

**Cost Behavior Analysis: The Stickiness of Selling, General, and
Administrative Cost.
An Empirical Study on Indonesian Manufacturing Companies Listed in
Jakarta Stock Exchange**

A THESIS

**Presented as a Partial Fulfillment of the Requirements
To Obtain the Bachelor Degree in Accounting Department**



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YOGYAKARTA
2006**

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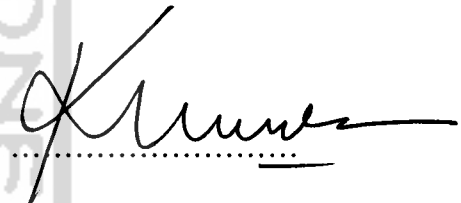
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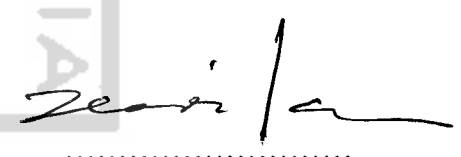
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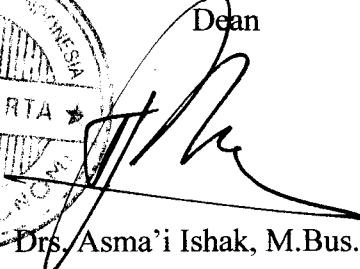
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Yogyakarta, September 2, 2006
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*This is on the
of the cost under
increases I've even
supervised!*

STATEMENT OF FREE PLAGIARISM

Herein I declare the originality of this thesis; there is no other work which has ever presented to obtain any university degree, and in my concern there is neither one else's opinion nor published written work, except acknowledged quotation relevant to the topic of this thesis have been stated or listed on the thesis bibliography.

If in the future this statement is not proven as it supposed to be, I am willing to accept any sanction complying with the determined regulation for its consequence.

Yogyakarta, August 30, 2006

Iman Persada Madaze



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Puri Srinindita, Room no: 4

August 31, 2006.

Iman Persada Madaze

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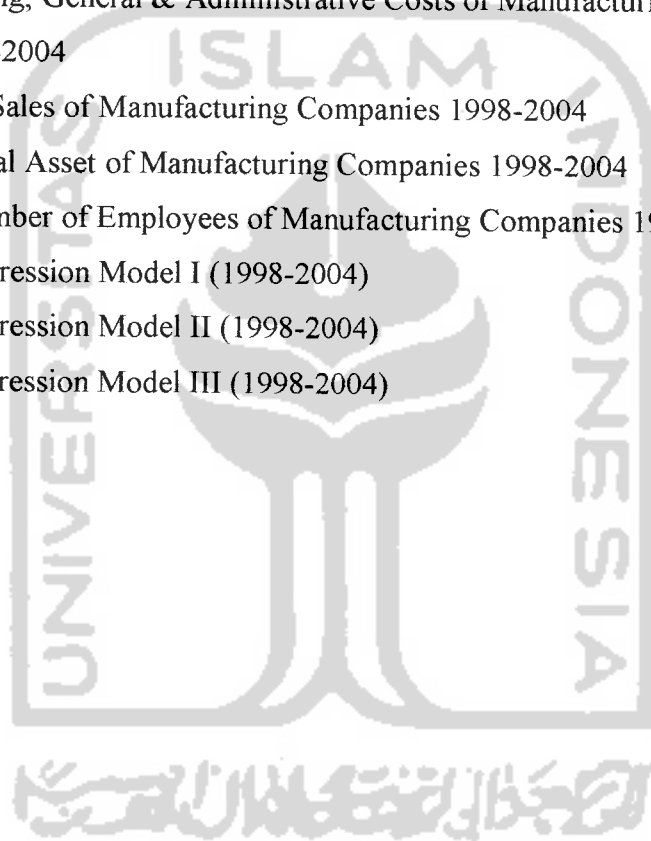
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ABSTRAK

Persada, Iman. Cost Behavior Analysis: The stickiness of Selling, General, and Administrative Cost. An Empirical Study on Indonesian Manufacturing Companies Listed in Jakarta Stock Exchange. (2006). International Program. Faculty of Economics. Islamic University of Indonesia.

Asumsi dasar dalam akuntansi biaya adalah hubungan antara kos dan volume adalah simetris untuk setiap kenaikan dan penurunan volume. Dalam penelitian ini, peneliti mencoba mencari tahu apakah biaya berperilaku *sticky* - yaitu, apakah kos bertambah lebih besar sewaktu aktivitas meningkat daripada ketika kos berkurang sewaktu aktivitas menurun pada jumlah yang sama. Peneliti menemukan, untuk 127 perusahaan manufaktur pada periode 1991-1996 dan untuk 160 perusahaan manufaktur pada periode 1998-2004, bahwa kos pemasaran, administrasi, dan umum (PAU) naik sebesar 0.69% per 1% kenaikan pada pendapatan penjualan untuk periode 1991-1996 dan naik sebesar 0.52% per 1% kenaikan pada pendapatan penjualan untuk periode 1998-2004 tapi hanya turun sebesar 0.29% dan 0.33% per 1% penurunan pada pendapatan penjualan, secara berurutan. Analisa peneliti membandingkan model tradisional perilaku kos dimana kos bergerak secara proporsional bersama perubahan aktivitas dengan model alternatif dimana *sticky costs* berlaku karena manajer secara sengaja menyesuaikan sumber daya yang dimiliki dengan aktivitas. Peneliti juga menguji hipotesa tentang perangkat dari *sticky costs* dan bagaimana derajat perilaku *sticky costs* bervariasi dengan keadaan perusahaan.

Keywords: Sticky Cost, Perilaku Kos, Kos PAU

ABSTRACT

Persada, Iman. Cost Behavior Analysis: The stickiness of Selling, General, and Administrative Cost. An Empirical Study on Indonesian Manufacturing Companies Listed in Jakarta Stock Exchange. (2006). International Program. Faculty of Economics. Islamic University of Indonesia.

A fundamental assumption in cost accounting is that the relation between costs and volume is symmetric for volume increases and decreases. In this research, researcher investigate whether costs are “sticky”– that is, whether costs increase more when activity rises than they decrease when activity falls by an equivalent amount. Researcher find, for 127 manufacturing firms for period of 1991-1996 and for 160 manufacturing firms for period of 1998-2004, that selling, general, and administrative (SG&A) costs increase on average 0.69% per 1% increase in sales revenues for period of 1991-1996 and increase on average 0.52% per 1% increase in sales revenues for period of 1998-2004 but decrease only 0.29% and 0.33% per 1% decrease in sales revenue, respectively. Researcher analysis compares the traditional model of cost behavior in which costs move proportionately with changes in activity with an alternative model in which sticky costs occur because managers deliberately adjust the resources committed to activities. Researcher tests hypothesis about the properties of sticky costs and how the degree of stickiness of SG&A costs varies with firm circumstances.

Keywords: Sticky Cost, Cost Behavior, SG&A Costs

CHAPTER I

INTRODUCTION

1.1. Background of The Study

Understanding cost behavior is an essential element of cost and management accounting. In the traditional model of cost behavior that pervades the accounting literature, costs are described as fixed or variable with respect to changes in activity volume. In this model, variable costs vary proportionately with changes in the activity driver (Noreen, 1991), implying that the magnitude of a change in costs depends only on the extent of a change in the level of activity, not on the direction of the change. However, some authors have sustained costs rise more with increases in activity volume than they fall with decreases (Cooper and Kaplan, 1998, p. 247; Noreen and Sanderstrom, 1997). This kind of cost behavior is called by Anderson, Banker and Janakiraman (2003) “sticky costs.” According to these authors, costs are sticky if the magnitude of the increase in costs associated with an increase in volume is greater than the magnitude of the decrease in costs associated with an equivalent decrease in volume.

The prevalence of sticky costs is consistent with an alternative model of cost behavior in which managers deliberately adjust resources in response to changes in volume. This model distinguishes between costs that move mechanistically with changes in volume and costs that are determined by the resources committed by managers. When there is uncertainty about future demand and firms must incur adjustment costs to reduce or restore committed resources,

managers may purportedly delay reductions to committed resources until they are more certain about the permanence of a decline in demand. This suggests that stickiness observed in one period may reverse in a subsequent period and that stickiness may be less pronounced when the observations period is longer.

The reason for this relevance consists in the fact that the basis of many managerial decisions is the knowledge of how costs can change as a function of activity level. Anderson, Banker and Janakiraman (2003), refers to sales, general, and administrative costs when it would be more correct to name them expenses. The reason for that is the paucity of data on costs drivers. Similar to Anderson, Banker and Janakiraman (2003), this research also uses sales, general and administrative expenses as a proxy for costs.

As put forward by Garrison and Noreen (2001, p. 131), attempts to take decisions without the thorough knowledge of costs involved and of how they change relative to the activity level might lead to disaster. There are diverging views in the accounting literature with respects to cost behavior. Garrison and Noreen (2001), Horngren, Foster, and Datar (2000) sustain that costs will react or change insofar as change on the activity level occur, without concern with the direction of these changes (increase or decrease). However, Noreen and Soderstrom (1997) and Anderson, Banker and Janakiraman (2003), state that costs vary with greater intensity with an increase in activity volume than in the opposite direction, i.e. with a decrease in activity volume, i.e. costs are sticky downwards.

This research adopts the assumption that costs behavior depends on the intensity and direction of the variation in the activity driver as in Anderson,

Banker and Janakiraman (2003), who concluded that costs are sticky. Therefore, the researcher want to write a thesis entitled **Cost Behavior Analysis: The Stickiness of Selling, General, and Administrative Cost. An Empirical Study on Indonesian Manufacturing Companies Listed in Jakarta Stock Exchange.**

1.2. Problem Identification

From the explanation above, the researcher identifies the problems as follows:

- The sticky cost behavior when the magnitude of the increase in costs associated with an increase in volume is greater than the magnitude of the decrease in costs associated with an equivalent decrease in volume.
- The degree of stickiness during macroeconomic growth.
- The degree of stickiness with asset intensity and with employee intensity.

1.3. Problem Formulation

The specific problems of this research are:

- Is cost behavior of selling, general, and administrative costs sticky for Indonesian manufacturing firms?
- How is the stickiness during macroeconomic growth in Indonesian manufacturing firms?
- How are the stickiness relations on asset intensity and employee intensity?

1.4. Problem Limitation

Restrictions on this research are outlined as follows:

- Research population is only manufacturing companies listed in Jakarta Stock Exchange.
- The variables chosen as the object of this research are selling, general and administrative cost, net sales revenue, number of employees, and net asset.
- Selling, general and administrative cost is used as proxy cost, because the existing component in this cost effects sales volume as activity volume proxy (Anderson, et al, 2003).

1.5. Research Objectives

The objective of this research is to investigate whether selling, general, and administrative costs in Indonesia manufacturing firms have stickiness behavior and in what condition that the stickiness in those firms can occur. Therefore, the specific objectives are:

1. to provide empirical evidence on the stickiness behavior of selling, general, and administrative costs in Indonesia manufacturing firms.
2. to examine stickiness behavior of selling, general, and administrative costs in Indonesia manufacturing firms occur during macroeconomic growth, and.
3. to examine the relations of stickiness behavior of selling, general, and administrative costs on asset intensity and employee intensity in Indonesia manufacturing firms.

1.6. Research Contribution

This research will, hopefully, be beneficial and have implication for the following parties:

- For company managers, the research will give a better understanding on cost behavior which will benefit for decision making in adjusting committed resources in response to changes in activity-based demand for those resources.
- For academicians, this research can be the basic research and reference for other researchers who have the same interest in doing research on the future.

1.7. Definition of Terms.

Cost Behavior: It is how costs are related to, and affected by, the activities of an organization.

Cost Drivers: Output measures of resources and activities that affects are called cost drivers.

Variable cost: A cost that changes in total in proportion to changes of a cost driver

Fixed Cost : A cost that does not change in total despite changes of a cost driver.

Sticky Cost : The cost is sticky if cost increase more when volume rises than they decrease when volume fall by an equivalent amount.

CHAPTER II

REVIEW OF RELATED LITERATURES

2.1. Cost Concepts

Accounting systems collect and analyze cost data to support managerial decision making. Cost is defined as the monetary value of goods and services expended to obtain current or future benefits. All costs are not necessarily the same as expenses. Expenses are reported in the income statement. They represent either costs for which benefits were already derived in the current fiscal period, such as cost of goods sold, or period costs, such as advertising whose benefits cannot be matched with the products or services sold in specific fiscal period. Product costs are all costs incurred for the manufacture of different products. (Atkinson, et al, 1995: 93-94)

Accountants usually define costs as a resource sacrificed or forgone to achieve a specific objective. To guide decisions, managers want to know the cost of something. We call this something a cost object and define it as anything for which a separate measurement of costs is desired (Horngren, et al, 1997: 26)

2.2. Cost Classification

Traditional cost accounting systems classify costs into manufacturing costs and nonmanufacturing costs, based on functions (Atkinson, et al, 1995: 94-95):

- Manufacturing

1. Manufacturing costs include all costs of transforming raw materials into a finished product.

- Nonmanufacturing

2. Distribution costs, which include costs of delivering finished product to customers
3. Selling costs, which include sales personnel salaries and commissions, and other sales office expenses
4. Marketing costs, which include advertising and publicity expenses
5. Research and development costs, which include expenditures for designing and bringing new products to the market
6. General and administrative costs, which include expenses such as chief executive officer's salary, and legal and accounting office costs that do not fall under any of the above categories

Manufacturing costs are classified into direct and indirect costs. Direct costs can be traced directly to a product. These costs are assigned to products directly based on the measured quantity of the resources consumed for their manufacture. The examples of direct manufacturing costs are direct material costs, which include the costs of all materials and parts that can be traced in the final product, and direct labor costs, which include the wages and fringe benefits paid to workers involved directly in manufacturing a product. All other manufacturing costs are classified as indirect costs that cannot be traced easily to products or

services produced; also referred to as overhead costs. (Atkinson, et al, 1995: 95-96)

A major question concerning costs is whether they have a direct or indirect relationship to a particular cost object. (Horngren, et al, 1997: 27)

- Direct costs of a cost object: costs that are related to the cost object and can be traced to it in an economically feasible way
- Indirect costs of a cost object: costs that are related to the cost object but cannot be traced to it in an economically feasible way. Indirect costs are allocated to the cost object using a cost allocation method.

2.3. Cost Behavior

To understand cost behavior in response to changes in the level of production and sales is critical for firms' management virtually in all sectors (Atkinson et al., 2000; Horngren; Foster; Datar, 2000). Garrison and Noreen (2001, p. 131) define that cost behavior means how cost will react or change when changes on the activity level occur. Managers who understand how costs behave have better conditions to predict what will be the trajectory of costs in several operating situations, allowing them to better plan their activities and, consequently, earnings. Suppose, for example, the following questions: What is the effect of eliminating a product line on operating profits? Is it better to produce or purchase? Which prices must be raised? Which effect will an increase of 10% on sales have on operating profit? These and many other managerial decisions depend upon the knowledge of cost behavior.

Let us now consider two basic types of cost behavior pattern found in many systems - variable costs and fixed costs. A variable cost is a cost that changes in total in proportion to changes of a cost driver. A fixed cost is a cost that does not change in total despite changes of a cost driver. (Horngren, et al, 1997: 29)

Costs are related to the levels of multiple activity cost drivers. But managers are often interested in how costs change with a change in the level of one important cost driver, the volume of production, because many marketing, production, and investment decisions affect production volume. To supply this information to managers, organizations traditionally classify costs into fixed and variable costs based on their behavior in response to changes in production volume. These terms are defined as follows (Atkinson, et al, 1995: 137):

- Fixed costs (FC) do not change with changes in the level of production over short periods of time.
- Variable costs (VC) change in proportion to changes in the level of production.

Fixed costs can be considered as committed or discretionary (Garrison and Noreen, 2001). Committed fixed costs are by nature long run and cannot be reduced to zero even for short periods. Depreciation of fixed assets, property tax, salaries of management and operating personnel are example of committed fixed costs. Discretionary fixed costs are generally short-run costs and can be cut for short periods, with minimum damage for the organization's long run targets.

Examples of discretionary fixed costs are advertising, research, and public relations.

The definitions of variable costs and fixed costs have important underlying assumptions (Horngren, et al, 1997: 30):

1. Costs are defined as variable or fixed with respect to a specific cost object.
2. The time span must be specified.
3. Total costs are linear. That is, when plotted on ordinary graph paper, a total variable cost or total fixed cost relationship to the cost driver will appear as an unbroken straight line.
4. There is only one cost driver.
5. Variations in the level of the cost driver are within a relevant range.

The semi-variable cost is composed of a fixed part (the activity costs when the volume of services is equal to zero) and a variable part (which must vary according to the activity driver). The semi-variable or mixed costs (for example, wages of maintenance workers) remain constant within large activity ranges and increases or decreases in response to reasonably large changes on the activity level only. Small changes in the production level might not affect for example the number of employees required to adequately handle maintenance.

Some managerial accounting experts argue that costs are neither genuinely variable nor fixed (Ingram, Albright and Hill, 1997) and that the relationship between variable and fixed costs and the activity level is valid within the so-called “relevant range” (Horngren, Foster and Datar, 2000; Maher, 2001).

The relevant range is the activity range in which the cost behavior hypotheses assumed by the manager is valid. Despite the emphasis given by economists to the non-linearity of many variable costs, it is assumed that a non-linear cost can be approximated by a straight line, within the activity range (Garrison and Noreen, 2001)

2.4. Previous Studies on Costs

Innes and Mitchell (1993, p. 86) consider that the accounting literature has a myopic view on how costs behave. Generally costs behavior is analyzed and measured by one driver only - production level. They add that classifying indirect costs as fixed (costs which do not change with changes in volume) might lead to wrong decisions insofar as in many organizations these costs have shown high growth rates without an increase in activity volume (Miller and Vollmann, 1985; Berliner and Brimson, 1992). The basis for this argument comes from the activity based costing (ABC) assumption that costs are primarily influenced by the volume of each activity flow, rather than by the volume of production (Innes and Mitchell, 1993). Hence, the efficacy of the cost-driver information is in providing a series of factors which might be used to explain fixed cost behavior (Innes and Mitchell, 1993). For the activity based costing, a linear relationship between cost driver and costs exists (Kaplan and Cooper, 1998).

Noreen (1991) demonstrated that cost allocation - even ABC - is relevant for the decisions if, and only if, the following conditions are satisfied: 1) all costs can be divided in centers and each one is defined as a function of a measured

activity; 2) the cost amount is each cost center changing in direct proportion to its activity; and 3) all activities can be attributed to products in the sense that if a product is cut, then the activities associated to this product will be eliminated. In 1994 Noreen and Soderstrom tested the second condition: that the costs are strictly proportional to the activity. This hypothesis was rejected in the majority of indirect cost accounts in hospitals in the US.

In 2003, Anderson, Banker and Janakiraman tested and confirmed the hypothesis that costs are sticky. By specifying a model with SG&A costs as a function of net sales revenues, they found that costs increased on average 0.55% in response to a 1% increase on net sales revenue, but decreases by only 0.35% with respect to a 1% reduction on those revenues. Due to the lack of general data on costs and relevant drivers, data on SG&A costs and net sales revenues were used to analyze cost stickiness. SG&A cost behavior can be analyzed with respect to net sales revenue because sales volume drives many of the SG&A components (Kaplan; Cooper, 1998; Noreen; Soderstrom, 1994).

Other research about costs stickiness was also conducted by Widyastuti and Biyanto (2005) who found from 25 Indonesian firms over 4 years that SG&A cost increase on average 0,68% per 1% increase in volume, but decrease only 0,08% per 1% decrease in volume. While Medeiros and Costa (2004) confirmed that costs are sticky for Brazilian firms that SG&A costs increase 0.59% per 1% increase in sales but decrease only 0,32% per 1% decrease in sales.

According to Anderson, Banker and Janakiraman (2003), there are various reasons for costs stickiness, such as: natural reluctance in firing employees when

the activity volume decreases and the need of time to confirm the tendency of activity volume reduction. When volume falls, managers must decide whether to maintain committed resources and bear the costs of operating with unutilized capacity or to reduce committed resources and incur the adjustments costs of retrenching and, if volume is restored, replacing committed resources at a later date. This suggests that stickiness would be stronger in circumstances where the assessed probability, that a demand decline is permanent, is lower or where the costs of adjusting committed resources are higher.

The traditional model of costs behavior relates costs to different levels of activity without considering how a managerial intervention affects the resource adjustment process. Sticky costs occur because there are asymmetric frictions in making resource adjustments - forces acting to restrain or slow the downward adjustment process more than the upward adjustment process (Anderson, et al., 2003).

Firms must incur adjustment costs to remove committed resources and to replace those resources if demand is restored. When demand increases, managers increase committed resources to the extent necessary to accommodate additional sales. When volume falls, however, some committed resources will not be utilized unless managers make the deliberate decision to remove them. Because demand is stochastic, managers must evaluate the likelihood that a drop in demand is temporary when deciding whether to adjust committed resources downward. Stickiness of SG&A costs occur if managers decide to retain unutilized resources rather than incur adjustment costs when volume declines.

Managers' decisions to maintain unutilized resources may also be caused by personal considerations and result in a form of agency costs. Agency costs are costs incurred by the firm because self interested managers make decision that maximize their personal utility but are not optimal from the perspective of the firm's stockholders (Jensen and Meckling, 1976)

Managers facing a downturn in sales may wait to obtain information that enables them to assess the permanence of the demand reduction before making decisions to cut resources. Such delay leads to sticky cost because unutilized resources are maintained during the interim between the reduction in volume and the adjustment decision. There may be also a time lag between the decision to reduce committed resources and the realization of the change in costs because it takes time to unwind contractual commitments (Anderson, et al., 2003).

Analysis of sticky costs suggests that managers trade off the anticipated costs of carrying unutilized resource during periods of weak demand against the expected adjustment costs of retrenching and then ramping up if demand is restored. The lower the expected adjustment costs relative to the costs of carrying unutilized resources, the more managers will reduce committed resources, resulting in less stickiness. Expected adjustment costs decrease as managers' assessments of the permanence of revenue declines get stronger and increase with managers' estimates of the costs of scaling back and then scaling up again. (Anderson, et al., 2003).

2.5. Hypothesis Formulation

Managers make distinct changes to dedicated resources because some costs are lumpy, which means dedicated resources cannot be added or subtracted in sufficiently small increments or fast enough to match resource changes to small changes in demand. Cost lumpiness may lead to excess or insufficient capacity but it does not lead to sticky costs. Sticky costs occur because there are asymmetric frictions in making resource adjustments.

Firms have to incur in adjustment costs to remove dedicated resources and replenish these resources when demand is restored. Adjustment costs are, for instance, severance pay when employees are released and training costs for the new ones, as well as organizational costs coming from the lack of motivation of the remaining employees after the releasing of many professionals.

When demand goes up, managers raise dedicated resources in order to correspond to the additional demand. When demand drops, however, some dedicated resources will not be utilized, unless managers take the deliberate action to reduce them. Because demand is stochastic, managers necessarily need to assess the possibility that this decline in demand is temporary, when the time is arrive to make a decision upon the reduction of dedicated resources. Sticky cost behavior will occur if the managers decide to hold unnecessary resources instead of incurring in adjustment costs when volume declines.

Managers' decisions to hold idle resources may also be caused by personal interests and result in form of agency costs. Agency costs are costs incurred by the firm because self-interested managers make decisions that maximize their

personal utility but are not optimal from the perspective of the firm's stockholders (Jensen and Meckling; 1976). Managers may keep idle resources to avoid personal consequences of cost reductions, such as loss of status when a branch is restructured or the anguish of dismissing familiar employees, becoming a factor of sticky cost behavior.

The researcher tests sticky cost behavior by comparing the variation of SG&A costs with sales revenue in periods when revenue increases with the variation of SG&A costs with sales revenue in periods when revenue decreases.

H1: The relative magnitude of an increase in SG&A costs for an increase in sales revenue is greater than the relative magnitude of a decrease in SG&A costs for a decrease in sales revenue.

Alteration in sales revenue may reflect short-term or long-term shifts in market condition for product and services. Managers having a downturn in market condition may wait to obtain information to enable them to appraise the certainty of demand reduction before making decision to trim down resources. Such delays may cause sticky costs since unused resources are held during the interim between the reduction in volume and the adjustment decision. A time lag may also occur between the decision to reduce resources and the actualization of the change in costs since contractual commitments take time to be disengaged. An implication of postponed decision-making and contracting lags is that stickiness observed in

one period may be reverted, offset by reductions to committed resources, in subsequent periods.

H2: Stickiness of SG&A costs reverses in subsequent periods.

Observation of stickiness in one time period reflects the costs of keeping unused resources in a period when a decline in revenue has occurred. When the observation window is enlarged to include multiple periods, more complete adjustment cycles are confined. During longer adjustment intervals, managers' assessment over the permanence of change in revenue becomes certain and then the adjustment costs become lower relative to the cost of keeping unused resources. Therefore, costs stickiness is likely to be less pronounced when time periods are aggregated into several periods.

