

# INNOVATION IN BUSINESS EDUCATION THROUGH PARTNERSHIP: A CASE STUDY OF MADAM MON'S FARM

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## ABSTRACT

This case study of collaborative effort is one of several cases under taken from real business practices in an attempt to use real business situations and practices for classroom project in Production and Operations Management and Strategic Management and Business Policy courses at Bangkok University. The cases adapted as class project are focused on Thailand's small (with tangible assets no more than 50 million bahts) and medium size enterprises (with tangible assets with no more than 1000 million bahts). The aims of using real cases would be to enhance students' experience, skills and most of all it gives students a chance to apply theory into practice. To achieve the aims, students would have to develop a model solving realistic problems given by an instructor. Excel is then used as a tool to create application software simulating the model. The outcomes of the project are submitted to the instructor and entrepreneurs in a form of report and decision making/problem solving software. Based on two semesters of experimenting by using adapted cases (**see appendix A**) from Weida, Nancy C., Richardson, Ronny, Vazsonyi, and Andrew, responses from students very positive. The major obstacle was many students' lack of advanced skills of many functions in Excel and time conflict in arranging meeting between instructor and business owners.

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## INTRODUCTION

Many students are normally turned off by the math requirements from many courses taken as part of their Bachelor Degree in Business Administration Programs; Operations Management course is not an exception. However, modeling with Excel provides an easy way around this perplexity, while retaining rigor and realism. Functions offered in Excel can create creative management operations decision tools because it is not merely a computational tool or spread sheet application software. Excel provides mathematics functions ranging from simple to complicated ones and scenarios feature. The scenarios allow users to easily and quickly switch and manipulate between sets of inputs of model, and provide a method for

generating summary report in table format with graphical illustrations.

Every year more and more students graduate with Bachelor Degree. On the other hand, fewer jobs are offered. This situation simply represents a case of over supply; too many students look for the same jobs. Most importantly, as reported by Kongnirundornsuk (2002), companies are now looking for qualified people with experience, skills, and ability who are ready to perform. So, that question becomes very critical and challenging for educators and scholars to reflect upon as reality check. Furthermore, the question, "Do most universities produce qualified students (products) that meet business needs (demand)?" must also be addressed.

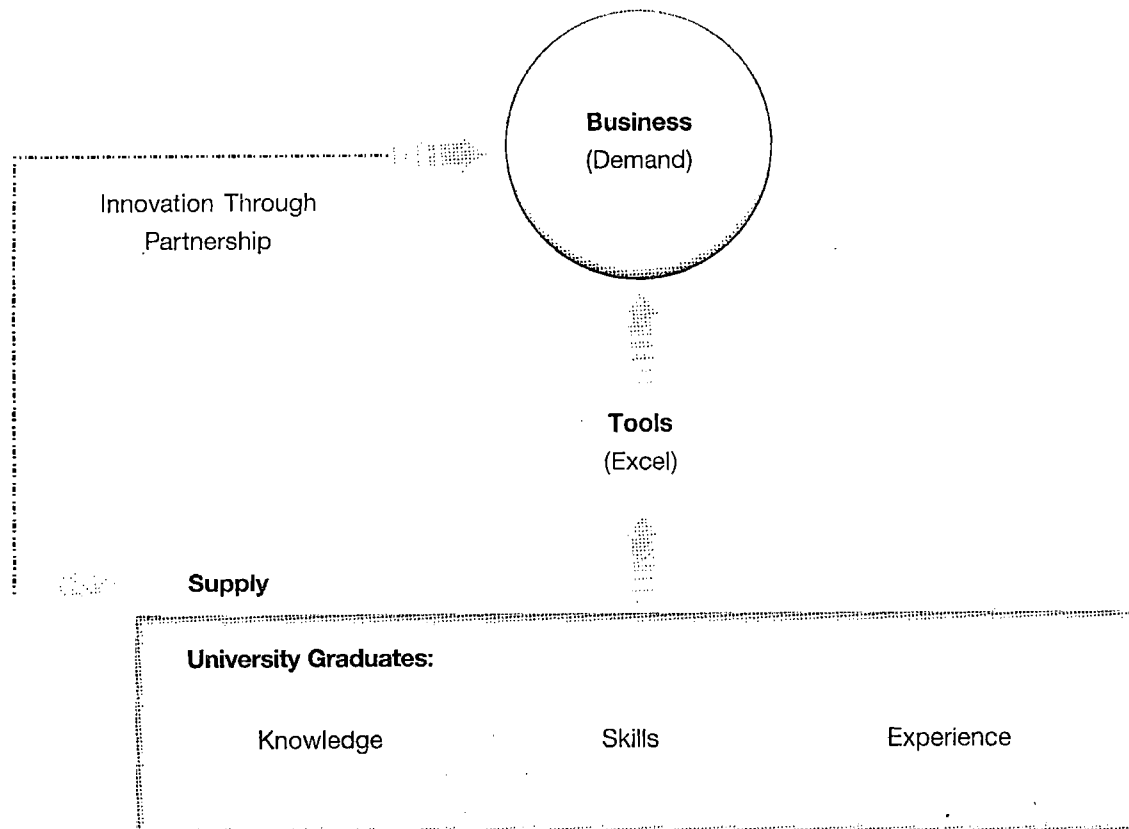
The key answer, I believe, is linkages between Thai universities as a supply side and Thai businesses as a demand side; with the hope that these collaborative efforts would better prepare students for business challenges as they enter into workforce. In addition, this may even encourage some of them to take interest in becoming entrepreneurs.

