

二零零七年工商業創新活動 按年統計調查報告

Report on 2007 Annual Survey of Innovation Activities in the Business Sector

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報告書內容摘要

Executive Summary

緒言

政府統計處在 2008 年 2 月至 8 月期間進行「2007 年工商業創新活動按年統計調查」，搜集工商業在 2007 年進行的研究及發展（研發）活動和其他創新活動的資料。共 5 511 間機構單位獲抽選作為樣本，整體回應率為 98.7%。本處在 2002 年首次進行這項統計調查，搜集工商業在 2001 年進行的研發活動和其他創新活動的資料。

研發活動在工商業的普遍程度

2. 研發是推動技術進步和變革的主要動力之一。有關研發的統計數字是反映投入這方面的資源及其分布情況的重要指標。在 2007 年曾進行研發活動的機構單位估計約有 4 864 間，較 2006 年 4 644 間的相應數字上升 5%。在 2007 年有進行研發的機構主要集中在兩個行業類別，分別為批發、零售、進口與出口貿易、飲食及酒店業（49%）和金融、保險、地產及商用服務業（29%）。（表 1.1 及 2.1）

用於研發活動的資源

3. 2007 年工商業用於內部研發活動的開支為 60.55 億港元，較 2006 年的 62.87 億港元下跌 4%。有關開支的下調，部分原因是一些機構單位減少其研發活動的資本開支。研發的資源主要用於兩個科技領域，分別為資訊科技和電機及電子工程科技，二者合共佔內部研發總開支的 76%。（表 1.1 及 2.5）

4. 另一方面，工商業用於外判研發活動予本港以外機構的開支則由 2006 年的 24.78 億港元上升至 2007 年的 27.94 億港元。（表 2.7）

Introduction

The **2007 Annual Survey of Innovation Activities in the Business Sector** was conducted by the Census and Statistics Department (C&SD) during February to August 2008 to collect data on research and development (R&D) activities and other innovation activities undertaken in the business sector in 2007. A total of 5 511 establishments were selected in the sample. The overall response rate was 98.7%. The survey was first conducted in 2002 to collect data on R&D activities and other innovation activities undertaken in the business sector in 2001.

Diffusion of R&D activities in the business sector

2. R&D is one of the key forces for technological advancement and changes. Statistics on R&D are important indicators to reflect the size and distribution of resources devoted to R&D. In 2007, some 4 864 establishments were estimated to have undertaken R&D activities, signifying an increase of 5% over the corresponding figure of 4 644 establishments in 2006. Establishments undertaking R&D activities in 2007 were mainly clustered in two sectors, viz. wholesale, retail and import and export trades, restaurants and hotels (49%); and financing, insurance, real estate and business services (29%). (Tables 1.1 and 2.1)

Resources devoted to R&D activities

3. Expenditure on in-house R&D for the business sector in 2007 decreased by 4% compared with a year ago, from HK\$6,287 million to HK\$6,055 million, partly as a result of the drop in capital spending of some establishments on R&D. R&D efforts were mainly directed to two broad technology areas, viz. information technology; and electrical and electronics engineering technology. These two technology areas together accounted for 76% of total in-house R&D expenditure. (Tables 1.1 and 2.5)

4. On the other hand, expenditure for the business sector on outsourcing R&D activities to parties outside Hong Kong rose from HK\$2,478 million in 2006 to HK\$2,794 million in 2007. (Table 2.7)

5. 2007年工商業的研發人員估計共12 673人(以相當於全日制的人數計算)，與2006年相若。當中，研究員／科學家／工程師、技術員和其他輔助人員分別佔74%、17%和9%。(表1.1及2.9)

技術創新活動在工商業的普遍程度

6. 創新活動在知識型經濟中扮演着一個重要角色。除進行研發之外，一間機構單位亦可從事多種與研發無直接關係的技術創新活動，而此等活動對有關機構的創新和表現往往十分重要。

7. 約5%的機構單位在2007年曾進行技術創新活動。在這些機構當中，約55%曾進行技術程序創新，而約33%曾進行技術產品創新。按機構單位規模分析，大型機構單位當中約有23%曾進行技術創新活動，中型機構單位約有13%，均較小型機構單位(4%)為多。(表1.2)

技術創新活動對工商業的影響

8. 一般而言，大部分在2007年曾進行技術創新活動的機構均認為，該等活動對其機構單位有正面影響。技術創新活動最顯著的果效是「改善了貨品或服務的素質」，有35%機構單位認為技術創新活動對此項有高度的影響性。(表3.8)

技術創新活動的知識或資訊來源

9. 獲取資訊是成功創新的重要一環，而一間機構單位可從內部和外界收集資訊。機構單位普遍表示，市場上的資訊來源對其進行技術創新活動十分重要。被視為高度重要的三大資訊來源是「設備、材料、組件或軟件的供應商」(35%)、「客戶或顧客」(29%)和「機構內部(例如：研發成果)」(27%)。(表3.10)

5. In 2007, the estimated number of R&D personnel in the business sector was 12 673 (in terms of full-time equivalent), about the same as in 2006. Researchers / scientists / engineers, technicians and other supporting staff constituted 74%, 17% and 9% respectively. (Tables 1.1 and 2.9)

Diffusion of technological innovation (TI) activities in the business sector

6. Innovation activities play an important role in a knowledge-based economy. In addition to conducting R&D, an establishment may also undertake many other technological innovation activities which are not directly related to R&D and yet play a major role in innovation and the performance of the establishment.