H3: Stickiness of SG&A costs declines with the aggregation of periods

The researcher makes two sets of hypotheses about how the degree of stickiness of SG&A costs varies across firms and overtime. First, the researcher considers how the degree of stickiness would vary across situations that produce different expectations about the permanence of a decline in revenue activity. Then researcher consider how the degree of stickiness would vary with factors that indicate circumstances where the adjustment costs are likely to be higher.

Managers' assessments of the permanence of the demand reduction are likely to get stronger as a revenue decline continues. Therefore, managers are likely to consider a revenue decline to be more permanent when it occurs in a second consecutive period of revenue losses. Increased likelihood of a permanent decline may motivate managers to scale down resources, resulting in less stickiness.

H4: Stickiness of SG&A costs is less pronounced when revenue also decline in the preceding period.

It is more likely for demand to decline in periods of economic contraction than in periods of economic growth. Therefore, managers would be reluctant to reduce committed resources in periods of macroeconomic growth than in other periods, reinforcing in more stickiness.

H5: SG&A costs exhibit greater stickiness during periods of macroeconomic growth.

Adjustment costs tend to be higher when SG&A activities rely more on assets possessed and people employed by a company instead of materials and services purchased by the company. Restructuring charges recognized when a firm downsizes typically involve large write-downs of fixed assets (Stickney and Brown: 1999, pp. 219-222).

H6: The degree of stickiness increases with the asset intensity, ratio of total assets to sales revenue of the company.

Similarly, the costs of adjusting committed resources are likely to be higher for firms that use more employees to support a given volume sales. Restructuring charges usually include a big amount for severance payments. The company may suffer investment lost made in firm-specific training if releasing employees when demand falls and hiring new employees when demand goes up again. Moreover, companies may encounter less productivity because morale decline when employees are released and they may face greater turnover because employee allegiance is eroded.

H7: The degree of stickiness increases with the employee intensity, ratio of number of employees to sales revenue, of the company.

CHAPTER III

RESEARCH METHOD

3.1. Introduction

This thesis uses quantitative instead of qualitative analysis method. The quantitative analysis is a characteristic of statistical variables, where the value is in the numerical form. The focus of this research is on finding empirical proves of sticky cost behavior by comparing the variation of Selling, General, and Administrative (SG&A) costs with sales revenue in periods when revenue increases and in periods when revenue decreases. Related with the research focus, the research tries to observe the stickiness of SG&A costs in subsequent and aggregation periods, during revenue decline in preceding period, and during macroeconomic growth period. Lastly, the research also observes the degree of stickiness increases with the asset intensity and with employee intensity.

Data are collected from secondary data containing the available variables, or at least constructing component, of SG&A costs, net sales revenue, number of employees and net asset. The research from those variables is analyzed by using regression analysis through SPSS program.

3.2. Research Population and Sample

A population is the set representing all measurements of interest to the sample collector (Mendenhall, 1999:4). Population of this research is manufacturing companies listed in Jakarta Stock Exchange (JSX). In this research,

companies that are chosen as populations are manufacturing companies from the period of before and after the economic crisis. The samples are taken based on purposive sampling method, in this method, the sample is found based on the core variable representing this research. The representative samples are taken according to the predetermined criteria as follows:

1. Company that include Selling, General, and Administrative Costs and net sales revenue in 1991-1996 and 1998-2004
2. Selling, General, and Administrative Costs do not exceed net sales revenue
3. 0.5% bottom and upper extreme data of distribution are omitted

3.3. Research Variables

3.3.1. Dependent Variable

Dependent variable on the data is the selling, general, and administrative costs. According to Cooper and Kaplan: 1998, the behavior of SG&A costs can be meaningfully studied in relation to revenue activity because sales volume drives many of the components of SG&A. The components of selling costs include sales personal salaries and commissions, freight out, and other sales office expenses. The components of general and administrative costs include expenses, such as chief executive officer's salary, depreciation, property tax and insurance, and legal and accounting office costs.

3.3.2. Independent Variable

Independent variables on the data are net sales revenue, number of employees, net asset, and macroeconomic growth.

- Net Sales Revenue

Revenues generated from company's selling activity after deducted by sales return and allowances and sales discounts.

- Number of Employees

The total of workers and professionals who work in the company.

- Net Asset

The total of resources owned by the company. The components are cash, receivables, supplies, inventories, equipments, land, and building.

- Macroeconomic growth

Gross Domestic Product (GDP) is used as proxy variable for macroeconomic growth in 1993 constant price (Real GNP 1993).

GDP is the market value of all final goods and services produced within a country in a given period of time. GDP which is denoted as Y is divided into four components: Consumption (C), Investment (I), Government purchase (G), and Net-exports (NX) (Mankiw, 2004: 502).

$$Y = C + I + G + NX$$

3.4. Statistical Tool

3.4.1. Empirical Tests of SG&A Costs Stickiness

An empirical model that enables measurement of the SG&A response to contemporaneous changes in sales revenue and discriminates between periods when revenue increases and revenue decreases is presented. The interaction variable, *Decrease_Dummy*, takes the value of 1 when sales revenue decreases between periods $t-1$ and t , and 0 otherwise.

Model (I):

$$\log\left[\frac{SGA_t}{SGA_{t-1}}\right] = \beta_0 + \beta_1 \log\left[\frac{revenue_{i,t}}{revenue_{i,t-1}}\right] + \beta_2 * Decrease_Dummy_{i,t} * \log\left[\frac{revenue_{i,t}}{revenue_{i,t-1}}\right] + \varepsilon_{i,t} \dots 3.1$$

This model provides the basis for our test of stickiness of SG&A costs. The log specification also accommodates economic interpretation of the estimated coefficients. Because the value of *Decrease_Dummy* is 0 when revenue increases, the coefficient β_1 measures the percentage increase in SG&A costs with a 1% increase in sales revenue. Because the value of *Decrease_Dummy* is 1 when revenue decreases, the sum of the coefficients, $\beta_1 + \beta_2$ measures the percentage increase in SG&A costs with a 1% decrease in sales revenue. If SG&A costs are sticky, the variation of SG&A costs with revenue increases should be greater than the variation for revenue decreases. Thus, the empirical hypothesis for stickiness, conditional on $\beta_1 > 0$ is $\beta_2 < 0$.

To test hypothesis H_2 - that stickiness is reversed in subsequent periods - model (I) is extended by including terms for one-period lagged changes to sales revenue.

Model (II):

$$\begin{aligned} \log \left[\frac{SG \& A_{i,t}}{SG \& A_{i,t-1}} \right] &= \beta_0 + \beta_1 \log \left[\frac{revenue_{i,t}}{revenue_{i,t-1}} \right] + \beta_2 Decrease_Dummy_{i,t} \\ &+ \beta_3 \log \left[\frac{revenue_{i,t}}{revenue_{i,t-1}} \right] + \beta_3 \log \left[\frac{revenue_{i,t-1}}{revenue_{i,t-2}} \right] \\ &+ \beta_4 Decrease_Dummy_{i,t-1} * \log \left[\frac{revenue_{i,t-1}}{revenue_{i,t-2}} \right] + \varepsilon_{i,t} \dots\dots 3.2 \end{aligned}$$

In order to test hypotheses H₃ that cost stickiness decreases with aggregation of years per period, regressions are carried out with Model (I) for aggregate periods of 1, 2, 3, and 4 years.

Hypotheses H₄ through H₇ describe conditions and circumstances that would affect the degree of stickiness across firms and over time under the alternative model of cost behavior. The coefficient on sticky cost term, β_2 in model (I), may be expanded to include the various economic factors describe in hypotheses H₄ through H₇ as follows:

$$\begin{aligned} \beta_2 &= \gamma_0 + \gamma_1 * Successive_Decrease_{i,t} + \gamma_2 * Growth_{i,t} + \gamma_3 * \log \left[\frac{Assets_{i,t}}{revenue_{i,t}} \right] \\ &+ \gamma_4 * \log \left[\frac{Employees_{i,t}}{revenue_{i,t}} \right] \dots\dots\dots 3.3 \end{aligned}$$

The *Successive_Decrease_{i,t}* dummy is activated for firm year observations when revenue decline in the preceding period. The *Growth_{i,t}* variable is the percentage

growth in real gross national product (GNP) during year t . Substituting this relation into model (I) gives:

$$\begin{aligned} \log \left[\frac{SG \& A_{i,t}}{SG \& A_{i,t-1}} \right] = & \beta_0 + \beta_1 \log \left[\frac{revenue_{i,t}}{revenue_{i,t-1}} \right] + \left\{ \gamma_0 + \gamma_1 * Successive_Decrease_{i,t} \right. \\ & + \gamma_2 * Growth_{i,t} + \gamma_3 * \log \left[\frac{Assets_{i,t}}{revenue_{i,t}} \right] \\ & \left. + \gamma_4 * \log \left[\frac{Employees_{i,t}}{revenue_{i,t}} \right] \right\} * Decrease_Dummy_{i,t} \\ & * \log \left[\frac{revenue_{i,t}}{revenue_{i,t-1}} \right] + \varepsilon_{i,t} \dots \dots \dots 3.4 \end{aligned}$$

This is restated as model (III), where $\beta_k = \gamma_{k-2}$ in the expanded version of model (I), $k = 2, 3, 4, 5$, and 6.

Model (III):

$$\begin{aligned} \log \left[\frac{SG \& A_{i,t}}{SG \& A_{i,t-1}} \right] = & \beta_0 + \beta_1 \log \left[\frac{revenue_{i,t}}{revenue_{i,t-1}} \right] + \beta_2 * Decrease_Dummy_{i,t} * \log \left[\frac{revenue_{i,t}}{revenue_{i,t-1}} \right] \\ & + \beta_3 * Decrease_Dummy_{i,t} * \log \left[\frac{revenue_{i,t}}{revenue_{i,t-1}} \right] * Successive_Decrease_{i,t} \\ & + \beta_4 * Decrease_Dummy_{i,t} * \log \left[\frac{revenue_{i,t}}{revenue_{i,t-1}} \right] * Growth_{i,t} \\ & + \beta_5 * Decrease_Dummy_{i,t} * \log \left[\frac{revenue_{i,t}}{revenue_{i,t-1}} \right] * \log \left[\frac{Assets_{i,t}}{revenue_{i,t}} \right] \\ & + \beta_6 * Decrease_Dummy_{i,t} * \log \left[\frac{revenue_{i,t}}{revenue_{i,t-1}} \right] * \log \left[\frac{Employees_{i,t}}{revenue_{i,t}} \right] + \varepsilon_{i,t} \dots 3.5 \end{aligned}$$

The *Decrease_Dummy_{i,t}* variabel is included in the last five terms in model (III), meaning that these terms are activated for all periods when revenue declined. As in model (I), where the degree of stickiness increases with the magnitude of the negative value of $\hat{\beta}_2$, the degree of stickiness increases (decreases) with the magnitude of negative (positive) coefficients $\hat{\beta}_2$ through $\hat{\beta}_6$ in model (III)

3.4.2. Multiple Linear Regression Assumptions

In order to test the influence of independent variables to dependent variables, this research uses multiple linear regressions as the statistical analysis tool. The data are analyzed by multiple linear regressions. It is a method of taking into account simultaneously the relationship among all variables when two or more independent variables are used in estimating the dependent variable. (Stacton, 1971: 31)

Before being tested by multiple linear regressions it must be considered whether the regression is good or not. A good regression can be detected by classical assumption test, which consist of multicollinearity test, autocorrelation test, and heteroscedasticity test. It is a good multiple linear regression if there is no multicollinearity or autocorrelation or heteroscedasticity problems in the multiple linear regression. The classical assumptions tests described below.

3.4.3. Multicollinearity Test

Condition where there is a correlation between independent variable is called Multicollinearity. The effect of multicollinearity that is the resulted estimation will become less accurate (Gujarati, 1995)

Multicollinearity can be known by using Pearson Correlation Matrix, Tolerance calculation (TOL), and Variance inflation Factor (VIF). According to Hair, et.al. (1998), Multicollinearity indication always exists in every research, so the researcher can decide by himself how much the correlation coefficient, TOL, an VIF to be indicated as multicollinearity. Gujarati, in 1995, stated that rule of thumb from correlation coefficient which is less than 0.8 value indicated that there is no multicollinearity in the research model. While VIF rule of thumb is 10. If VIF is less than 10, there is no multicollinearity or multicollinearity is not dangerous. For TOL which is less than 1 and more than 0, using rule of thumb 0.10. So, if TOL is more than 0.10, there is no high multicollinearity between independent variable.

The measurement of multicollinearity can be in the form of mathematical calculation as follows:

$$\text{VIF: } 1 \div (1 - R^2)$$

VIF : The variation of inflation factor and

R^2 : Coefficient of determination (R square)

3.4.4. Autocorrelation Test

Autocorrelation test, according to Gujarati, is done to know correlation between time series and cross section observation data, even though autocorrelation mostly happen to time series data. To detect autocorrelation, it uses d-statistic from Durbin-Watson. D value shows it is not dangerous autocorrelation, especially if d-value is on the area of $dU < d < 4-dU$

Another autocorrelation tests that can be used are Lagrange Multiplier, Statistic Q test: Box-Pierce, and Ljung Box and Breusch-Godfrey test.

3.4.5. Heteroscedasticity Test

One important test assumption in classic linear regression model is disturbance variable, u_1 , that exist in population regression function. It is homocedastic, which is all disturbance variables that have the same variance (Gujarati, 1995). So, if disturbance variances have different variance from one observation to another observation, there will be heteroscedasticity.

To detect heteroscedasticity, Gujarati (1995) stated there are many ways, such as informal and formal method. Formal method can be detected by Park test, Glejser test, Spearman's Correlation test, Goldfeld-Quant test, etc. But his research uses White's (1980) test to predict heteroscedasticity.

3.4.6. Outlier testing

Outlier test in this research is done using Cook's distance value of 2.5. If the result of Cook's distance value is lower than 2.5, the data is free from bias. In the contrary, if it is not, the data is not free from bias.

3.5. Research Procedures

In order to answer the research problems, it is imperative to conduct research procedures. The procedures are arranged as follows (Murdick and Ross, 1982, 499-450):

a. Observe the problem

Researcher seeks the problem or the new case for the related cost behavior study.

b. Formulate the problem

Researcher formulates the title and topic related with the problem.

c. Collect the data

Researcher collects the data taken from Indonesian Capital Market Directory, which encompasses all needed variable data. Data is also taken from Statistic Center Body (BPS).

d. Arrange and test the model for case solution

After data is collected, arranged, and understood, research will continue by constructing the same data model to be evaluated. This is done to get the choice of problem solution.

e. Analyze and interpret the data

- f. Extracting conclusion and any other findings

3.7. Technique of Data Analysis

This research employs panel data log-linear regressions to test cost stickiness. Based on equation model I, a regression will be done with Pooled Least Square method. Panel data has advantage compared to time series data or cross section data. The usage of panel data will enhance the degree of freedom and decrease collinearity between independent variables which will result efficient estimation of coefficient (Hsiao, 1995). Subsequently, the models qualification to observe the stickiness of SG&A cost will be done by looking at the value of t -statistics, F -statistics, and adjusted R^2 .

Based on Model I of the above equation, the statistical hypothesis for hypothesis H_1 are:

$$H_{01}: \beta_2 \geq 0 \text{ from model 1}$$

$$H_{a1}: \beta_2 < 0 \text{ from model 1}$$

Where:

H_{01} : The relative magnitude of an increase in SG&A costs for an increase in sales revenue is not greater than the relative magnitude of a decrease in SG&A costs for a decrease in sales revenue

H_{a1} : The relative magnitude of an increase in SG&A costs for an increase in sales revenue is greater than the relative magnitude of a decrease in SG&A costs for a decrease in sales revenue

Based on Model II, the statistical hypothesis H_2 and H_3 are:

$$H_{02}: \beta_4 \leq 0 \text{ from model 2}$$

$$H_{a2}: \beta_4 > 0 \text{ from model 2}$$

Where:

H_{02} : Stickiness of SG&A costs does not reverse in subsequent periods.

H_{a2} : Stickiness of SG&A costs reverses in subsequent periods.

and

$$H_{03}: \beta_2 \geq 0 \text{ from model 2}$$

$$H_{a3}: \beta_2 < 0 \text{ from model 2}$$

By adding variables of two, three, four lagged year periods

Where:

H_{03} : Stickiness of SG&A costs does not decline with the aggregation of periods

H_{a3} : Stickiness of SG&A costs declines with the aggregation of periods

Based on Model III, the statistical hypothesis H_4 through H_7 are:

$$H_{04}: \beta_3 \leq 0 \text{ from model 3}$$

$$H_{a4}: \beta_3 > 0 \text{ from model 3}$$

Where:

H_{04} : Stickiness of SG&A costs is not less pronounced when revenue also decline in the preceding period.

H_{a4} : Stickiness of SG&A costs is less pronounced when revenue also decline in the preceding period.

and

$H_{05}: \beta_4 \geq 0$ from model 3

$H_{a5}: \beta_4 < 0$ from model 3

Where:

H_{05} : SG&A costs do not exhibit greater stickiness during periods of macroeconomic growth.

H_{a5} : SG&A costs exhibit greater stickiness during periods of macroeconomic growth.

and

$H_{06}: \beta_5 \geq 0$ from model 3

$H_{a6}: \beta_5 < 0$ from model 3

Where:

H_{06} : The degree of stickiness does not increase with the asset intensity, ratio of total assets to sales revenue, of the company.

H_{a6} : The degree of stickiness increases with the asset intensity, ratio of total assets to sales revenue, of the company.

and

$H_{07}: \beta_6 \geq 0$ from model 3

$H_{a7}: \beta_6 < 0$ from model 3

Where:

H_{07} : The degree of stickiness does not increase with the employee intensity, ratio of number of employees to sales revenue, of the company.

H_{a7} : The degree of stickiness increases with the employee intensity, ratio of number of employees to sales revenue, of the company.



CHAPTER IV

RESEARCH FINDINGS AND DISCUSSION

This chapter explains about the process of data extraction from the beginning, variable computation, data processing, analysis, and the interpretation of hypothesis testing. This chapter consists of research description, research findings and implications.

4.1 Research Description

4.1.1. Research Preparation

This research is started by analyzing the contemporary research literature, from library reference, journals, and articles in effort of obtaining a relevant research topic. The research can give reference to the accounting studies, and yet applicable in relation with data accessibility. The data needed for this research are extracted from Indonesian Capital Market Directory for the year 1991-1996 and 1998-2004 and Indonesian Statistical Year Book for the year 1991-1996 and 1998-2004.

4.1.2. Research Process

Data used in this research is quantitative data. First, a sample is selected to obtain data that will be used as variables for this research. The samples applied in this research are manufacturing companies which are listed in Jakarta Stock Exchange (JSX) from the year 1991-1996 and 1998 and 2004. For period 1991-

1996, researcher found 127 manufacturing companies in ICMD (Indonesian Capital Market Directory). Researcher found 100 manufacturing companies with complete SG&A cost and Net Sales Revenue, 101 manufacturing companies with complete Net Asset, and 77 manufacturing companies with complete Number of Employees through out the period. For the period 1998-2004, researcher found 160 manufacturing companies in ICMD. Researcher found 144 manufacturing companies with complete SG&A cost, 143 manufacturing companies with complete Net Sales Revenue and Net Asset, and 128 manufacturing companies with complete Number of Employees through out the period. The discrepancies are resulted from unstated data in ICMD and the listing year of the companies.

In order to meet the hypothesis, the stickiness of SG&A cost and the variation in the degree of SG&A cost stickiness will be examined by utilizing the T-test. In purpose of calculating the T-test and finding the significance level, researcher uses SPSS statistical computer software; therefore SPSS will be able to find out whether SG&A cost is sticky in the respected period and the level of significance.

TABLE 4.1: Descriptive Statistics 1991-1996

		N	Minimum	Maximum	Mean	Std. Deviation
Model (I)	Logsga	586	-1,8878	2,1118	0,1069	0,1860
	Logrev	586	-0,5817	0,8622	0,0911	0,1406
Model (II)	Logsga	461	-1,8878	0,8172	0,0965	0,1557
	LogRevt-1	461	0,5409	0,8622	0,0897	0,1352
	LogRevt-2	461	0,2086	13,1791	1,8190	1,4012
Model (III)	Logsga	459	-1,8878	2,1118	0,1024	0,1835
	LogRevt-1	459	-0,5409	0,9827	0,0931	0,1458

TABLE 4.2: Descriptive Statistics 1998-2004

		N	Minimum	Maximum	Mean	Std. Deviation
Model (I)	SGA	758	-1,0468	1,5507	0,0461	0,1436
	LR1	759	-0,9776	1,1003	0,0397	0,1557
Model (II)	SGA	758	-1,0468	1,5507	0,0461	0,1436
	LR1	759	-0,9776	1,1003	0,0397	0,1557
	LR2	759	-1,2833	1,9734	0,0745	0,2453
Model (III)	SGA	758	-1,0468	1,5507	0,0461	0,1436
	LR1	759	-0,9776	1,1003	0,0397	0,1557

4.2 Research Discussion

The result of the hypothesis testing for hypothesis one through seven are completed by using two sample T-test. This test is used to analyze the level of significance of Net Sales Revenue in influencing the stickiness of SG&A costs. The result of testing hypothesis one through three is presented in table 4.3 for period of 1991-1996.

TABLE 4.3: Coefficient Estimates (Std. Error) Period of 1991-1996

	Model (I) One-year period	Model (II) One-year period	Model (I) Two-year period	Model (I) Three-year period	Model (I) Four-year period
$\hat{\beta}_0$	0.037 (0.010)*	0.020 (0.012)	0.086 (0.013)*	0.121 (0.020)*	0.149 (0.031)*
$\hat{\beta}_1$	0.695 (.062)*	0.576 (0.075)*	0.627 (0.043)*	0.647 (0.050)*	0.649 (0.061)*
$\hat{\beta}_2$	-0.409 (0.148)*	-0.406 (0.148)*	-0.237 (0.154)	-0.181 (0.232)	-0.334 (0.318)
$\hat{\beta}_3$		0.011 (0.005)**			
$\hat{\beta}_4$		-0.003 (0.015)			
Adjusted R ²	0.207	0.234	0.348	0.370	0.367
Number of observation	586	461	464	339	216

* Significant at 1%

** Significant at 5%

Table 4.3 presents the results of estimating model (I) for period of 1991-1996. The estimated value of $\hat{\beta}_1$ of 0.695 (0.062) indicates that SG&A costs increase 0.69% per 1% increase in sales revenues. The estimated value of $\hat{\beta}_2$ of -0.409 (0.148) gives strong support for the sticky cost hypothesis. The combined value of $\hat{\beta}_1 + \hat{\beta}_2 = 0.286$ shows that costs decrease only 0.29% per 1% decrease in sales revenue. Therefore, for the before Indonesian economic crisis period, in this research is period of 1991-1996, the null hypothesis for H_1 in model (I) is rejected.

Table 4.3 also presents the results of estimating model (II) for period of 1991-1996. From this estimation, model (II) also support the cost stickiness hypothesis, whereas the value of $\hat{\beta}_1 = 0.576$ (0.075) and the value of $\hat{\beta}_2 = 0.406$ (0.148). The value of $\hat{\beta}_3 = 0.011$ (0.005) shows a lagged adjustment to SG&A costs for changes in sales revenue. But the insignificant negative result of $\hat{\beta}_4 = -0.003$ (0.015) leads to a failure of rejecting null hypothesis of H_2 . Meaning that stickiness of SG&A costs does not reverse in subsequent periods.

The remaining columns of Table 4.3 present the estimating result to test H_3 that stickiness is likely to be less pronounced when observed over greater aggregation of periods. For the purpose of testing H_3 , researcher estimates model (I) for two-, three-, and four-year aggregation period. The results indicate inconsistency in $\hat{\beta}_2$'s absolute value as the aggregation period increase. From one-year period through three-year period, the absolute value of $\hat{\beta}_2$ is decrease, indicating that as the aggregation period increase the cost stickiness becomes less pronounced. But in four-year period, $\hat{\beta}_2$ is greater than the one in three-year

period. This results leads to fail to reject the null hypothesis of H_3 , meaning that stickiness of SG&A costs does not decline with the aggregation of period.

Table 4.4 presents the estimation result of H_1 through H_3 for the period of 1998-2004.

TABLE 4.4: Coefficient Estimates (Std. Error) Period of 1998-2004

	Model (I) One-year period	Model (II) One-year period	Model (I) Two-year period	Model (I) Three-year period	Model (I) Four-year period
$\hat{\beta}_0$	0.019 (0.006)*	0.014 (0.006)**	0.070 (0.009)*	0.097 (0.011)*	0.116 (0.017)*
$\hat{\beta}_1$	0.520 (.046)*	0.282 (0.060)*	0.437 (0.042)*	0.487 (0.048)*	0.546 (0.056)*
$\hat{\beta}_2$	-0.187 (0.074)**	-0.090 (0.079)	0.127 (0.072)	0.094 (0.080)	0.025 (0.095)
$\hat{\beta}_3$		0.201 (0.034)*			
$\hat{\beta}_4$		-0.106 (0.047)**			
Adjusted R^2	0.222	0.257	0.344	0.410	0.479
Number of observation	759	759	607	450	297

* Significant at 1%

** Significant at 5%

Similar to its counterpart, the period of 1998-2004 also support the cost stickiness hypothesis, based on the estimated value of $\hat{\beta}_1$ of 0.520 (0.046) indicates that SG&A costs increased 0.52% per 1% increase in sales revenues, while the estimated value of $\hat{\beta}_2$ of -0.187 (0.074). The combined value of $\hat{\beta}_1 + \hat{\beta}_2 = 0.333$ shows that costs decreased only 0.33% per 1% decrease in sales revenue. Therefore, in period of 1998-2004, with the negative value and significant at 5% of $\hat{\beta}_2$ the null hypothesis for H_1 in model (I) is rejected.