The focus of the collaborative efforts is on practical problems and practical solutions from small and medium size enterprises (SMEs) in Thailand. The reason for choosing SMEs is that most of them cannot

afford to hire programmers or to pay for software. That situation creates an opportunity for both parties to gain mutual benefits; instructor get real cases and the entrepreneurs get the software package. To offer students a realistic experience on, **Madam Mon's Farm** was the first real case study used in conjunction with cases that were adapted from Operations Analysis Using Excel by Weida, Nancy C., Richardson, Ronny, Vazsonyi, and Andrew (2001) for class project.

The diagram below represents the process of learning through collaboration for this study:

**Exhibition 1**  
**The learning loop.**



Based on the notion that theoretical contents would become evidence and more valuable by using real situation as stimuli. Student's skills are developed through applying knowledge on real problem. With the capability of Excel functions and scenarios feature, it becomes a tool for creating software package. Note that, the instructor will do the study of the case and come up with software of his own prior to adapting it for classroom project. Information and problems of the business are then given as a project.

## Conceptual Framework

Conceptual framework as illustrated in the model in the introduction part is based on literature review which divided into two parts, academic theory and Buddhism's thinking.

### *Academic Theory*

Theories in learning can be classified in three spheres starting from Pavlov and B.F. Skinner that believe that individual's knowledge can be observed through one owner behavior. Of course, their belief becomes famous theory in behaviorism namely operant condition, S-R theory, and reinforcement. As a result of their work, Programs written to lead students step by step to mastery all kinds of subject matter were devised at the time teaching machines were introduced and they are presently for the used with computer (Biehler & Snowman, 1986). On the other hand, cognitivism is the theory believes in individual differences in ones' feelings, emotional, interests, and skills. Scheme theory is an extension of cognitivism theory having the main focus on network of knowledge and individual's acquiring knowledge. Finally, cognitive flexibility theory points out that knowledge can be looked at from two aspects; one it is simple network and/or the other is a complex one.