7. About 5% of the establishments had undertaken TI activities in 2007. Of those, about 55% had technological process innovation and about 33% had technological product innovation. Analysed by size of establishment, TI activities were more prevalent in large establishments (23% had undertaken such activities) and medium establishments (13%) than in small establishments (4%). (Table 1.2)

Impact of TI activities on the business sector

8. Generally speaking, most of the establishments having undertaken TI activities in 2007 considered that such activities would have positive impact on their establishments. The most pronounced effect of TI activities was seen in the area of “improved quality in goods or services”, as cited by 35% of the establishments. (Table 3.8)

Source of knowledge or information on TI activities

9. Access to information is key to successful innovation. The source of information could be both inside and outside an establishment. Establishments generally indicated that market sources were highly important for their undertaking of TI activities. The top three information sources considered to be highly important were “suppliers of equipment, materials, components or software” (35%), “clients or customers” (29%), and “within the firm (e.g. R&D results)” (27%). (Table 3.10)

阻礙技術創新的因素

10. 機構單位普遍認為經濟因素是阻礙技術創新的主因。在 2007 年曾進行技術創新活動的機構單位最常提及的三大阻礙因素是「創新成本太高」(46%)、「缺乏適當的資金來源」(37%)和「預期的經濟風險太高」(27%)。(表 3.12)

較宏觀的創新活動

11. 除技術創新活動外，一間機構單位亦會從事很多與技術沒有直接關係的非技術創新活動，以助提升其競爭力及表現。這類活動可包括實施新的機構策略以開拓新市場，及重組架構以更有效運用人力資源。機構單位進行的非技術創新活動主要包括策略、管理、組織架構、市場推廣及產品外觀設計等範疇的重要變革。

12. 約 42% 的機構單位在 2007 年有進行一項或以上的非技術創新活動。這些機構單位進行的主要非技術創新活動為「實施嶄新或經重大改變的機構策略」(25%)及「令機構最少一個產品在外觀美感或設計方面有重大改變或有其他主觀改變」(22%)。(表 4.1 及 4.2)

13. 從較宏觀的角度把技術創新和非技術創新活動合計，在 2007 年約有 42% 的機構單位有進行創新活動。(表 4.4)

專利

14. 統計調查的結果顯示，在 2007 年約有 720 間的機構單位獲批予專利，涉及 1 241 個知識產權。該些機構單位平均每間擁有獲批專利的知識產權數目為 1.7 個。(表 5.1 及 5.2)

Barriers to TI

10. Establishments generally considered economic factors as the major barriers to TI. The three most common hampering factors mentioned by the establishments having undertaken TI activities in 2007 were “innovation costs too high” (46%), “lack of appropriate sources of finance” (37%), and “excessive perceived economic risks” (27%). (Table 3.12)

Innovation activities from a wider perspective

11. Apart from TI activities, an establishment may engage in many other non-technological innovation (non-TI) activities that have no direct relation to technology but may help enhance its competitiveness and performance. Such activities may include implementation of new corporate strategies to explore new markets and restructuring of organisation to better utilise human resources. The non-TI activities undertaken by establishments mainly embrace important changes in several dimensions, viz. strategy, management, organisation, marketing and aesthetic design of products.

12. About 42% of the establishments had undertaken one or more types of non-TI activities in 2007. The prevalent non-TI activities among these establishments were “implementation of new or significantly changed corporate strategies” (25%) and “significant changes in the aesthetic appearance or design or other subjective changes in at least one of the products” (22%). (Tables 4.1 and 4.2)

13. From a wider perspective, by taking TI and non-TI activities together, some 42% of establishments had undertaken innovation activities in 2007. (Table 4.4)

Patent

14. The survey results indicated that about 720 establishments had patents granted in 2007, involving 1 241 intellectual properties in total. For those establishments, there were 1.7 intellectual properties granted with patent right per establishment on average. (Tables 5.1 and 5.2)

15. 此外，2007 年有 956 間機構單位仍有未獲批准的專利申請，涉及共 1 499 個知識產權。（表 5.4 及 5.5）

15. Moreover, 956 establishments had patent applications pending for approval in 2007, involving 1 499 intellectual properties in total. (Tables 5.4 and 5.5)

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技術創新活動

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較宏觀的創新活動

Innovation Activities from a Wider Perspective

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1 緒言及統計方法註釋

1 Introduction and Methodological Notes

背景

1.1 政府統計處於 2008 年 2 月至 8 月期間進行「**2007 年工商業創新活動按年統計調查**」。本處於 2002 年首次進行該項統計調查，目的是協助確定本港的技術水平。在設計此項統計調查時，已參考了由經濟合作與發展組織制定的國際標準，以及相關工商界及商會的意見。

