



**UNIVERSITI TEKNIKAL MALAYSIA MELAKA**

# **FEASIBILITY STUDY OF PRODUCT LOCALIZATION: A CASE STUDY**

Thesis submitted in accordance with the requirements of the  
Universiti Teknikal Malaysia Melaka for the  
Bachelor of Engineering Manufacturing (Manufacturing Process)

By

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## DECLARATION

I hereby, declare this thesis entitled  
“Feasibility Study Of Product Localization: A Case Study”  
is the results of my own research except as cited in the reference.

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Date : 18 MAY 2007


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## **ABSTRACT**

The main goal of this project is to 'feasibilities product localize' and also the influence of other conditions such as cost of material, machine, how to select the appropriate machine and differentiate between in sourcing and outsourcing the making of the part. Aiming to achieve this goal, several techniques were carried out with method. In the first phase of the case study, all the data should be taken such as analyzing the product based on the process that related to make it. The proposed method uses a feasibility study on the localize product that has been made by the company. The conclusions of this project there are a differentiate cost between out sourcing and in sourcing the part of EDP metal parts.

## DEDICATION

*For my beloved father,*

*Haji Mohd Daim Bin Supangat*

*My beloved mother,*

*Hajah Zubaidah Bte Suraji*

*My brother,*

*Mohd Zudaimy*

*My sisters,*

*Daizura*

*Daizeela*

*Daiziana*

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## **LIST OF ABBREVIATIONS, SYMBOLS, SPECIALIZED NOMENCLATURE**

BOM	-	Bill Of Material
eg	-	Example
EDP	-	External Distribution Point.
In	-	Inch
KMH	-	Kemilau Mega Holdings Sdn. Bhd.
lb	-	pound
mm	-	Milimeter
psi	-	pressure square per inch
RM	-	Ringgit Malaysia
ROR	-	Rate Of Return
vs	-	Versus
%	-	Percentage

# CHAPTER 1

## INTRODUCTION

### 1.0 INTRODUCTION

Modifying foreign-made products/services to render them suitable for Japanese users is called "**localization**". This is an essential part of your success in the Japanese market. Localization refers to the **adaptation** of a product, application or document content to meet the language, cultural and other requirements of a specific target market (a "locale").Localization is sometimes written as "l10n", where 10 is the number of letters between 'l' and 'n'.

Often thought of only as a synonym for translation of the user interface and documentation, localization is often a substantially more complex issue. It can entail customization related to:

1. Numeric, date and time formats
2. Use of currency
3. Keyboard usage
4. Collation and sorting
5. Symbols, icons and colors
6. Text and graphics containing references to objects, actions or ideas which, in a given culture, may be subject to misinterpretation or viewed as insensitive.
7. Varying legal requirements
8. and many more things.

Localization may even necessitate a comprehensive rethinking of logic, visual design, or presentation if the way of doing business (eg., accounting) or the accepted paradigm for learning (eg., focus on individual vs. group) in a given locale differs substantially from the originating culture.

## **1.1 OBJECTIVES OF THE PROJECT**

- a) Set up the criteria and understand the meaning of costing processes in manufacturing.
- b) Identify the suitable part to produce for the company in the term of cost.
- c) Describe the differences cost between in house and out house.
- d) Distinguish between the various units used to determine which part to be made in house.

## **1.2 SCOPE OF THE PROJECT**

- a) Study the definition of manufacturing costing processes.
- b) Study on the manufacturing costing method.
- c) Study on the metal part costing of the part product.
- d) Analysis on the metal part of the part product to be produce in house in term of process cost only.
- e) Choosing the suitable costing method that can be related to metal part processes.
- f) Study on the localization product.



