

## CHAPTER 4

### RESEARCH METHODOLOGY

Since the aim of this thesis is to study the deregulation of the Prime Minister Office's Procurement, which this situation is not in existence now, but is likely to be in the future. Thus the methodology used here is the forecasting method (Aljian, 1973) so-called "opinion survey". The study makes use of the opinion survey to forecast the impacts on purchasing procurement after abolishing the regulation, which has already done recently by many academic institutes including GPO. Therefore, this study makes use of all available data, which has already done for its analysis. So this chapter is aimed to present mainly part of data sources and data collection and the conceptual framework. And for better understanding of some words used in this thesis, some definitions are provided in the first part.

#### 4.1 Definitions

**GPO's products** means the pharmaceutical and medical products that GPO manufactures to provide to its customers which mostly are the public hospitals. The products are for example as Essential Drugs (ED) , Non Essential Drugs (NED) , special formula drug, raw materials , chemicals, etc.

**Non GPO's products** means the pharmaceutical and medical products that GPO does not manufacture but purchases from local firms or MNCs according to the needs of the customers in special brand names or by bidding for unspecific needs in generic name under the condition of the firms that got the GMP certificate which must be proved for sure the quality by GPO's laboratory.

GPO's customers means all public and private health sector such as ; the general hospitals, the district hospitals, health centers, public enterprises, private hospitals, clinics, doctors, drug distributors, health funds, etc.

GPO's structure means the organization structure of GPO in the aspects of product range , production such as; process, capacity, inputs (labors, raw materials, machines/ equipment, etc.), R&D , technology ,etc.

Good Manufacturing Practice (GMP) means the manufacturing guidelines that are applications of the principles of quality assurance which initially related to the manufacture, processing and packing of pharmaceutical preparations; gradually the scope has been widened to include medicinal chemicals as well. The guidelines'purpose is to ensure that drugs are safe, efficient and stable.

The Prime Minister Office's Procurement Regulation is the regulation that the government established to use in the same criteria for all public sector in purchasing all the management resources by using the government budget in terms of negotiated prices ,price investigation , bidding, special procedure ,etc. The latest issue used at present is number 8 A.D.1992. This study concerns only in the part of pharmaceutical and medical products.

#### 4.2 Conceptual Framework and Tools to be Used

To achieve the above objectives, the study will begin with description of general background of the Prime Minister Office's Procurement Regulation as part of pharmaceutical and medical products in order to know how important GPO related to public and private sectors and from point of view why they disagree with this regulation. Then the study examines the distribution of GPO's

products and its market share and study further for the GPO's role in comparison with the private companies in the drug market in the following aspects ;

