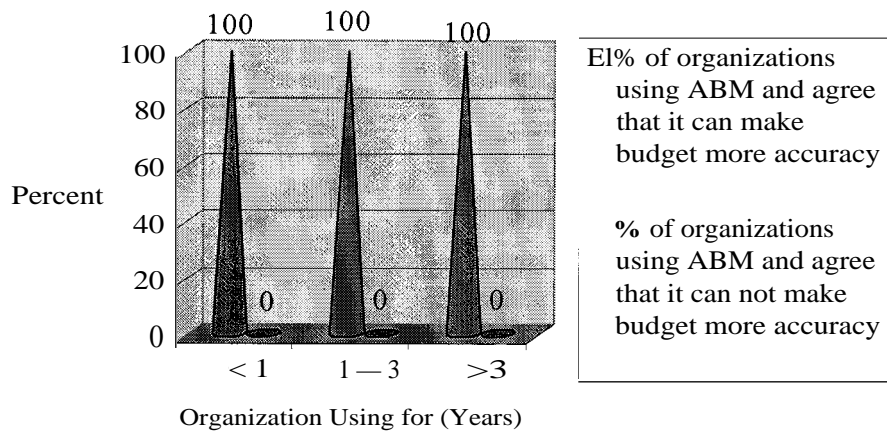


Figure 4.24. Relationship between Period of Time in Using Activity-based Management (ABM) and Result in Forecasting Cost Budgeting in Activities More Accuracy in the Organization.

Table 4.35. Percentage of Respondent about Knowledge of ABC and ABM.

Knowledge of ABC and ABM	Amount	Percent
Yes	33	63.46
No	19	36.54
Total	52	100

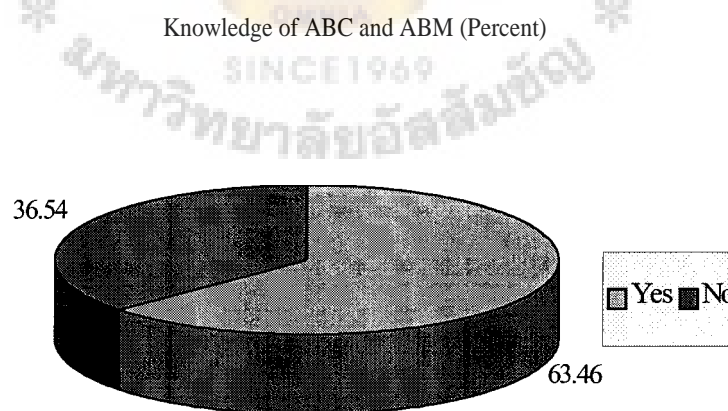


Figure 4.25. Percentage of Respondent about Knowledge of ABC and ABM.

However, 7.5% of them who have worked for more than 10 years disagree. The reason is that they may be conservative and resistant to change. In addition, the barrier factor which hinders the use of ABM and ABC is the sufficiency of specialists as seen in hypothesis test.

Although these companies do not use ABM, most of them still improve operating standard upon the situations as seen in Tables 4.37-4.38 and Figures 4.27-4.28.

Table 4.36. Relationship between Working Experience and Attitude in Using Activity-based Management (ABM) That Result in Generating a Lot of Benefits to Organization.

Working Experience (Years)	Generating a lot of Benefits to Organization			
	Yes		No	
	Amount	Percent	Amount	Percent
<3	2	100	0	0
3—6	1	100	0	0
7—10	8	100	0	0
>10	37	92.5	3	7.5

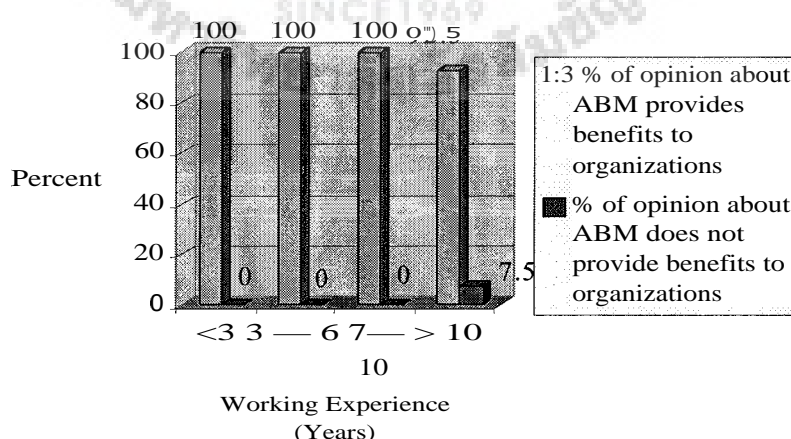


Figure 4.26. Relationship between Working Experience and Attitude in Using ABM That Result in Generating a Lot of Benefits to Organization.