統計調查目的

1.2 這項統計調查旨在搜集工商業創新活動的資料。具體來說，統計調查的目的是：

- (a) 搜集有關**研究及發展（研發）活動的數據**，以評估用於研發的資源的規模和分布；
- (b) 搜集**研發活動以外的創新活動的量化資料**，協助評估本港新技術的發展和普遍程度；
- (c) 搜集受訪者**對創新活動的意見**，藉此加深了解助長或阻礙創新過程的因素；及
- (d) 搜集有關**專利申請的數據**，以評估獲批和申請專利的數目及有關專利被開拓作商業應用的情況。

1.3 統計調查結果有助制定和評估香港的創新和科技政策。

Background

1.1 The **2007 Annual Survey of Innovation Activities in the Business Sector** was conducted by the Census and Statistics Department (C&SD) during February to August 2008. The survey was first conducted by the Department in 2002 to help ascertain the level of technological sophistication of the economy. In designing the survey, reference has been made to relevant international standards promulgated by the Organisation for Economic Cooperation and Development (OECD) and views of the business sector and trade associations.

Objectives

1.2 The survey aims to collect information on innovation activities in the business sector. Specifically, the objectives of the survey are:

- (a) to collect **data on research and development (R&D) activities** with a view to assessing the size and distribution of resources devoted to R&D;
- (b) to collect **quantitative information on innovation activities other than R&D** to help assess the development and diffusion of new technologies in Hong Kong;
- (c) to gauge respondents' **views on innovation activities** so as to gain a better understanding of the factors that foster or hinder the innovation process; and
- (d) to collect **data on patent applications** with a view to assessing the number of patents granted / being applied and the situation pertaining to the exploitation of these patents for commercial application.

1.3 The survey results would be useful to innovation and technology policy formulation and evaluation in Hong Kong.

概念及定義

1.4 **研發活動**是指有系統的創意活動，目的是增進知識，包括對於人類、文化和社會的知識，從而運用這些知識來發明新產品、提供新服務或擴大用途，以及改良現有產品、服務或用途。

1.5 **技術創新**是指一間機構在市場上推出一個技術嶄新或經顯著改良的產品（貨品或服務），或在機構內部實施一個技術嶄新或經顯著改良的程序。有關的技術創新可以源自新技術發展的成果、現有技術的重新結合或該機構所汲取的其他知識的運用。

1.6 關於研發和技術創新活動的定義的較全面註釋，請參閱本報告書的附錄甲。

有關法例

1.7 2007 年統計調查是根據《普查及統計條例》（第 316 章）進行。這條例賦予本處權力向被訪者搜集所需數據，並規定本處對個別機構單位提供的資料必須嚴加保密，日後只會發表不顯示個別機構單位情況的整體資料。

統計調查涵蓋範圍

1.8 這項統計調查以政府統計處備存的機構單位記錄庫為抽樣框。此記錄庫是根據稅務局商業登記署的資料更新。這項統計調查涵蓋下列行業類別的機構單位：

行業類別 (HSIC)	包括的行業
3	製造業
4	電力及燃氣業
5	建造業(只包括就業人數 10 人或以上的機構單 位)

Concepts and definitions

1.4 **R&D activities** refer to creative work undertaken on a systematic basis in order to increase the stock of knowledge, including knowledge of man, culture and society, and the use of this knowledge to devise new products / services / applications and improve existing products / services / applications.

1.5 **Technological innovation (TI)** refers to the introduction of a technologically new or significantly improved product (goods or service) to the market or of a technologically new or significantly improved process within a firm. The TI may be based on the results of new technological developments, new combinations of existing technology or utilisation of other knowledge acquired by the firm.

1.6 For a more comprehensive interpretation of the definitions of R&D and TI activities, please refer to Appendix A of this report.

Legislation

1.7 The 2007 survey was conducted under the Census and Statistics Ordinance (Chapter 316). The Ordinance provides authority for the collection of the required data from respondents and stipulates that information relating to individual establishments must be kept in strict confidence. Only aggregate information, which does not reveal details of individual establishments, would be released.

Survey coverage

1.8 The sampling frame for the survey is the Central Register of Establishments, which is a comprehensive register maintained by the C&SD and updated by reference to records of the Business Registration Office of the Inland Revenue Department. The survey covers establishments engaged in the following industry sectors:

Industry sector (HSIC)	Industries covered
3	Manufacturing
4	Electricity and gas
5	Construction (establishments with 10 or more persons engaged)

6	批發、零售、進口與出口貿易、飲食及酒店業	6	Wholesale, retail and import and export trades, restaurants and hotels
7	運輸、倉庫及通訊業	7	Transport, storage and communications
8	金融、保險、地產及商用服務業	8	Financing, insurance, real estate and business services
9	社區、社會及個人服務業	9	Community, social and personal services

1.9 為提高成本效益和運作效率，一些經濟貢獻相對較少，以及較少投入研發／創新活動的行業（例如農業及漁業、採礦及採石業、就業人數不足 10 人的建造業機構單位、的士、公共小巴和個人服務業），並沒有包括在本統計調查範圍內。

1.9 On cost effectiveness and operational considerations, some industries (e.g. agriculture and fishing; mining and quarrying; construction establishments each with less than 10 persons engaged; taxis; public light buses; personal services) with relatively small economic contribution and presumably not so involved in R&D / innovation activities are not included in this survey.