The model (II) estimation for period of 1998-2004 shows that $\hat{\beta}_1$ of 0.282 (0.060) and $\hat{\beta}_2$ of -0.090 (0.079) support cost stickiness hypothesis in this period. The value of $\hat{\beta}_3$ for 0.201 (0.034) shows a lagged adjustment to SG&A costs for changes in sales revenue. But the null hypothesis of H_2 in this period fail to be rejected, because the negative value of $\hat{\beta}_4$ for -0.106 (0.047) shows that stickiness of SG&A costs does not reverse in subsequent periods for the period of 1998-2004.

In period of 1998-2004 the absolute value movement of $\hat{\beta}_2$ is consistent as it decreases as the aggregation period increases. But unlike its counterpart, $\hat{\beta}_2$'s coefficients for two-, three- and four-year period show positive value. Since the estimation results are also insignificant, the null hypothesis of H_3 fail to be rejected. Therefore costs stickiness hypothesis is not supported in 1998-2004 period for result estimation of model (I) aggregation period.

Table 4.5 presents the estimation result of H_4 through H_7 to describe the conditions and circumstances that would affect the degree of stickiness across firms and over time. The result of period 1991-1996 is displayed on Table 4.5 adjacent to period 1998-2004.

TABLE 4.5: Coefficient Estimates (Std. Error)

	Period of 1991-1996	Period of 1998-2004
$\hat{\beta}_0$	0.049 (0.011)*	0.020 (0.006)*
$\hat{\beta}_1$	0.543 (0.067)*	0.517 (0.046)*
$\hat{\beta}_2$	0.076 (1.258)	-1.421 (0.350)*
$\hat{\beta}_3$	1.019 (0.482)**	0.001 (0.108)
$\hat{\beta}_4$	-3.978 (5.530)	26.436 (7.950)*
$\hat{\beta}_5$	-0.517 (0.670)	-0.149 (0.102)
$\hat{\beta}_6$	-0.098 (0.450)	-0.096 (0.060)
Adjusted R ²	0.156	0.236

* Significant at 1%

** Significant at 5%

From the estimation result as displayed on Table 4.5, $\hat{\beta}_1$'s coefficient for 1991-1996 and 1998-2004 are 0.543 and 0.517, respectively. While the coefficient of $\hat{\beta}_2$ for both periods are 0.076 and -1.421, respectively. The model (III) estimation result for 1991-1996 periods does not support cost stickiness hypothesis, because of positive value of $\hat{\beta}_2$. Despite the negative value of $\hat{\beta}_2$ for 1998-2004, the model (III) estimation result for this period does not support cost stickiness hypothesis as well, because of $\hat{\beta}_2$'s insignificance.

The positive coefficients of $\hat{\beta}_3$ for both periods, 1.019 (0.482) and 0.001 (0.108), respectively, are indicating that the stickiness degree is lower in the period of revenue decrease that were preceded by revenue-decreasing periods. It depicts the behavior of manager who considers the revenue decline periods that happened successively to be steadier. But only period of 1991-1996 confirm to H₄,

because of positive value and significance of $\hat{\beta}_3$, while $\hat{\beta}_3$ for 1998-2004 is positive and insignificant. Therefore, null hypothesis of H_4 for 1991-1996 is rejected and for other period fail to be rejected.

In accordance with growth, the null hypothesis of H_5 for 1991-1996 periods fail to be rejected because the coefficient of $\hat{\beta}_4$ in that period is negative for -3.978 (5.530) and not significant. The same thing happen for 1998-2004 periods, because $\hat{\beta}_4$ is positive, instead of negative as expected, for 26.436 (7.950) leads to the failure of H_5 's null hypothesis.

In terms of asset and employee intensity, both periods fail to reject null hypothesis for H_6 and H_7 . Provided the coefficients of $\hat{\beta}_5$ and $\hat{\beta}_6$ for both periods are negative and insignificant. Coefficients for both periods of $\hat{\beta}_5$ are -0.517 (0.670) and -0.149 (0.102), respectively and $\hat{\beta}_6$'s coefficients are -0.098 (0.450) and -0.096 (0.060).

4.3. Research Implications

This part describes the implications of the research to the underlying theory used as the foundation of this research. The alternative theory of cost behavior is used as the foundation theory of this research and Table 4.6 summarizes the result of the research in order to make easier for readers to comprehend how the research implies to the alternative theory of cost behavior.

TABLE 4.6: Research Summary

Null Hypothesis	1991-1996	1998-2004
H ₁	Rejected	Rejected
H ₂	Fail to be Rejected	Fail to be Rejected
H ₃	Fail to be Rejected	Fail to be Rejected
H ₄	Rejected	Fail to be Rejected
H ₅	Fail to be Rejected	Fail to be Rejected
H ₆	Fail to be Rejected	Fail to be Rejected
H ₇	Fail to be Rejected	Fail to be Rejected

The alternative theory of cost behavior used in this research is that costs vary with greater intensity with an increase in activity volume than in the opposite direction, i.e. with a decrease in activity volume, which cause costs to be sticky downwards (Noreen and Soderstrom (1997) and Anderson, Banker, and Janakiraman (2003)). The traditional theory of cost, as it is confirmed by Garrison and Noreen (2001), Horngren, Foster, and Datar (200), stated that costs will react or change insofar as change on the activity level occur, regardless the direction of these changes (increase or decrease).

The result of this research sustains the alternative theory of cost behavior, as shown from Table 4.6 that null hypothesis of H₁ for both periods is rejected. The research provides empirical evidence on the stickiness behavior on Selling, General, and Administrative costs in Indonesia manufacturing firms for the period of 1991-1996 and 1998-2004. The result is in accordance with Anderson, Banker, and Janakiraman (2003), de Medeiros and de Souza Costa (2004) and Windyastuti and Biyanto's (2005) research. The estimations of stickiness behavior of model (II)

and model (III) in this research all confirm the cost stickiness behavior, except for model (III) estimation result for period of 1991-1996 which does not confirm to cost stickiness behavior. In 1991-1996 period for model (III) estimation the cost increase for 54% every 1% increase on revenue, but the cost decrease for 62% ($\hat{\beta}_1 + \hat{\beta}_2 = 0.543 + 0.076 = 0.619$, see Table 4.5) for every 1% decrease on revenue.

The null hypothesis of H_2 for both periods fails to reject, indicating that the stickiness of SG&A costs does not reverse in subsequent periods. This can be related to Indonesian managers' behavior which is more impulsive toward downturn in market condition. If revenue drops, Indonesian managers will see it as a permanent downward pattern. This can be rationalized with the Indonesia's unstable economic condition, typical in developing country. Since $\hat{\beta}_3$'s coefficient for both period is positive (see Table 4.1 and Table 4.2), meaning that time lag does occur between the decision to reduce resources and the actualization of the change in costs because the time taken to unwind contractual commitments, the reversion of SG&A costs in subsequent periods probably happen, but only partially for the period of 1991-1996.

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

In this chapter, the researcher presents the conclusion from the research conducted and the research limitations that can be taken into account when conducting any related further research.

5.1. Research Conclusions

The overall objective of this research is to provide empirical evidences on the behavior of selling, general, and administrative costs in Indonesia manufacturing firms whether it has stickiness behavior and in what condition that the stickiness in those firms occur. From the research findings derived from hypothesis one, the researcher concluded that stickiness behavior occur in period 1991-1996 and 1998-2004. SG&A costs are sticky because in period of 1991-1996 the cost increased 0.69% per 1% increase in sales revenues but it only decreases for 0.29% per 1% decrease in sales revenue. While in period of 1998-2004, SG&A costs increases for 0.52% per 1% increase in sales revenues but decreases 0.33% per 1% decrease in sales revenue.

From the research findings derived from hypothesis two, the researcher concludes that the stickiness of SG&A costs reverses partially in subsequent periods. It is indicated by $\hat{\beta}_3$ coefficient is positive and significant as expected, but $\hat{\beta}_4$ coefficient is negative and significant. The result is consistent with

alternative theory of cost behavior that acknowledge the managers' role in adjusting committed resources in response to changes in activity-based demand for those resources.

The conclusion for hypothesis three in this research is that stickiness of SG&A costs does not decline with the aggregation of period, because of the insignificance of $\hat{\beta}_2$ coefficient for two-, three-, and four-year period. A possible inference from the rejection of H₃ in this research is that Indonesian managers are more lenient towards the necessity to further reduce costs after a period of revenue drops, and to proceeding to the adjustment of resources in a longer term.

The conclusion for hypothesis four and five in this research is that most of the result leads to the rejection of hypothesis made for this research. Explanation can be put forward for this is because Indonesian economy is more unstable than the developed ones. It is possible that Indonesian managers feel more difficult to reckon if a revenue drop is a slump or it is only a short-term fluctuation.

Finally, the conclusion for hypothesis six and seven based on the research findings is costs are not stickier at Indonesian firms that require relatively more employees or more assets to support their sales. This condition is related to the labor surplus condition in Indonesia. Labor surplus factor makes companies relatively easier to adjust the amount of employees with companies' operational activities, especially for production labor.

A managerial inference of the analysis is that cost stickiness can be verified and controlled. Managers can assess their exposition to sticky costs when observing the costs sensitivity to volume reductions. They can increase the costs

sensitivity to volume fluctuations by taking contractual decisions which reduce the adjustment costs connected to change the levels of committed resources.

5.2. Research Limitations and Recommendations

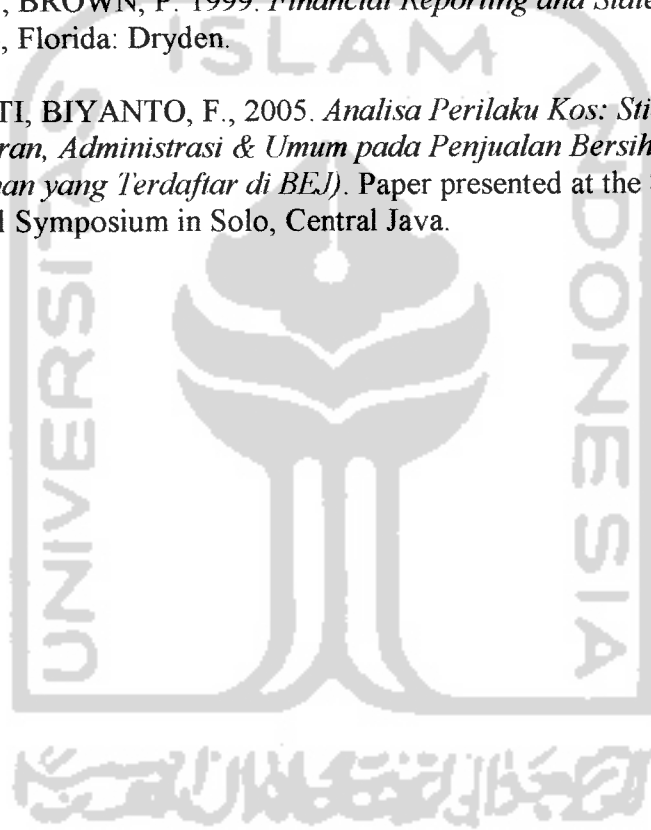
After completion of this research the following recommendations have been drawn:

1. Further researches need to enlarge the scope of the sample of the data as including other sector of companies and industries. In order to maintain a valid result.
2. The data taken from the company is best taken from the company's annual report. Since, the data taken from annual report is more valid and reliable.
3. This research has compared the period of before and after Indonesia crisis, further research should include the crisis period and extend the model used to observe the effect of Indonesian crisis to the equation. Therefore, a better understanding of the stickiness behavior of costs during Indonesian economic crisis can be acquired.

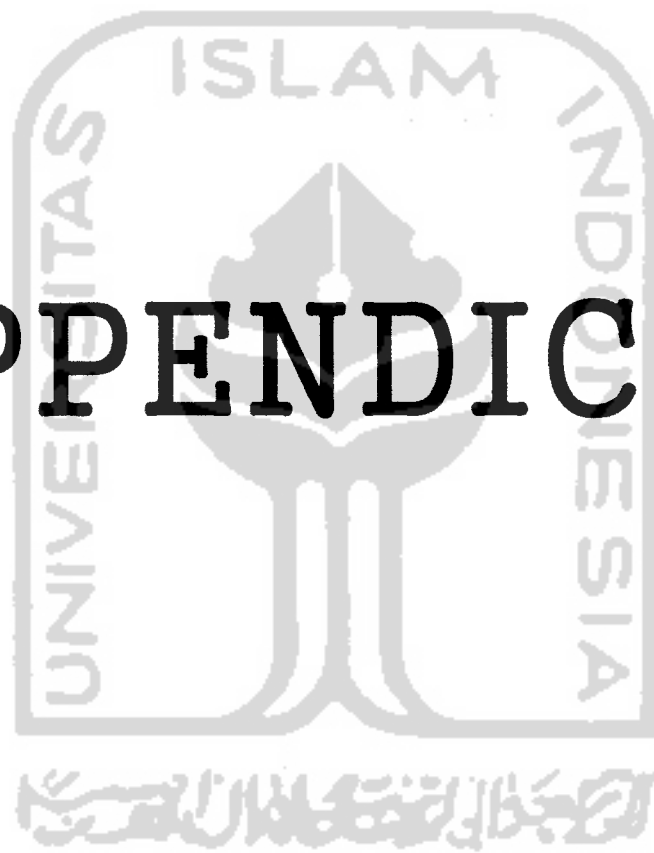
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APPENDICES



**Appendix 1:
SELLING, GENERAL & ADMINISTRATIVE COSTS OF MANUFACTURING COMPANIES 1991-1996**

Name of Manufacturing Companies	KODE	1991	1992	1993	1994	1995	1996
Ades Alfindo Putraseta Tbk	ADES	x	2,774	8,326	12,871	19,049	21,802
Alakasa Industrindo Tbk	ALKA	2,952	4,030	4,318	5,055	5,595	4,931
Aneka Kimia Raya Tbk	AKRA	x	16,838	14,632	21,904	28,486	35,852
APAC Citra Cetertex Tbk	MYTX	5,316	7,169	9,122	6,785	4,956	16,427
Aqua Golden Mississippi	AQUA	6,002	7,746	8,775	10,388	17,850	18,663
Argha Karya Prima Industry Tbk	AKPI	7,381	10,170	16,824	25,198	22,999	27,258
Argo Pantex Tbk	ARGO	17,236	22,466	25,820	30,479	45,957	35,952
Asahimas Flat Glass Co Ltd Tbk	AMFG	x	x	51,111	57,631	74,260	73,532
Asiana IMI Industries	ASIA	x	1,233	1,435	3,080	6,354	7,262
Aster Dharma Industri	ASTR	944	1,389	6,065	6,222	7,808	7,798
Astra Graphia Tbk	ASGR	34,031	35,295	41,013	48,212	97,718	111,804
Astra International Tbk	ASII	497,761	1,033,761	1,010,399	1,288,255	1,847,526	2,268,441
Barito Pacific Timber Tbk	BRPT	78,379	88,611	98,707	134,685	120,877	130,213
BAT Indonesia Tbk	BATI	24,396	28,991	40,510	49,380	58,783	87,861
Bayer Indonesia Tbk	BYSB	26,170	33,511	39,865	42,253	54,103	58,666
Berlina Co Ltd	BRNA	2,581	3,243	4,862	6,324	6,719	6,462
Branta Mulia Tbk	BRAM	13,080	17,056	22,905	27,282	32,044	35,359
Bristol-Myers Squibb Indonesia Tbk	SQBI	7,422	12,154	12,894	12,071	4,832	6,091
Budi Acid Jaya Tbk	BUDI	x	2,303	1,696	2,708	8,724	12,278
Century Textile Industry	CNTX	3,932	1,195	1,354	1,422	1,803	1,576
Citra Tubindo	CTBN	5,581	8,091	8,042	7,730	8,002	11,657
Dankos Laboratories Tbk	DNKS	9,262	20,942	26,400	30,493	41,561	45,186
Darya-Varia Laboratoria Tbk	DVLA	x	9,225	10,193	15,149	36,813	51,556
Davomas Abadi Tbk	DAVO	x	353	418	898	1,115	3,483
Daya Sakti Unggul Corporation	DSUC	x	x	x	34,525	33,296	32,514
Delta Djakarta Tbk	DLTA	12,298	13,856	13,806	19,019	21,891	24,436
Duta Pertiwi nusantara Tbk	DPNS	4,593	4,007	6,620	5,334	6,379	6,557
Dynaplast Tbk	DYNA	1,310	2,266	3,327	6,021	2,628	15,430
Ekadharna Tape Industries Tbk	EKAD	1,841	2,795	3,258	3,890	4,472	5,116
Eratex Djaja Limited Tbk	ERTX	11,535	11,600	11,986	13,241	14,968	12,476
Ever Shine Textile Industry Tbk	ESTI	2,894	3,710	6,033	7,585	9,785	11,315
Fajar Surya Wisesa Tbk	FASW	x	5,174	7,356	10,472	18,585	22,848
Fast Food Indonesia Tbk	FAST	22,359	26,882	34,423	44,663	62,216	79,446
Gajah Tunggal Tbk	GJTL	18,988	24,353	33,955	47,518	61,780	79,208

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SELLING, GENERAL & ADMINISTRATIVE COSTS OF MANUFACTURING COMPANIES 1991-1996**

Name of Manufacturing Companies	KODE	1991	1992	1993	1994	1995	1996
Goodyear Indonesia Tbk	GDYR	8,839	12,457	12,959	13,020	15,991	16,314
Great Golden Star	GGST	2,315	2,385	6,354	3,236	4,143	2,699
Great River International Tbk	GRIV	14,932	21,103	30,133	36,320	50,720	69,368
GT Kabel Indonesia Tbk	KBLI	3,434	3,562	5,056	9,342	16,013	14,205
GT Petrochem Industries Tbk	ADMG	1,366	2,430	4,897	8,025	14,426	13,372
Gudang Garam Tbk	GGRM	216,285	235,227	262,472	329,970	377,331	501,473
Hanjiaya Mandala Sampoerna Tbk	HMSP	65,283	95,640	111,752	151,460	199,779	240,066
Hanson Industri Utama	MYRX	5,859	7,758	6,020	9,007	6,756	5,356
Hexindo Adiperkasa Tbk	HEXA	x	6,418	12,687	19,278	26,646	34,887
Igarjaya Tbk	IGAR	3,356	2,993	4,079	4,174	5,904	12,850
Indah Kiat Pulp & Paper Corporation Tbk	INKP	36,279	37,925	50,896	80,939	117,966	160,981
Indahl Aluminium Industry Tbk	INAL	x	2,157	2,519	7,050	11,985	14,524
Indocement Tunggal Prakasa Tbk	INTP	42,865	234,526	298,489	329,622	408,709	476,985
Indofood Sukses Makmur Tbk	INDF	x	19,152	62,434	221,255	301,525	374,503
Indorama Systetics	INDR	8,856	18,733	21,881	23,390	42,855	49,840
Indospring Tbk	INDS	3,679	3,789	4,552	5,360	7,111	6,541
Intan Wijaya Chemical	INCI	3,889	3,780	4,194	4,676	5,088	6,782
Inter Delta Tbk	INTD	8,903	9,485	9,956	10,498	11,648	13,566
Inti Indorayon Utama	INTR	23,980	30,968	27,017	40,035	55,638	62,267
Intraco Penta Tbk	INTA	4,884	6,222	9,760	12,582	15,168	19,224
Itamaraya Gold Industry Tbk	ITMA	2,179	1,469	1,698	2,638	3,515	3,571
Jaya Pari Steel Tbk	JPRS	3,531	4,051	4,472	5,285	6,075	6,228
Jeewon Jaya Indonesia	JWJI	x	1,259	1,646	3,679	3,957	3,647
Jembo Cable Co. Tbk	JECC	3,934	5,199	6,883	10,135	15,636	13,834
Kabelindo Murni Tbk	KBLM	3,612	4,712	5,088	5,494	6,224	7,277
Kalbe Farma	KLBF	26,510	66,655	86,313	113,851	140,002	144,397
Karwell Indoensia Tbk	KARW	x	6,689	7,338	11,519	15,156	25,160
Kasogi International Tbk	GDWU	1,103	4,194	8,735	11,270	13,724	22,116
Kedaung Indah Can Tbk	KICI	1,896	2,556	3,410	4,914	6,485	6,496
Keramika Indonesia Asosiasi Tbk	KIAS	x	2,978	5,220	10,826	16,621	20,986
Kurnia Kapuas Utama Glue Industries Tbk	KKGI	2,936	6,311	6,144	7,821	8,625	11,573
Langgeng Makmur Plastik Industry Ltd Tbk	LMPI	x	792	1,482	4,304	6,773	10,999
Lion Mesh Prima Tbk	LMSH	746	700	1,192	1,304	1,677	2,670
Lion Metal Workds Tbk	LION	2,724	3,731	4,663	4,725	6,960	8,815

**Appendix 1:
SELLING, GENERAL & ADMINISTRATIVE COSTS OF MANUFACTURING COMPANIES 1991-1996**

Name of Manufacturing Companies	KODE	1991	1992	1993	1994	1995	1996
Lippo Industries	LPIN	3,120	3,904	4,242	6,484	6,706	7,376
Mandom Indonesia Tbk (Tanco Indonesia Tbk)	TCID	14,702	16,586	21,043	25,470	30,958	37,833
Mayora Indah Tbk	MYOR	5,103	7,729	10,251	16,441	24,624	31,265
Merck Indonesia Tbk	MERK	7,432	9,791	13,165	14,315	17,864	24,313
Metrodata Electronic	MTDL	4,778	15,884	20,194	22,426	26,894	28,934
Miwon Indonesia Tbk	MWON	x	x	13,023	12,459	18,023	21,041
Modern Photo film Company Tbk	MDRN	45,316	50,766	61,112	70,468	83,397	79,351
Mulia Industrindo Tbk	MLIA	1,194	3,367	13,021	29,302	37,262	57,460
Multi Agro Persada Tbk (Trafindo Perkasa Tbk)	TRPK	1,776	10,842	13,303	15,429	19,952	12,988
Multi Bintang Indonesia Tbk	MLBI	16,853	17,356	17,720	25,769	27,399	40,028
Multipolar Corporation	MLPL	11,700	6,031	5,754	6,679	10,575	34,479
Mustika Ratu Tbk	MRAT	x	x	20,775	25,729	33,392	44,172
Nipress Tbk	NIPS	2,609	3,411	3,175	3,706	2,897	2,461
Pabrik Kertas Tjiwi Kimia Tbk	TKIM	81,911	43,790	69,701	81,698	98,953	133,605
Pan Brothers Tex Tbk	PBRX	8,723	9,886	10,654	13,116	15,505	10,960
Panasia Indosyntec Tbk	HDTX	9,427	11,369	18,259	20,482	23,972	20,728
Perdana Bangun Pusaka Tbk	KONI	x	x	7,646	7,630	11,592	12,911
Pioneerindo Gourmet International (dlh Putra Sejahtera	PTSP	x	14,476	18,397	24,179	32,367	44,310
Polysindo Eka Perkasa	POLY	8,769	20,952	29,229	32,252	51,224	66,229
Prasidha Aneka Niaga Tbk	PSDN	x	3,229	5,194	34,093	28,835	26,181
Prima Alloy Steel Universal Tbk	PRAS	2,949	3,575	3,672	3,516	4,914	5,876
Procter & Gamble Indonesia Tbk	PGIN	18,985	9,697	12,315	16,989	24,080	25,227
Rimba Niaga Idola	RMBA	1,216	1,156	483	609	712	672
Roda Vivatex Tbk	RDTX	5,475	7,985	11,785	11,057	11,274	9,615
Sarasa Nugraha Tbk	SRSN	2,150	7,503	6,949	8,128	7,587	11,690
Sari Husada Tbk	SHDA	8,414	11,156	15,790	38,761	45,129	36,055
Schering Plough Indonesia Tbk	SCPI	3,943	5,282	7,414	7,783	9,767	11,336
Sekar Laut Tbk	SKLT	1,359	1,879	5,849	9,452	10,224	12,685
Semen Cibinong Tbk	SMCB	11,465	11,472	22,056	33,391	432	55,920
Semen Gresik (Persero) Tbk	SMGR	29,366	33,022	43,544	60,976	146,417	258,960
Sepatu Bata Tbk	BATA	16,918	20,743	24,118	29,205	34,211	37,825
Sorini Corporation Tbk	SOBI	2,017	2,898	3,903	6,293	9,937	14,716
Suba Indah	SUBA	2,885	4,147	5,464	7,215	12,504	13,989
Sumalindo Lestari Jaya Tbk	SULI	15,436	17,291	20,300	25,482	36,667	36,831