### *Buddhism' Thinking*

Life is education-Buddhism, a belief system

practice by most Thais for centuries in Thailand, is an importance contribution to this study. There are two Buddhism's concepts mentions here. According to Prapayut (2001), in his book called "A Good Life",

One's knowledge or wisdom can be achieved through training based on reality combined with applying systematic approach of study and practice. The learning process involves:

1. The training lesson must incorporate its environment promoting one's use of commonsense.
2. The environment will reflect and interact on one's mind which interns depend upon one's intention and objectives that provoke by the like or dislike of internal and or external incentives.
3. The truth is a learning process. Individual gains understanding and acknowledgement through reasoning, analyzing, synthesizing, examining, proving and using the truth in problem solving. (2001. p.11)

Furthermore, Prapayut (2001) points outs that the three approaches must be applied as such; they cannot be applied separately.

In most instances, businesses often face with uncertainty that translate in to a simple term called problem. The four-noble truth is very much applicable for this study because it provides a logical and systematic approach with four steps of problem-solving technique. The four noble truths, Buddhism's belief system in finding the truth, mentioned by Bunyanuparp (1972) are:

1. Identify causes and conditions of the problem,
2. Develop alternatives, and
3. Select the best alternatives

## Conceptual Process Model

According to Mungman (2001) computer-assisted instruction can be classified into five different types 1) Tutorial, 2) Drill and practice, 3) Test, 4) Simulation, and 5) Instructional Games. In view of problem solving programs, Biehler & Snowman (1986) see them as elaborate tutorials enable the learner to apply what

they have learned. Simon (1979) developed the three phases of decision making that reflect an idealized notion of the flow of decision making 1) the intelligent phase-the focus is on organization and its environment, 2) the design phase-a formal spreadsheet model, and 3) choice phase-alternatives are reviewed at this phase.

The model presented here is a step-by-step process that uses as requirements for students to build their application software. The finished software in a sense become problem solving programs simulating of real-life decision making. The objectives for the conceptual process are:

1. To promote understanding of existing problems facing SMEs in Thailand,
2. To apply theories in analyzing business problems and synthesizing them, and

3. To develop possible solutions.

The process begins with drawing a diagram to represent each group's interpretation of problems of the case. The second step involves identifying parameter of the case. Parameter in this case means variables and causes of the case. The third step requires student to collect inputs for calculations in step four. Step four takes data from the third step and perform calculations necessary to produce quantitative analysis. Step five requires each group to perform what if and business scenarios based on the group concept. The last step is summarizing results from step five in to tables. In addition, interpretation of results, which normally are number, are translated into wording explanation.

## **Exhibition 2**

### **The process of decision making.**

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#### **Diagram (1)**

Using diagram to exhibit and to further  
examine concept or problem(s).

|

#### **Parameter (2)**

Identify variables

|

#### **Data (3)**

Collect Data

|

#### **Evaluation (4)**

Perform necessary calculations.

|

#### **Reality Check (5)**

Do what if and/or scenarios.

|

#### **Final Outcomes (6)**

Results are summarized in tables and/or graphs.

## Thailand's Small and Medium Size Enterprises

### Definition

Leapirote (1997) described Small and Medium Enterprises in Thailand in the book called SMES as:

- 1) **Manufacturing firms** comprise of companies that produce all types of products, mining, and agro industries.
- 2) **Service Industries** are those that engage in retailing and wholesaling business
- 3) **Trading firms** involves companies with activities supporting those in manufacturing and service industries.

**Table 1**  
**Classifications of SMEs by its tangible assets**

Business Type	Small	Medium
Manufacturing	Not exceeding 50 million bahts	Not exceeding 200 million bahts
Service	Not exceeding 50 million bahts	Not exceeding 200 million bahts
Trading <ul style="list-style-type: none"><li>• Retailing</li><li>• Wholesaling</li></ul>	Not exceeding 30 million bahts Not exceeding 50 million bahts	Not exceeding 100 million bahts Not exceeding 60 million bahts

**Source:** A Handbook for SMEs Entrepreneurs (p. 12)

### ***The Problems and University's Role***

SMEs in Thailand are currently facing problems pertaining to the technical know-how, operations management, marketing their products, financial support and they cannot catch up with the dynamic changes of today's business (Leapirote, Sirirangmanon, Vitayasook & Vuttikao, 1997). Researches based on real business problems would contribute a great deal of help especially when the result can be modified into training programs for entrepreneurs (Ittipoa, 1997). As far as, the roles of University would be to help these entrepreneurs in developing business analysis tool (Boonpraseart, 1997). So far, this study has produced two programs: 1) cost-benefit analysis and 2) financial analysis package. The first one was result of collaboration with Madam Mon and the second was a joint effort from Bangkok Bank, Siam Square branch and Somboon Group.