Table 4.37. Percentage of Organization Improving Standard or Not in Operation.

Organization Improving Standard in Operation	Amount	Percent
Yes	48	90.57
No	5	9.43
Total	53	100

Organization that Improving Standard in Operation

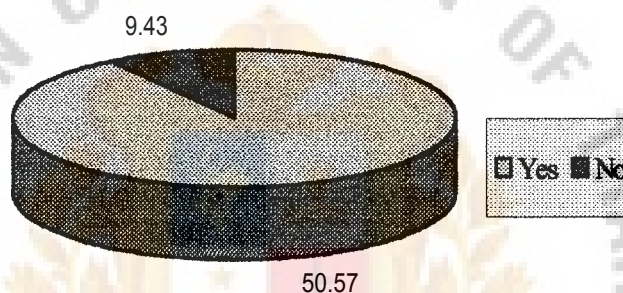


Figure 4.27. Percentage of Organization Improving Standard or Not in Operation.

Table 4.38. Percentage of Organization Improving Standard Separated by Period of Time.

Organization that Improving Standard in Operation	Amount	Percent
Quarter	7	16.28
Annual	6	13.95
By Requests	2	4.65
Depend on Situations	28	65.12
Total	43	100.00

### Organization that Improving Standard in Operation

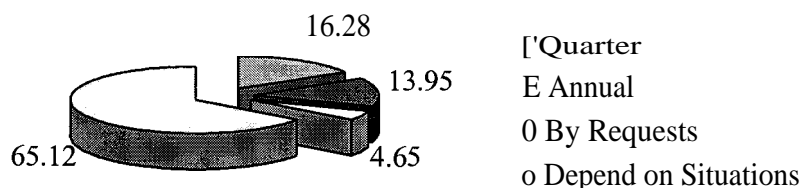


Figure 4.28. Percentage of Organization Improving Standard Separated by Period of Time.

Table 4.39. Relationship between Working Experience and Result of Trend in Using ABM in the Future.

Working Experience(Years)	Trend in Using ABM in the Future			
	Use ABM		Not Use ABM	
	Amount	Percent	Amount	Percent
< 3	1	50	1	50
3—6	0	0	1	100
7—10	6	85.7	1	14.3
> 10	33	78.6	9	21.4

Most of the controller managers have trend to use ABM when their employees and system are ready for changes because they think that ABM is a good system for their organizations as seen in Table 4.39 and Figure 4.29.

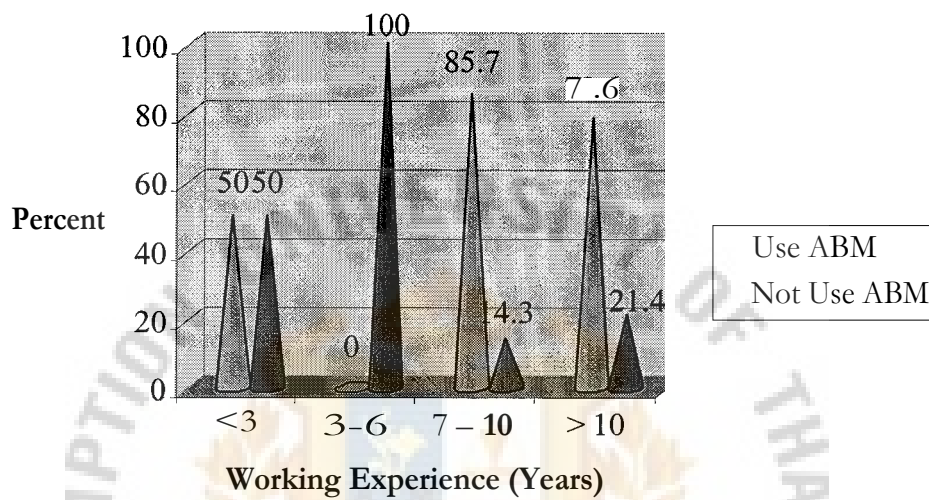


Figure 4.29. Relationship between Working Experience and Result of Trend in Using ABM in the Future.

