

## SUMMARY OF MAIN RESULTS

### GENERAL RESULTS

#### Organisations surveyed with Research and Development (R&D)

□ Private Sector	: 228
□ Government Agencies and Research Institutions	: 33
□ Institutions of Higher Learning	: 12
Total	: 273

#### Expenditure

□ Gross Expenditure on R&D (GERD)	: RM 1,127.0 million
□ The GERD/GDP Ratio	: 0.39%*
□ Current Expenditure	: RM 696.2 million
□ Labour Cost	: RM 278.3 million
□ Operating Cost	: RM 417.9 million
□ Capital Expenditure	: RM 430.8 million

#### Manpower

□ Total R&D Research Personnel	: 12,127
□ Total Number of Researchers	: 6,249
□ Total FTE	: 6,656.33
□ FTE per Research Personnel	: 0.55
□ FTE per Researcher	: 0.48
□ Degree Holders (Ph.D, Masters, Bachelors)	: 1,986
□ Number of Researchers per 10,000 Labour Force	: 7
□ R&D Cost per Research Personnel	: RM 30,487.56

## SECTOR PERFORMANCE

### PRIVATE SECTOR

#### Expenditure

□ Total Expenditure	: RM 746.1 million
□ Current Expenditure	: RM 423.9 million
□ Labour Cost	: RM 163.7 million
□ Operating Cost	: RM 260.2 million
□ Capital Expenditure	: RM 322.2 million

#### Manpower

□ Total Number (Headcount) of Research Personnel	: 4,158
□ Total Number (Headcount) of Researchers	: 2,287
□ Total Number (Headcount) of Support Staff	: 1,871
□ Total FTE	: 1,996.93
□ FTE per Research Personnel	: 0.85
□ FTE per Researcher	: 0.87

#### Other Indicators

- Largest R&D Industry Group : Electronic Equipment & Components
- Largest R&D (Field of Research, FOR) : Applied Sciences & Technologies
- Largest R&D (Socio-Economic Objectives, SEO) : Manufacturing

## **GOVERNMENT AGENCIES & RESEARCH INSTITUTIONS (GRI)**

### **Expenditure**

- Total Expenditure : RM 247.3 million
- Current Expenditure : RM 151.2 million
  - Labour Cost : RM 73.9 million
  - Operating Cost : RM 77.3 million
- Capital Expenditure : RM 96.1 million

### **Manpower**

- Total Number (Headcount) of Research Personnel : 5,234
- Total Number (Headcount) of Researchers : 1,987
- Total Number (Headcount) of Support Staff : 3,253
- Total FTE : 740.99
- FTE per Research Personnel : 0.42
- FTE per Researcher : 0.37

### **Other Indicators**

- Largest R&D (Field of Research, FOR) : Info. Comp. & Comm. Tech.
- Largest R&D (Socio-Economic Objectives, SEO) : Info. & Comm. Services

## **INSTITUTIONS OF HIGHER LEARNING (IHL)**

### **Expenditure**

- Total Expenditure : RM 133.6 million
- Current Expenditure : RM 102.3 million
  - Labour Cost : RM 40.6 million
  - Operating Cost : RM 61.7 million
- Capital Cost : RM 31.3 million

### **Manpower**

- Total Number (Headcount) of Research Personnel : 2,735
- Total Number (Headcount) of Researchers : 1,975
- Total Number (Headcount) of Support Staff : 760
- Total FTE : 677.85
- FTE per Research Personnel : 0.34
- FTE per Researcher : 0.34

### **Other Indicators**

- Largest R&D (Field of Research, FOR) : Chemical Sciences
- Largest R&D (Socio-Economic Objectives, SEO) : Manufacturing

## **INTERNATIONAL COMPARISONS (Selected Countries)**

### **The GERD/GDP Ratio (%) (year)**

- Malaysia : 0.39 ('98)
- Indonesia : 0.16 ('94)\*
- Thailand : 0.20 ('91)
- Singapore : 1.76 ('98)
- Taiwan : 1.82 ('94)\*\*
- USA : 2.52 ('96)
- Japan : 3.00 ('96)

### **Number Researchers per 10,000 Labour Force**

- Malaysia : 7.0 ('98)
- Indonesia : -
- Thailand : 3.0 ('94)
- Singapore : 65.5 ('98)
- Taiwan : 26.0 ('93)
- USA : 76.0 ('96)
- Japan : 82.0 ('95)

\* *Labour force (1998) = 8,883.6 x 10<sup>3</sup>*

\* *Source : ASEAN S&T Indicators, published by ASEAN Secretariat, 1997*

\*\* *Source : The S&T Analysis Section, Dept. of Industry, Science and Resources, Australia, 1997*