經濟活動分類

1.10 本統計調查是採納「香港標準行業分類」（HSIC）來劃分機構單位的經濟活動。「香港標準行業分類」（HSIC）是以「國際標準產業分類」（ISIC）第二修訂版為藍本，加以編訂，使其切合本地環境，從而反映本港的經濟結構。

Classification of economic activities

1.10 The Hong Kong Standard Industrial Classification (HSIC) is adopted for classifying the economic activities of establishments in the survey. The HSIC is an industrial classification system devised on the basis of the International Standard Industrial Classification (ISIC) Revision 2 with suitable adaptation to reflect the structure of the local economy.

統計期

1.11 這項統計調查搜集 2007 年或在 2007 年 1 月 1 日至 2008 年 3 月 31 日期間任何連續 12 個月的資料，視乎個別機構單位的會計慣例而定。至於在上述期間開業或停業的機構單位，所搜集的資料是指該等機構單位在有關會計年度內有經營業務期間的數據。

Survey reference period

1.11 Data collected in the survey referred to the calendar year 2007, or a 12-month period between 1 January 2007 and 31 March 2008 according to the accounting practices of individual establishments. For establishments which commenced or ceased operation within their respective accounting periods defined above, data collected were for that part of the period during which the establishments were in operation.

樣本設計

1.12 這項統計調查的抽樣框是先以行業組別分層，然後再按就業人數分層。被識別為會進行研發和／或創新活動的機構單位，全納入統計調查的樣本內。這些機構單位包括在政府統計處以往進行的統計調查中報稱有進行研發活動的機構單位，和透過各種渠道如剪報、網上搜尋以及諮詢政府部門、商業機構、高等教育機構和商會後確定的機構單位。至於其他機構單位，則經科學方法抽選樣本。獲選作為統計調查對象的機構單位共 5 511 間。根據統計調查結果估計，在統計調查涵蓋範圍內的機構單位總數約為 263 020 間。

資料搜集

1.13 這項統計調查採用兩種問卷，即長問卷和短問卷。被識別為會進行研發和／或創新活動的機構單位填寫長問卷，而其餘的機構單位則填寫短問卷。採用短問卷是為了減少受訪者填報資料的負擔，特別是對於沒有進行研發和／或創新活動的受訪機構而言。

1.14 統計調查問卷及註釋於 2008 年 1 月尾郵寄予獲選中的 5 511 間機構單位。此外，本處亦製備問卷的電子版本，以供索取應用。外勤人員會探訪或致電受訪者以核實已填妥問卷內的資料，並在有需要時協助受訪者填報問卷。截至資料搜集期完結時，成功訪問的機構單位有 4 773 間，未有回應的有 64 間，未能接觸或在統計期內沒有營業的有 674 間。統計調查的整體回應率為 98.7%。

Sample design

1.12 The sampling frame for the survey was stratified by industry group and, within each industry group, by employment size. Establishments identified as potential R&D and / or innovation performers were fully covered. These included establishments with reported R&D activities in previous C&SD's surveys and those identified through various channels such as newspaper cuttings, web search, and consultations with government departments, business firms, higher education institutions and trade associations. As for the other establishments, a scientific sample was drawn. Altogether 5 511 establishments were selected for enumeration. The total number of establishments falling within the scope of the survey was estimated to be 263 020 based on the results of the survey.

Data collection

1.13 Two types of questionnaire were used for the survey, viz. the long form and the short form. Establishments identified as potential R&D and / or innovation performers were requested to complete a long form. For other sampled establishments, a short form was used. The rationale of having a short form was to minimize reporting burden, especially for those sampled cases with no R&D and / or innovation activities.

1.14 Survey questionnaires together with the explanatory notes were mailed to the 5 511 selected establishments in end January 2008. Electronic template of the questionnaire was also available upon request. Field officers would visit / telephone respondents to verify the information in the completed questionnaires and assist them in completing the questionnaires if necessary. By the end of the data collection period, 4 773 establishments were successfully enumerated, 64 failed to respond, and 674 could not be located or were found to be inactive in the survey reference period. The overall response rate of the survey was 98.7%.