### **The Case**

Mrs. Mon is the owner of Madam Mon's Farm who is previously owned and operated a trucking company in Kanchanaburi province. She is just like many businesspersons that were faced with financial crisis of 1997. She lost the trucking company because her business depends on the housing industry. Demand for housing was down so did her business. She then began to take serious on her framing business growing all kinds of fruits and fresh produce that later she turns them into other products such as banana chips and Thai rice crackers. The product that makes her well known is her creativeness taking the traditional Thai sweet rice cooked in bamboo stick goes international; that product is served on Thai Internal Air Ways. However, this study picked a product called corn milk drink as a case study. First, Mrs. Mon gave actual information on the process and the costs in class Mon (**See Appendix B**). Then each group (8-10 students per group, 16 groups) started to develop their program using the six steps as part of their requirements. In addition, a set of questions is given as part of requirement.

### **The Program**

In the research on satisfaction of computer assisted-instruction of Bangkok University's night program based on 320 students found that four percent of students were highly satisfied, twenty percent were very satisfied, forty-nine percent were moderately satisfied, twenty percent were somewhat happy, and seven percent were not satisfied (Petchnue, 2001). In addition, survey of 320 students from operations management by Svetsomboon (2001) revealed that more than ninety-eight percent of students are very satisfied.

Using a case adapted from Weida, Nancy C., Richardson, Ronny, Vazsonyi, and Andrew as a class project, each group developed an application program using the six-step model and turned the application software and a report on the due date. The report basically is step-by-step explanations of the application software. Moreover, each group must evaluate advantages and disadvantages of the project comparing to if they were to be given a topic for class report. On the due date, five groups were selected to give a ten minutes presentation following by class discussion of programs