**Appendix 1:
SELLING, GENERAL & ADMINISTRATIVE COSTS OF MANUFACTURING COMPANIES 1991-1996**

Name of Manufacturing Companies	KODE	1991	1992	1993	1994	1995	1996
Sumi Indo Kabel Tbk	IKBI	4,012	6,525	8,362	10,491	12,050	12,600
Suparma Tbk	SPMA	x	2,069	3,462	6,611	10,561	10,478
Super Indah Makmur	SIMA	x	1,748	2,093	2,125	2,260	2,281
Super Mitory Utama	SUMI	966	1,532	1,626	2,780	2,402	2,810
Supreme Cable Manufacturing Corporation (Sucaco) Tbk	SCCO	9,992	17,742	17,450	23,576	24,965	24,319
Surabaya Agung Industry Pulp Tbk	SAIP	8,846	9,732	9,538	16,841	17,691	15,014
Surya Toto Indonesia Tbk	TOTO	7,341	8,338	10,644	12,963	16,772	19,448
Teijin Indonesia Fiber Corporation (Tifico) Tbk	TFCO	7,477	4,902	6,226	5,753	6,860	6,410
Tembaga Mulia Semanan	TBMS	6,036	6,378	6,737	8,473	9,497	10,932
Tempo Scan Pacific Tbk	TSPC	x	44,271	49,688	68,506	131,066	149,195
Texmaco Perkasa Engineering Tbk	TPEN	2,116	2,790	4,423	6,858	14,899	20,044
Textile Manufacturing Company Jaya (Texmaco Jaya) Tbk	TEJA	6,823	8,956	13,432	16,849	20,634	25,366
Tira Austenite Tbk	TIRA	10,153	13,002	12,940	13,696	15,978	17,653
Tri Polyta Indonesia	TPIA	x	x	x	37,434	41,427	53,930
Trias Sentosa Tbk	TRST	3,246	4,796	5,134	7,704	8,092	10,955
Tunas Ridean Tbk	TURI	x	x	1,809	41,198	58,750	81,535
Ugahari	UGAR	x	896	1,268	1,852	2,671	3,470
Ultra Jaya Milk Industry and Trading Company Tbk	ULTJ	6,126	7,679	12,546	16,224	17,858	21,048
Unggul Indah Cahaya Tbk	UNIC	10,294	9,426	14,719	16,784	22,834	28,916
Unilever Indonesia Tbk	UNVR	16,294	213,688	274,857	310,605	354,544	497,365
United Tractors Tbk	UNTR	53,911	66,073	74,787	104,103	127,400	159,700
Unitex	UNTX	3,486	4,728	4,772	4,687	6,361	6,593
Voksel Electric Tbk	VOKS	6,694	10,557	11,060	14,163	20,070	21,660

Appendix 2:
NET SALES OF MANUFACTURING COMPANIES 1991-1996

Name of Manufacturing Companies	CODE	1991	1992	1993	1994	1995	1996
Ades Alfindo Putrasetia Tbk	ADES	x	11,397	33,379	48,043	61,258	69,716
Alakasa Industrindo Tbk	ALKA	31,300	31,826	31,457	38,225	54,677	45,407
Aneka Kimia Raya Tbk	AKRA	x	285,889	303,583	369,324	473,700	514,185
APAC Citra Ceteretex Tbk	MYTX	54,410	78,146	103,234	70,737	58,953	324,121
Aqua Golden Mississippi	AQUA	41,899	49,752	55,368	120,253	162,180	179,359
Argha Karya Prima Industry Tbk	AKPI	91,408	124,894	162,962	189,868	247,822	288,378
Argo Pantes Tbk	ARGO	291,768	363,668	340,002	463,493	475,868	449,978
Asahimas Flat Glass Co Ltd Tbk	AMFG	x	x	229,826	289,716	403,594	347,291
Asiana IMI Industries	ASIA	x	8,072	10,514	25,463	36,821	50,814
Aster Dharma Industri	ASTR	5,737	6,687	48,693	66,488	89,132	139,515
Astra Graphia Tbk	ASGR	141,490	150,776	200,177	199,145	725,754	889,358
Astra International Tbk	ASII	5,517,435	5,017,431	6,424,160	9,506,926	12,619,690	12,284,331
Barito Pacific Timber Tbk	BRPT	669,898	769,441	978,619	861,981	817,818	951,311
BAT Indonesia Tbk	BATI	92,306	100,020	139,729	171,101	230,075	307,757
Bayer Indonesia Tbk	BYSB	147,609	183,935	199,724	236,631	317,032	333,183
Berlina Co Ltd	BRNA	25,749	28,054	47,623	61,876	70,099	77,881
Branta Mulia Tbk	BRAM	206,402	221,368	281,894	308,968	336,929	315,189
Bristol-Myers Squibb Indonesia Tbk	SQBI	23,703	35,682	38,734	32,527	34,671	50,984
Budi Acid Jaya Tbk	BUDI	x	17,535	19,481	73,600	148,597	298,074
Century Textile Industry	CNTX	40,322	43,517	49,696	14,301	17,690	17,435
Citra Tubindo Tbk	CTBN	30,688	48,624	28,505	34,579	42,852	67,633
Dankos Laboratories Tbk	DNKS	44,794	59,863	74,991	89,437	115,386	130,679
Darya-Varia Laboratoria Tbk	DVLA	x	34,287	36,670	62,249	136,317	203,237
Davomas Abadi Tbk	DAVO	x	49,167	60,926	86,046	127,597	233,810
Daya Sakti Unggul Corporation	DSUC	x	x	x	178,701	175,210	214,504
Delta Diakarta Tbk	DLTA	53,136	47,307	55,818	71,358	89,705	84,017
Duta Pertiwi nusantara Tbk	DPNS	28,843	24,539	36,577	32,209	40,492	34,706
Dynplast Tbk	DYNA	16,568	20,104	28,627	42,901	68,630	90,271
Ekadharna Tape Industries Tbk	EKAD	16,574	22,360	23,061	24,387	36,201	43,274
Eratex Djaja Limited Tbk	ERTX	82,129	78,926	81,176	96,667	102,746	130,774
Ever Shine Textile Industry Tbk	ESTI	78,424	105,315	106,271	136,039	162,575	184,030
Fajar Surya Wisesa Tbk	FASW	x	119,981	132,289	222,077	300,027	350,287
Fast Food Indonesia Tbk	FAST	53,304	61,434	77,428	96,362	133,727	165,143
Gajah Tunggal Tbk	GJTL	223,754	269,653	364,584	487,289	746,824	986,880

**Appendix 2:
NET SALES OF MANUFACTURING COMPANIES 1991-1996**

Name of Manufacturing Companies	CODE	1991	1992	1993	1994	1995	1996
Goodyear Indonesia Tbk	GDYR	173,967	197,340	206,372	219,982	237,873	256,237
Great Golden Star	GGST	17,991	20,817	18,395	15,965	13,551	5,208
Great River International Tbk	GRIV	76,967	99,890	123,773	147,566	182,323	252,673
GT Kabel Indonesia Tbk	KBLI	58,381	103,674	130,076	170,125	241,298	243,751
GT Petrochem Industries Tbk	ADMG	51,384	70,048	111,753	145,141	222,049	256,753
Gudang Garam Tbk	GGRM	2,745,179	3,294,758	3,874,452	4,783,722	5,594,577	6,558,296
Hanjaya Mandala Sampoerna Tbk	HMSP	325,217	682,228	829,211	1,363,098	1,687,786	2,366,309
Hanson Industri Utama	MYRX	77,085	70,789	47,227	69,808	88,674	56,079
Hexindo Adiperkasa Tbk	HEXA	x	56,981	101,598	151,165	200,734	258,740
Igaliaya Tbk	IGAR	24,783	26,459	33,433	36,935	47,470	58,422
Indah Kiat Pulp & Paper Corporation Tbk	INKP	418,967	424,826	650,546	1,043,759	2,075,867	1,812,475
Indah Aluminium Industry Tbk	INAI	x	62,820	64,139	98,743	106,422	140,651
Indocement Tunggal Prakasa Tbk	INTP	771,319	2,206,114	2,890,384	3,388,014	3,942,267	4,271,232
Indofood Sukses Makmur Tbk	INDF	x	1,230,911	1,131,258	1,344,896	2,091,043	2,826,767
Indorama Synthetics Tbk	INDR	111,716	242,054	77,898	307,249	824,781	836,485
Indospring Tbk	INDS	32,539	25,604	37,176	56,185	73,045	69,186
Intan Wijaya Chemical	INCI	30,058	28,475	29,438	25,598	39,624	53,382
Inter Delta Tbk	INTD	48,778	50,309	59,538	67,796	80,817	90,557
Inti Indorayon Utama	INRU	147,094	163,012	157,221	387,462	622,088	331,106
Intraco Penta Tbk	INTA	29,627	37,873	53,589	69,223	105,385	179,264
Itamaraya Gold Industry Tbk	ITMA	61,785	42,668	47,584	49,740	71,367	58,238
Jaya Pari Steel Tbk	JPRS	48,067	47,378	44,248	42,869	94,887	63,332
Jeewon Jaya Indonesia	JWJI	x	27,030	31,375	57,053	59,789	17,662
Jembo Cable Co. Tbk	JECC	86,766	119,020	136,414	162,977	238,347	210,084
Kabelindo Murni Tbk	KBLM	80,195	98,029	100,653	115,442	144,484	165,361
Kalbe Farma	KLBF	88,926	235,561	310,055	428,626	528,487	481,760
Karwell Indoensia Tbk	KARW	x	57,772	76,940	155,126	180,110	242,026
Kasogi International Tbk	GDWU	29,831	42,265	76,542	95,044	94,470	133,428
Kedaung Indah Can Tbk	KICI	30,601	41,764	42,359	49,734	59,524	64,515
Keramika Indonesia Asosiasi Tbk	KIAS	x	21,297	43,537	103,218	100,795	107,913
Kurnia Kapuas Utama Glue Industries Tbk	KKGI	31,842	48,619	57,325	66,930	82,149	81,372
Langgeng Makmur Plastik Industry Ltd Tbk	LMPI	x	14,331	22,404	69,580	74,264	85,857
Lion Mesh Prima tbk	LMSH	8,786	7,958	13,724	21,481	29,392	28,345
Lion Metal Works Tbk	LION	22,303	28,215	31,235	30,592	42,178	43,990

Appendix 2:
NET SALES OF MANUFACTURING COMPANIES 1991-1996

Name of Manufacturing Companies	CODE	1991	1992	1993	1994	1995	1996
Lippo Industries	IPIN	26,820	24,499	33,653	53,653	57,855	60,786
Mandom Indonesia Tbk (Tanco Indonesia Tbk)	TCID	52,684	59,008	75,431	101,209	122,962	140,538
Mayora Indah Tbk	MYOR	93,227	120,062	162,316	249,960	304,839	342,400
Merck Indonesia Tbk	MERK	22,799	28,399	36,604	44,801	51,525	60,458
Metrodata Electronic	MTDL	80,802	133,420	160,617	238,113	316,063	349,950
Miwon Indonesia Tbk	MWON	x	x	85,156	105,070	127,237	165,122
Modern Photo film Company Tbk	MDRN	330,798	369,378	468,325	563,772	642,277	666,165
Mulia Industrindo Tbk	MLIA	1,242	20,054	136,513	234,797	327,519	518,933
Multi Agro Persada Tbk (Trafindo Perkasa Tbk)	TRPK	14,122	63,939	80,778	87,454	132,710	103,203
Multi Bintang Indonesia Tbk	MLBI	92,079	92,926	118,808	143,372	188,561	213,872
Multipolar Corporation Tbk	MLPL	50,370	29,552	28,875	29,746	40,079	98,512
Mustika Ratu Tbk	MRAT	x	x	48,170	66,316	92,265	104,322
Nipress Tbk	NIPS	28,086	31,790	31,526	31,881	29,301	32,865
Pabrik Kertas Tjiwi Kimia Tbk	TKIM	335,820	492,245	616,212	840,514	1,243,833	1,391,108
Pan Brothers Tex Tbk	PBRX	75,028	82,904	67,310	80,217	68,527	48,036
Panasia Indosyntec Tbk	HDTX	158,243	166,658	225,112	330,700	443,501	414,369
Perdana Bangun Pusaka Tbk	KONI	x	x	73,333	64,185	77,754	74,713
Pioneerindo Gourmet International (d/h Putra Sejahtera	PTSP	x	28,188	36,545	53,369	66,157	91,451
Polysindo Eka Perkasa	POLY	270,043	597,661	679,312	749,429	970,617	1,422,665
Prasidha Aneka Niaga Tbk	PSDN	x	99,391	141,964	891,286	752,193	741,353
Prima Alloy Steel Universal Tbk	PRAS	19,097	22,981	30,665	36,872	62,130	75,712
Procter & Gamble Indonesia Tbk	PGIN	47,250	23,201	35,989	58,275	75,284	80,576
Rimba Niaga Idola	RMBA	5,595	1,466	1,167	11,215	15,380	11,713
Roda Vivatex Tbk	RDTX	67,216	83,713	101,738	112,449	161,868	146,779
Sarasa Nugraha Tbk	SRSN	31,407	78,299	69,676	89,039	93,975	91,909
Sari Husada Tbk	SHDA	45,374	56,725	78,290	133,460	184,191	194,695
Schering Plough Indonesia Tbk	SCPI	14,295	19,134	25,181	30,162	39,742	36,564
Sekar Laut Tbk	SKLT	15,661	23,343	65,274	97,207	82,600	97,163
Semen Cibinong Tbk	SMCB	125,051	192,617	394,145	536,607	694,841	768,265
Semen Gresik (Persero) Tbk	SMGR	156,023	165,829	219,480	309,079	820,930	1,362,963
Sepatu Bata Tbk	BATA	65,718	74,799	92,091	107,869	124,529	122,431
Sorini Corporation Tbk	SOBI	19,353	38,180	43,089	54,749	65,400	84,873
Suba Indah	SUBA	29,393	36,567	43,340	38,603	61,186	57,401
Sumalindo Lestari Jaya Tbk	SULI	146,980	185,244	267,175	237,433	251,464	291,602

Appendix 2:
NET SALES OF MANUFACTURING COMPANIES 1991-1996

Name of Manufacturing Companies	CODE	1991	1992	1993	1994	1995	1996
Sumi Indo Kabel Tbk	IKBI	62,402	78,911	83,533	126,151	204,124	193,080
Suparma Tbk	SPMA	x	45,971	75,481	131,956	178,000	151,015
Super Indah Makmur	SIMA	x	20,054	22,913	26,441	24,072	26,183
Super Mitory Utama	SUMI	17,127	19,254	26,130	24,205	25,412	23,157
Supreme Cable Manufacturing Corporation (Sucaco) Tbk	SCCO	199,251	284,086	310,142	333,271	416,413	321,505
Surabaya Agung Industry Pulp Tbk	SAIP	153,293	199,020	182,489	239,326	284,926	239,909
Surya Toto Indonesia Tbk	TOTO	52,425	53,690	81,125	170,187	210,131	132,859
Teijin Indonesia Fiber Corporation (Tifico) Tbk	TFCO	200,815	127,096	107,044	170,187	210,131	178,287
Tembaga Mulia Semanan	TBMS	273,111	283,290	216,213	263,675	359,300	403,401
Tempo Scan Pacific Tbk	TSPC	x	115,452	131,536	193,778	406,454	474,228
Texmaco Perkasa Engineering Tbk	TPEN	18,481	36,197	45,346	83,202	168,881	405,849
Textile Manufacturing Company Jaya (Texmaco Jaya) Tbk	TEJA	176,864	215,266	262,568	319,584	359,577	495,475
Tira Austenite Tbk	TIRA	34,620	34,307	42,049	42,734	52,885	63,114
Tri Polyta Indonesia	TPIA	x	x	x	481,117	587,217	720,410
Trias Sentosa Tbk	TRST	41,140	52,742	70,095	100,372	146,110	160,916
Tunas Ridean Tbk	TURI	x	x	76,428	741,864	1,001,037	904,743
Ugahari	UGAR	x	11,986	26,144	27,822	19,176	15,115
Ultra Jaya Milk Industry and Trading Company Tbk	ULTJ	54,564	63,530	80,655	101,541	126,207	150,624
Unggul Indah Cahaya Tbk	UNIC	139,839	168,250	238,825	282,403	317,936	368,094
Unilever Indonesia Tbk	UNVR	650,267	791,374	933,362	1,100,466	1,340,333	1,644,511
United Tractors Tbk	UNTR	644,760	600,251	857,188	1,250,907	1,608,680	1,979,744
Unitex	UNTX	38,823	50,555	53,320	52,641	65,891	65,267
Voksel Electric Tbk	VOKS	87,501	146,602	157,369	207,391	275,226	268,573

Appendix 3:
TOTAL ASSET OF MANUFACTURING COMPANIES 1991-1996

Name of Manufacturing Companies	CODE	1991	1992	1993	1994	1995	1996
Ades Alfindo Putrasetia Tbk	ADES	x	28,630	50,174	92,911	105,690	110,916
Alakasa Industrindo Tbk	ALKA	32,929	41,693	43,080	54,791	71,437	70,002
Aneka Kimia Raya Tbk	AKRA	x	126,269	139,751	277,237	348,207	517,462
APAC Citra Ceteretex Tbk	MYTX	179,208	208,976	212,535	203,799	156,436	1,658,526
Aqua Golden Mississippi	AQUA	52,002	50,551	58,523	89,667	100,148	113,591
Argha Karya Prima Industry Tbk	AKPI	134,454	251,922	300,750	450,390	634,408	668,571
Argo Pantas Tbk	ARGO	717,513	695,949	668,159	743,911	876,965	997,629
Asahimas Flat Glass Co Ltd Tbk	AMFG	x	x	512,430	554,780	740,098	731,589
Asiana IMI Industries	ASIA	x	12,334	24,357	67,109	88,173	110,959
Aster Dharma Industri	ASTR	20,819	21,014	98,456	115,583	90,999	154,968
Astra Graphia Tbk	ASGR	172,171	178,059	192,091	183,949	586,622	707,677
Astra International Tbk	ASII	6,631,089	6,826,905	7,491,172	10,175,580	15,617,034	16,732,823
Barito Pacific Timber Tbk	BRPT	1,657,023	1,750,042	2,750,770	2,880,893	2,997,442	2,667,677
BAT Indonesia Tbk	BATI	100,889	93,688	102,874	120,576	173,025	280,673
Bayer Indonesia Tbk	BYSB	84,306	109,516	126,017	149,455	182,642	173,417
Berlina Co Ltd	BRNA	35,701	36,681	61,876	67,207	73,101	100,303
Branta Mulia Tbk	BRAM	428,472	516,776	573,171	595,728	676,340	765,134
Bristol-Myers Squibb Indonesia Tbk	SQBI	26,847	31,685	37,853	35,031	32,129	36,898
Budi Acid Jaya Tbk	BUDI	x	14,866	17,498	104,692	250,970	374,482
Century Textile Industry	CNTX	61,345	78,221	74,552	79,954	76,924	84,988
Citra Tubindo	CTBN	106,108	118,016	106,162	111,683	113,343	127,354
Dankos Laboratories Tbk	DNKS	47,118	84,244	113,748	137,469	191,752	200,823
Darya-Varia Laboratoria Tbk	DVLA	63,221	35,835	37,962	114,885	206,782	363,767
Davomas Abadi Tbk	DAVO	x	42,542	40,534	118,905	146,640	242,463
Daya Sakti Unggul Corporation	DSUC	x	x	x	146,056	171,092	190,883
Delta Djakarta Tbk	DLTA	53,522	55,518	62,414	80,179	111,694	198,872
Duta Pertiwi nusantara Tbk	DPNS	45,442	47,297	51,623	58,577	63,240	74,556
Dynaplast Tbk	DYNA	30,713	34,509	41,244	106,369	134,981	167,737
Ekadharma Tape Industries Tbk	EKAD	16,473	20,041	22,290	26,125	32,255	31,869
Eratex Djaja Limited Tbk	ERTX	124,776	109,619	121,566	143,988	138,302	167,350
Ever Shine Textile Industry Tbk	ESTI	76,038	126,200	153,384	214,175	292,268	374,877
Fajar Surya Wisesa Tbk	FASW	x	306,108	354,805	593,062	865,011	1,126,405
Fast Food Indonesia Tbk	FAST	47,346	57,196	75,548	90,239	103,256	119,486
Gajah Tunggal Tbk	GJTL	427,918	674,955	797,137	2,250,517	2,726,745	4,918,161

Appendix 3:
TOTAL ASSET OF MANUFACTURING COMPANIES 1991-1996

Name of Manufacturing Companies	CODE	1991	1992	1993	1994	1995	1996
Goodyear Indonesia Tbk	GDYR	103,724	131,697	155,614	185,067	212,275	203,137
Great Golden Star	GGST	103,788	79,402	89,181	100,724	102,535	107,472
Great River International Tbk	GRIV	173,574	200,133	263,550	309,310	392,255	615,012
GT Kabel Indonesia Tbk	KBLI	87,038	162,871	286,827	431,868	478,507	694,064
GT Petrochem Industries Tbk	ADMG	146,105	173,866	243,903	904,623	939,723	2,078,822
Gudang Garam Tbk	GGRM	2,530,248	2,718,939	3,029,737	3,567,791	3,914,547	4,314,323
Hanjaya Mandala Sampoerna Tbk	HMSP	777,892	887,421	964,951	5,341,800	1,717,077	2,894,636
Hanson Industri Utama	MYRX	44,751	53,717	64,909	67,546	79,892	90,632
Hexindo Adiperkasa Tbk	HEXA	x	41,172	70,945	144,322	243,399	281,227
Igarjaya Tbk	IGAR	43,920	38,006	37,734	51,985	105,291	110,252
Indah Kiat Pulp & Paper Corporation Tbk	INKP	2,101,706	3,006,481	3,561,965	4,505,786	6,924,671	8,737,131
Indah Aluminium Industry Tbk	INAI	x	49,499	47,248	130,359	146,940	160,804
Indocement Tunggal Prakasa Tbk	INTP	2,151,192	4,795,191	5,054,028	5,556,406	8,205,010	7,806,961
Indofood Sukses Makmur Tbk	INDF	x	526,049	718,684	1,437,729	3,702,708	4,220,918
Indorama Systetics	INDR	468,472	619,851	128,755	494,964	692,075	682,074
Indospring Tbk	INDS	58,643	53,666	68,206	71,768	94,632	88,300
Intan Wijaya Chemical	INCI	62,818	65,663	85,514	72,684	85,602	87,580
Inter Delta Tbk	INTD	38,317	38,936	38,970	45,471	55,841	59,946
Inti Indorayon Utama	INRU	1,039,631	1,778,645	1,745,353	1,674,222	1,649,601	1,963,561
Intraco Penta Tbk	INTA	47,486	52,093	71,331	80,946	118,695	149,602
Itamaraya Gold Industry Tbk	ITMA	62,170	58,740	54,071	55,784	60,756	66,830
Jaya Pari Steel Tbk	JPRS	68,592	62,872	62,333	59,930	51,411	61,696
Jeewon Jaya Indonesia	JWJI	x	15,005	30,793	52,083	56,948	70,414
Jembo Cable Co. Tbk	JECC	95,919	166,055	171,523	189,740	221,855	177,006
Kabelindo Murni Tbk	KBLM	75,799	89,521	124,613	147,933	202,048	192,817
Kalbe Farma	KLBF	208,028	347,693	524,495	1,094,167	1,281,761	1,305,001
Karwell Indoensia Tbk	KARW	x	46,207	62,021	204,494	235,317	315,547
Kasogi International Tbk	GDWU	49,338	88,092	121,949	158,989	195,712	250,899
Kedauung Indah Can Tbk	KICI	32,147	37,377	77,822	100,809	115,517	121,935
Keramika Indonesia Asosiasi Tbk	KIAS	x	26,345	124,576	232,620	308,376	503,306
Kurnia Kapuas Utama Glue Industries Tbk	KKGI	64,687	87,073	82,862	93,392	103,406	112,552
Langgeng Makmur Plastik Industry Ltd Tbk	LMPI	x	27,549	48,625	132,268	180,367	248,887
Lion Mesh Prima Tbk	LMSH	10,900	11,257	13,493	21,815	29,448	28,130
Lion Metal Workds Tbk	LION	28,214	24,570	25,820	39,237	42,965	68,582