資料處理

1.15 填妥交回的問卷經本處職員詳細審核及電腦查證，方進行製表工作。審核程序包括查核填報的資料是否完整無缺、前後一致以及確實可信。遇有含糊或不一致的數據，負責人員會致電或探訪有關機構單位進行查證。

估值的可靠性

1.16 這項統計調查的結果受抽樣誤差和非抽樣誤差的影響。本報告書所載的估價是根據一個特定樣本所得的資料編製。以同樣的抽樣方式，可抽選出許多大小相同的樣本，而是項統計調查的樣本為眾多樣本的其中之一。由於每次抽選的樣本都有所不同，因此不同樣本得出的估價亦互有差異。抽樣誤差是計算這些差異的統計數量，可用以量度從一個特定樣本所得的估價，在估計總體數據方面的精確程度。

1.17 本報告書在評估各種變數估價的精確程度時，採用了離中系數。離中系數為一統計量數，顯示估計數值的相對精確性。離中系數的計算方法，是將估價的抽樣誤差除以估價本身的數值，再以百分比表示。離中系數越低，估計數值越精確。

1.18 統計變數的 95% 置信區間是指某一範圍的數值，其包含變數的實際值的機會率達百分之九十五。

1.19 本報告書所載列的主要變數估價的離中系數及統計變數的 95% 置信區間如下：

Data processing

1.15 Completed questionnaires received were subjected to thorough checking by office staff and detailed validation checks by computer before tabulation. Such checking covered completeness of entries, consistency among data items and credibility of reported data. For dubious entries or inconsistencies in the reported data, clarifications were made with respondents by phone or by field verification visits.

Reliability of the estimates

1.16 Results of the survey are subject to sampling and non-sampling errors. The estimates contained in this report are based on information obtained from a particular sample, which is one of many samples that could be selected using the same sampling design. Estimates derived from different samples may differ from each other. Sampling error is a measure of these variations and is thus a measure of the precision of an estimate derived from the particular sample in estimating the population parameter to be measured.

1.17 For assessing the precision of the estimates for various variables in this report, the coefficient of variation (CV) is used. The CV is a statistical measure to indicate the relative precision of an estimate. The CV is obtained by expressing the sampling error of an estimate as a percentage of the value of estimate itself. The smaller the CV, the more precise is the value of the estimate.

1.18 A 95% confidence interval (CI) for a statistical variable refers to the range of values which covers the true value of the variable with a chance of 95 out of 100.

1.19 The CV and 95% CI of the estimates of the key variables in this report are given below :

變數 Variable	估值 Estimate	離中系數 CV	95% 置信區間 95% CI
有從事研發活動的機構單位的百分比 Percentage of establishments having undertaken R&D activities	1.8%	11.7%	1.4% – 2.3%
有進行技術創新活動的機構單位的百分比 Percentage of establishments having undertaken TI activities	5.5%	7.5%	4.7% – 6.3%
有進行非技術創新活動的機構單位的百分比 Percentage of establishments having undertaken non-TI activities	41.9%	2.8%	39.6% – 44.1%
內部研發活動開支（十億港元） Expenditure for in-house R&D activities (HK\$ billion)	6.05	6.7%	5.26 – 6.84
技術創新活動開支（十億港元） Expenditure for TI activities (HK\$ billion)	15.68	5.8%	13.88 – 17.47

闡釋統計數字應注意的事項

1.20 政府統計處自 1995 年開始，透過按年經濟統計調查計劃，向工商機構搜集有關研發活動的數據。1995 年度的統計調查向所有主要行業搜集研發資料，訪問對象包括製造、屋宇建築及建造、批發及零售、貿易、運輸、倉庫、通訊、銀行、保險及地產等主要行業。1995 年度統計調查的結果顯示，研發開支高度集中在製造業、批發及零售業和貿易業。為減輕受訪者填報資料的負擔，自 1996 年度的統計調查開始已不再向屋宇建築及建造業、地產業和保險業的機構單位搜集有關研發的資料。1997 及 1998 年度的統計調查只向製造業和經銷貿易業的機構單位搜集有關數據。由於創新及科技對提升香港競爭力的重要性日漸增加，自 1999 年度開始，統計調查的範圍再次擴大至和 1995 年度時涵蓋所有主要行業一樣。由 2001 統計年份開始，有關研發和創新活動的詳細資料是透過「工商業創新活動按年統計調查」搜集。

Cautions in interpreting the statistics

1.20 The C&SD has been collecting data relating to R&D activities in the business sector through the Programme of Annual Economic Surveys since 1995. R&D data were collected from all major industries in the 1995 survey round, including manufacturing, building and construction, wholesale and retail, trading, transport, storage, communications, banking, insurance and the real estate sectors. Based on the results of the 1995 round, R&D expenditure were found highly concentrated in the manufacturing, wholesale and retail, and trading industries. In order to relieve respondents' burden, R&D data were no longer collected from establishments in the building and construction, real estate, and insurance industries in the 1996 round. In the 1997 and 1998 rounds, R&D data were only collected from establishments in the manufacturing and distributive trade industries. In view of the increasing emphasis of innovation and technology to enhance Hong Kong's competitiveness, the survey coverage was extended as from the 1999 survey round to cover all major industries as in the 1995 round. As from the reference year 2001, more detailed information pertaining to R&D and innovation activities is collected through the Annual Survey of Innovation Activities in the Business Sector.