## V. CONCLUSIONS AND RECOMMENDATIONS

### 5.1 Conclusions

From the research, there are 195 manufacturing firms and the cooperated respondents from mailing questionnaires are 63 which is 32.31%. The results from research of the attitude of accounting controllers in manufacturing industries toward activity-based management (ABM) are separated into 4 parts as the following:

Part 1: A study on general information for controller manager and that organization

Part 2: A study on the effects in operating and the beneficial results from using ABM.

This part is the collected information from the controller manager who works in the organization that is already using ABM.

Part 3: A study on the effects and the motivating factors that help to decide not to use ABM and the method that the organization used to allocate indirect manufacturing cost to a product. This part is collected information from the controller manager who works in the organization that is not using ABM.

Part 4: The conclusion of the results from this survey research is done by using SWOT analysis in applying ABM.

From the results in 4 parts, the conclusions are as the following categories:

(<sup>1</sup>) General Information for Controller Manager and that Organization

As the research, there are a few manufacturing firms who registered in SET which is the target group from this survey and they used activity-based management for ABM allocating indirect cost when compared to all manufacturing firms in SET. For the firm's capital register, the survey results show that most the manufacturing firms both of using and not using ABM have the proportion in a firm's capital register less than 1,000 million

bahts. Most of the controlling managers who give the opinion for this research have experience more than 10 years and agree that ABM is the efficient method in running an effective operation.

- (2) The attitude of accounting controllers in manufacturing industries that are currently used ABM

Most of the manufacturing firms have been using ABM for more than 3 years. The higher proportion of the controller managers from the manufacturing firms used ABM agree that ABM is the efficient technique of running a higher operation. The most important motivator in using ABM is the cost reduction. In addition, the beneficial results from using ABM in the manufacturing firms are reducing cost, eliminating non-value added activity, enhancing continuous improvement in working process, and being flexible enough to cope with innovations. However, all of these beneficial results do not depend on the period in using ABM. In addition, using ABM results in positive effects in operating and financing ratio such as Return on Investment (ROI), net profit ratio, growth rate, and dividend per share

- (3) The attitude of accounting controllers in manufacturing industries who do not use ABM

Most of the controller managers have known about ABC and ABM and they agree that using ABM can generate a lot of benefits to the organization. The most important motivating factors for not using ABM is the lack of professional staffs who have enough skills in Activity-based Costing (ABC) and Activity-based Management (ABM). These companies have a policy to improve operating standard that depends on contingency situations. Moreover, high proportion of controller managers working in



manufacturing firms in SET and not using ABM would like to use ABM for allocating product cost when their organization members clearly understand the ABM concept and are ready to transform company cost accounting system.

(4) The conclusion of the results from this survey research:

#### SWOT Analysis of Activity-based Management

ABM provides strengths in controlling operation effectively and the cost is related to value-added activities. The accountants can control cost effectively because of a better understanding of the real costs. In addition, ABM helps create a better understanding of what people in the organization are doing and a better understanding of the opportunities available for cost reduction. Using ABM efficiently, one can reduce time in production and operation and helps the organization to reduce labor costs and to deliver the products on schedule because this technique separates cost by each activity and helps to clarify the root of increasing cause more easily. Moreover, ABM can reduce non-value added activities and be flexible enough to cope with many innovations. Then top management can receive more accurate cost accounting information by using ABM technique which supports them to plan, analyze and make decisions effectively in a competitive situation.

In contrast, ABM also has some weaknesses. For instance, the total results are effectiveness but not efficiency because the expenses from changing cost accounting system to ABC such as training cost, hiring professional staffs can not be off-set to benefits in short term.

Using ABM gives more opportunities for the companies to be nationally accepted because ABM results in high quality and standardized products. This is the good



opportunity to compete in the worldwide market. It is mutually beneficial for both the suppliers and customers. Moreover, management can plan or make decision in expanding or discontinuing some product lines that have low profit per units.

However, there are some threats occurring from transforming the traditional cost accounting system to ABM system. The most important factor is lack of supporting from top management. The reason is that they do not understand the ABM concept and unaware of the benefits they can get from ABM. Nevertheless, it is still not suitable for some kinds of manufacturing firms that are very small, conservative with simple cost accounting system. The other threats are lack of professional staffs who are skillful in ABC and ABM and in financial resource problem. There are also some difficulties in classifying activities into categories especially in the organizations that are conservative or do not have any standardized accounting system.