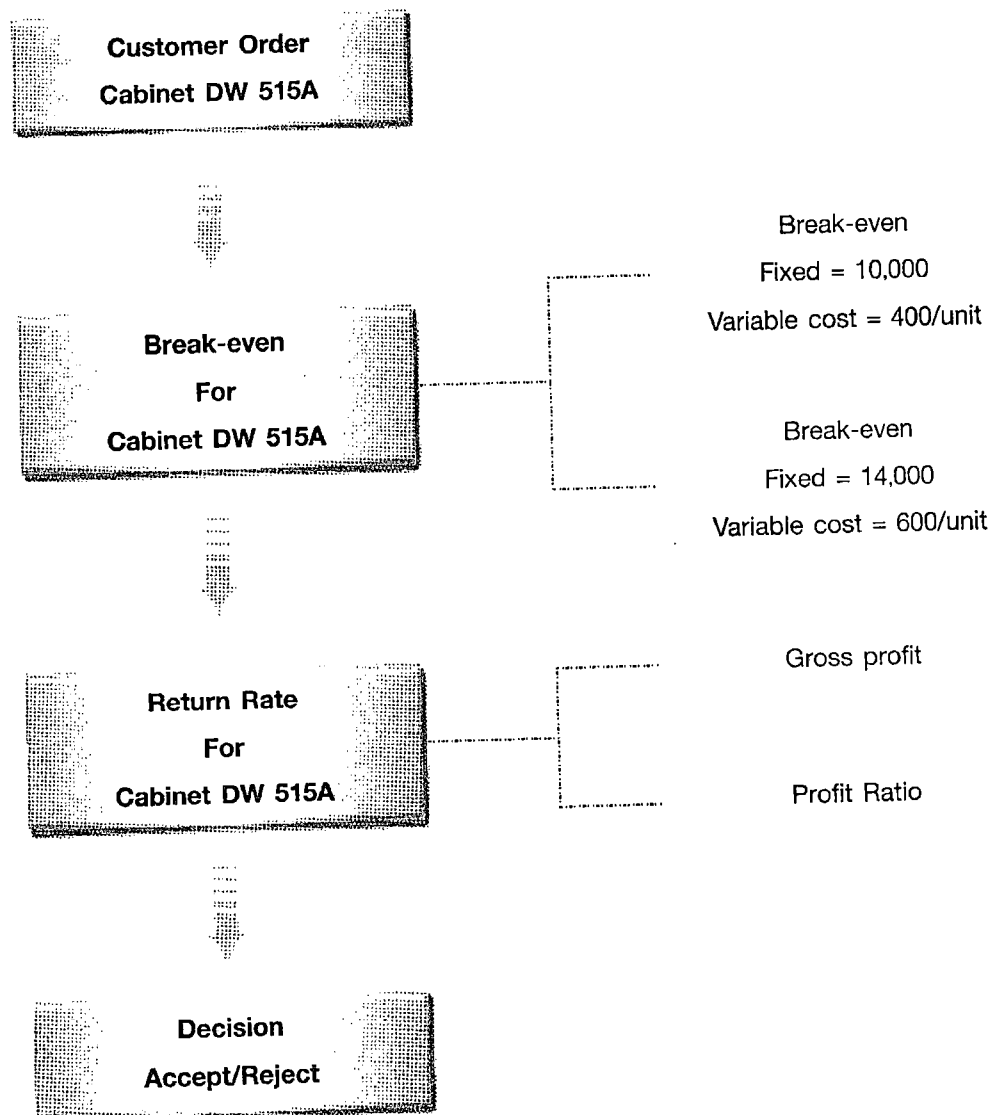
developed by students. In the development of the program, instructor assumed the of a company consultant. However, at the presentation date, instructor gave critiques, comments on students' program and shared experience utilizing Madam Mon's application software for further discussion on real business process.

The programs appeared in this part consists of three programs: 1) an example of a student's program

using. The Maxwell Formica Co., 2) cost benefit-analysis of Corn Milk Drink from Madam Mon's Farm, and 3) financial package. Only the diagrams of the three programs being exhibit here, except for cost-benefit of the corn milk drink. There will be some discussion of some important aspects. The software packages are submitted with the hard copy of this study to the conference secretariat.