Appendix 3:
TOTAL ASSET OF MANUFACTURING COMPANIES 1991-1996

Name of Manufacturing Companies	CODE	1991	1992	1993	1994	1995	1996
Lippo Industries	LPIN	90,725	93,064	100,225	110,449	118,918	138,869
Mandom Indonesia Tbk (Tanco Indonesia Tbk)	TCID	48,538	59,626	80,480	100,657	125,037	135,381
Mayora Indah Tbk	MYOR	102,480	168,358	219,648	556,347	662,330	809,424
Merkc Indonesia Tbk	MERK	15,189	15,883	21,336	25,821	35,578	37,986
Metrodata Electronic	MTDL	65,690	90,858	103,711	124,916	180,638	189,918
Miwon Indonesia Tbk	MWON	x	x	99,974	123,069	195,776	285,340
Modern Photo film Company Tbk	MDRN	237,437	326,274	398,806	377,536	425,197	515,355
Mulia Industrindo Tbk	MLIA	25,704	469,212	523,110	640,017	1,302,256	2,076,189
Multi Agro Persada Tbk (Trafindo Perkasa Tbk)	TRPK	49,227	85,945	114,111	136,416	188,095	130,579
Multi Bintang Indonesia Tbk	MLBI	104,486	114,145	142,989	178,488	267,126	277,208
Multipolar Corporation	MLPL	68,754	75,519	77,263	84,914	128,371	323,616
Mustika Ratu Tbk	MRAT	x	x	50,716	61,572	145,575	164,520
Nipress Tbk	NIPS	48,388	49,539	49,449	55,325	61,069	69,249
Pabrik Kertas Tjiwi Kimia Tbk	TKIM	1,100,709	1,372,163	1,459,289	2,127,724	2,785,089	3,259,688
Pan Brothers Tex Tbk	PBRX	104,049	131,410	103,354	110,144	82,607	56,105
Panasia Indosyntec Tbk	HDTX	242,147	583,701	673,339	738,725	928,324	1,087,984
Perdana Bangun Pusaka Tbk	KONI	x	x	36,005	75,968	93,977	85,929
Pioneerindo Gourmet International (d/h Putra Sejahtera)	PTSP	x	40,635	43,529	94,569	104,756	129,284
Polysindo Eka Perkasa	POLY	632,593	951,774	1,344,808	1,850,221	2,541,661	4,101,774
Prasidha Aneka Niaga Tbk	PSDN	x	116,782	187,888	358,108	431,308	420,786
Prima Alloy Steel Universal Tbk	PRAS	43,631	40,942	51,718	74,659	117,875	145,301
Procter & Gamble Indonesia Tbk	PGIN	31,788	37,864	47,670	65,743	91,557	111,036
Rimba Niaga Idola	RMBA	9,584	14,522	13,894	18,575	10,354	10,200
Roda Vivatex Tbk	RDTX	59,289	106,883	124,279	254,560	287,588	289,156
Sarasa Nugraha Tbk	SRSN	35,748	74,744	95,234	104,570	117,915	117,263
Sari Husada Tbk	SHDA	38,579	51,874	80,279	126,174	165,499	176,672
Schering Plough Indonesia Tbk	SCPI	8,328	9,950	14,706	18,691	22,793	25,314
Sekar Laut Tbk	SKLT	30,769	36,377	88,831	121,252	127,253	197,194
Semen Cibinong Tbk	SMCB	730,532	875,124	1,244,895	1,645,532	2,265,294	3,192,936
Semen Gresik (Persero) Tbk	SMGR	661,041	891,530	967,646	1,006,247	3,351,112	4,230,668
Sepatu Bata Tbk	BATA	47,068	57,500	67,009	89,272	101,053	102,914
Sorini Corporation Tbk	SOBI	55,546	84,964	97,714	127,071	311,365	360,022
Suba Indah	SUBA	53,878	53,766	61,781	71,696	84,767	98,157
Sumalindo Lestari Jaya Tbk	SULI	227,493	239,602	341,290	533,817	728,921	769,849

Appendix 3:
TOTAL ASSET OF MANUFACTURING COMPANIES 1991-1996

Name of Manufacturing Companies	CODE	1991	1992	1993	1994	1995	1996
Sumi Indo Kabel Tbk	IKBI	112,837	137,829	134,714	161,848	251,150	270,902
Suparma Tbk	SPMA	x	120,681	156,736	242,856	275,021	414,520
Super Indah Makmur	SIMA	x	36,003	37,937	53,331	52,647	50,111
Super Mitory Utama	SUMI	19,494	27,485	42,187	49,495	49,098	50,485
Supreme Cable Manufacturing Corporation (Sucaco) Tbk	SCCO	233,802	334,153	352,182	429,291	567,181	607,224
Surabaya Agung Industry Pulp Tbk	SAIP	290,134	328,067	466,254	598,550	746,486	116,801
Surya Toto Indonesia Tbk	TOTO	106,403	133,788	135,867	181,272	209,593	242,866
Teijin Indonesia Fiber Corporation (Tifico) Tbk	TFCO	343,639	511,729	612,642	685,171	760,060	683,986
Tembaga Mulia Semanan	TBMS	198,407	187,294	172,702	264,872	251,020	235,681
Tempo Scan Pacific Tbk	TSPC	x	112,307	141,220	298,903	499,689	553,731
Texmaco Perkasa Engineering Tbk	TPEN	73,076	94,449	185,503	241,929	306,981	605,322
Textile Manufacturing Company Jaya (Texmaco Jaya) Tbk	TEJA	234,801	278,067	320,612	452,774	614,079	763,863
Tira Austenite Tbk	TIRA	29,337	33,774	46,333	46,415	59,108	82,592
Tri Polyta Indonesia	TPIA	x	x	x	817,913	935,492	1,369,680
Trias Sentosa Tbk	TRST	97,167	133,902	207,084	326,828	418,576	586,305
Tunas Ridean Tbk	TURI	x	x	21,414	245,514	405,206	460,500
Ugahari	UGAR	x	24,732	39,967	57,164	49,137	43,714
Ultra Jaya Milk Industry and Trading Company Tbk	ULTJ	97,379	102,686	113,091	290,340	302,196	385,834
Unggul Indah Cahaya Tbk	UNIC	312,538	479,741	515,855	680,103	752,917	785,317
Unilever Indonesia Tbk	UNVR	255,468	306,232	401,031	506,499	619,300	777,499
United Tractors Tbk	UNTR	700,504	770,578	889,079	1,141,642	1,501,753	1,793,005
Unitex	UNTX	75,211	75,008	80,961	78,996	87,060	104,077
Voksel Electric Tbk	VOKS	90,191	138,684	204,945	269,508	313,730	283,780

Appendix 4:
NUMBER OF EMPLOYEES OF MANUFACTURING COMPANIES 1991-1996

Name of Manufacturing Companies	CODE	1991	1992	1993	1994	1995	1996
Ades Alfindo Putraseta Tbk	ADES	x	x	x	1,320	2,000	2,000
Alakasa Industrindo Tbk	ALKA	306	500	511	568	555	569
Aneka Kimia Raya Tbk	AKRA	x	x	x	343	607	607
APAC Citra Cetertex Tbk	MYTX	5,000	5,000	5,000	5,000	3,017	2,040
Aqua Golden Mississippi	AQUA	647	1,341	1,294	1,294	1,539	1,633
Argha Karya Prima Industry Tbk	AKPI	x	1,792	1,919	2,010	1,919	1,919
Argo Pantas Tbk	ARGO	6,097	6,097	6,097	6,801	6,639	6,616
Asahimas Flat Glass Co Ltd Tbk	AMFG	x	x	x	x	3,473	3,497
Asiana IMI Industries	ASIA	x	x	x	1,664	1,664	1,700
Aster Dharma Industri	ASTR	275	275	275	780	780	780
Astra Graphia Tbk	ASGR	1,772	1,772	1,334	1,334	1,389	7,828
Astra International Tbk	ASII	4,944	71,000	5,346	5,700	105,000	123,000
Barito Pacific Timber Tbk	BRPT	x	x	42,213	42,213	42,213	42,213
BAT Indonesia Tbk	BATI	605	593	580	579	633	737
Bayer Indonesia Tbk	BYSB	953	944	930	945	938	938
Berlina Co Ltd	BRNA	1,400	1,516	1,500	1,500	1,369	1,369
Branta Mulia Tbk	BRAM	965	1,562	1,432	1,432	1,375	1,327
Bristol-Myers Squibb Indonesia Tbk	SQBI	290	290	290	290	290	341
Budi Acid Jaya Tbk	BUDI	x	x	x	1,364	5,000	5,000
Century Textile Industry	CNTX	867	867	876	800	800	747
Citra Tubindo Tbk	CTBN	700	842	850	850	850	850
Dankos Laboratories Tbk	DNKS	313	313	460	460	460	626
Darya-Varia Laboratoria Tbk	DVLA	x	x	x	539	539	2,500
Davomas Abadi Tbk	DAVO	x	x	x	184	184	184
Daya Sakti Unggul Corporation	DSUC	x	x	x	x	x	4,608
Delta Diakarta Tbk	DLTA	756	756	765	905	905	848
Duta Pertiwi nusantara Tbk	DPNS	139	139	139	139	139	139
Dynplast Tbk	DYNA	626	920	1,200	1,200	1,500	1,500
Ekadharna Tape Industries Tbk	EKAD	626	381	430	430	430	448
Eratex Djaja Limited Tbk	ERTX	4,802	4,802	4,802	4,802	4,802	4,802
Ever Shine Textile Industry Tbk	ESTI	x	2,452	2,450	2,450	2,450	2,450
Fajar Surya Wisesa Tbk	FASW	x	x	x	1,375	2,000	2,000
Fast Food Indonesia Tbk	FAST	x	3,410	3,410	3,410	4,966	4,966
Gajah Tunggal Tbk	GJTL	4,935	5,042	5,279	5,279	6,900	7,100

**Appendix 4:
NUMBER OF EMPLOYEES OF MANUFACTURING COMPANIES 1991-1996**

Name of Manufacturing Companies	CODE	1991	1992	1993	1994	1995	1996
Goodyear Indonesia Tbk	GDYR	1,037	1,037	1,023	1,023	1,023	1,023
Great Golden Star	GGST	3,381	3,381	3,396	3,000	3,000	3,000
Great River International Tbk	GRIV	10,000	10,000	10,000	10,000	10,000	13,055
GT Kabel Indonesia Tbk	KBLI	460	460	540	540	540	540
GT Petrochem Industries Tbk	ADMG	x	x	567	567	567	567
Gudang Garam Tbk	GGRM	48,050	48,050	47,000	47,000	44,208	44,208
Hanjaya Mandala Sampoerna Tbk	HMSP	16,442	16,442	16,442	16,442	16,442	16,442
Hanson Industri Utama	MYRX	1,300	1,300	1,300	1,300	1,300	1,300
Hexindo Adiperkasa Tbk	HEXA	x	x	x	481	761	819
Igarjaya Tbk	IGAR	662	662	850	850	850	850
Indah Kiat Pulp & Paper Corporation Tbk	INKP	3,978	3,978	12,146	12,146	12,146	12,146
Indahl Aluminium Industry Tbk	INAI	x	x	x	1,227	1,365	1,365
Indocement Tunggal Prakasa Tbk	INTP	5,067	5,069	5,069	26,956	27,439	27,439
Indofood Sukses Makmur Tbk	INDF	x	x	x	15,000	17,305	17,305
Indorama Synthetics	INDR	4,000	4,200	4,125	21,432	22,298	20,604
Indospring Tbk	INDS	410	410	410	410	410	410
Intan Wijaya Chemical	INCI	145	145	145	145	200	191
Inter Delta Tbk	INTD	317	317	317	317	317	380
Inti Indorayon Utama	INRU	2,500	2,500	4,850	4,850	4,850	4,850
Intraco Penta Tbk	INTA	320	320	274	320	320	500
Itamaraya Gold Industry Tbk	ITMA	320	320	320	320	320	320
Jaya Pari Steel Tbk	JPRS	495	495	425	384	384	384
Jeewon Java Indonesia	JWJI	x	x	x	974	700	618
Jembo Cable Co. Tbk	JECC	x	901	901	1,002	1,042	1,042
Kabelindo Murni Tbk	KBLM	321	321	619	619	765	762
Kalbe Farma	KLBF	951	x	1,000	1,000	1,200	1,200
Karwell Indoensia Tbk	KARW	x	x	x	5,954	5,954	5,954
Kasagi International Tbk	GDWU	x	x	4,792	4,792	4,792	6,911
Kedaung Indah Can Tbk	KICI	x	x	1,577	2,100	2,100	2,030
Keramika Indonesia Asosiasi Tbk	KIAS	x	x	x	1,758	1,758	2,848
Kurnia Kapuas Utama Glue Industries Tbk	KKGI	39	39	160	160	160	160
Langgeng Makmur Plastik Industry Ltd Tbk	LMPJ	x	x	x	1,202	1,202	1,202
Lion Mesh Prima Tbk	LMSH	91	91	91	91	91	91
Lion Metal Works Tbk	LION	x	x	618	618	618	1,003

Appendix 4:
NUMBER OF EMPLOYEES OF MANUFACTURING COMPANIES 1991-1996

Name of Manufacturing Companies	CODE	1991	1992	1993	1994	1995	1996
Lippo Industries	LPIN	72	72	72	91	91	91
Mandom Indonesia Tbk (Tanco Indonesia Tbk)	TCID	x	x	2,014	2,367	2,747	3,070
Mayora Indah Tbk	MYOR	2,327	4,500	5,000	5,000	5,000	6,000
Merck Indonesia Tbk	MERK	381	435	449	449	449	549
Metrodata Electronics	MTDL	x	x	x	x	x	x
Miwon Indonesia Tbk	MWON	x	x	x	x	825	825
Modern Photo film Company Tbk	MDRN	836	836	836	1,000	1,057	1,057
Mulia Industrindo Tbk	MLIA	x	x	2,987	3,530	3,530	3,530
Multi Agro Persada Tbk (Trafindo Perkasa Tbk)	TRPK	320	320	416	416	410	481
Multi Bintang Indonesia Tbk	MLBI	1,290	1,290	1,012	1,012	1,012	1,012
Multipolar Corporation Tbk	MLPL	300	278	189	189	184	184
Mustika Ratu Tbk	MRAT	x	x	x	x	2,200	2,200
Nipress Tbk	NIPS	452	452	600	600	651	600
Pabrik Kertas Tjiwi Kimia Tbk	TKIM	7,000	7,000	7,000	7,898	7,898	7,898
Pan Brothers Tex Tbk	PBRX	3,939	3,939	4,209	4,209	4,209	4,209
Panasia Indosyntec Tbk	HDTX	3,171	3,171	3,171	3,171	3,171	3,171
Perdana Bangun Pusaka Tbk	KONI	x	x	x	x	699	699
Pioneerindo Gourmet International (d/h Putra Seljahtera	PTSP	x	x	x	2,000	2,000	2,000
Polysindo Eka Perkasa	POLY	1,389	2,161	2,161	2,161	2,161	2,672
Prasidha Aneka Niaga Tbk	PSDN	x	x	x	1,048	1,048	1,500
Prima Alloy Steel Universal Tbk	PRAS	541	541	541	541	541	541
Procter & Gamble Indonesia Tbk	PGIN	358	358	358	358	358	358
Rimba Niaga Idola	RMBA	2,277	2,277	2,277	31	31	21
Roda Vivatex Tbk	RDTX	2,300	2,300	2,300	3,000	3,600	3,800
Sarasa Nugraha Tbk	SRSN	x	4,378	4,378	4,000	4,000	4,000
Sari Husada Tbk	SHDA	562	562	798	798	798	798
Schering Plough Indonesia Tbk	SCPI	x	x	240	240	250	244
Sekar Laut Tbk	SKLT	x	x	1,630	1,630	1,630	1,630
Semen Cibinong Tbk	SMCB	940	940	940	940	1,260	1,811
Semen Gresik (Persero) Tbk	SMGR	1,832	1,800	2,000	2,000	2,166	2,343
Sepatu Bata Tbk	BATA	1,875	1,875	2,091	2,091	2,091	2,091
Sorini Corporation Tbk	SOBI	280	280	280	320	470	470
Suba Indah	SUBA	696	696	696	700	700	600
Sumalindo Lestari Jaya Tbk	SULI	x	x	5,088	7,000	7,000	6,700

Appendix 4:
NUMBER OF EMPLOYEES OF MANUFACTURING COMPANIES 1991-1996

Name of Manufacturing Companies	CODE	1991	1992	1993	1994	1995	1996
Sumi Indo Kabel Tbk	IKBI	591	591	591	817	817	817
Suparma Tbk	SPMA	x	x	x	1,631	1,631	1,631
Super Indah Makmur	SIMA	x	x	x	280	300	251
Super Mitory Utama	SUMI	x	x	1,730	2,000	2,000	2,000
Supreme Cable Manufacturing Corporation (Sucaco) Tbk	SCCO	1,384	1,384	1,515	1,362	1,362	1,500
Surabaya Agung Industry Pulp Tbk	SAIP	x	1,800	1,800	1,800	1,800	1,800
Surya Toto Indonesia Tbk	TOTO	1,500	2,180	2,345	2,345	2,837	2,656
Teijin Indonesia Fiber Corporation (Tifico) Tbk	TFCO	1,346	1,346	1,346	2,041	1,998	2,256
Tembaga Mulia Semanan	TBMS	168	168	168	168	168	168
Tempo Scan Pacific Tbk	TSPC	x	x	x	942	1,163	1,254
Texmaco Perkasa Engineering Tbk	TPEN	x	1,043	1,043	1,043	1,043	1,043
Textile Manufacturing Company Jaya (Texmaco Jaya) Tbk	TEJA	x	x	4,645	4,645	4,645	4,645
Tira Austenite Tbk	TIRA	x	x	323	323	465	337
Tri Polyfa Indonesia	TIPIA	x	x	x	x	x	540
Trias Sentosa Tbk	TRST	344	344	344	344	344	344
Tunas Ridean Tbk	TURI	x	x	x	x	160	2,364
Ugahari	UGAR	x	x	x	1,100	1,100	1,100
Ultra Jaya Milk Industry and Trading Company Tbk	ULTJ	600	600	600	600	600	600
Unggul Indah Cahaya Tbk	UNIC	196	196	196	196	237	281
Unilever Indonesia Tbk	UNVR	2,000	2,000	2,000	2,000	2,000	2,000
United Tractors Tbk	UNTR	4,109	4,109	4,361	7,500	2,589	7,293
Unitex	UNTX	1,200	1,200	x	1,200	1,568	1,508
Voksel Electric Tbk	VOKS	729	729	729	729	729	729

**Appendix 5:
REGRESSION MODEL I (1991-1996)**

Model Summary(b)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.458(a)	.210	.207	.16563886385132	2.423

a Predictors: (Constant), DUMREV, LOGREV

b Dependent Variable: LOGSSGA

ANOVA(b)

Model	Sum of Squares	df	Mean Square	F	Sig.	
1	Regression	4.245	2	2.122	77.354	.000(a)
	Residual	15.995	583	.027		
	Total	20.240	585			

a Predictors: (Constant), DUMREV, LOGREV

b Dependent Variable: LOGSSGA

Coefficients(a)

Model	Unstandardized Coefficients		Standardized Coefficients		t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta				Tolerance	VIF
1	(Constant)	.037	.010		3.759	.000		
	LOGREV	.695	.062	.525	11.279	.000	.625	1.599
	DUMREV	-.409	.148	-.129	-2.760	.006	.625	1.599

a Dependent Variable: LOGSSGA

**Appendix 6:
REGRESSION MODEL II (1991-1996)**

Model Summary(b)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.491(a)	.241	.234	.136204480208388	1.856

a Predictors: (Constant), dmrevt-2, LogRev-2, DumRev-1, LogRev-1

b Dependent Variable: LOGSGA

ANOVA(b)

Model	Sum of Squares	df	Mean Square	F	Sig.
1	2.686	4	.672	36.200	.000(a)
	8.460	456	.019		
	11.146	460			

a Predictors: (Constant), dmrevt-2, LogRev-2, DumRev-1, LogRev-1

b Dependent Variable: LOGSGA

Coefficients(a)

Model	Unstandardized Coefficients		Std. Error	t	Sig.	Collinearity Statistics	
	B	Beta				Tolerance	VIF
1							
	(Constant)	.020	.012	1.668	.096		
	LogRev-1	.576	.075	7.650	.000	.389	2.571
	DumRev-1	-.406	.148	-2.740	.006	.586	1.708
	LogRev-2	.011	.005	1.985	.048	.681	1.468
	dmrevt-2	-.003	.015	-.222	.825	.762	1.312

a Dependent Variable: LOGSGA

**Appendix 7:
REGRESSION MODEL III (1991-1996)**

Model Summary(b)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.408(a)	.167	.156	.168578616817685	2.041

a Predictors: (Constant), DDRE, DDRSD, LogRev1-1, DDRAS, DDRG, DDR

b Dependent Variable: LOGSSGA

ANOVA(b)

Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6	.428	15.078	.000(a)
	Residual	452	.028		
	Total	458			

a Predictors: (Constant), DDRE, DDRSD, LogRev1-1, DDRAS, DDRG, DDR

b Dependent Variable: LOGSSGA

Coefficients(a)

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error				Beta	Tolerance
1	(Constant)	.049	.011	4.313	.000		
	LogRev1-1	.543	.067	8.081	.000	.646	1.549
	DDR	.076	1.258	.061	.952	.012	80.364
	DDRSD	1.019	.482	2.117	.035	.460	2.173
	DDRG	-3.978	5.530	-7.19	.472	.068	14.781
	DDRAS	-.517	.670	-.772	.440	.094	10.614
	DDRE	-.098	.450	-.217	.828	.047	21.443

a Dependent Variable: LOGSSGA

**Appendix 8:
SELLING, GENERAL & ADMINISTRATIVE COSTS OF MANUFACTURING COMPANIES 1998-2004**

Manufacturing Companies	CODE	1998	1999	2000	2001	2002	2003	2004
Andhi Chandra Automotive	ACAP	2,926	3,607	5,830	9,202	9,834	11,075	12,277
Ades Alfindo Putrasetia Tbk	ADES	30,135	34,236	47,561	49,116	60,936	82,037	88,831
GT Petrochem Industries Tbk	ADMG	118,000	104,000	133,000	139,126	137,385	174,145	142,322
Asia Intiseleria Tbk	AISA	18,398	12,933	15,500	18,851	20,486	27,389	24,219
Argha Karya Prima Industry Tbk	AKPI	85,591	60,396	66,140	84,159	87,258	100,670	92,893
Aneka Kimia Raya Tbk	AKRA	41,478	40,956	49,385	60,747	58,015	64,822	182,688
Alakasa Industrindo Tbk	ALKA	8,350	6,459	7,842	8,816	7,052	6,372	6,441
Alumunda Light Metal Industry	ALMI	35,411	49,670	51,819	70,335	70,554	60,611	61,765
Asahimas Flat Glass Co Ltd Tbk	AMFG	134,451	143,224	166,349	203,190	210,052	214,610	226,035
Asiaplast Industries Tbk	APLI	663	3,426	5,277	6,502	9,023	7,968	9,101
Aqua Golden Mississippi	AQUA	26,610	22,748	20,800	31,925	39,228	26,875	25,193
Argo Pantes Tbk	ARGO	101,124	78,909	73,132	74,668	68,142	72,001	58,358
Arwana Citra Mulia Tbk	ARNA	6,362	7,723	12,876	16,440	23,092	27,650	27,027
Astra Graphia Tbk	ASGR	180,966	148,298	204,191	181,584	194,394	138,024	138,966
Astra International Tbk	ASII	1,265,505	1,328,803	2,542,617	2,963,944	3,779,080	4,281,613	5,455,318
Astra Otoparts Tbk	AUTO	84,614	111,983	170,588	203,111	225,443	259,003	329,668
Sepatu Bata Tbk	BATA	53,794	68,585	83,630	92,879	110,726	120,848	129,918
BAT Indonesia Tbk	BATI	169,347	237,293	217,005	195,702	216,739	225,517	283,240
Primarindo Asia Infrastructure	BIMA	31,559	25,038	31,777	28,941	18,072	10,139	8,534
Branta Mulia Tbk	BRAM	78,299	72,130	119,598	131,816	184,667	161,449	157,600
Berlina Co Ltd Tbk	BRNA	7,278	8,449	10,095	14,901	19,299	22,753	29,415
Barito Pacific Timber Tbk	BRPT	186,925	193,498	190,013	220,681	250,169	266,863	201,301
Betonjaya Manunggal Tbk	BTON	588	769	758	1,116	1,575	1,551	2,076
Budi Acid Jaya Tbk	BUDI	35,282	43,452	41,989	57,107	62,847	39,417	52,861
Bayer Indonesia Tbk	BYSB	107,771	128,072	40,918	57,008	88,501	x	x
Cahaya Kalbar Tbk	CEKA	13,823	10,869	10,274	9,742	9,903	11,044	9,716
Colorpak Indonesia Tbk	CLPI	x	2,838	3,326	4,233	5,083	6,503	8,307
Century Textile Industry	CNTX	15,068	41,537	32,661	36,420	36,065	24,816	25,694
Citra Tubindo	CTBN	38,635	45,942	41,654	50,835	48,311	59,242	63,515
Davomas Abadi Tbk	DAVO	9,932	3,574	6,592	6,046	6,297	8,281	8,592
Delta Jakarta Tbk	DLTA	51,532	55,553	61,179	79,303	78,848	90,672	104,901
Dankos Laboratories Tbk	DNKS	64,966	109,413	152,539	225,871	321,889	395,361	466,278
Daeyu Orchid Indoensia Tbk	DOID	18,763	8,922	11,238	14,560	9,392	6,628	9,554
Duta Pertiwi nusantara Tbk	DPNS	10,661	10,976	11,837	14,500	11,903	14,524	16,330