## **5.2 Recommendations**

The recommendations for a development and a better understanding of Management and Activity-based Costing are separated into 2 categories:

### **(1) A Role of Government Support**

- (a) The Ministry of Education should encourage the Education Institute and Universities to cooperate with each other in establishing the information center to distribute the knowledge of Activity-based Management and Activity-based Costing to the organizations who are interested in using ABM and ABC. In addition, this center will provide more knowledge for organizations who are already using ABM in order to improve their operation.
- (b) The Ministry of Education should promote the universities to provide the a curriculum for managers or an academic seminar in applying

ABC and ABM by concentrating on practical action rather than theories. Using a case study from both local and international business units have succeeded or failed in using ABC and ABM to analyze, can clearly present a better understanding in practical action and problems to the managers clearly. Moreover, study from a case study helps convince the managers to transform their cost accounting system to ABM because they can accept and understand the specific benefits and good opportunities from the case study analysis.

- (c) The Ministry of Education should encourage the universities in distributing ABC and ABM through other media such as Internet. It would be a good advantage for the managers who do not have enough time for a seminar. Another alternative is to provide academic database about ABC and ABM in practical action for management. These methods can distribute attractive knowledge widely in a very short time.
- (d) The Government should support more research study about ABC and ABM so that people will be aware of problems, threats, and key factors that would effect on the success or failure in using ABC and ABM in business units. As the results from survey research of Peter C. Brewer, key factor that would effect on the success or failure in applying ABC and ABM is human behavior and different cultures of the organizations. Therefore, in Thailand, there should be more expand survey research about ABC and ABM in order to study the key factors, strengths as well as weaknesses, etc. The research study

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would be of high value for business units in Thailand because this study is done in business environment in Thailand.

### (2) A Role in Reducing Organization Resistance

- (a) An academic who clearly understands in both theories and practical actions in applying ABC and ABM should be a representative who explains and gives recommendations to management in any level of the organizations including all employees. It is the good opportunity to encourage them to participate in transforming to ABM and to reduce resistance in the organization.
- (b) It is necessary to apply the theories in each different organization. However, management in any level of the organizations including all employees should understand and accept the reason in transforming the cost accounting system to ABM. The organization may need to set up a training course in the beginning stage.
- (c) In order to reduce an organization resistance, the organization should clearly define the goal congruence to all management and employees clearly. To identify the advantage from using ABM to the firms and all of the employees a "Balance Scorecard" proves to be a very useful tool in creating a better understanding.