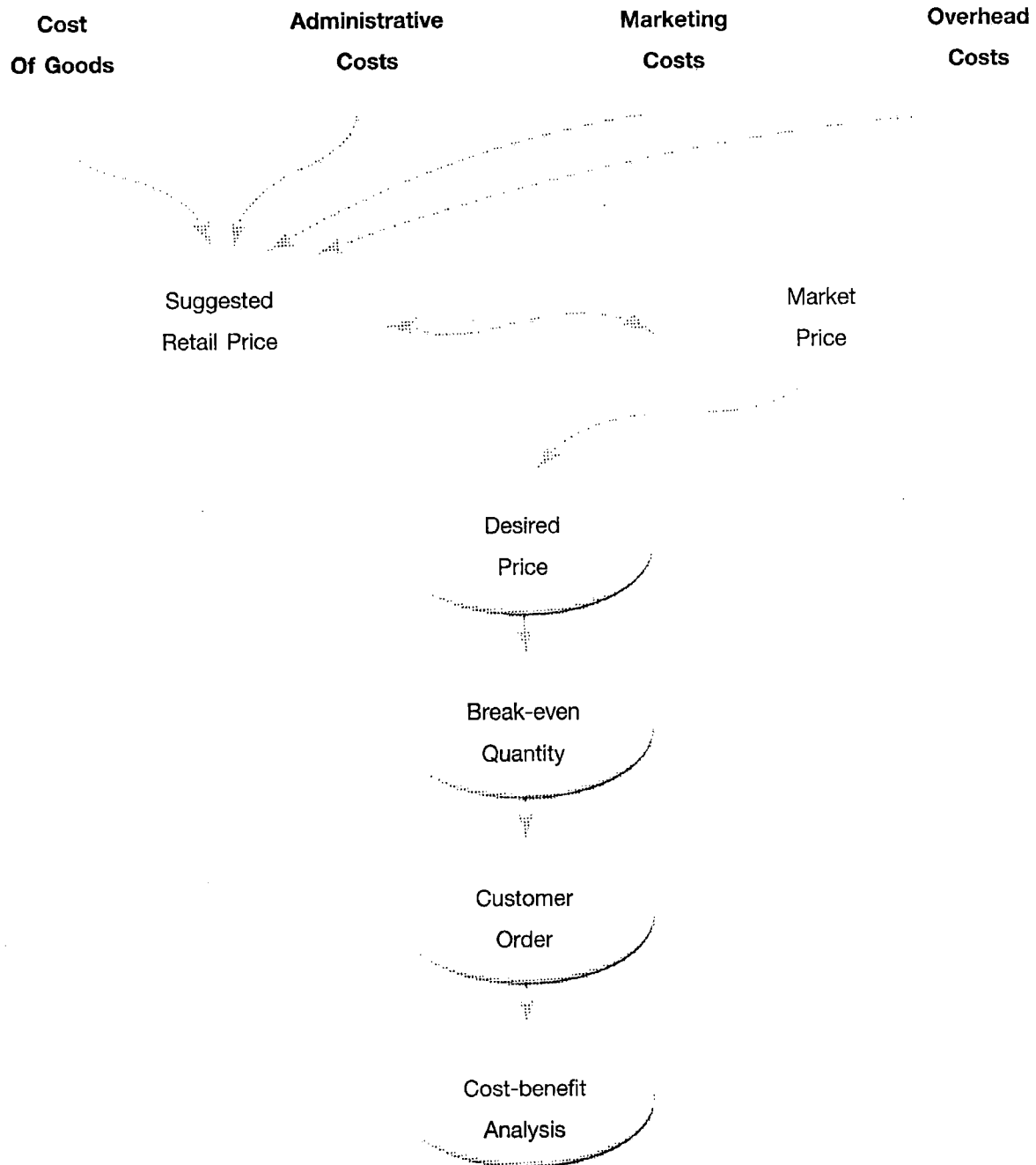
### Exhibition 3

#### Student's Program Using the Maxwell Formica Co.



#### Exhibition 4

#### Cost benefit-analysis of Corn Milk Drink from Madam Mon's Farm



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As it was previously mentioned, universities need to extend and reach to give a helping hand in solving the problems facing entrepreneurs in Thailand. The diagram represents how information is categorized and

the flow decision making that are made into Excel application software that later used for class discussion in conjunction with the assignment. Preliminary finding for this study found that:



1. The product's costs were not categorized,
2. The owner's salary, unsold products, and promotion using given to customers were not accounted for,

3. Profit was a result of total contribution margin of profit from supplying to herself raw materials and selling of products.

After several meeting, the discussion of software program was fabricated.