1.21 如上文所述，就有關工商業研發活動而言，不同年度的統計調查所涵蓋的行業不盡相同。雖然有關影響相信不大，但在闡釋本報告書內的研發統計數字，以及以不同形式發布的以往年度的同類數字時，必須審慎。

1.22 由於研發和／或創新活動屬個別機構按需要而不定時進行的投資，因此難於為進行研發／創新活動的機構單位設定一個整全和詳盡的記錄庫。雖然政府統計處已盡力透過第 1.12 段所述的途徑確定有進行研發／創新活動的機構單位，但仍可能會有遺漏。統計處會不斷檢討和改善統計調查的涵蓋範圍。

1.23 本報告書內陳述的創新統計數字，是指在 2007 年一年內進行的創新活動。不過，有些國家／地區編製同類統計時或會包括了一個較長年期內進行的創新活動。因此，在比較香港和其他國家／地區的創新統計數字時，應小心處理。

統計表註釋

1.24 機構單位按其就業人數分為小型、中型及大型三個類別，詳情如下：

行業類別 Industry sector	機構單位規模 Size of establishment	就業人數 No. of persons engaged		
		小型 Small	中型 Medium	大型 Large
製造業（行業類別 3） Manufacturing (Industry Sector 3)		< 10	10 - 99	≥ 100
非製造業（行業類別 4-9） Non-manufacturing (Industry Sectors 4-9)		< 10	10 - 49	≥ 50

1.25 由於四捨五入關係，個別數字或百分比之和可能不等於其總數。

1.21 As mentioned above, the industry coverage in respect of R&D activities in the business sector in different survey rounds is not the same. Hence, care should be taken in interpreting the R&D statistics in this report with previous years' R&D statistics presented in different contexts, although the effect of such is believed to be small.

1.22 Since R&D and / or innovation activities are some sort of investment which individual establishments might choose to undertake on an ad hoc and need basis, it is difficult to construct a comprehensive and exhaustive frame of R&D / innovation performers in the economy. Despite the efforts of identifying those potential R&D / innovation performers through various sources as mentioned in paragraph 1.12, the list is by no means comprehensive and exhaustive. C&SD would continuously review and enhance the coverage of the survey.

1.23 The innovation statistics presented in this report refer to those innovation activities which took place in the year 2007, whereas in other countries / territories, they may refer to innovation activities which took place in a longer span of time. Hence, care should be taken when comparing the innovation statistics of Hong Kong with those of other countries / territories.

Notes to statistical tables

1.24 Establishments are categorised into small, medium and large according to their number of persons engaged as follows:

1.25 Figures or percentages of components may not add up to the respective totals owing to rounding.

2 研究及發展活動 Research and Development Activities

研究及發展（研發）活動在工商業的普遍程度

2.1 進行創新科技的能力是經濟持續發展的重要元素。創新活動包含一系列的科學、技術、組織架構、財經及商業活動。研發是當中的一項活動，可在創新過程中的不同階段進行。

2.2 研發是推動技術進步和變革的主要動力之一。有關研發的統計數字是反映投入這方面的資源及其分布情況的重要指標。在 2007 年曾進行研發活動的機構單位估計約有 4 864 間，較 2006 年 4 644 間的相應數字增加 5%。2007 年的統計結果顯示，參與研發活動的機構單位主要集中於兩個行業類別，即

- (a) 批發、零售、進口與出口貿易、飲食及酒店業（49%）；
 - (b) 金融、保險、地產及商用服務業（29%）。
- （表 1.1 及 2.1）

2.3 就批發、零售、進口與出口貿易、飲食及酒店業而言，研發活動主要由從事分判工序的貿易機構進行。這個表面上看來奇特的現象，其實是香港製造業的特色，其成因是香港很多的製造機構透過分判安排，將較低增值和勞工密集的工序遷移至中國內地進行。這些機構在香港只保留屬支援性質的辦公室，負責產品設計、測試、接訂單和研發等工作。

用於研發活動的資源

內部研發活動開支

2.4 以研發的投資計算，2007 年工商業用於內部研發活動的總開支為 60.55 億港元。該等開支相對本地生產總值⁽¹⁾比率，在 2007 年為 0.37%，低於 2006 年的 0.43%。（表 1.1 及 2.2）

(1) 以開支面編製並以當時市價計算的 2006 及 2007 年生產總值分別為 14,759 億港元及 16,162 億港元。數字是 2008 年 8 月發表的最新數據並在日後會作出修訂。

Diffusion of research and development (R&D) activities in the business sector

2.1 Capabilities in innovation and technology are crucial elements for sustainable economic growth. Innovation activities involve a series of scientific, technological, organisational, financial and commercial activities. R&D is one of these activities and may be carried out at different phases of the innovation process.