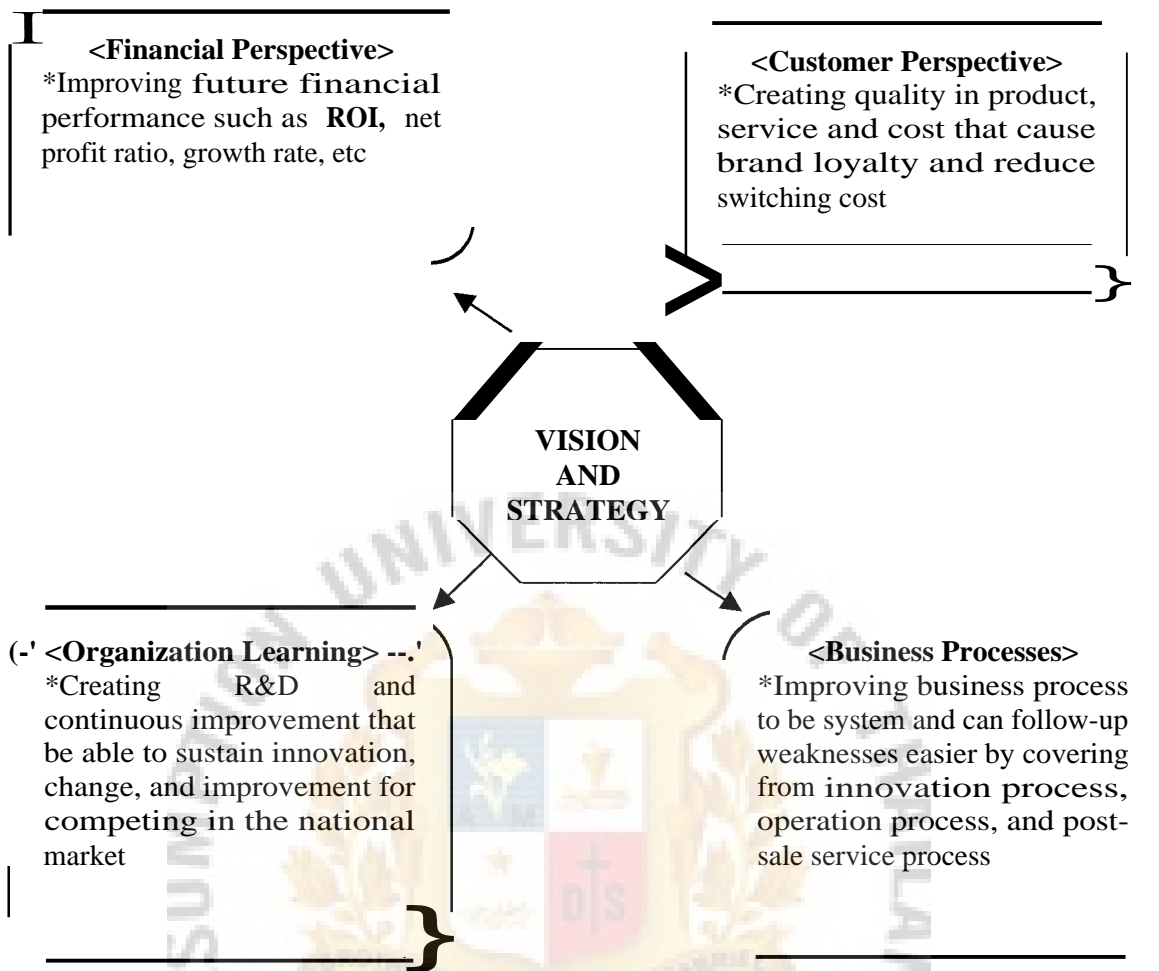


Figure 5.1. Balanced Scorecard.

The "Balanced Scorecard" is a measurement and management system that views a business unit's performance from four perspectives: financial, customer, internal business process, and learning and growth. This is done to clarify, communicate and implement business strategy. This concept can make the organization achieve a goal congruence that brings to the company's vision by applying techniques and strategies to four perspectives in the organization. It is important to keep balanced and try to achieve each perspective. From Figure 5.1, when an organization applies for ABC and ABM improvement is made in 4 perspectives:

- (1) Financial Perspective: Improving future financial performance such as ROI, net profit ratio, growth rate, etc
- (2) Customer Perspective: Creating quality in product, service and cost that cause brand loyalty and reduce switching cost
- (3) Organization Learning: Creating R&D and continuous improvement that is able to sustain innovation, change, and improvement for competing in the national market
- (4) Business Processes: Improving business process to be systematic and can follow-up weaknesses more easily by covering from Innovation Process, Operation Process, and Post-Sale Service Process; analyzing information more efficiently.

In addition, recommendations are for applying and improving Activity-Based Management in cost accounting system that is suitable for different business units. Before applying ABM in business units with different management, the researcher would like to recommend beneficial criteria for applying ABM in each business unit.

#### (1) Designing and Building

Before implementing any new costing system such as ABC and ABM, responsible employees in the organization should spend a great deal of time benchmarking other systems; forming a multifunctional team and a senior management steering committee; defining purposes, goals, and users; and developing the technical details of the system.

##### (a) Develop Benchmarking

A firm should select one best local company who has succeeded in using ABM and achieved the goal congruence and make it a model for improving their own organizations. Benchmarking another

organization can involve obtaining benchmarks for general technical structure of the company's management accounting system or collecting information about the number of cost pools; activity centers and drivers; and value-added versus non-value added costs or burden rates. The selected company would be a good benchmark from which the other organizations can follow and be successful. In addition, the firm should develop further by selecting the best international company as a benchmark. This means that the organization has developed to the advanced step and is ready to change to the new system which will create a high value to the country.