**Appendix 8:
SELLING, GENERAL & ADMINISTRATIVE COSTS OF MANUFACTURING COMPANIES 1998-2004**

Manufacturing Companies	CODE	1998	1999	2000	2001	2002	2003	2004
Daya Sakti Unggul Corporation	DSUC	110,022	95,423	93,147	115,759	106,741	118,965	110,191
Darya-Varia Laboratoria Tbk	DVLA	82,546	116,406	150,262	174,097	197,223	179,890	203,323
Dynaplast Tbk	DYNA	12,938	18,941	31,835	34,549	45,674	68,634	72,884
Ekadharna Tape Industries Tbk	EKAD	10,487	9,692	8,427	9,090	10,853	14,032	12,327
Eratex Djaja Limited Tbk	ERTX	47,187	43,277	44,232	55,120	57,163	60,704	47,283
Ever Shine Textile Industry Tbk	ESTI	22,760	23,131	24,970	28,838	27,294	25,158	30,969
Eterindo Wahanatama Tbk	ETWA	150,646	74,640	124,519	127,866	132,074	41,618	8,521
Fast Food Indonesia Tbk	FAST	114,768	148,603	188,179	286,598	377,755	433,997	488,449
Fajar Surya Wisesa Tbk	FASW	176,296	125,357	108,168	138,231	104,551	90,141	101,755
Fortune Mate Indoensia Tbk	FMI	8,949	7,870	4,609	7,903	5,798	5,769	3,203
Fatrapindo Nusa Industri Tbk	FPNI	x	6,421	9,789	11,398	13,872	15,403	16,744
Kasogi International Tbk	GDWU	27,320	20,605	20,273	18,415	19,216	15,098	6,638
Goodyear Indonesia Tbk	GDYR	27,405	23,339	33,075	40,226	36,899	39,512	50,479
Gudang Garam Tbk	GGRM	652,500	738,891	872,798	1,061,021	1,376,047	1,591,099	1,916,005
Gajah Tunggal Tbk	GJTL	262,269	303,819	361,658	424,030	496,789	648,114	440,611
Great River International Tbk	GRIV	151,903	183,698	204,216	110,066	144,718	784,411	70,423
Panasia Indosyntec Tbk	HDTX	146,476	95,262	114,711	103,683	100,037	74,595	73,511
Hexindo Adiperkasa Tbk	HEXA	64,806	54,170	81,845	88,652	79,254	98,859	114,619
Hanjaya Mandala Sampoerna	HMSP	469,291	738,192	1,044,750	1,419,867	1,883,940	2,129,788	2,623,446
Igarjaya Tbk	IGAR	8,467	11,612	14,315	19,939	30,036	28,355	25,137
Intikramik Alamasri Industri	IKAI	24,269	28,420	32,929	36,168	39,531	38,307	36,926
Sumi Indo Kabel Tbk	IKBI	18,091	11,248	11,988	21,750	22,337	38,491	34,105
Indomobil Sukses International	IMAS	268,507	237,784	412,628	637,994	838,105	326,597	454,494
Indofarma Tbk	INAF	32,264	56,137	89,470	131,460	175,419	185,325	165,928
Indal Aluminium Industry Tbk	INAI	16,352	21,072	25,169	38,465	32,486	32,521	30,303
Intan Wijaya Internasional Tbk	INCI	10,338	9,132	9,752	10,893	12,802	14,278	16,197
Indofood Sukses Makmur Tbk	INDF	974,544	1,396,690	1,344,312	1,834,063	2,187,416	2,457,262	2,507,501
Indorama Synthetics	INDR	220,945	213,568	316,481	312,520	237,069	244,693	271,845
Indospring Tbk	INDS	6,254	7,861	10,923	12,809	16,481	23,065	31,058
Indah Kiat Pulp & Paper	INKP	321,896	774,070	1,365,547	1,286,542	970,679	1,165,812	1,512,259
Intraco Penta Tbk	INTA	41,414	64,862	78,943	82,122	105,895	88,687	87,378
Inter Delta Tbk	INTD	18,043	18,377	21,648	20,546	19,738	17,453	14,136
Indocement Tunggal Prakasa	INTP	178,942	264,112	303,186	410,602	369,971	581,545	686,852
Itamaraya Gold Industry Tbk	ITMA	5,232	3,236	3,483	3,619	x	x	x

**Appendix 8:
SELLING, GENERAL & ADMINISTRATIVE COSTS OF MANUFACTURING COMPANIES 1998-2004**

Manufacturing Companies	CODE	1998	1999	2000	2001	2002	2003	2004
Jembo Cable Co. Tbk	JECC	23,249	14,447	12,307	24,313	31,650	27,262	37,446
Jakarta Kyoel Steel Works Ltd	JKSW	31,250	3,691	18,804	2,854	3,864	4,395	12,792
Jaya Pari Steel Tbk	JPRS	13,932	7,622	12,303	11,007	13,364	11,969	10,898
Wanaindah Busana/Jeewon	JWJI	1,803	779	810	x	x	x	x
Kimia Farma Tbk	KAEF	168,677	250,394	303,829	331,352	384,286	454,029	521,941
Karwell Indoensia Tbk	KARW	75,228	71,277	86,054	91,502	47,380	57,263	48,582
GT Kabel Indonesia Tbk	KBLI	27,305	24,987	27,289	33,707	43,783	36,143	31,256
Kabelindo Murni Tbk	KBLM	5,841	7,849	8,061	8,733	9,912	10,866	7,909
Kedawung Setia Industrial Tbk	KDSI	20,046	19,954	31,315	44,239	55,432	60,537	59,753
Keramika Indonesia Assosiasi	KIAS	48,429	32,327	31,916	36,895	44,976	51,351	x
Kedaung Indah Can Tbk	KICI	24,270	16,217	18,152	16,108	15,421	17,280	15,522
Kurnia Kapuas Utama Glue	KKGI	22,875	17,346	21,392	29,704	26,776	26,655	30,410
Kalbe Farma Tbk	KLBF	192,019	308,833	437,893	644,571	833,000	1,057,553	1,214,529
Komatsu Indonesia Tbk	KOMI	26,679	24,087	20,043	38,402	46,429	33,294	39,359
Perdana Bangun Pusaka Tbk	KONI	10,244	11,666	10,636	11,419	13,451	12,117	12,020
Lapindo Packaging Tbk	LAPD	1,386	1,673	1,339	2,073	2,484	3,505	3,937
Lion Metal Workds Tbk	LION	28,011	11,168	14,307	12,956	17,266	20,449	23,641
Langgeng Makmur Plastik	LMPI	15,442	18,649	20,248	26,903	30,823	33,944	34,515
Lion Mesh Prima tbk	LMSH	6,479	1,724	1,785	2,228	3,330	3,315	3,814
Multi Prima Sejahtera Tbk	LPIN	9,406	11,656	8,009	6,837	6,279	8,563	9,525
Lautan Luas Tbk	LTLS	74,157	100,389	117,856	139,745	152,047	183,230	228,389
Modern Photo film Company	MDRN	117,267	147,878	194,325	221,426	262,164	300,316	296,550
Merck Indonesia Tbk	MERK	32,400	41,229	53,151	65,550	81,219	112,348	128,958
Multi Bintang Indonesia Tbk	MLBI	44,555	77,047	86,445	108,042	134,926	166,789	205,280
Mulia Industrindo Tbk	MLIA	282,075	292,542	331,855	357,881	439,342	472,837	538,162
Multipolar Corporation Tbk	MLPL	781,578	62,375	49,391	52,051	65,200	68,626	534,938
Mustika Ratu Tbk	MIRAT	50,894	53,592	63,357	91,794	102,860	103,326	110,776
Metrodata Electronics Tbk	MTDL	48,660	46,154	77,639	102,290	109,002	103,181	109,653
Miwon Indonesia Tbk	MWON	55,490	58,934	65,614	66,576	x	x	x
Mayora Indah Tbk	MYOR	86,266	81,449	91,540	89,750	122,309	148,911	211,867
Hanson Industri Utama Tbk	MYRX	30,158	22,733	25,478	29,080	25,360	25,379	23,807
APAC Citra Centertex Tbk	MYTX	179,284	155,711	188,310	201,136	161,499	164,732	179,193
Nipress Tbk	NIPS	5,867	7,142	8,161	8,252	10,304	10,830	14,652
Panasia Filament Inti Tbk	PAFI	66,074	50,832	51,651	62,577	54,011	39,113	53,950

**Appendix 8:
SELLING, GENERAL & ADMINISTRATIVE COSTS OF MANUFACTURING COMPANIES 1998-2004**

Manufacturing Companies	CODE	1998	1999	2000	2001	2002	2003	2004
Pan Brothers Tex Tbk	PBRX	13,722	15,922	23,849	30,440	32,886	31,394	35,562
Procter & Gamble Indonesia	PGIN	103,124	83,762	65,016	77,653	x	x	x
Pelangi Indah Canindo Tbk	PICO	10,386	15,282	13,559	14,168	17,127	-18,184	-16,517
Plastpack Prima Industri Tbk	PLAS	11	30	1,084	3,705	2,993	2,885	x
Polysindo Eka Perkasa Tbk	POLY	572,989	326,987	373,738	568,465	518,218	299,795	143,394
Prima Alloy Steel Universal Tbk	PRAS	11,604	9,232	12,578	11,575	12,587	19,346	24,768
Prasidha Aneka Niaga Tbk	PSPN	98,444	69,524	41,244	38,292	32,474	27,770	28,828
Pioneerindo Gourmet	PTSP	61,617	56,038	69,352	78,969	85,003	89,083	90,498
Pyridam Farma Tbk	PYFA	x	6,826	11,797	10,845	13,636	15,141	18,308
Roda Vivatex Tbk	RDTX	35,951	23,444	23,251	26,861	19,693	18,477	17,562
Ricky Putra Globalindo Tbk	RICY	20,626	26,978	33,316	34,128	34,273	34,122	38,826
Ryane Adibusana Tbk	RYAN	x	4,462	7,486	12,115	11,947	9,827	6,449
Surabaya Agung Industry Pulp	SAIP	88,371	141,693	109,507	104,084	102,017	75,653	70,394
Supreme Cable Manufacturing	SCCO	52,254	28,617	26,009	32,583	36,235	49,739	50,895
Schering-Plough Indonesia	SCPI	27,245	34,892	29,971	32,775	35,174	36,529	48,068
Sari Husada Tbk	SHDA	34,207	53,942	63,627	88,076	125,842	189,622	321,126
Siwani Makmur Tbk	SIMA	3,468	4,031	6,740	8,443	7,891	7,117	8,023
Surya Intrindo Makmur Tbk	SIMM	7,745	6,146	6,720	13,599	7,610	7,727	7,470
Sierad Produce Tbk	SIPD	160,520	98,735	95,309	98,372	110,858	114,018	138,694
Sekar Laut Tbk	SKLT	29,016	31,187	35,145	35,681	31,929	32,646	31,556
Sinar Mas Agro Resources and	SMAR	210,126	156,901	159,657	217,366	276,741	294,317	332,614
Semen Cibinong Tbk	SMCB	82,761	74,249	177,152	190,149	212,560	238,362	241,571
Semen Gresik (Persero) Tbk	SMGR	407,315	436,400	611,877	816,577	881,148	963,938	1,104,434
Summiplast Interbenua Tbk	SMPL	4,714	5,933	8,539	10,788	9,857	10,090	11,959
Selamat Sempurna Tbk	SMSM	40,377	35,374	47,890	53,051	57,726	64,292	69,841
Sorini Corporation Tbk	SOBI	53,795	43,124	48,185	68,955	67,553	67,842	88,380
Suparma Tbk	SPMA	21,580	26,003	23,529	28,762	28,162	32,099	36,217
Bristol-Myers Squibb Indonesia	SQBI	33,682	43,103	45,858	58,459	63,865	60,638	66,776
Sarasa Nugraha Tbk	SRSN	45,354	36,707	30,760	29,033	30,448	31,326	18,582
Sunson Textile Manufacture Tbk	SSTM	38,851	34,222	34,222	36,811	29,321	39,991	34,114
Siantar TOP Tbk	STTP	13,366	22,597	45,790	48,619	75,991	77,302	73,471
Suba Indah Tbk	SUBA	19,202	15,522	22,483	45,625	36,678	46,605	35,760
Surya Dumai Industri Tbk	SUDI	52,817	40,789	34,075	55,014	40,811	49,140	32,395
Sugi Samapersada Tbk	SUGI	x	1,787	1,351	4,609	5,558	6,035	7,196

Appendix 8:
SELLING, GENERAL & ADMINISTRATIVE COSTS OF MANUFACTURING COMPANIES 1998-2004

Manufacturing Companies	CODE	1998	1999	2000	2001	2002	2003	2004
Sumalindo Lestari Jaya Tbk	SULI	41,407	48,838	60,037	69,419	79,490	63,410	73,242
Tunas Baru Lampung Tbk	TBLA	65,878	26,602	19,873	29,596	64,736	67,623	94,446
Tembaga Mulia Semanan Tbk	TBMS	16,461	20,303	22,729	28,418	34,658	34,477	38,320
Mandom Indonesia Tbk (Tancho	TCID	46,171	74,636	86,139	102,850	137,840	159,358	193,221
Textile Manufacturing Company	TEJA	167,575	139,090	153,883	199,084	159,118	126,917	57,785
Teijin Fiber Indonesia/Tifico	TFCO	60,105	16,520	41,090	45,700	62,708	62,203	83,976
Tira Austenite Tbk	TIRA	21,662	25,980	30,520	34,448	34,421	75,106	46,086
Tirta Mahakam Plywood	TIRT	6,630	7,708	11,747	17,470	20,871	23,943	37,207
Pabrik Kertas Tjiwi Kimia Tbk	TKIM	616,713	695,211	1,186,038	1,370,734	873,292	949,357	1,098,235
Surya Toto Indonesia Tbk	TOTO	33,597	31,926	46,759	64,000	61,839	58,796	65,804
Texmaco Perkasa Engineering	TPEN	49,274	60,686	39,182	72,476	57,658	26,487	x
Tri Polyta Indonesia Tbk	TPIA	57,513	59,279	91,904	123,788	x	x	x
Multi Agro Persada Tbk	TRPK	16,764	14,836	13,103	23,760	12,297	17,273	x
Trias Sentosa Tbk	TRST	22,942	24,822	34,256	46,108	51,435	57,601	67,187
Tempo Scan Pacific Tbk	TSPC	197,958	263,875	320,450	478,738	483,632	586,743	684,173
Tunas Ridean Tbk	TURI	30,096	37,600	57,000	88,700	99,437	110,222	166,351
Wahana Jaya Perkasa Tbk	UGAR	6,385	9,886	10,029	23,715	15,657	7,901	x
Ultra Jaya Milk Industry and	ULTJ	21,625	26,091	29,518	42,037	66,268	73,630	87,912
Unggul Indah Corporation	UNIC	41,407	54,223	71,394	78,976	83,267	173,250	212,588
United Tractors Tbk	UNTR	359,344	260,747	334,338	486,081	455,023	459,252	598,883
Unilever Indonesia Tbk	UNVR	625,611	1,019,589	1,258,157	1,612,913	2,053,313	2,440,049	2,630,295
Voksel Electric Tbk	VOKS	24,588	23,320	27,144	38,366	44,143	37,832	43,787

Appendix 9:
NET SALES OF MANUFACTURING COMPANIES 1998-2004

Manufacturing Companies	CODE	1998	1999	2000	2001	2002	2003	2004
Andhi Chandra Automotive Products	ACAP	43,134	64,434	115,195	153,595	128,412	142,698	188,190
Ades Alfindo Putrasetia Tbk	ADES	69,643	76,420	108,997	123,206	148,456	168,936	125,554
GT Petrochem Industries Tbk	ADMG	1,891,027	1,992,778	3,030,328	3,370,837	2,935,694	3,059,049	4,481,624
Asia Intiseleria Tbk	AISA	93,878	73,202	71,088	57,533	133,145	167,420	228,437
Argha Karya Prima Industry Tbk	AKPI	744,707	583,363	743,609	944,731	918,538	844,712	946,877
Aneka Kimia Raya Tbk	AKRA	995,810	1,058,868	1,257,015	1,455,125	1,288,511	1,844,699	2,187,493
Alakasa Industrindo Tbk	ALKA	30,308	145,716	292,880	423,443	238,774	337,003	600,895
Alumindo Light Metal Industry Tbk	ALMI	858,124	879,685	993,746	1,149,580	963,364	1,065,729	1,330,224
Asahimas Flat Glass Co Ltd Tbk	AMFG	706,989	786,478	1,029,053	1,226,821	1,294,284	1,357,378	1,457,267
Asioplast Industries Tbk	APLI	19,925	77,292	139,600	156,877	177,912	169,063	241,690
Aqua Golden Mississippi	AQUA	360,546	410,793	550,584	793,652	220,765	269,724	354,497
Argo Panties Tbk	ARGO	1,510,996	1,084,571	1,089,820	1,202,077	1,033,464	1,028,794	982,371
Arwana Citra Mulia Tbk	ARNA	x	76,669	92,243	115,439	165,082	193,249	216,957
Astra Graphia Tbk	ASGR	1,298,488	1,340,300	634,622	713,680	829,468	446,339	472,267
Astra International Tbk	ASII	10,208,268	14,315,250	28,403,770	30,122,723	30,685,033	31,512,954	44,344,672
Astra Otoparts Tbk	AUTO	1,237,181	1,560,279	2,101,172	2,097,454	2,063,493	2,151,505	2,924,581
Sepatu Bata Tbk	BATA	181,348	286,722	368,042	407,232	210,082	232,263	262,535
BAT Indonesia Tbk	BATI	858,342	1,015,354	874,202	713,986	743,855	501,188	573,426
Primarindo Asia Infrastructure Tbk	BIMA	375,823	376,473	455,195	357,377	141,851	18,612	24,967
Branta Mulia Tbk	BRAM	887,110	747,436	1,215,328	1,334,884	1,304,368	1,235,082	1,472,678
Berlina Co Ltd Tbk	BRNA	90,122	116,377	156,837	211,670	225,911	214,496	267,546
Barito Pacific Timber Tbk	BRPT	1,929,206	1,595,016	1,410,630	1,600,691	2,259,386	1,871,209	1,278,060
Betonjaya Manunggal Tbk	BTON	25,181	17,925	16,494	18,284	20,443	18,543	45,812
Budi Acid Jaya Tbk	BUDI	791,638	734,295	690,061	823,660	771,989	634,118	929,548
Bayer Indonesia Tbk	BYSB	556,465	669,380	622,851	972,671	1,089,902	x	x
Cahaya Kalbar Tbk	CEKA	231,291	226,625	169,797	149,108	172,968	180,498	167,612
Colorpak Indonesia Tbk	CLPI	x	37,868	41,827	58,721	50,456	55,878	117,215
Century Textile Industry (Centex) Tbk	CNTX	276,478	215,324	256,761	260,589	260,589	183,202	203,396
Citra Tubindo Tbk	CTBN	315,373	160,382	207,189	406,726	375,935	616,000	670,591
Davomas Abadi Tbk	DAVO	555,188	504,673	460,595	507,823	600,501	854,967	1,032,178
Deita Djakarta Tbk	DLTA	156,188	211,618	259,053	306,073	277,637	302,646	353,481
Dankos Laboratories Tbk	DNKS	214,690	376,030	531,845	763,624	1,065,422	1,191,273	1,361,327
Daeyu Orchid Indonesia Tbk	DOID	72,906	44,848	58,473	89,631	71,816	81,189	311,638
Duta Pertiwi nusantara Tbk	DPNS	97,592	54,722	63,799	79,163	58,302	69,775	75,717

Appendix 9:
NET SALES OF MANUFACTURING COMPANIES 1998-2004

Manufacturing Companies	CODE	1998	1999	2000	2001	2002	2003	2004
Daya Sakti Unggul Corporation Tbk	DSUC	570,511	555,586	546,227	600,323	542,943	506,117	521,462
Darya-Varia Laboratoria Tbk	DVLA	288,075	355,364	430,701	511,996	549,020	390,346	426,796
Dynaplast Tbk	DYNA	149,914	196,813	307,882	383,641	446,215	589,328	741,447
Ekadharna Tape Industries Tbk	EKAD	104,082	92,973	82,040	80,344	75,449	81,874	79,596
Eratex Djaja Limited Tbk	ERTX	474,453	347,991	451,287	500,693	363,803	391,008	426,083
Ever Shine Textile Industry Tbk	ESTI	474,630	496,912	535,760	529,779	417,869	376,682	487,609
Eterindo Wahanatama Tbk	ETWA	833,193	1,108,740	1,226,461	1,211,278	1,324,472	545,465	106,851
Fast Food Indonesia Tbk	FAST	250,249	349,450	422,698	593,904	715,230	795,290	889,423
Fajar Surya Wisesa Tbk	FASW	1,047,522	1,025,098	1,262,702	1,180,203	1,174,066	1,207,859	1,427,031
Fortune Mate Indoensia Tbk	FMI	412,121	260,997	332,605	386,343	368,609	297,790	40,934
Fatraplindo Nusa Industri Tbk	FPNI	x	132,713	193,739	210,837	216,291	150,573	157,937
Kasogi International Tbk	GDWU	267,349	139,367	103,544	95,064	87,742	65,899	30,303
Goodyear Indonesia Tbk	GDYR	519,807	535,114	515,664	593,046	563,247	589,194	767,891
Gudang Garam Tbk	GGRM	9,973,172	12,694,605	14,964,674	17,970,450	20,939,084	23,137,376	24,291,692
Gajah Tunggal Tbk	GJTL	3,668,475	3,969,842	5,078,432	5,742,120	5,560,902	5,729,506	6,607,579
Great River International Tbk	GRIV	296,757	476,749	623,186	646,610	423,775	354,114	327,823
Panasia Indosyntec Tbk	HDTX	1,217,431	1,077,444	1,264,525	1,309,066	1,164,127	978,309	1,073,768
Hexindo Adiperkasa Tbk	HEXA	467,809	349,929	388,375	489,128	507,874	661,909	995,576
Hanjaya Mandala Sampoerna Tbk	HMSP	4,649,400	7,412,032	10,029,401	14,066,515	15,126,664	14,675,125	17,646,694
Igariaya Tbk	IGAR	157,301	229,194	289,378	329,410	390,586	365,639	375,207
Intikeramik Alamasri Industri Tbk	IKAI	120,683	100,650	144,542	183,861	189,071	187,813	223,074
Sumi Indo Kabel Tbk	IKBI	394,285	305,245	554,466	701,060	560,318	582,244	976,070
Indomobil Sukses International Tbk	IMAS	1,721,049	1,984,240	5,039,562	7,469,124	9,194,778	2,700,902	4,289,959
Indofarma Tbk	INAF	254,136	392,025	493,371	615,426	687,984	498,206	689,522
Indal Aluminium Industry Tbk	INAL	201,134	209,689	247,435	348,742	287,290	313,861	470,542
Intan Wijaya Internasional Tbk	INCI	90,295	91,722	79,187	100,389	84,970	147,258	158,640
Indofood Sukses Makmur Tbk	INDF	8,834,356	11,548,599	12,702,239	14,644,598	16,466,285	17,871,425	17,918,528
Indorama Synthetics	INDR	1,992,509	2,027,313	3,250,959	3,320,366	2,834,827	3,008,771	3,936,841
Indospring Tbk	INDS	36,274	77,356	145,603	191,955	213,598	216,172	304,887
Indah Kiat Pulp & Paper Corporation	INKP	8,222,595	9,274,645	14,829,332	11,442,373	10,719,519	11,368,242	13,302,226
Intraco Penta Tbk	INTA	196,659	258,767	318,487	546,599	499,447	471,862	701,756
Inter Delta Tbk	INTD	99,627	117,957	105,706	102,004	71,685	72,258	78,738
Indocement Tunggal Prakasa Tbk	INTP	1,589,882	1,758,966	2,447,973	3,453,411	3,948,283	4,157,683	4,615,507
Itamaraya Gold Industry Tbk	ITMA	658,790	65,741	39,848	17,604	x	x	x