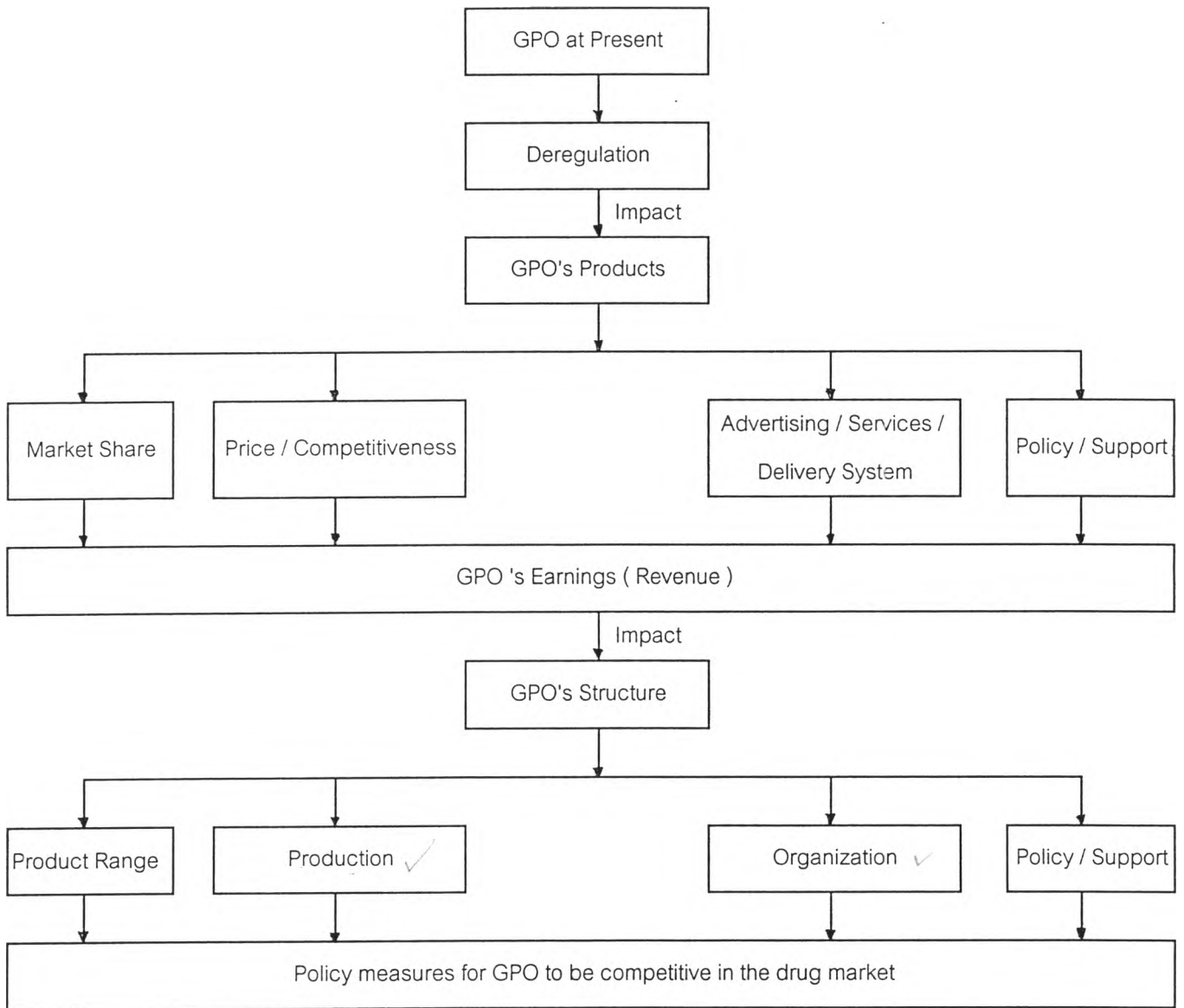
1. Total sales of GPO
2. GPO's products sales to public sector.
3. Non GPO's products sales to public sector.
4. GPO's products sales to private sector
5. Non GPO's products sales to private sector
6. Value of drugs in Thailand
7. Market share of GPO's sale

The year mentioned in the thesis is the fiscal year ( starting 1 October and ending 30 September ). The period covers in the study starts from 1986, the year that the Prime Minister Office's Procurement was launched, up to 1997.

Since deregulation is not yet implemented, GPO at present is still operating as a manufacturer and distributor for pharmaceutical and medical products under the government. To study the impact on GPO after deregulation, it begins with the conceptual framework as shown in Figure 4.1 that what the GPO's products and structure will be changed in the future after deregulation especially the earnings compare to GPO at present.

For the GPO's products or product range are classified into four groups by applying the standardized product-portfolio model which is the growth / share matrix developed by the Botston Consulting Group (BCG) quoted by Lilien and Kotler (1983). According to this approach the company classified all of its strategic business units (SBUs) into the business-portfolios matrix shown in Figure 4.2 , which is briefly described as follows:

Figure 4.1 Conceptual Framework



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1. The vertical axis is the market-growth rate. It is arbitrarily divided into high and low growth.
2. The horizontal axis shows the market share for each SBU relative to the share of the industry's largest competitors.
3. Each quadrant represents a distinct type of cash flow situation ,leading to the following classification of SBUs
  - a. Stars are high growth, high share SBUs. Cash is necessary to finance their rapid growth. Eventually, their growth will slow down, and they will turn into cash cows and become major cash generators supporting other SBUs.
  - b. Cash Cows are low-growth, high-share SBUs. They throw off a lot of cash that the company uses to meet its bills and support other SBUs that are cash using.
  - c. Question Marks are low-share SBUs in high-growth markets. They require a lot of cash to maintain and increase their share. Management has to think hard about whether to spend more to build these question marks into leaders; if not, the question marks will have to be phased down or out.
  - d. Dogs are low-growth, low-share SBU. They may generate enough cash to maintain themselves but do not promise to be a large source of cash.
4. Management's job is to project a future matrix showing where each SBU is likely to be, assuming no change in its strategy.

The main concept behind the BCG approach is that of cash balance that the long-run health of the corporation depends on some products generating cash (and profits) and other using the cash to support growth.