(b) Change Champion and Multifunctional Team

Change champion is the key person or persons who lead any change in an organization. Usually, a champion is someone at a reasonably high level within an organization who has the authority and influence to foment any major modifications. If the firm needs to develop ABC and ABM specifically in its organization, the firm will be a leader who takes the initiative and the risk to make significant changes to ABM. However, this concept would coordinate a multifunctional team of individuals from various areas for assistance in providing various types of information and support. The team usually consists of technical people who are well-versed in operations management and cost accounting and that usually includes manufacturing managers, purchasing managers, human resource managers, marketing managers, information system managers among

others. Therefore, this concept is used when it lacks a good company as their benchmark.

## (2) Implementing the ABM and ABC

Due to implementing stage of using ABC and ABM, the organization should realize that there are always some differences between what people say they will accommodate and their actual behavior as changes occur. The organization should concern four topics related to the change process which the multifunctional team should also consider as it begins to implement changes.

### (a) Knowledge of the organizational culture

Before implementing ABM, those involved need to develop a clear understanding of the kind of culture that currently exists within the organization. If the culture of an organization is not assessed or if it is misread, successful changes are unlikely to occur. Furthermore, experience has shown that strong, functional cultures can be changed more easily than either strong dysfunctional or ill-defined cultures. It is necessary to understand each organization culture and apply ABC and ABM according to that structure.

### (b) Knowledge of current manufacturing practices

One of the initial problems facing employees who desired to change management accounting system was how the changes would fit with the existing technology. The organization should make feasibility study whether changing to new accounting system is efficient in expense or not.

### (3) Types of resistance to change

Resistant to change is the biggest stumbling block that change agents face. The difficulties are as follows:

- (a) The defensive response when people and organizations set in their ways are forced to change
- (b) The cost of change, which can be very high, both in terms of employees' compensation and other rewards and in the amount of time it takes to make change
- (c) The shift in an organization's balance of power

To reduce resistance to change, a study on the attitudes of the members in the organization is important. This method can make the employees participate in and accept the changes in the organization. If the changes occur without the employees acceptance, the implementation of ABC and ABM may fail because human resource is an important factor in the organization. Organizations and managers often make the mistake of trying to make too many changes simultaneously in too many areas of their organizations. If attempts to complete conversion to a new system across all functions and divisions should fail simultaneously, the organization may never have the opportunity again to make the change.

To avoid this problem, some organizations implement change beginning in a single workgroup or business unit. One of the best approaches to overcome resistance to change is to understand and anticipate the fear and embarrassment that managers sometimes feel when confronted with modifications of an existing technical system. The organization should invest in educational programs to introduce the overall philosophy of the



new method or innovation to all employees well before the changes are to occur. Everyone should understand why changes are necessary, especially the benefits that all employees will get as a result from those changes.

#### (4) Aspects of employee compensation

A common outcome of the ABM analysis is that work becomes reorganized according to business processes which involve teams of individuals. Performance then is the result of team effort. Thus, compensation systems must be designed to reward the outcomes of team-managed business processes. However, the firm should know exactly what the employees want because they may need to develop more continual education. If they are satisfied with the motivating factors, the chances of being successful will increase.

The implementation of ABM can meet with resistance. Cost management champions and their teams should pay a great deal of attention to behavioral and organizational issues to increase their chances of being successful.

As the above recommendations, the research results present the problems occurred before using ABM. The reasons the firms cannot decide whether to use ABM or not may be because of the lack of ABM knowledge, financial resource or support from top management. Additionally, the problems occur after using ABM are not efficient in expense when trade-off to the benefits that do not comply on the expectations. Therefore, the above recommendations are the guideline for applying ABM in business units and increase the capability to achieve the company's vision of Thailand manufacturing industries competition.

The research study on the attitude of accounting controllers in manufacturing industries toward activity-based management is to motivate accountants and other

interested people to apply ABM concept for their organizations. This can provide more efficiency in production, marketing, and other aspects in the large industries in Thailand. However, this research is a study in only a part of Thai industries and some parts of responses from questionnaires. For further study, it is necessary to collect information from each industry and management from each department. Then using ABM should be co-operated from government, publics, educational institute, etc to formulate the same aspect and support to use ABM to increase stability for industries in Thailand.





## APPENDIX A

### FORM OF QUESTIONNAIRE

Assumption University

Number .....

Date .....

I am a graduate student of Assumption University. I am now conducting a research on the attitude of accounting controllers in manufacturing industries toward activity-based management which is in partial fulfillment of the requirements for the degree of Master of Science in Computer and Engineering Management.