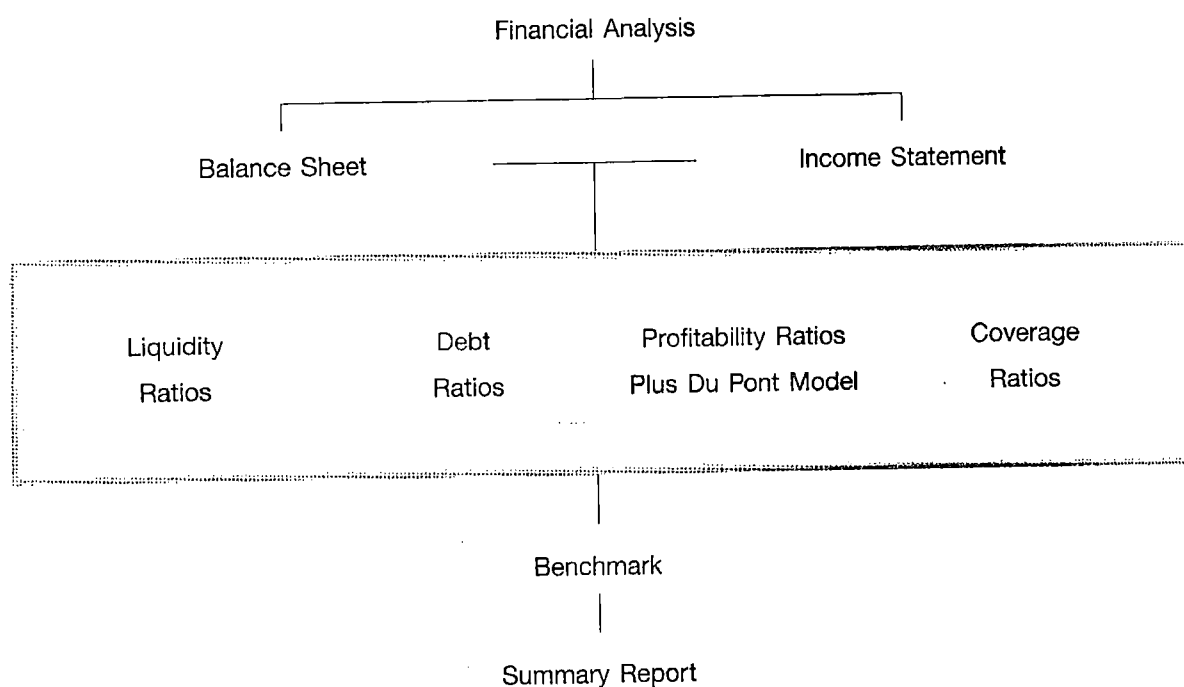
Solutions to preliminary identification of the problems were that:

1. The all costs were included and categorized, real product's cost was determined per unit and the percentile of each item was computed,
2. Selling price was computed based on the comparison of the product price generated by computer,
3. Break-even was computed,
4. Customer order now could be entered for cost-benefit analysis.

From the findings, I hope that this would lead to for development of more business analysis tool not only for Madam Mon's products but for others SMEs entrepreneurs as well (please see **appendix C**) for entrepreneurs wanted to joint the program).

The third application relates to financial analysis package for SMEs. At this point, the package is still under further improvements. However, it is sufficient to use for Strategic and Business Policy course. The development of this package was a result of collaborating efforts by Vorapot, CFO of Soomboon Group, and Suvat, loan manager of Ayudhaya Bangkok. The program starts with computations of financial ratios; results are compare to theoretical values as the first benchmark. In addition, the program provides second benchmark with three comparison options as a more realistic approach: 1) Company's past performance, 2) Industry average, and 3) Leading competitors. The following diagram shows how the program flows.

**Exhibition 5**  
**Financial Analysis Diagram**



## The Final Thought

The learning model and the design of decision making model are in their introductory stage. There are much more work to be done especially in the areas of improving the program both in terms of real usage and applying them in classroom. Also, there is a need to have long-term involvement and commitment both from entrepreneurs and myself. As far as applying this

concept, most students have had many difficulties using Excel. At the present, examples of Excel software are given to students as learning by doing.

Looking a head into the future, if all go well, I hope that Bangkok University will become the first university that have a center for business analysis tool to serve not only SMEs but other businesses as well.

