#### **CHAPTER I**

## INTRODUCTION

## A. Background

In today's business world, competition has become a matter that cannot be avoided by most companies. Moreover, customers' demand for special features of the product makes competition more intense. To maintain the viability of the enterprise, companies must strive to win, at least do not defeated in the competition that showed increasingly stringent condition. In order to reach competitive advantage in the market and satisfy customer needs, companies should innovate and develop their products. Innovation and product development are key strategic prerequisite because the company must be able to increase technology, knowledge, exploitation of capacity, and market reach of the idea. Innovation and product development also become the keyword for the growth of the organization because those are going to improve company performance. It is not only innovation as the key factor, but also technology changes and technology development. Technology investment is significant in a long run as a cultivation of technological capability indicated by a progress in R&D productivity.

The Research and Development (R&D) is one of the ways which many managers choose to survive their company. Trough the R&D activities companies are constantly trying to improve and enhance product and service

quality, understand the market conditions and other competitors, improve production systems and activities that are useful for being survive in business competition. The activities of research and development generally require a relatively long time, costly, and uncertain rewards.

R&D can have an impact on the companies' performance. Motivated by creating good quality of goods and service to its customer, a company invests resources in R&D activity in order to create new ideas, and the process of their exploitation. R&D activities are essential for companies in order to maintain the current competitive position and to reach for new competitive advantages in the fast changing environment. Furthermore, even though the business environment has changed considerably, the companies' innovation processes have changed very little throughout the years (Tidd, 2001).

A study has been done to obtain evidence that R&D affects companies' performance, such as profitability (Hokkanen, 2006). However, there is also an issue that there is no relationship between R&D expenditures and company's performance (Jaruzelski et al, 2005). Furthermore, factors such as different in samples of company, country, time horizon, independent variables, and the economic and political condition can cause different results. Researcher has also found that successful R&D will have much less effect on the performance (Hutagaol and E. Natasha, 2009).

Indonesia as a developing country, should pay much attention to research and development activity; at least Indonesia should compete with

neighboring countries. Indonesia has many and various natural resources. However, without improvement on research and development activity, those resources will not provide any significant impact on national economic growth. In 2010, allocation of R&D in Indonesia still less than 1 percent (0.07 percent) and it is much smaller compared with Singapore (2.36), Malaysia (0.63), Thailand (0.25) and Vietnam (0.19). As nowadays R&D becomes one of the most important activities with the competition globally. It makes sense if Indonesian government and company realize the importance of R&D.

As the researcher was mentioned earlier, there are numerous studies examined the impact of R&D on companies' performance. The results of them show different conclusions. Because Indonesia as a developing country with low allocation R&D in GDP percentage and there are only few studies made in Indonesia relating to this issue, it would be interesting for researcher to empirically examine whether R&D activities can influence Indonesian companies' performance.

## 1. Problem Formulation of the Research Study

Even though, it has been widely accepted that R&D creates future benefits for the company, it is not definite that the significant effect empirically be found. The research questions to discuss in this study introduced as follows:

■ Does the R&D influence companies' performance?

This study examines the effects of R&D activity on a company.

The company's spent on R&D activity is usually measured by R&D intensity, where the R&D expenditures of the companies are represented as a proportion of some measure of firm size.

# 2. Scope of the Research Study

In order to keep the study from growing too large, some restrictions have been made. This study neither discusses the financing aspect of R&D projects, i.e., where do companies get the finance for R&D investments nor the valuation of R&D projects? In the second chapter, the problem of R&D expenditures accounting treatment discussed in order to shed a light on the aspects that related to the accounting treatment of R&D expenditures. However, this study does not cover the problem of which one would be the accurate approach, capitalizing or expensing of R&D expenditures.

# 3. Originality of the Research Study

The researcher compiled this research study by herself. There are no duplicated or manipulated elements except the previous research studies and references by others. All writing, research data, data analysis, and conclusions in this research study were analyzed and explored by the writer, except the written sources which were used as the references in this study.

## B. Objective and Benefits of the Research Study

# 1. Objective of the Research Study

The main objective of this study is to examine and discuss the influence of companies' R&D activities on companies' performance. This carried out by analyzing and discussing previous research study settings and the results of these studies and carried out with empirical analysis from Indonesia mining companies' data. The empirical part of this study examines with Indonesian data, whether there is a correlation between companies' R&D expenditures and different companies performance measures. Accordingly, the impact of reported R&D expenditures on profitability examined. Furthermore, with Indonesian data this study conducts in order to examine whether the results are consistent and similar with the international studies.

# 2. Benefits of the Research Study

The benefits of this research study hopefully will be able to:

## a. Researcher

Researcher will know whether there is a relation between Research and Development (R&D) activity with companies' performance. The results of this study increase the researcher's knowledge in accounting analysis, that R&D activity into consideration.

## b. Other Researcher

Other researchers can use this research as the reference for further research and try different things that the researcher had not included in this research.

# c. Company or someone who use this research

Readers will receive more knowledge on Research and Development (R&D) activity and the impact on the company performance.

Financial professionals and educators can use the findings from the research to develop educational resources and services that take R&D activity analysis on company performance into consideration.

The management of the company can use this research concept in order to maintain the current competitive position to reach for new competitive advantages in the fast canging environment.

## d. Development in theory

Since there is still a little research about behavioral finance, this study can support some previous research and raise some important issues for future research.

## C. Organization of the Writing

#### CHAPTER I INTRODUCTION

This chapter describes the background, problem formulation, limitation, research objectives, benefits of the research study, and writing organization.

## CHAPTER II THEORETICAL REVIEWS

This chapter begins with a discussion of the significant concepts of the study. In the first part, the basic concepts of this study are introduced. First the concepts of R&D and R&D expenditures. This section also concentrates on the accounting treatment of R&D expenditures, i.e., R&D expenditures have to be expensed as incurred regardless of the possible future benefits. This chapter also identifies the core aspects of companies' innovation and R&D activity and the effects of R&D expenditures on company performance. The end of this section introduces the research hypothesis to be examined in the empirical analyses.

## CHAPTER III RESEARCH METHODOLOGY

Chapter III begins the empirical part of this study. The beginning of this section introduces the methodology and research design. After this, the data and its collection are discussed. Also the different variables to be used in the analyses are identified and discussed. This section also introduces the empirical models to be tested in the analyses.

# **CHAPTER IV ANALYSIS**

Chapter IV discusses the empirical result and findings. First the descriptive statistics for each variable used in the analyses are presented. Also results from the test of normal distribution are presented. This section also discusses the results and findings regression analyses.

# **CHAPTER V CONCLUSION**

This chapter present overall finding of this study and answers the research question, fulfill the overall purpose and suggest the implications for theory, practitioners, and future research.