I would like to ask for your kind cooperation in completing the questionnaires. This is to evaluate the current accounting system and the results of using Activity-Based Management (ABM) in the organizations. I would greatly appreciate it if you could kindly send the questionnaire back before August 31, 1999. You can be ensured that the information given will be kept confidential.

Thank you very much.

## Definition of Terms

Activity-Based Costing System (ABC)<sup>1</sup> is the procedure that measures the cost of objects, such as products, services and customers. ABC first assigns resources cost to the activities performed by the organization. Then activity costs are assigned to the products, services and customers who benefit from or are creating the demand for the activities.

**Activity-Based Management (ABM)**<sup>2</sup> is the management processes that use the information provided by activity-based cost analysis to improve organizational profitability. Activity-based management (ABM) includes performing activities more efficiently, eliminating the need to perform certain activities that do not add value for customers, improving the design of products, and developing better relationships with customers and suppliers. The goal of ABM is to satisfy customers needs to be satisfied while making fewer demands on organizational resources.

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<sup>1</sup> Anthony A. Atkinson, Rajiv D. Banker, Robert S. Kaplan and S. Mark Young. **Management Accounting** .

<sup>2</sup> Anthony A. Atkinson, Rajiv D. Banker, Robert S. Kaplan and S. Mark Young. **Management Accounting** .

## QUESTIONNAIRE

### **Part 1 General Information**

#### **Section 1 General Information for Controller Manager**

1. Your current position

- |   |  |
|---|--|
| <input type="checkbox"/> Accounting Manager | <input type="checkbox"/> Accounting Director |
| <input type="checkbox"/> Chief Controller   | <input type="checkbox"/> Others .....        |

2. Sex

- |                               |                                 |
|-------------------------------|---------------------------------|
| <input type="checkbox"/> Male | <input type="checkbox"/> Female |
|-------------------------------|---------------------------------|

3. Age

- |   |   |
|---|---|
| <input type="checkbox"/> Less than 30 years | <input type="checkbox"/> 30 — 35 years      |
| <input type="checkbox"/> 36 — 40 years      | <input type="checkbox"/> More than 40 years |

4. Education level

- ☐ Under Bachelor's Degree
- ☐ Bachelor's Degree
- ☐ Over Bachelor's Degree

5. Working Experience

- |  |   |
|--|---|
| <input type="checkbox"/> Less than 3 years | <input type="checkbox"/> 3 — 6 years        |
| <input type="checkbox"/> 7 — 10 years      | <input type="checkbox"/> More than 10 years |

## Section 2      General Information about your organization

### 1.    What is the type of your manufacturing industry ?

- |   |   |
|---|---|
| <input type="checkbox"/> Agricultural Business              | <input type="checkbox"/> Tools and Machines     |
| <input type="checkbox"/> Construction and Decoration        | <input type="checkbox"/> Mine                   |
| <input type="checkbox"/> Chemical Product and Plastic       | <input type="checkbox"/> Package                |
| <input type="checkbox"/> Electronics Equipment and Computer | <input type="checkbox"/> Drugs and Cosmetics    |
| <input type="checkbox"/> Electronics Parts                  | <input type="checkbox"/> Printing               |
| <input type="checkbox"/> Food and Beverages                 | <input type="checkbox"/> Paper                  |
| <input type="checkbox"/> Household                          | <input type="checkbox"/> Cloths and Shoes       |
| <input type="checkbox"/> Jewelry and Accessories            | <input type="checkbox"/> Vehicles and Equipment |

### 2.    How much is your organization's capital register?

- |  |  |
|--|--|
| <input type="checkbox"/> Less than 1,000 Million Bahts | <input type="checkbox"/> 1,000 — 3,000 Million Bahts   |
| <input type="checkbox"/> 3,001 — 5,000 Million Bahts   | <input type="checkbox"/> More than 5,000 Million Bahts |

### 3. How long has your organization been operating?

- |  |   |
|--|---|
| <input type="checkbox"/> Less than 5 years | <input type="checkbox"/> 5 ---15 years      |
| <input type="checkbox"/> 16 — 30 years     | <input type="checkbox"/> More than 30 years |

### 4. Is your organization using "Activity — based Management or ABM" at present ?

- |  |
|--|
| <input type="checkbox"/> If "Yes", please continue to answer in questionnaire part 2 |
| <input type="checkbox"/> If "No", please continue to answer in questionnaire part 3  |



## **Part 2      Information of organization that is using ABM**

1. How long has your organization been using ABM ?

- ☐ Less than 1 year      ☐ 1 — 3 years      ☐ More than 3 years

2. What do you think is the most important motivating factor that made your organization decide to use ABM ? (Please order from 1 — 3, 1 is the most important motivating factor)

- ☐ To reduce Cost
- ☐ To reduce Non-value Added Activity
- ☐ To reduce Cycle time
- ☐ To measure performance and control operation better
- ☐ The results from operation will be developed and continuous improvement
- ☐ To promote better relationship between organization and supplier; organization and customer
- ☐ Others..