Appendix 9:
NET SALES OF MANUFACTURING COMPANIES 1998-2004

	CODE	1998	1999	2000	2001	2002	2003	2004
Manufacturing Companies								
Jembo Cable Co. Tbk	JECC	248,695	147,232	161,358	291,407	258,271	282,031	360,916
Jakarta Kyoel Steel Works Ltd Tbk	JKSW	148,724	51,063	17,439	30,476	189,413	105,893	87,332
Jaya Pari Steel Tbk	JPRS	117,839	87,880	126,722	94,887	253,037	247,886	379,928
Wanaindah Busana/Jeewon Jaya	JWJI	7,747	4,394	x	x	x	x	x
Kimia Farma Tbk	KAEF	783,685	1,059,115	1,517,153	1,409,567	1,538,712	1,816,381	1,925,990
Karwell Indoensia Tbk	KARW	1,155,340	781,564	914,367	848,606	540,637	525,007	583,340
GT Kabel Indonesia Tbk	KBLI	217,147	185,041	222,492	333,100	360,956	339,367	412,333
Kabelindo Murni Tbk	KBLM	62,797	40,209	33,910	63,058	86,602	91,970	125,616
Kedawung Setia Industrial Tbk	KDSI	200,807	239,914	432,146	436,461	513,094	498,553	542,754
Keramika Indonesia Asosiasi Tbk	KIAS	86,509	106,010	147,358	198,370	211,247	184,470	x
Kedaung Indah Can Tbk	KICI	161,904	121,659	127,806	117,678	105,784	84,274	87,921
Kurnia Kapuas Utama Glue	KKGI	258,358	158,596	171,451	185,836	172,152	153,406	157,568
Kalbe Farma Tbk	KLBF	725,103	1,119,238	1,561,839	2,046,499	2,561,802	2,889,209	3,413,997
Komatsu Indonesia Tbk	KOMI	459,601	549,606	862,349	615,893	872,145	789,753	1,682,159
Perdana Bangun Pustaka Tbk	KONI	55,290	47,506	53,483	50,144	51,045	57,632	59,092
Lapindo Packaging Tbk	LAPD	11,539	11,086	14,278	21,086	24,550	58,574	91,161
Lion Metal Works Tbk	LION	46,236	41,381	59,093	66,834	83,535	87,997	111,114
Langgeng Makmur Plastik Industry	LMPI	94,236	133,224	185,538	212,864	223,731	244,432	237,296
Lion Mesh Prima Tbk	LMSH	24,401	27,873	43,220	50,627	57,462	65,106	89,238
Multi Prima Sejahtera Tbk	LPIN	44,289	86,361	362,323	38,149	34,706	28,865	38,762
Lautan Luas Tbk	LTLS	600,408	636,978	820,805	1,039,517	1,113,638	1,258,443	1,705,580
Modern Photo film Company Tbk	MDRN	1,946,391	1,520,683	1,733,728	1,912,996	1,856,934	1,694,243	1,640,723
Merck Indonesia Tbk	MERK	94,245	125,831	183,810	224,074	220,918	296,320	373,341
Multi Bintang Indonesia Tbk	MLBI	299,772	407,248	508,249	569,921	542,394	562,852	710,911
Mulia Industrindo Tbk	MLIA	1,077,045	1,389,092	1,778,483	2,154,037	2,181,700	2,156,267	2,571,695
Multipolar Corporation Tbk	MLPL	163,910	239,885	375,884	578,863	501,441	594,388	2,506,936
Mustika Ratu Tbk	MRAT	108,044	150,957	194,280	228,226	252,977	229,779	243,879
Metrodata Electronics Tbk	MTDL	494,292	676,724	867,641	1,139,133	994,803	944,300	1,260,770
Miwon Indonesia Tbk	MWON	542,910	526,579	514,969	630,792	x	x	x
Mayora Indah Tbk	MYOR	446,199	544,110	684,558	833,977	998,557	1,103,893	1,378,127
Hanson Industri Utama Tbk	MYRX	349,632	351,820	305,964	314,677	247,004	298,008	365,186
APAC Citra Centerflex Tbk	MYTX	1,791,812	1,553,675	1,967,394	2,164,638	1,955,031	1,912,468	2,165,991
Nipress Tbk	NIPS	74,132	76,801	87,878	100,583	123,098	121,839	168,201
Panasia Filament Inti Tbk	PAFI	640,266	614,850	637,662	659,422	559,865	371,625	403,333

Appendix 9:
NET SALES OF MANUFACTURING COMPANIES 1998-2004

Manufacturing Companies	CODE	1998	1999	2000	2001	2002	2003	2004
Pan Brothers Tex Tbk	PBRX	157,986	167,697	241,769	287,978	300,118	264,225	307,709
Procter & Gamble Indonesia Tbk	PGIN	207,427	368,387	457,852	524,820	429,762	x	x
Pelangi Indah Canindo Tbk	PICO	107,479	163,300	153,027	151,454	158,595	159,354	175,579
Plastpack Prima Industri Tbk	PLAS	195	1,456	18,343	63,017	72,991	53,569	x
Polysindo Eka Perkasa Tbk	POLY	3,681,776	2,352,934	3,301,165	4,012,064	3,795,935	1,590,012	1,341,276
Prima Alloy Steel Universal Tbk	PRAS	172,746	154,993	175,005	179,846	192,471	391,433	541,705
Prasidha Aneka Niaga Tbk	PSPN	1,832,663	1,183,420	1,083,057	326,991	384,709	90,051	209,990
Pioneerindo Gourmet International	PTSP	98,651	114,369	137,219	154,134	160,930	153,305	160,100
Pyridam Farma Tbk	PYFA	x	12,772	20,945	29,227	24,629	27,256	33,969
Roda Vivatex Tbk	RDTX	298,086	244,329	199,322	215,179	196,859	178,586	178,585
Ricky Putra Globalindo Tbk	RICY	247,916	252,411	269,217	274,098	234,902	207,634	222,256
Ryane Adbusana Tbk	RYAN	x	19,390	26,924	42,719	40,276	26,678	7,203
Surabaya Agung Industry Pulp Tbk	SAIP	655,700	622,956	634,730	634,852	499,491	355,860	293,451
Supreme Cable Manufacturing	SCCO	293,515	312,833	461,666	648,626	543,557	647,473	991,690
Schering-Plough Indonesia	SCPI	61,634	81,722	89,004	101,558	109,625	117,435	112,005
Sari Husada Tbk	SHDA	240,977	428,771	585,404	932,942	1,021,851	1,100,131	1,235,159
Siwani Makmur Tbk	SIMA	32,224	37,483	67,042	76,730	69,223	66,890	76,519
Surya Intrindo Makmur Tbk	SIMM	95,908	136,428	153,106	215,106	136,540	107,831	93,136
Sierad Produce Tbk	SIPD	5,571,682	768,872	1,040,937	1,307,868	1,315,702	1,126,708	1,353,621
Sekar Laut Tbk	SKLT	133,121	156,875	173,669	175,277	158,329	151,518	137,754
Sinar Mas Agro Resources and	SMAR	2,646,699	2,954,137	2,413,379	2,294,285	3,078,926	3,332,321	4,274,569
Semen Cibinong Tbk	SMCB	880,274	1,188,516	1,492,369	1,804,568	1,978,932	2,240,296	2,368,489
Semen Gresik (Persero) Tbk	SMGR	2,314,802	3,091,660	3,596,410	4,659,202	5,177,543	5,449,941	6,067,558
Summiplast Interbenua Tbk	SMPL	156,191	130,232	170,341	149,466	123,085	155,413	213,726
Selamat Sempurna Tbk	SMSM	349,561	359,362	502,848	565,090	603,355	637,589	730,962
Sorini Corporation Tbk	SOBI	424,275	368,404	432,322	538,734	533,432	491,078	575,684
Suparman Tbk	SPMA	385,339	407,747	458,326	454,780	409,351	470,197	546,499
Bristol-Myers Squibb Indonesia Tbk	SQBI	73,653	116,853	138,526	175,173	205,623	197,493	221,595
Sarasa Nugraha Tbk	SRSN	310,385	251,424	338,788	319,974	268,952	221,057	181,225
Sunson Textile Manufacture Tbk	SSTM	503,464	450,568	533,298	588,805	507,144	526,184	548,070
Siantar TOP Tbk	STTP	158,681	236,196	375,783	518,463	627,774	701,077	712,558
Suba Indah	SUBA	52,919	66,949	94,321	139,116	112,635	443,115	429,440
Surya Dumai Industri Tbk	SUDI	677,535	627,104	556,175	495,363	521,818	338,222	288,517
Sugi Samapersada Tbk	SUGI	x	8,669	61,600	63,302	64,944	67,029	58,955

Appendix 9:
NET SALES OF MANUFACTURING COMPANIES 1998-2004

	CODE	1998	1999	2000	2001	2002	2003	2004
Manufacturing Companies								
Sumalindo Lestari Jaya Tbk	SULI	766,452	788,106	838,128	887,610	802,991	689,508	773,559
Tunas Baru Lampung Tbk	TBLA	663,068	696,310	666,676	614,998	626,649	715,576	1,191,010
Tembaga Mulia Sermanan Tbk	TBMS	414,815	519,137	763,549	1,039,916	953,103	1,020,375	1,823,215
Mandom Indonesia Tbk (Tancho	TCID	261,264	372,238	465,547	527,633	582,748	637,156	800,612
Textile Manufacturing Company Jaya	TEJA	1,501,367	878,644	827,528	842,957	684,701	424,275	140,703
Teijin Indonesia Fiber (Tifico)	TFCO	996,067	655,991	1,588,786	1,791,527	1,578,767	1,946,954	2,590,237
Tira Austenite Tbk	TIRA	85,947	72,810	83,505	103,700	96,956	224,717	118,567
Tirta Mahakam Plywood Industry Tbk	TIRT	172,309	266,143	320,457	383,921	380,400	407,594	748,865
Pabrik Kertas Tjiwi Kimia Tbk	TKIM	4,482,876	6,164,603	7,954,668	7,388,342	6,967,555	7,350,096	8,422,216
Surya Toto Indonesia Tbk	TOTO	233,815	212,048	330,990	417,620	414,704	469,829	570,863
Texmaco Perkasa Engineering Tbk	TPEN	732,797	203,030	141,329	78,110	105,128	26,560	x
Tri Polyta Indonesia Tbk	TPIA	1,088,357	1,134,115	1,631,802	1,662,191	x	x	x
Multi Agro Persada Tbk (Trafindo	TRPK	35,464	19,262	37,315	272,472	281,614	528,783	x
Trias Sentosa Tbk	TRST	427,347	417,488	567,194	764,069	781,636	793,395	903,095
Tempo Scan Pacific Tbk	TSPC	888,999	1,331,508	1,451,646	1,785,230	1,959,435	2,124,162	2,371,553
Tunas Ridean Tbk	TURI	455,186	734,244	2,063,187	2,350,738	2,444,867	2,700,370	3,357,708
Wahana Jaya Perkasa Tbk	UGAR	228,394	172,499	191,064	195,012	191,691	90,781	x
Ultra Jaya Milk Industry and Trading	ULTJ	188,891	255,032	323,527	478,403	408,794	490,632	546,325
Unggul Indah Corporation	UNIC	1,247,740	1,137,216	1,603,750	1,880,269	1,540,879	2,119,267	2,776,817
United Tractors Tbk	UNTR	3,682,936	3,828,048	5,193,532	7,058,396	6,881,887	6,872,808	8,895,977
Unilever Indonesia Tbk	UNVR	3,146,717	4,167,393	4,870,972	6,012,611	7,015,181	8,123,625	8,904,822
Voksel Electric Tbk	VOKS	302,809	288,176	360,570	432,771	516,063	426,897	592,258



Appendix 10:
TOTAL ASSET OF MANUFACTURING COMPANIES 1998-2004

Manufacturing Companies	CODE	1998	1999	2000	2001	2002	2003	2004
Andhi Chandra Automotive	ACAP	31,897	45,698	126,758	137,165	138,463	147,905	144,933
Ades Alfindo Putra Setia Tbk	ADES	298,836	250,455	219,761	207,358	206,917	192,043	102,977
GT Petrochem Industries Tbk	ADMG	6,780,364	6,536,022	7,848,169	7,457,946	6,637,499	6,239,217	4,549,288
Asia Intiselerata Tbk	AISA	182,488	177,122	130,214	113,816	337,570	339,919	372,438
Argha Karya Prima Industry Tbk	AKPI	1,723,911	1,551,397	1,792,002	1,803,651	1,571,672	1,355,389	1,425,757
Aneka Kimia Raya Tbk	AKRA	896,019	935,727	1,045,268	623,789	614,832	1,559,867	1,690,251
Alakasa Industrindo Tbk	ALKA	100,419	96,588	203,560	138,128	33,402	67,646	83,834
Alumindo Light Metal Industry	ALMI	616,598	874,628	1,126,381	1,049,057	976,142	1,008,173	931,927
Asahimas Flat Glass Co Ltd Tbk	AMFG	1,833,968	1,679,350	1,689,159	1,807,946	1,378,137	1,486,587	1,564,031
Asiaplast Industries Tbk	APLI	102,088	175,151	220,377	233,600	282,217	293,099	309,088
Aqua Golden Mississippi	AQUA	176,127	216,845	341,018	513,597	536,787	523,302	671,109
Argo Pantas Tbk	ARGO	2,703,471	2,430,372	2,640,790	2,711,375	2,265,174	2,125,970	1,759,150
Arwana Citra Mulia Tbk	ARNA	x	132,006	177,419	221,095	246,532	248,100	295,971
Astra Graphia Tbk	ASGR	1,343,044	875,000	848,355	414,419	722,881	704,664	571,015
Astra International Tbk	ASII	24,025,988	22,203,518	27,422,744	26,573,546	26,185,605	27,404,308	39,145,053
Astra Otoparts Tbk	AUTO	1,387,336	1,410,261	1,767,778	1,767,868	1,831,509	1,957,303	2,436,481
Sepatu Bata Tbk	BATA	119,722	151,714	207,844	222,913	411,028	408,805	440,925
BAT Indonesia Tbk	BATI	807,107	874,736	812,466	730,886	696,440	648,344	696,241
Primarindo Asia Infrastructure	BIMA	193,442	182,023	204,775	181,790	98,265	83,086	80,841
Branta Mulia Tbk	BRAM	1,427,868	1,411,528	1,914,397	1,809,573	1,641,446	1,543,441	1,710,352
Berlina Co Ltd Tbk	BRNA	109,137	117,907	164,391	211,662	259,311	266,556	406,984
Barito Pacific Timber Tbk	BRPT	6,120,406	5,790,663	6,688,783	6,520,276	6,783,881	3,317,768	3,348,386
Betonjaya Manunggal Tbk	BTON	14,693	17,045	25,488	32,925	25,123	23,461	28,780
Budi Acid Jaya Tbk	BUDI	802,698	875,726	985,467	1,002,993	931,900	927,249	940,868
Bayer Indonesia Tbk	BYSB	266,217	295,670	297,004	537,562	649,833	x	x
Cahaya Kalbar Tbk	CEKA	306,307	288,811	278,194	304,291	300,442	295,249	290,337
Colopak Indonesia Tbk	CLPI	x	14,148	19,473	48,901	53,751	59,004	82,470
Century Textile Industry	CNTX	170,185	171,523	210,418	245,095	245,095	264,471	309,683
Citra Tubindo Tbk	CTBN	512,046	562,842	634,823	715,015	668,554	655,324	650,562
Davomas Abadi Tbk	DAVO	430,088	577,464	599,441	764,624	791,797	894,073	1,577,951
Delta Djakarta Tbk	DLTA	318,963	305,625	386,063	346,404	367,804	398,857	455,117
Dankos Laboratories Tbk	DNKS	422,991	402,164	481,812	568,511	660,949	826,778	1,050,887
Daeyu Orchid Indonesia Tbk	DOID	16,534	18,334	27,882	39,630	40,856	40,092	830,457
Duta Pertiwi nusantara Tbk	DPNS	103,759	108,105	137,239	131,619	125,604	138,442	150,358

Appendix 10:
TOTAL ASSET OF MANUFACTURING COMPANIES 1998-2004

Manufacturing Companies	CODE	1998	1999	2000	2001	2002	2003	2004
Daya Sakti Unggul Corporation	DSUC	418,504	411,384	424,158	388,037	392,037	413,365	415,115
Darya-Varia Laboratoria Tbk	DVLA	367,722	342,027	376,278	300,440	322,922	375,386	431,174
Dynaplast Tbk	DYNA	292,393	303,730	402,782	480,699	526,788	766,930	998,118
Ekadharna Tape Industries Tbk	EKAD	54,262	54,736	58,399	59,710	58,300	60,825	63,086
Eratex Djaja Limited Tbk	ERTX	357,115	346,693	514,877	458,983	418,678	290,042	298,389
Ever Shine Textile Industry Tbk	ESTI	755,603	723,492	802,911	741,159	664,935	574,093	543,566
Eterindo Wahanatama Tbk	ETWA	2,150,379	2,480,816	2,853,652	3,261,165	2,928,341	439,997	489,392
Fast Food Indonesia Tbk	FASW	128,626	134,848	186,774	210,261	244,381	280,571	322,647
Fajar Surya Wisesa Tbk	FMIJ	3,348,763	3,256,736	3,166,878	2,821,062	2,720,840	2,627,238	2,628,415
Fortune Mate Indoensia Tbk	FPNI	91,477	176,188	250,405	231,590	220,794	185,443	98,992
Fatraplindo Nusa Industri Tbk	GDWU	x	168,687	224,729	230,962	240,295	360,226	365,693
Kasogi International Tbk	GDYR	422,285	270,421	241,826	200,856	158,941	96,529	91,652
Goodyear Indonesia Tbk	GGRM	324,498	348,003	406,151	390,074	384,872	392,263	440,841
Gudang Garam Tbk	GJTL	6,532,916	8,076,916	10,843,195	13,448,124	15,452,703	17,338,899	20,591,389
Gajah Tunggal Tbk	GRIV	12,408,863	12,256,568	14,893,153	15,130,837	12,457,376	12,173,255	6,341,117
Great River International Tbk	HDTX	1,163,020	1,253,874	1,674,716	1,248,281	987,026	1,089,263	1,200,646
Panasia Indosyntec Tbk	HEXA	2,236,603	2,219,808	2,365,686	2,300,305	2,010,353	1,863,039	1,113,478
Hexindo Adiperkasa Tbk	HMSP	444,734	367,943	400,638	569,402	638,784	584,512	636,106
Hanjaya Mandala Sampoerna Igarjaya Tbk	IGAR	5,223,614	6,492,685	8,524,815	9,470,540	9,817,074	10,197,768	11,563,295
Intikramik Alamasri Industri	IKAI	150,188	171,039	228,645	250,481	237,577	236,244	283,462
Sumi Indo Kabel Tbk	IKBI	764,123	1,035,524	1,010,551	923,679	812,188	741,492	751,317
Indomobil Sukses International	IMAS	339,546	349,564	392,160	393,043	404,556	369,799	445,145
Indofarma Tbk	INAF	4,512,165	1,904,018	3,531,135	2,575,125	2,302,687	2,807,817	3,422,524
Indal Aluminium Industry Tbk	INAI	477,652	486,390	538,173	811,625	810,028	629,217	523,923
Intan Wijaya Internasional Tbk	INCI	220,415	226,812	259,436	267,093	300,555	316,919	406,708
Indofood Sukses Makmur Tbk	INDF	111,607	117,833	151,811	162,305	164,060	169,119	179,910
Indorama Synthetics	INDR	11,086,191	10,637,680	12,554,630	12,979,102	15,251,516	15,308,854	15,669,008
Indospring Tbk	INDS	4,267,001	4,125,256	5,541,400	5,694,957	4,837,748	4,530,168	4,937,424
Indah Kiat Pulp & Paper	INKP	207,154	214,651	242,964	277,596	282,378	273,677	351,140
Intraco Penta Tbk	INTA	39,846,052	42,504,739	56,635,620	58,275,211	49,559,865	46,066,234	50,295,008
Inter Delta Tbk	INTD	484,224	399,854	518,209	713,550	670,556	651,566	780,040
Indocement Tunggal Prakasa	INTP	73,985	72,796	75,963	57,165	40,716	35,136	33,435
Itamaraya Gold Industry Tbk	ITMA	9,649,676	9,859,534	11,649,037	930,019	11,437,523	10,145,066	9,771,012
		64,636	67,158	64,211	56,961	x	x	x

**Appendix 10:
TOTAL ASSET OF MANUFACTURING COMPANIES 1998-2004**

Manufacturing Companies	CODE	1998	1999	2000	2001	2002	2003	2004
Jembo Cable Co. Tbk	JECC	236,312	205,065	212,029	300,834	304,258	277,188	302,022
Jakarta Kyoel Steel Works Ltd	JKSW	408,710	377,953	310,187	465,927	538,583	376,675	309,187
Jaya Pari Steel Tbk	JPRS	145,063	120,246	66,994	93,979	127,431	130,870	245,437
Wanaindah Busana/Jeewon	JWJI	96,774	93,194	92,709	x	x	x	x
Kimia Farma Tbk	KAEF	662,955	704,124	964,463	1,151,253	1,038,545	1,368,145	1,173,438
Karwell Indonesia Tbk	KARW	698,008	576,630	725,625	500,208	491,824	412,820	514,999
GT Kabel Indonesia Tbk	KBLI	1,174,572	796,195	970,161	943,494	454,800	416,984	367,349
Kabelindo Murni Tbk	KBLM	340,425	273,054	257,207	268,875	223,286	206,358	233,535
Kedawung Setia Industrial Tbk	KDSI	280,542	356,205	422,696	410,650	410,776	372,076	379,040
Keramika Indonesia Assosiasi	KIAS	1,559,675	1,406,838	1,285,064	1,229,901	1,065,735	875,792	x
Kedauang Indah Can Tbk	KICI	190,661	172,969	211,192	216,942	202,955	177,457	169,918
Kurnia Kapuas Utama Glue	KKGI	249,061	226,918	259,074	280,202	270,115	226,222	224,727
Kalbe Farma Tbk	KLBF	2,118,766	2,002,677	1,757,841	1,877,316	2,015,538	2,448,390	3,016,864
Komatsu Indonesia Tbk	KOMI	434,285	517,713	586,546	619,645	669,205	737,192	995,130
Perdana Bangun Pusaka Tbk	KONI	72,713	61,275	66,625	67,291	63,185	60,786	66,850
Lapindo Packaging Tbk	LAPD	4,256	4,812	10,516	32,870	35,313	38,926	44,659
Lion Metal Workds Tbk	LION	84,250	93,250	104,716	100,099	108,263	120,626	146,703
Langgeng Makmur Plastik	LMPI	439,988	437,904	504,421	525,919	504,312	501,284	509,105
Lion Mesh Prima tbk	LMSH	38,688	34,311	38,160	39,262	34,853	34,163	42,748
Multi Prima Sejahtera Tbk	LPIN	139,568	130,103	76,374	66,350	124,360	123,286	129,173
Lautan Luas Tbk	LTLS	571,622	596,022	700,431	762,821	902,286	1,228,714	1,424,973
Modern Photo film Company	MDRN	1,135,751	956,639	987,198	958,645	1,017,904	1,044,536	992,230
Merek Indonesia Tbk	MERK	74,355	97,359	129,685	162,720	172,336	200,328	200,466
Multi Bintang Indonesia Tbk	MLBI	461,567	410,704	433,607	517,775	475,039	483,004	558,388
Mulia Industrindo Tbk	MLIA	4,430,446	4,045,615	4,391,871	4,562,684	4,287,247	4,158,067	4,411,869
Multipolar Corporation Tbk	MLPL	1,201,466	1,027,408	1,508,904	1,614,208	1,772,387	1,569,258	4,872,717
Mustika Ratu Tbk	MRAT	229,004	226,434	278,215	295,031	291,549	275,180	294,415
Metrodata Electronics Tbk	MTDL	203,102	206,764	399,171	537,519	452,479	452,368	611,042
Miwon Indonesia Tbk	MWON	428,862	397,362	555,170	573,166	x	x	x
Mayora Indah Tbk	MYOR	1,342,163	1,304,749	1,312,039	1,324,990	1,332,375	1,284,779	1,280,645
Hanson Industri Utama Tbk	MYRX	891,182	749,124	744,896	675,815	656,323	678,357	713,330
APAC Citra Centertex Tbk	MYTX	2,660,957	2,603,638	2,845,042	2,680,431	2,687,344	2,592,556	2,576,148
Nipress Tbk	NIPS	95,128	88,409	97,847	110,049	105,088	171,173	189,086
Panasia Filament Inti Tbk	PAFI	910,108	900,453	949,740	916,687	780,372	717,711	709,778

