CHAPTER 1

INTRODUCTION

The wealth of developed and developing nations continues to depend on technological innovation in the new millennium. New technologies today could decide the future competitiveness and growth of developed countries. Developing countries, riding the technological cycles initiated in the past, continue to harbour dreams of joining the ranks of developed nations in the distant future. For developing countries where such dreams seem to be within reach, the challenge of achieving higher value-added in production requires climbing the technological ladder.

Malaysia aspires to be a developed nation by year 2020. In the past, much of the country's industrial growth and development came from the comparative advantage of manufacturing base in terms of low labour cost. As the Malaysia enters the rank of middle income countries, it finds itself in an awkward position of a country having neither low-cost of production of lower income developing countries nor the technology-base of developed countries. Taking cognizance of this, the Malaysian Government has consistently emphasized on the importance of the technological progress of the country.

The Malaysian Science and Technology Information Centre (MASTIC) at the Ministry of Science, Technology and the Environment is the main government agency responsible for collecting data and information on the status of science and technology (S&T) in Malaysia. Aside from publishing secondary data collected from various agencies and organisations, MASTIC also carries out several types of surveys to collect primary data on the various aspects of science and technology such as public awareness of S&T issues, research and development (R&D), and the national survey of innovation.

This report summarizes the findings from the Third National Survey of Innovation (NSI-3). In general, the Survey uses the format and methodology adopted in the Second National Survey that was published in April 2001. The methodology adopted for the NIS-3 is also based on recommendations from the Oslo Manual as well as the Third Community Innovation Survey (CIS-3). The Oslo Manual is a document published in 1997 by the Organization for Economic Cooperation and Development (OECD) and the European Commission (EC) to provide guidelines on data collection on technological innovation. The CIS-3 surveys are national innovation surveys carried out by countries in the European Community (EC).

Features of the Survey

The Third National Survey of Innovation (NIS-3) retains some of the features in the previous innovation survey (NIS-2) while at the same time adopting different approaches in some areas.

1.1 Sampling Methodology

As in the NIS-2, this population sampling frame is obtained from the Department of Statistics. The list contained 4,000 business establishments in the manufacturing sector. As in the previous survey, a stratified random sampling approach is used.

1.2 Sample Size

A total of 4,000 questionnaires were sent to firms in the manufacturing sector. The sample size is the same as that in the NIS-2. However, unlike the NIS-2 (where preliminary first stage questionnaires were sent to 4,000 firms), the complete questionnaires were sent to 4,000 firms. In other words, this survey employs a one-stage survey approach and not the two-stage survey approach used in NIS-2.

1.3 Questionnaire Design

The questionnaire for the NIS-3 is based on the questionnaire used in the Third Community Innovation Survey (CIS-3). This follows the practice adopted in the previous survey (i.e. the NIS-2 adopted the CIS-2 questionnaire).

1.4 Reference Period

The reference period for the NIS-3 is a two year period covering the years 2000-2001. The survey itself was carried out between August 2002 and May 2003.

Outline of the Report

Chapter 1 provides a general introduction to the report. Chapter 2 discusses the methodology adopted in the survey. The main characteristics of the survey sample are discussed in Chapter 3. Chapter 4 contains a detailed report of the main findings of the survey. Findings from the survey are compared with other countries' innovation levels in Chapter 5. Detailed tables are presented in the appendices.