Applying the BCG approach to the GPO's products, the study classified products into 4 groups based on sale value and percent of gross profit margin as follows : (Figure 4.3)

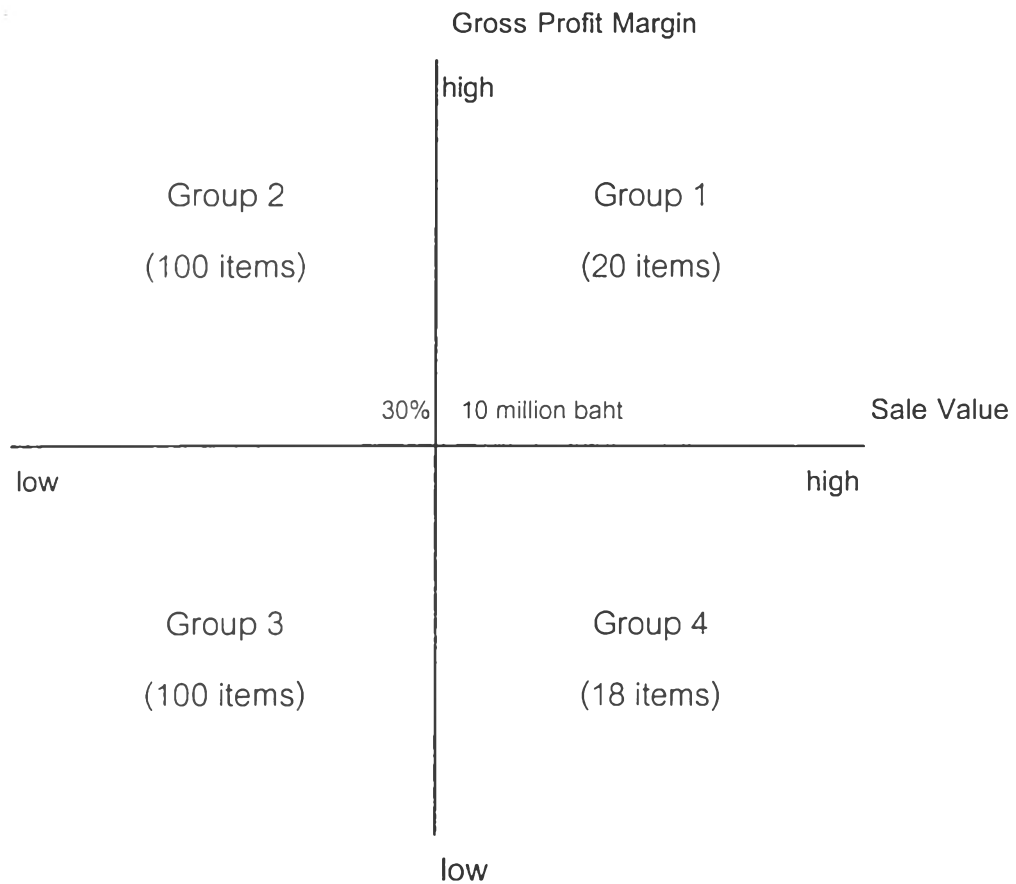
1. Group 1 (equivalent to Stars in BCG Business-Portfolio Matrix) : comprises of GPO sale value more than 10 million Baht\* per year and the gross profit margin (in percentage) more than 30%.\*\*
2. Group 2 (equivalent to Question Marks in BCG Business-Portfolio Matrix): comprises of sale value lower 10 million Baht per year and the gross profit margin more than 30%.
3. Group 3 (equivalent to Dogs in BCG Business-Portfolio Matrix) : comprises of product sale value below 10 million Bath per year and the gross profit margin less than 30%.
4. Group 4 (equivalent to Cash Cows in BCG Business-Portfolio Matrix) : comprises of demand more than 10million Baht per year and the gross profit margin less than 30%.

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\* GPO uses the limit of 10 million Baht per year to classified the group of high and low profit because it has been justified that this limit will divided the GPO products into 4 group equally, which can be handle by GPO.

\*\* The limit of 30% gross profit margin comes from the percentage of interest on a loan (15-17%) plus 6.5% inflation plus 5% of welfare benefit.

Figure 4.3 Portfolio Matrix of GPO's Products



No Gross profit margin (%) means income minus production costs and expenditures except expenditures of administrative and market management.