## Appendix A: Cases

### MG212: Production and Operations Management

Project Assignment: Management Decision Tool for operations using Excel

*A. Surapol Svetsomboon*

### Company's Profile

The Maxwell Formica Co. receives the order from the Baby Furniture Company to manufacture 75 customized units of cabinet DW-51A. The company is offered \$60,000 for the 75 units. Clifford Matz, chief executive officer and principal owner, wonder whether they should accept the order.

An analysis of the production problems related to making the cabinet reveals that a new special-purpose lathe will be required. Delmar Castenada thinks that the cost will be between \$10,000 and \$14,000. Castenada find it difficult to estimate the variable cost per unit because of the custom-made cabinet will require some new production techniques. All he is will to say is that the cost will be between \$ 400 to \$600.

### Questions:

1. What is the company's break-even point?
2. Will it be profitable to accept the order?
3. What is the company's profit ratio?

### Requirements:

1. Draw a diagram for the problem.
2. Identify parameter for the problem.
3. Create data sheet.
4. Perform necessary calculations.
5. Summarize results using graphical illustrations or tables.

**Due Date:**

- Tuesday class - **Jan. 29, 2002**
- Wednesday class - **Jan. 30, 2002**
- Saturday class - **Feb. 1, 2002**
- No late paper will be accepted
- Turn in your diskette with project

**MG 212: Production and operations management**  
**Inventory Planning Using Excel**

A large chemical company produces a specialized chemical on a common production line. Demand for this chemical is 25 tons per day, 365 days per year. The common production line has a capacity of 100 tons per day when producing this product. Setup costs for this chemical are \$1,000, and inventory costs \$10 per ton per year. This line runs five days a week for 50 weeks per year, or a total of 250 days.

**Questions:**

1. How many tons should be produced during each product run?
2. What would be the average production run for this chemical?
3. How many runs will this company make each year?
4. What would be their average inventory of this chemical?
5. What would be the combined costs for this chemical?

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**Requirements:**

6. Draw a diagram for the problem.
7. Identify parameter for the problem.
8. Create data sheet.
9. Perform necessary calculations.
10. Summarize results using graphical illustrations or tables.

**Due Date:**

- Tuesday class - **Jan. 29, 2002**
- Wednesday class - **Jan. 30, 2002**
- Saturday class - **Feb. 1, 2002**
- No late paper will be accepted
- Turn in your report and diskette

## Appendix B: Information on Corn Milk Drink costs

Current capacity: 1000 units  
Current selling price: 25 bahts/bottle

### Costs:

- |                   |                                |
|-------------------|--------------------------------|
| 1. Sweet corn     | Three kilograms of corn/bottle |
| 2. Label          | 2 bahts/bottle                 |
| 3. Plastic bottle | 1.80 bahts/bottle              |
| 4. Sticker        | 0.80 bahts/bottle              |
| 5. Ice            | 0.25 bahts/bottle              |
| 6. Salary         | 40000 bahts                    |
| 7. Shipping cost  | 1 bahts/bottle                 |

## Appendix C: Entrepreneurs

**SMEs** companies currently involves in developing business analysis tools:

Madam Mon's Farm

Boaploy, Kanchanaburi, Thailand

Tel. 011-662-570-9896

Srisakol Premium Co., Ltd.

Sathorn, Bangkok , Thailand 10120

Tel. 011-662-211-1971

Sea Grass Thai Craft

20<sup>th</sup> Forum Tower, Rchadaphisak Rd.

Huaywang, Bangkok

Thailand, 10320

Tel. 011-662-645-3709

Virat Plastic

12/79 Moo 1, Klong 1

Amphur Klongluang, Prathumtanee

Tel. 011-662-150-0147

## Large firms and financial institutions

Somboon Group, Spring Industrial Co., Ltd.  
112 Moo 2, Bangna-Trad Road  
Bangplee, Samutprakran  
Thailand 10540  
Tel. 011-662-312-5371

SEFCO CO., Ltd.  
26/10 Ram Indra Road.  
Bangkok, Thailand 10510

Bangkok Bank  
Siam Square Branch  
Bangkok, Thailand

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