**Appendix 10:
TOTAL ASSET OF MANUFACTURING COMPANIES 1998-2004**

Manufacturing Companies	CODE	1998	1999	2000	2001	2002	2003	2004
Pan Brothers Tex Tbk	PBRX	86,592	94,502	115,784	158,528	140,844	112,292	126,772
Procter & Gamble Indonesia	PGIN	218,307	182,625	174,500	199,034	138,501	x	x
Pelangi Indah Canindo tbk	PICO	381,786	331,992	315,071	285,868	272,493	258,349	243,302
Plastpack Prima Industri Tbk	PLAS	57	689	22,313	47,640	82,974	82,108	x
Polysindo Eka Perkasa Tbk	POLY	11,093,685	10,419,785	10,043,843	9,558,644	8,459,075	7,776,083	3,782,447
Prima Alloy Steel Universal Tbk	PRAS	325,179	290,102	385,946	528,453	303,102	368,825	438,201
Prasidha Aneka Niaga Tbk	PSPN	696,908	672,675	534,368	474,494	348,147	174,970	179,944
Pioneerindo Gourmet	PTSP	111,247	135,197	147,321	134,791	124,981	111,320	84,814
Pyridam Farma Tbk	PYFA	x	41,275	66,084	76,668	69,751	68,267	70,430
Roda Vivatex Tbk	RDTX	385,147	319,931	317,093	126,952	301,737	309,646	322,871
Ricky Putra Globalindo Tbk	RICY	281,668	278,532	339,610	293,025	260,766	263,827	297,377
Ryane Adibusana Tbk	RYAN	x	20,609	45,605	69,946	76,065	54,539	41,992
Surabaya Agung Industry Pulp	SAIP	2,910,373	2,765,302	2,864,051	2,689,479	2,481,192	2,324,153	2,225,462
Supreme Cable Manufacturing	SCCO	610,726	556,822	423,006	481,085	435,378	559,763	610,717
Schering-Plough Indonesia	SCPI	34,858	47,694	51,317	62,280	61,256	59,029	58,504
Sari Husada Tbk	SHDA	280,800	388,983	542,656	796,532	935,520	1,121,223	1,220,026
Swani Makmur Tbk	SIMA	59,918	63,275	80,640	79,144	79,831	53,343	56,765
Surya Intrindo Makmur Tbk	SIMM	39,926	118,164	208,206	258,854	231,274	174,511	135,321
Sierad Produce Tbk	SIPD	1,494,139	1,498,795	1,627,779	1,314,480	1,149,300	1,265,566	1,254,009
Sekar Laut Tbk	SKLT	194,010	177,511	141,510	127,503	120,639	111,137	112,336
Sinar Mas Agro Resources and	SMAR	2,555,647	2,773,292	3,919,860	3,896,838	3,570,086	3,629,993	3,972,684
Semen Cibinong Tbk	SMCB	9,470,361	8,973,829	6,796,443	5,972,061	7,713,791	7,647,642	7,520,403
Semen Gresik (Persero) Tbk	SMGR	7,089,638	7,203,340	7,539,269	8,763,075	6,872,346	6,559,495	6,640,561
Summiplast Interbenua tbk	SMPL	115,466	136,441	204,513	205,862	164,164	187,320	193,273
Selamat Sempurna Tbk	SMSM	261,513	303,673	529,837	567,053	583,627	632,610	650,930
Sorini Corporation Tbk	SOBI	796,101	759,822	866,732	606,096	563,840	530,999	533,484
Suparma Tbk	SPMA	989,702	943,882	976,351	1,038,685	1,042,263	1,031,827	1,085,461
Bristol-Myers Squibb Indonesia	SQBI	70,158	82,784	120,563	110,679	133,011	165,424	190,599
Sarasa Nugraha Tbk	SRSN	183,628	146,414	175,689	181,301	165,740	138,864	89,743
Sunson Textile Manufacture Tbk	SSTM	750,031	693,130	763,790	817,268	811,519	913,734	923,895
Siantar TOP Tbk	STTP	159,002	230,839	301,986	404,060	470,452	505,507	470,177
Suba Indah	SUBA	65,400	71,007	598,629	740,958	887,361	1,127,996	1,008,292
Surya Dumai Industri Tbk	SUDI	1,777,907	1,841,188	1,517,199	1,451,989	1,316,839	884,858	771,294
Sugi Samapersada Tbk	SUGI	x	26,437	55,568	53,467	58,010	65,025	65,278

**Appendix 10:
TOTAL ASSET OF MANUFACTURING COMPANIES 1998-2004**

Manufacturing Companies	CODE	1998	1999	2000	2001	2002	2003	2004
Sumalindo Lestari Jaya Tbk	SULI	1,898,046	1,851,102	1,843,759	1,607,559	1,441,918	1,290,967	1,163,351
Tunas Baru Lampung Tbk	TBLA	623,959	729,667	935,029	936,637	1,021,657	1,151,281	1,352,092
Tembaga Mulia Semanan Tbk	TBMS	492,220	413,047	509,855	619,900	569,271	558,372	710,414
Mandom Indonesia Tbk (Tancha)	TCID	196,555	246,888	333,582	357,575	356,007	387,601	472,364
Textile Manufacturing Company	TEJA	1,378,800	1,311,913	1,194,266	1,160,862	1,077,940	957,626	705,230
Teijin Indonesia Fiber (Tifico)	TFCO	3,479,433	1,657,209	1,810,239	2,635,587	2,290,905	2,123,547	2,547,453
Tira Austenite Tbk	TIRA	102,852	96,181	102,049	67,240	199,563	284,579	177,739
Tirta Mahakam Plywood	TIRT	156,651	182,177	283,534	336,353	440,977	529,009	808,567
Pabrik Kertas Tjiwi Kimia Tbk	TKIM	15,743,980	16,467,512	20,885,811	22,616,305	18,994,899	17,892,932	19,794,288
Surya Toto Indonesia Tbk	TOTO	385,375	384,297	393,600	525,603	551,573	554,920	708,561
Texmaco Perkasa Engineering	TPEN	4,278,196	4,564,296	4,668,986	4,761,885	4,161,990	2,586,913	x
Tri Polyta Indonesia Tbk	TPIA	2,063,015	2,015,198	2,268,733	2,266,097	x	x	x
Multi Agro Persada Tbk	TRPK	136,743	51,558	50,641	117,292	144,680	231,751	x
Trias Sentosa Tbk	TRST	1,518,591	1,463,000	1,621,196	1,534,877	1,522,356	1,695,670	1,911,757
Tempo Scan Pacific Tbk	TSPC	1,316,677	1,083,044	1,428,314	1,663,925	1,816,536	1,943,351	2,141,419
Tunas Ridean Tbk	TURI	632,654	362,680	800,269	113,007	1,111,266	1,485,051	2,178,179
Wahana Jaya Perkasa Tbk	UGAR	1,544,679	1,592,670	1,828,943	1,848,772	1,482,306	1,463,377	x
Ultra Jaya Milk Industry and	ULTJ	476,978	698,624	707,021	970,601	1,018,073	1,120,851	1,300,240
Unggul Indah Corporation	UNIC	1,731,315	1,681,127	2,048,581	2,211,461	1,855,530	2,256,579	2,724,338
United Tractors Tbk	UNTR	4,382,918	4,429,615	5,450,044	6,464,186	5,939,946	6,056,439	6,769,367
Unilever Indonesia Tbk	UNVR	1,227,534	1,815,904	2,253,637	2,682,025	3,091,853	3,416,276	3,663,709
Voksel Electric Tbk	VOKS	486,720	444,761	494,527	448,647	397,499	354,624	409,270

Appendix 11:
NUMBER OF EMPLOYEES OF MANUFACTURING COMPANIES 1998-2004

Manufacturing Companies	CODE	1998	1999	2000	2001	2002	2003	2004
Anchi Chandra Automotive	ACAP	x		630	700	546	527	473
Ades Alfindo Putra Setia Tbk	ADES	2,000	2,000	2,741	2,741	2,563	2,563	2,364
GT Petrochem Industries Tbk	ADMG	5,601	5,601	6,436	6,454	6,387	5,958	5,958
Asia Intiseleria Tbk	AISA	876	516	620	522	507	224	319
Argha Karya Prima Industry Tbk	AKPI	x	862	862	880	754	754	799
Aneka Kimia Raya Tbk	AKRA		607	601	601	309	381	1,274
Alakasa Industrindo Tbk	ALKA	223	236	241	16	9	9	10
Alumindo Light Metal Industry	ALMI	1,371	1,506	1,400	1,589	1,421	1,601	1,421
Asahimas Flat Glass Co Ltd Tbk	AMFG	3,414	2,617	3,614	2,389	2,368	2,192	2,192
Asiaplast Industries Tbk	APLI	x	400	758	750	471	471	423
Aqua Golden Mississippi	AQUA	2,000	1,351	1,840	1,415	1,214	1,214	1,128
Argo Pantex Tbk	ARGO	6,300	6,072	6,048	5,408	5,585	5,765	3,828
Arwana Citra Mulia Tbk	ARNA	x		295	1,039	984	982	891
Astra Graphia Tbk	ASGR	5,968	11,417	2,007	1,715	1,599	1,336	966
Astra International Tbk	ASII	120,000	68,000	91,000	55,600	51,100	52,000	56,640
Astra Otoparts Tbk	AUTO	17,893	16,000	8,997	6,269	7,737	20,020	22,575
Sepatu Bata Tbk	BATA	2,091	2,276	2,312	2,114	1,974	1,905	1,548
BAT Indonesia Tbk	BATI	788	1,717	1,040	886	815	717	717
Primarindo Asia Infrastructure	BIMA	6,000	7,000	7,288	6,827	3,230	1,387	1,290
Branta Mulia Tbk	BRAM	1,216	1,177	1,889	1,062	1,698	1,703	1,660
Berlina Co Ltd Tbk	BRNA	1,200	2,000	1,391	1,330	1,316	1,292	1,287
Barito Pacific Timber Tbk	BRPT	30,418	16,774	17,958	17,958	18,622	16,058	11,099
Betonjaya Manunggal Tbk	BTON	x		218	226	206	37	37
Budi Acid Jaya Tbk	BUDI	5,000	4,188	4,188	4,682	4,632	4,407	4,407
Bayer Indonesia Tbk	BYSB	x	833	878	928	656	x	x
Cahaya Kalbar Tbk	CEKA	117	117	117	117	470	484	484
Colorpak Indonesia Tbk	CLPI	x		x	65	65	65	65
Century Textile Industry	CNTX	747	747	713	742	654	634	607
Citra Tubindo Tbk	CTBN	789	683	821	923	923	946	946
Davomas Abadi Tbk	DAVO	339	339	325	269	299	316	313
Delta Djakarta Tbk	DLTA	547	547	557	565	572	509	511
Dankos Laboratories Tbk	DNKS	619	2,014	2,466	2,801	3,057	2,701	2,161
Daeyu Orchid Indonesia Tbk	DOID	x		858	1,760	1,525	2,238	2,238
Duta Pertiwi nusantara Tbk	DPNS	139	167	164	147	155	133	124

Appendix 11:
NUMBER OF EMPLOYEES OF MANUFACTURING COMPANIES 1998-2004

Manufacturing Companies	CODE	1998	1999	2000	2001	2002	2003	2004
Daya Sakti Unggul Corporation	DSUC	4,608	4,300	4,894	4,698	4,192	3,591	2,931
Darya-Varia Laboratoria Tbk	DVLA	2,500	2,500	1,687	1,781	1,131	1,165	1,239
Dynaplast Tbk	DYNA	1,998	2,486	2,975	3,238	2,540	2,000	2,236
Ekadharma Tape Industries Tbk	EKAD	456	456	380	382	412	417	376
Eratex Djaja Limited Tbk	ERTX	4,250	4,162	4,230	3,012	3,130	3,200	3,474
Ever Shine Textile Industry Tbk	ESTI	3,500	3,500	3,500	3,500	3,154	2,739	2,640
Eterindo Wahanatama Tbk	ETWA	x	1,252	1,169	1,229	1,130	1,140	21
Fast Food Indonesia Tbk	FAST	4,996	6,395	6,618	8,564	8,930	8,964	8,949
Fajar Surya Wisesa Tbk	FASW	2,000	2,368	2,111	1,993	1,928	1,865	1,865
Fortune Mate Indoensia Tbk	FMI	x	6,983	6,983	6,983	6,983	7,606	7,606
Fatrapindo Nusa Industri Tbk	FPNI	x	x	x	428	436	436	436
Kasogi International Tbk	GDWU	5,000	5,800	3,592	3,995	3,703	2,432	2,432
Goodyear Indonesia Tbk	GDYR	851	851	876	899	886	863	875
Gudang Garam Tbk	GGRM	44,208	40,415	41,362	41,387	41,039	40,292	39,799
Gajah Tunggal Tbk	GJTL	13,604	6,833	7,271	7,083	7,553	7,853	9,969
Great River International Tbk	GRIV	13,055	14,416	17,621	11,263	10,909	10,178	10,178
Panasia Indosyntec Tbk	HDTX	x	x	2,252	7,832	2,268	2,268	2,120
Hexindo Adiperkasa Tbk	HEXA	635	641	656	676	652	677	709
Hanjaya Mandala Sampoerna	HMSP	30,737	20,000	38,000	38,053	37,141	38,570	38,570
Igarjaya Tbk	IGAR	850	1,274	1,117	1,138	1,171	887	912
Intikramik Alamasri Industri	IKAI	1,533	1,462	1,249	897	900	900	800
Sumi Indo Kabel Tbk	IKBI	508	506	487	485	505	479	482
Indomobil Sukses International	IMAS	20,604	20,604	6,314	6,581	2,377	3,342	5,178
Indofarma Tbk	INAF	x	x	918	983	x	1,566	1,566
Indal Aluminium Industry Tbk	INAI	1,140	1,140	1,558	1,511	1,403	1,480	1,276
Intan Wijaya Internasional Tbk	INCI	190	194	239	235	254	254	209
Indofood Sukses Makmur Tbk	INDF	39,108	38,762	40,923	46,000	43,679	46,318	48,622
Indorama Syntetics	INDR	6,975	8,165	8,165	8,295	7,928	7,369	7,289
Indospring Tbk	INDS	410	410	822	835	823	934	1,126
Indah Kiat Pulp & Paper	INKP	12,146	12,146	24,288	17,608	15,751	16,131	16,131
Intraco Penta Tbk	INTA	500	390	543	1,247	1,255	1,061	890
Inter Delta Tbk	INTD	202	202	202	202	341	371	324
Indocement Tunggal Prakasa	INTP	7,332	7,000	7,401	7,326	7,414	7,174	6,851
Itamaraya Gold Industry Tbk	ITMA	320	508	494	482	x	x	x

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NUMBER OF EMPLOYEES OF MANUFACTURING COMPANIES 1998-2004

Manufacturing Companies	CODE	1998	1999	2000	2001	2002	2003	2004
Jembo Cable Co. Tbk	JECC	1,042	607	708	780	757	705	641
Jakarta Kyoel Steel Works Ltd	JKSW	318	318	200	200	200	200	198
Java Pari Steel Tbk	JPRS	384	343	345	430	334	330	320
Wanaindah Busana/Jeewon	JWJI	x	618	618	x	x	x	x
Kimia Farma Tbk	KAFF	x	x	5,150	5,275	5,535	5,575	5,604
Karwell Indonesia Tbk	KARW	8,180	14,548	1,140	8,666	9,279	6,226	5,663
GT Kabel Indonesia Tbk	KBLI	717	540	975	884	814	808	633
Kabelindo Murni Tbk	KBLM	624	624	225	225	224	296	296
Kedawung Setia Industrial Tbk	KDSI	3,723	3,723	3,020	3,275	3,280	2,562	1,913
Keramika Indonesia Assosiasi	KIAS	2,848	2,848	700	700	700	648	x
Kedaung Indah Can Tbk	KICI	2,030	1,774	1,706	1,663	1,622	1,622	1,400
Kurnia Kapuas Utama Glue	KKGI	286	286	585	450	616	714	714
Kalbe Farma Tbk	KLBF	1,400	5,201	1,617	6,272	6,640	5,513	5,513
Komatsu Indonesia Tbk	KOMI	1,072	823	869	760	756	787	1,164
Perdana Bangun Pusaka Tbk	KONI	690	589	599	522	424	270	267
Lapindo Packaging Tbk	LAPD	x	x	230	230	433	433	433
Lion Metal Workds Tbk	LION	1,003	1,003	489	486	602	641	683
Langgeng Makmur Plastik	LMPI	1,800	1,800	2,016	2,344	2,451	2,451	2,451
Lion Mesh Prima tbk	LMSH	91	91	81	110	109	123	108
Multi Prima Sejahtera Tbk	LPIN	410	401	401	98	78	111	111
Lautan Luas Tbk	LTLS	526	1,402	1,551	2,324	1,869	2,000	2,143
Modern Photo film Company	MDRN	1,104	6,497	6,262	6,352	6,953	5,346	4,506
Merck Indonesia Tbk	MERK	539	539	467	458	526	534	538
Multi Bintang Indonesia Tbk	MLBI	1,012	1,012	918	945	4,000	826	808
Mulia Industrindo Tbk	MLIA	3,530	281	261	373	570	617	613
Multipolar Corporation Tbk	MLPL	184	278	360	451	383	219	14,347
Mustika Ratu Tbk	MRAT	2,200	2,296	2,257	2,831	3,209	2,585	2,572
Metrodata Electronics Tbk	MTDL	415	560	706	800	747	610	559
Miwon Indonesia Tbk	MWON	825	1,048	1,090	1,213	x	x	x
Mayora Indah Tbk	MYOR	6,000	3,003	3,003	4,812	4,251	4,480	4,741
Hanson Industri Utama Tbk	MYRX	1,300	1,300	940	2,341	2,102	2,102	2,102
APAC Citra Centertex Tbk	MYTX	2,040	4,040	15,732	15,608	15,150	14,402	13,596
Nipress Tbk	NIPS	600	500	492	535	708	761	873
Panasia Filament Inti Tbk	PAFI	4,009	5,019	4,857	5,294	4,115	3,650	3,570

Appendix 11:
NUMBER OF EMPLOYEES OF MANUFACTURING COMPANIES 1998-2004

Manufacturing Companies	CODE	1998	1999	2000	2001	2002	2003	2004
Pan Brothers Tex Tbk	PBRX	3,000	3,000	3,000	3,000	2,656	2,926	3,990
Procter & Gamble Indonesia	PGIN	358	358	358	291	305	x	x
Pelangi Indah Canindo Tbk	PICO	775	1,161	1,703	1,067	1,293	x	978
Plastpack Prima Industri Tbk	PLAS	x	x	602	602	600	600	x
Polysindo Eka Perkasa Tbk	POLY	3,832	3,784	10,983	11,021	9,753	2,510	2,510
Prima Alloy Steel Universal Tbk	PRAS	541	541	1,200	1,200	958	967	1,021
Prasidha Aneka Niaga Tbk	PSPN	1,500	1,500	1,139	956	703	703	703
Pioneerindo Gourmet	PTSP	2,000	2,465	2,300	2,660	2,372	1,542	1,412
Pyridam Farma Tbk	PYFA	x	x	x	306	454	489	489
Roda Vivatex Tbk	RDTX	3,930	3,556	2,846	2,845	2,279	1,871	1,372
Ricky Putra Globalindo Tbk	RICY	4,000	4,144	4,505	3,391	3,324	3,324	3,500
Ryane Adibusana Tbk	RYAN	x	x	x	253	145	100	46
Surabaya Agung Industry Pulp	SAIP	1,800	2,005	2,005	1,246	1,653	1,325	1,285
Supreme Cable Manufacturing	SCCO	x	800	800	800	896	940	931
Schering-Plough Indonesia	SCPI	244	244	269	291	284	283	278
Sari Husada Tbk	SHDA	506	506	536	600	756	756	756
Siwani Makmur Tbk	SIMA	251	251	237	238	229	217	234
Surya Intrindo Makmur Tbk	SIMM	x	50	401	1,192	1,459	2,968	2,968
Sierad Produce Tbk	SIPD	4,000	4,000	4,320	6,062	4,449	4,294	4,294
Sekar Laut Tbk	SKLT	1,222	1,055	905	905	873	821	821
Sinar Mas Agro Resources and	SMAR	17,500	37,300	12,181	13,048	11,846	11,251	11,948
Semen Cibinong Tbk	SMCB	2,246	2,178	3,635	2,332	2,210	2,072	3,313
Semen Gresik (Persero) Tbk	SMGR	2,522	2,418	2,383	7,126	7,459	7,500	7,316
Summiplast Interbenua Tbk	SMPL	x	943	1,203	762	762	1,403	1,403
Selamat Sempurna Tbk	SMSM	1,217	2,400	1,630	1,450	1,669	1,341	1,903
Sorini Corporation Tbk	SOBI	470	470	470	409	409	380	372
Suparima Tbk	SPMA	1,600	1,600	249	349	472	421	434
Bristol-Myers Squibb Indonesia	SQBI	x	x	347	336	331	329	281
Sarasa Nugraha Tbk	SRSN	4,000	5,317	5,080	4,626	3,801	3,432	1,672
Sunson Textile Manufacture Tbk	SSIM	4,600	4,600	4,943	5,016	4,915	4,699	4,651
Siantar TOP Tbk	STTP	2,054	2,054	4,500	5,900	5,285	8,100	8,766
Suba Indah	SUBA	600	600	378	378	332	332	332
Surya Dumai Industri Tbk	SUDI	7,159	2,882	1,900	4,261	5,326	2,215	2,341
Sugi Samapersada Tbk	SUGI	x	x	x	85	105	94	93

Appendix 11:
NUMBER OF EMPLOYEES OF MANUFACTURING COMPANIES 1998-2004

Manufacturing Companies	CODE	1998	1999	2000	2001	2002	2003	2004
Sumalindo Lestari Jaya Tbk	SULI	7,700	8,000	7,000	5,787	4,986	4,937	3,602
Tunas Baru Lampung Tbk	TBLA	x	2,403	1,772	1,225	1,741	2,825	2,825
Tembaga Mulia Semanan Tbk	TBMS	168	309	386	531	645	502	932
Mandom Indonesia Tbk (Tancho	TCID	2,547	3,652	4,258	4,978	4,157	2,125	3,927
Textile Manufacturing Company	TEJA	5,186	6,369	7,187	5,752	5,299	5,251	5,251
Teijin Indonesia Fiber (Tifico)	TFCO	2,131	2,081	2,047	1,954	2,002	1,833	1,181
Tira Austenite Tbk	TIRA	337	646	477	489	979	913	712
Tirta Mahakam Plywood	TIRT	x	1,540	2,259	2,259	2,886	3,886	3,886
Pabrik Kertas Tjiwi Kimia Tbk	TKIM	13,550	13,550	14,915	14,511	14,511	14,500	14,500
Surya Toto Indonesia Tbk	TOTO	2,696	2,986	3,196	6,508	3,388	3,075	3,344
Texmaco Perkasa Engineering	TPEN	1,043	3,611	5,081	5,081	2,741	2,741	x
Tri Polyta Indonesia Tbk	TPIA	540	540	652	639	x	x	x
Multi Agro Persada Tbk	TRPK	236	236	239	239	254	324	x
Trias Sentosa Tbk	TRST	344	344	907	779	776	849	911
Tempo Scan Pacific Tbk	TSPC	1,193	1,193	4,300	4,300	4,600	4,600	4,475
Tunas Ridean Tbk	TURI	2,621	1,538	1,819	2,117	2,125	2,371	2,708
Wahana Jaya Perkasa Tbk	UGAR	1,100	150	101	509	532	532	x
Ultra Jaya Miik Industry and	ULTJ	600	600	1,180	1,100	1,100	1,100	1,100
Unggul Indah Corporation	UNIC	320	685	684	682	339	846	859
United Tractors Tbk	UNTR	7,065	7,200	6,429	8,629	7,933	1,700	7,200
Unilever Indonesia Tbk	UNVR	2,200	2,200	2,199	3,000	2,880	2,880	2,880
Voksel Electric Tbk	VOKS	908	908	761	779	354	499	412

**Appendix 12:
REGRESSION MODEL I (1998-2004)**

Model Summary(b)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,474(a)	,224	,222	,126664192896739	1,904

a Predictors: (Constant), DDLR1, LR1

b Dependent Variable: SGA

ANOVA(b)

Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2	1,752	109,221	,000(a)
	Residual	755	,016		
	Total	757			

a Predictors: (Constant), DDLR1, LR1

b Dependent Variable: SGA

Coefficients(a)

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error				Beta	Tolerance
1	(Constant)	,019	,006	3,214	,001		
	LR1	,520	,046	11,231	,000	,407	2,455
	DDLR1	-,187	,074	-2,515	,012	,407	2,455

a Dependent Variable: SGA

**Appendix 13:
REGRESSION MODEL II (1998-2004)**

Model Summary(b)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,511(a)	,261	,257	,123832418930679	1,910

a Predictors: (Constant), DDLR2, LR1, DDLR1, LR2

b Dependent Variable: SGA

ANOVA(b)

Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression Residual Total	4 753 757	1,018 ,015	66,368	,000(a)

a Predictors: (Constant), DDLR2, LR1, DDLR1, LR2

b Dependent Variable: SGA

Coefficients(a)

Model	Unstandardized Coefficients		Std. Error	t	Sig.	Collinearity Statistics	
	B	Beta				Tolerance	VIF
1	(Constant)	,014	,006	2,260	,024		
	LR1	,282	,060	4,711	,000	,233	4,298
	DDLR1	-,090	,079	-1,130	,259	,343	2,912
	LR2	,201	,034	5,929	,000	,292	3,425
	DDLR2	-,106	,047	-2,273	,023	,466	2,147

a Dependent Variable: SGA

Appendix 14:
REGRESSION MODEL III (1998-2004)

Model Summary(b)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,492(a)	,242	,236	,125554295468510	1,910

a Predictors: (Constant), DDLRE, DDLRA, DDLRSD, LR1, DDLRG, DDLR1
b Dependent Variable: SGA

ANOVA(b)

Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression Residual Total	6 751 757	,630 ,016	39,955	,000(a)

a Predictors: (Constant), DDLRE, DDLRA, DDLRSD, LR1, DDLRG, DDLR1
b Dependent Variable: SGA

Coefficients(a)

Model	Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.	Collinearity Statistics	
	B	Std. Error				Tolerance	VIF
1	(Constant)	,020	,006	3,334	,001		
	LR1	,517	,046	11,240	,000	,406	2,466
	DDLR1	-1,421	,350	-4,059	,000	,018	55,271
	DDLRS	,001	,108	,013	,990	,325	3,076
	DDLRG	26,436	7,950	3,325	,001	,019	51,999
	DDLRA	-,149	,102	-1,453	,147	,430	2,325
	DDLRE	-,096	,060	-1,604	,109	,126	7,952

a Dependent Variable: SGA