### **1.3 BACKGROUND PROBLEM**

Many of the manufacturers in OEM did not know how to manage their own production on their product. Thus it will make whether the company is bankrupt or it is not been well organized. A lot of factor and thing need to be considered, analyzed and the outcome of the problem can be achieved. The relationship between the product and the cost to make is important to make sure that the target is achieved with the minimum cost, good quality, on time delivery and customer satisfaction. For this company, at the mean time it only runs an assembly processes on producing the product. All the part is been made by the other vendor or sub contract. In the future, the company want to make the all the metal part in house. In achieving the company aim, there are procedures and steps to determine the cost, the machine and others factor to suit between the company expenses and the production line to be made.

## **CHAPTER 2**

### **LITERATURE REVIEW**

#### **2.1. INTRODUCTION.**

The literature review is discussing about research which had been made previously. It also discussed the points which related to this project. The objective of the literature review is to appreciate and explain in detail about journal read as the guideline for this project research.

#### **2.2. THE SOURCING DECISION**

At its most basic level, sourcing decisions address which products and services will be provided in-house (known as in sourcing) and which will be provided by a firm's supply chain partners (outsourcing). The sourcing decision is also known as the make-or-buy decision.

Quite simply, sourcing decisions are critical to operations and supply chain managers (including those in purchasing) because it tells them what they will and will not be responsible for. In this case, operations and supply chain managers must determine the capacity and resources they need, the most appropriate manufacturing or service processes to use, and the information systems they need to coordinate operations. But if the company decides to outsource the product or service, the emphasis shifts to the purchasing activities associated with identifying the most qualified suppliers and managing the buyer-supplier relationship.

Table 2.1: Factors That Affect the Decision to In source or Outsource

Factor	Favors In sourcing	Favors Outsourcing
Environmental uncertainty	High	Low
Competition in the supplier market	Low	High
Ability to monitor supplier's performance	High	Low
Relationship of product / service to buying firm's core competencies.	High	Low

As the table suggests, in sourcing will generally be more favorable in situations where environmental uncertainty is low (thereby reducing the risk of investing in capacity), supplier markets are not well developed, and the product or service being considered is not directly related the buying firm's core competencies. In contrast, outsourcing becomes more attractive as competition in supplier markets increases, the product or service is not seen as strategically critical, and environmental uncertainty makes internal investment a risky prospect. Given this, it makes sense that a lot of high tech companies, facing short product life cycles and uncertain market conditions, outsource more often than firms in more stable industries.

## **2.21 COST INVOLVE ON OUT SOURCING AND IN SOURCING.**

Ultimately, managers must understand the cost issues associated with in sourcing versus outsourcing. Determining the actual cost of metal parts in EDP is a complicated task requiring both good judgment and the application of sound quantitative techniques. In this section we will first examine the direct and indirect costs managers must consider in making such decisions.

Table 2.2: In sourcing and outsourcing costs

	In sourcing	Outsourcing
Direct Costs	Direct material Direct labor Freight costs Variable overhead	Price (from invoice) Freight costs
Indirect Costs	Supervision Administrative support Supplies Maintenance costs Equipment depreciation Utilities Building lease Fixed overhead	Purchasing Receiving Quality Control

Table 2.2 identifies the major cost categories associated with in sourcing and outsourcing decisions. As the table shows, these costs are typically divided into direct and indirect costs. Direct costs are those costs that are tied directly to the production of a good or service, such as materials costs, labor costs, and variable overhead.

## **EXISTING OPERATION (OUTSOURCING)**

### **2.3 DEFINITION OF OUTSOURCING.**

"Outsourcing" involves transferring or sharing management control and/or decision-making of a business function to an outside supplier, which involves a degree of two-way information exchange, coordination and trust between the outsourcer and its client. Many companies also outsource customer support and call centre functions, manufacturing and engineering. Outsourcing typically increases a firm's flexibility and access to state-of-the-art products and processes. As markets or technologies change, many firms find changing supply chain partners easier than changing internal processes. In addition to increasing a firm's strategic flexibility and access to new technologies, outsourcing improves its cash flow. With outsourcing, less investment is required up front in the resources needed to provide a product or service. The benefits can be significant. By using contract manufacturers, Dell Computer supported \$3 billion in annual revenues with only \$60 million of fixed assets (Shawn Tully 1994).