The first group, GPO has to examine whether their prices are higher than average price of local made products or not under the condition of same size of production. If not, GPO has to retain the sale value without backorder. But if the price is higher, GPO should consider to reduce the marginal ) cost.

The second group, the strategies in operating are the same as the first group and furthermore increasing sale value is needed as well.

The third group, GPO has to be careful and concentrate in seeking the problems making loss or low profit. For the unpopular products, GPO can reduce the quantity gradually and inform the customers, but for the necessary products which no companies can produce GPO must play the role to support the MOPH's Policy such as household products and vaccine.

The last group of low or loss profit but high demand, GPO should concern to lowering the marginal costs, if not, it must produce of substitute products and promotion support would be held firmly.

After considering for these product groups, we study further on the market competitiveness by using the SWOT analysis ( Dibb and Simkin, 1996) to be the guideline of decision making.

The SWOT analysis is one of the most commonly implemented analyses for marketing strategies. It provides an excellent starting point for this type of review. The SWOT helps identify and structure a business's strengths, weaknesses as well as the available opportunities and threats of each firm. A number of basic rules can help avoid misuse and maximize the robustness of the SWOT analysis.

Rule 1 : Carefully define the scope of each particular SWOT.

Rule 2: Understanding the distinction between the SWOT elements. Strength and weakness are issues internal to a firm and are therefore under its

control. Opportunities and threats relate to aspects of the marketing environment and are not under the control of the organization.

Rule 3 : Strengths and weaknesses can only be viewed as such as if this is how they are perceived by the customers.

Rule 4 : Be objective and use a broad base of inputs to generate the issues for the SWOT analysis. As far as possible the SWOT must be based on objective facts and on marketing research findings.

Rule 5: Avoid wide ranging and ambiguous statements. The more finely tuned the issues included, the more useful the SWOT is likely to be.

To develop effective SWOT analysis, it is needed to use a simple format for presenting the SWOT as illustrated in Figure 4.4 : The SWOT Grid. By this approach GPO would know its own strengths and weakness to develop and improve all the internal managements with the right decision in order to strengthen its capabilities by opportunity reviews outside and the threats, which comes from the market and customer focused view.

### 4.3 Data and Data Collection

All the data used in this research are secondary data obtained from many sources: the GPO itself, profile from the FDA, the Health Systems Research Institute, the MOPH, The Ministry of Finance, the Infopharma Media Services (IMS), reports, theses, journals, paper works of academic institutions, and the National Statistical Office, etc.

It is fortunately that the primary data had already been surveyed in 1997 by several academics or institutions. The main concern was to explore the opinion whether the public agree or disagree with this procurement regulation

Figure 4.4 The SWOT Grid

Internal	<b>Strengths</b> Internal issues which are directly relevant to the customers under consideration. These issues must be narrow in focus.	<b>Weakness</b>
External	<b>Opportunities</b> External issues relating to a range of environmental areas such as legal/ political/ regulatory/ societal/ economic and technological	<b>Threats</b>

Source : Sally Dibb and Lyndon Simkin (1996)

and to investigate whether they would purchase pharmaceutical and medical products from GPO after deregulation or not. Moreover, it was surveyed in details of the reasons to agree or disagree with the regulation and with the satisfaction or unsatisfaction reasons of continuing to purchase the products from GPO in order to analyze the problems and to find out the answers for improving the activity of GPO for survival in pharmaceutical market.

The existing opinion survey data used in this thesis come from 3 sources

#### **The Survey of GPO (1997)**

It was conducted by one private company in 1997. The methodology used were both the quality and quantity research.

Stratified random sampling was used based on the number of doctors and pharmacist groups who work in the government sector and those who work in private sector in Bangkok and other 12 areas divided by the MOPH.

For the topics in this survey related to the thesis were the agreement of using GPO's drugs and medical products in case of the hospitals under MOPH unnecessary to conduct to the purchase procurement regulation and the reasons of agreement or disagreement of using GPO's drug and medical products. The results are useful to analyze the trend of GPO's drug sale in the near future after deregulation in Chapter 5.

#### **The Project by Tangcharoensathian et al (1997)**

The questionnaires of the survey were both open ended and close ended to get some more ideas from target population who were the hospital directors and/or the pharmacists those had the authorization in pharmaceutical and medical products purchasing. The scope of the project concerned with the

hospitals under MOPH, which divided into two levels. The first is the level of large hospitals (the general and regional hospitals), which contain 92 hospitals over all the country. The second is the small level of 10-30 beded hospitals sampling in 20%, the district hospitals of 60 beds sampling only 50% by systemic random sampling.