3. Do you think ABM makes your operation highly efficiency ?

- ☐ Yes      ☐ No

4. What are the results from using ABM in your organization ?

	Yes	No
Cost reduction	<input type="checkbox"/>	<input type="checkbox"/>
Reduced non-value added activity	<input type="checkbox"/>	<input type="checkbox"/>
Continuous improvement in working process	<input type="checkbox"/>	<input type="checkbox"/>
Be flexible enough to adjust in order to cope with many innovations	<input type="checkbox"/>	<input type="checkbox"/>

- |  |                          |                          |
|--|--------------------------|--------------------------|
| Measure and follow cost of activities more easily                                  | <input type="checkbox"/> | <input type="checkbox"/> |
| Allocate the cost to each product more correctly                                   | <input type="checkbox"/> | <input type="checkbox"/> |
| Be able to make higher profit (compare to before using ABM)                        | <input type="checkbox"/> | <input type="checkbox"/> |
| Providing cost information for management to plan and<br>make decision effectively | <input type="checkbox"/> | <input type="checkbox"/> |
| Increasing database which helps in budgeting by activities<br>validity             | <input type="checkbox"/> | <input type="checkbox"/> |
| Others.....  | <input type="checkbox"/> | <input type="checkbox"/> |

5. After using ABM in your organization, the effects in operating and financing are:

	Increase	Stable	Decrease
Growth Rate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Net Profit Ratio	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ROI	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dividend per share	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6. Recommendations.....

— — — —

Thank you for your cooperation.

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## **Part 3      Information of organization that does not use ABM**

1. Do you know about ABC and ABM ?

☐ Yes

☐ No ( Please read the attachment before answering next question )

2. "If your organization uses ABM, it can generate a lot of benefits." Do you agree?

☐ Yes

☐ No

3. What do you think is the most important motivating factor that made your organization decide not to use ABM ? (Please order from 1 — 3, 1 is the most important motivating factor)

☐ Complexity in using ABM

☐ Financial resource problem

☐ Employees are not ready in changing to new system

☐ Lack of professional staffs who have skills in ABC and ABM

☐ Lack of support from top management

☐ the current system is efficient and suitable for your organization

☐ Others.....

4. Does your organization improve standard in operation?

☐ Yes

☐ No (Please go to answer question no. 6)

5. If your organization improves standard in operation, how often it would be.

☐ Quarterly

☐ Annually

☐ Others..... years

☐ Depend on your management's requests

☐ Uncertainty depends on unexpected situations

6. Has your organization analyzed process and evaluated activities that occurred?
- ☐ Yes ☐ No
7. Does the operating system in your organization not collect cost accounting based on activities?
- ☐ Yes ☐ No
8. Your organization allocates indirect manufacturing cost to be cost of product by:
- ☐ Allocating indirect manufacturing cost of service department to be the cost of each production department and then allocating the cost of each production department to be the cost of each product
- ☐ Allocating indirect manufacturing cost that separately based on activities to be the cost of each product directly
- ☐ Others.
9. Your organization allocates selling and administration expense to be the cost of product by:
- ☐ Allocating indirect manufacturing cost of service department to be the cost of each production department and then allocating the cost of each production department to be the cost of each product
- ☐ Allocating indirect manufacturing cost separately based on activities to be the cost of each product directly
10. Does your organization use single rate to allocate indirect manufacturing cost?
- ☐ Yes ☐ No
11. How does your organization select activities volume to calculate rate in cost allocation?
- ☐ Activities volume that mostly occurred

☐ Activities volume that influences the increase and decrease of each indirect cost

☐ Others .....

12. When your organization understands and is ready to use ABM, do you agree to use ABM?

☐ Yes because .....

☐ No because .....

13. Recommendations .....

.....  
.....  
.....

-----  
Thank you for your cooperation.

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