2.2 R&D is one of the key forces for technological advancement and changes. Statistics on R&D are important indicators to reflect the size and distribution of resources devoted to R&D. Some 4 864 establishments were estimated to have undertaken R&D activities in 2007, signifying a rise of 5% as compared with the corresponding figure of 4 644 establishments in 2006. According to the 2007 survey results, establishments engaging in R&D activities were mainly clustered in two industry sectors, namely,

- (a) Wholesale, retail and import and export trades, restaurants and hotels (49%);
 - (b) Financing, insurance, real estate and business services (29%).
- (Tables 1.1 and 2.1)

2.3 For the wholesale, retail and import and export trades, restaurants and hotels sector, R&D activities were predominately performed by trading firms with sub-contract processing arrangement. This apparent peculiarity was in fact a feature in Hong Kong with many manufacturing establishments relocating their lower value added and labour-intensive manufacturing process to the mainland of China through sub-contract processing arrangement. They left behind in Hong Kong only the supporting offices to perform such activities as product design, testing, orders taking and R&D.

Resources devoted to R&D activities

Expenditure for in-house R&D activities

2.4 Measured in terms of investment in R&D, total expenditure on in-house R&D activities in the business sector amounted to HK\$6,055 million in 2007. The ratio of such R&D expenditure to Gross Domestic Product⁽¹⁾ (GDP) was 0.37% in 2007, lower than that of 0.43% in 2006. (Tables 1.1 and 2.2)

(1) The expenditure-based GDP estimates at current market prices for 2006 and 2007 are HK\$1,475.9 billion and HK\$1,616.2 billion respectively. The figures are the latest data released in August 2008 and are subject to revision later on.

2.5 按行業類別分析，批發、零售、進口與出口貿易、飲食及酒店業的內部研發開支佔所有行業研發開支的總額的45%，在各行業類別中所佔的比重最大。至於金融、保險、地產及商用服務業所佔的比重，在2007年則佔約36%。（表1.1及2.2）

2.5 Analysed by industry sector, the wholesale, retail and import and export trades, restaurants and hotels sector contributed the largest share of 45% in total expenditure for in-house R&D activities. As for the financing, insurance, real estate and business services sector, the percentage was around 36% in 2007. (Tables 1.1 and 2.2)

2.6 在2007年曾進行研發活動的所有機構單位當中，大型機構單位佔15%，但其內部研發開支在所有機構的總額中所佔的比重達45%。中型和小型機構單位分別佔內部研發開支的32%和23%。（表1.1、2.1及2.2）

2.6 Large establishments constituted 15% of all establishments that had undertaken R&D activities in 2007. However, they accounted for 45% of total in-house R&D expenditure. Medium and small establishments accounted for 32% and 23% of in-house R&D expenditure respectively. (Tables 1.1, 2.1 and 2.2)

2.7 按研發活動的開支類別分析，經常開支(52.69億港元)和資本開支(7.85億港元)分別佔內部研發活動開支的87%和13%。由於研發資本開支主要包括在統計年份內購買供研發之用的資產，而並非經常性質，所以它在內部研發活動開支中，所佔的比重較經常開支為小。（圖2.1和表2.2）

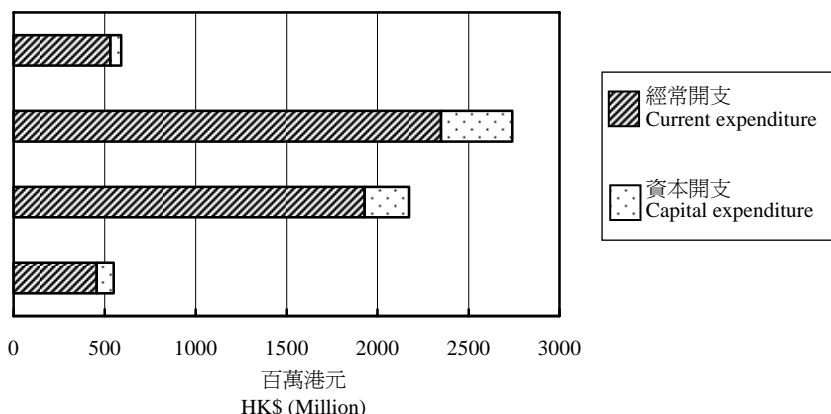
2.7 Analysed by type of R&D expenditure, the proportions of current expenditure (HK\$5,269 million) and capital expenditure (HK\$785 million) for in-house R&D activities were 87% and 13% respectively. Since R&D capital expenditure was not recurrent in nature and it covered mainly acquisitions of assets for R&D during the reference year, its share to in-house R&D expenditure was often smaller than that of R&D current expenditure. (Chart 2.1 + Table 2.2)

圖 2.1 按研發開支類別（即資本和經常開支）和按行業類別／機構單位規模劃分的2007年內部研發活動總開支

Chart 2.1 Total expenditure for in-house R&D activities in 2007 by type of R&D expenditure (i.e. capital and current) by industry sector / size of establishment

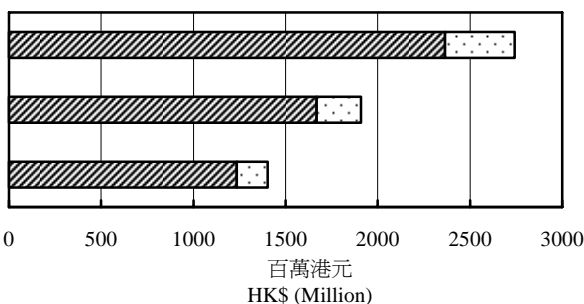
按行業類別劃分
By industry sector

製造業
Manufacturing
批發、零售、進口與出口貿易、飲食及酒店業
Wholesale, retail and import and export trades, restaurants and hotels
金融、保險、地產及商用服務業
Financing, insurance, real estate and business services
其他
Others