- 10 beds, 271 hospitals, sample size is 20% = 54 hospitals
- 30 beds, 294 hospitals, sample size is 20% = 59 hospitals
- 60 beds, 94 hospitals, sample size 50% = 47 hospitals
- 90 beds, 18 hospitals, sample size 100%
- 120 beds, 7 hospitals, sample size 100%

The answers came back for 67% of total copies sent out in district hospitals and for more than 80% of total copies sent to large hospitals which were adequate information for the total hospitals.

The results of project related to the thesis can be summarized as follow:

1. In 1996, the hospital under MOPH had purchased the drugs around 5,710 million Baht (Table 4.1) for the small hospitals (district hospitals of 10-120 beds), the drug purchased value were in the range between 50-87% of the government budget whilst the large hospitals (regional and general hospital) purchased between 37-50% of government budget, on the contrary, the district hospitals purchased drugs by using non-government budget (revenue budget) in the range of 13-50 % which the large hospitals purchased drugs in 50-63%

**Table 4.1** Percentage of Drug Purchased by Source of Fund and Total Purchase Value Classified by Types of Hospital in 1996

Hospitals	No. of Hospitals	Gov. Budget (%)			Non Budget (%)			Drug purchased per hospital (million Baht)	Total purchased * (million Baht)
		ED	NED	Total	ED	NED	Total		
Regional hospital	18	28	8	37	11	52	63	83.4	1,501.20
General hospital	73	41	10	50	11	39	50	28.2	2,058.60
District hosp. 10 beds	271	73	13	87	7	7	13	1.5	406.50
30 beds	294	59	13	72	16	13	28	3.2	940.80
60 beds	94	44	13	56	31	13	44	6.4	601.60
90 beds	18	49	11	61	20	20	39	7.1	127.80
120 beds	7	41	9	50	29	22	50	10.5	73.50
									5,710.80

**Note** : \* Total purchased value in 1996 is equal to purchased value per hospital multiply by number of hospitals in each size

**Source** : Viroj Tangcharoensathian et al (1997) , HSRI

with revenue budget (non government budget) and most of them were non-essential drugs (NED) in the range of 39-52%. This table signals that the procurement regulation influences only the district hospitals in using the government budget because the patient of the district hospitals mostly are low incomes needed the subsidies from the government. Whereas the large hospitals try to avoid from the regulation since they earn the revenue by user-charge from the patients, so they can buy drugs from any companies they wanted without conforming to the regulation.

2. Most of hospitals, around 70-80% of total, agreed with the liberalization of the procurement regulation by the main reasons of the management, services, prices and benefits of GPO. The concept of liberalization of the regulation will lead to the effectiveness of the competitive drug markets.

#### The survey of the Legal Affairs Division (1997)

The Legal Affairs Division (LAD) of the MOPH had sent the questionnaires to the public health section under the MOPH through the Provincial Health Center of each province all over the country in regard to the Prime Minister Office's Purchase Procurement Regulation, Article 61, with the target group as the director or pharmacist of the hospitals. The returned copies were unexactly counted because some of the hospital had been summarized by the Provincial Health Center, some had been sent directly to LAD. However, the returned copies in more than a half of all allowed to use for the analysis in this thesis supporting by the survey of Tangcharoensathien et al (1997).

By the conclusion of the Legal Affairs Division's opinion survey in regard to Article 61 of the procurement regulation were as follow:

1. Most of the hospital wanted the regulation amendment in proper detail of drug and medical product purchasing in the following reasons:

1.1 To have a chance of competitiveness in drug market and to develop the local drug industry both of quality and price.

1.2 The purchasers had a chance to select the the drugs with good qualities and reasonable prices.

1.3 To be unsatisfactory in products and services from GPO. The allowance in the competition with the private sector will make the GPO services better.

2. For the regulation amendment, the majority wanted to purchase from the private companies in case of the same quality or better than GPO but cheaper and not exceeded the medium prices.

3. Some hospitals, in minority, still agreed with the procurement regulation because of the reliable quality standard of GPO's product. The competition may be make the purchase in the wrong way.

4. The main problems that made the customers unsatisfied the GPO were delivery delay, out of stock, higher prices in some products and lowered services than private sector.