## 2.4 ISSUES RELATED TO OUTSOURCING.

Outsourcing occurs when a company purchases products or services from an outside supplier, rather than performing the same work within its own facilities, in order to cut costs. The decision to outsource is a major strategic one for most companies, since it involves weighing the potential cost savings against the consequences of a loss in control over the product. Vendors providing outsourcing services into two models:

- a. Business Process Outsourcing (BPO).
  - i. Major resources and assets are transferred from the company to the vendor.
- b. Application Service Provider (ASP).
  - ii. Vendors concentrate on providing selected services for multiple clients.
- c. Bill Of Material (BOM) is not update.

The BOM must be checked with the customer to make sure that it is updated. It is to make sure that the correct part is been made and also it can reduce the percentage of reject part.

- d. Uses the standard specification for the metal part is higher or lower than expected.

A decision must be made whether the standard specification for the metal part should be raise or not.

- e. Updated design.

The design of the part should be checked before running the production whether the drawing has been revised or not.

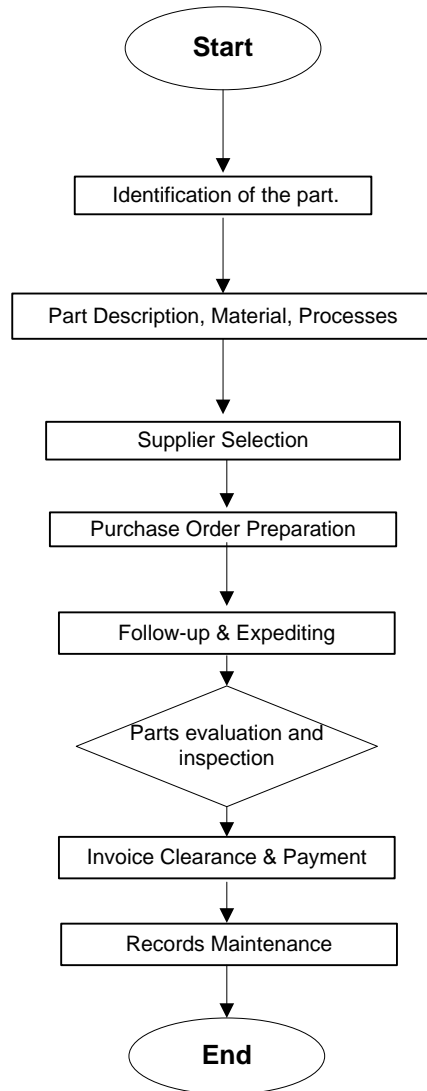


Figure 2.1: The outsourcing process

Figure 2.1 shows process of outsourcing. Starting from identification of the part until record the maintenance, each of the processes should be go through.

## **PROPOSE OPERATION (IN SOURCING)**

### **2.5 DEFINITION OF IN SOURCING.**

In sourcing is the opposite of outsourcing; that is in sourcing (or contracting in) is often defined as the delegation of operations or jobs from production within a business to an internal (but 'stand-alone') entity (such as a subcontractor) that specializes in that operation. In sourcing is a business decision that is often made to maintain control of certain critical production or competencies.

On the downside, in sourcing can be risky because it decreases a firm's strategic flexibility. The semiconductor industry is a good example of the risks of in sourcing. In 1995, at least a dozen new semiconductor plants were under construction in the United States, including three for Intel and two for Motorola. At the time the average cost of a chip fabrication plant was about \$1.5 billion, and was expected to rise to \$3 billion by 1999. To make matters worse, some of the associated manufacturing technologies had life cycles as short as six months, after which they were expected to be superseded by newer technologies. As a result, semiconductor manufacturers faced the very real risk of investing in old process technologies just as newer ones emerged. To justify plant expansions under these conditions, managers had to show that investing in new capacity would bring a quick payback(Erin Anderson and Barton J. Weitz ,1986).