按機構單位規模劃分
By size of establishment

大型
Large
中型
Medium
小型
Small



按研究類別劃分的研發總開支

Total R&D expenditure by type of research

2.8 工商業的研發總開支主要是用來進行下游的研究工作。就 2007 年的研發總開支而言，當中最大部分是用於實驗發展（80%），其次是應用研究（18%）和基礎研究（2%）。（圖 2.2(i) 及 2.2(ii)和表 2.3）

2.8 R&D spending in the business sector was mainly targeted to down-stream research. Of the total R&D expenditure incurred in 2007, the largest share went to experimental development (80%), followed by applied research (18%), followed by basic research (2%). (Charts 2.2(i) and 2.2(ii) + Table 2.3)

圖 2.2(i) 按研究類別劃分的 2007 年內部研發活動總開支分布
Chart 2.2(i) Distribution of total expenditure for in-house R&D activities in 2007 by type of research

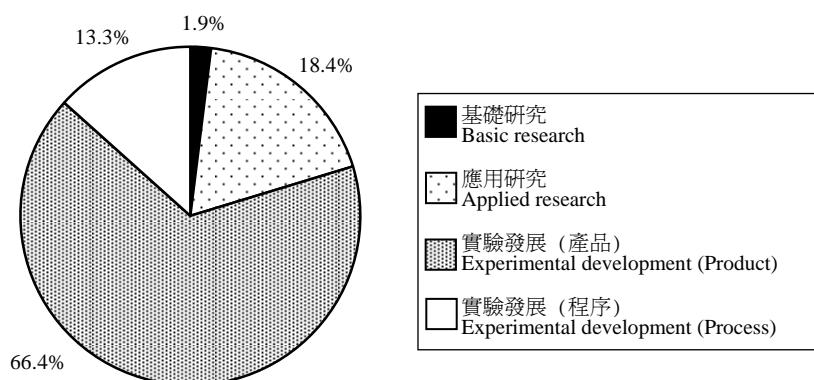
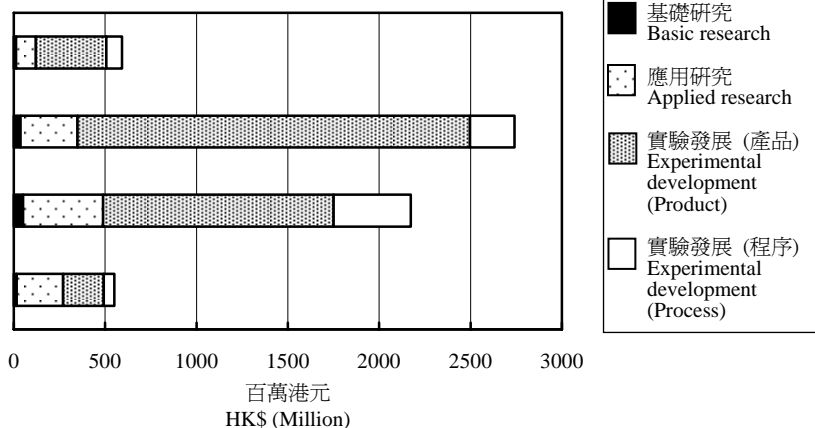


圖 2.2(ii) 按研究類別和按行業類別／機構單位規模劃分的 2007 年內部研發活動總開支
Chart 2.2(ii) Total expenditure for in-house R&D activities in 2007 by type of research by industry sector / size of establishment

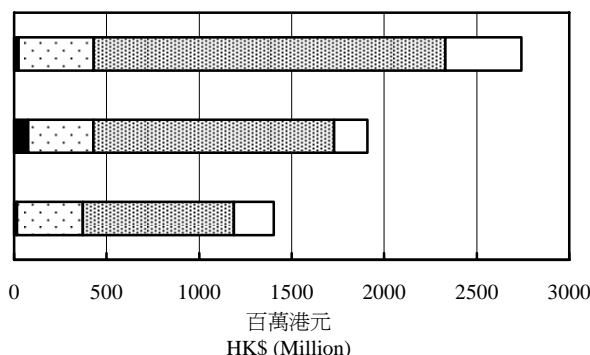
按行業類別劃分
By industry sector

- 製造業
Manufacturing
- 批發、零售、進口與出口貿易、飲食及酒店業
Wholesale, retail and import and export trades, restaurants and hotels
- 金融、保險、地產及商用服務業
Financing, insurance, real estate and business services
- 其他
Others



按機構單位規模劃分
By size of establishment

- 大型
Large
- 中型
Medium
- 小型
Small



按研發活動範疇劃分的研發總開支

Total R&D expenditure by field of R&D activity

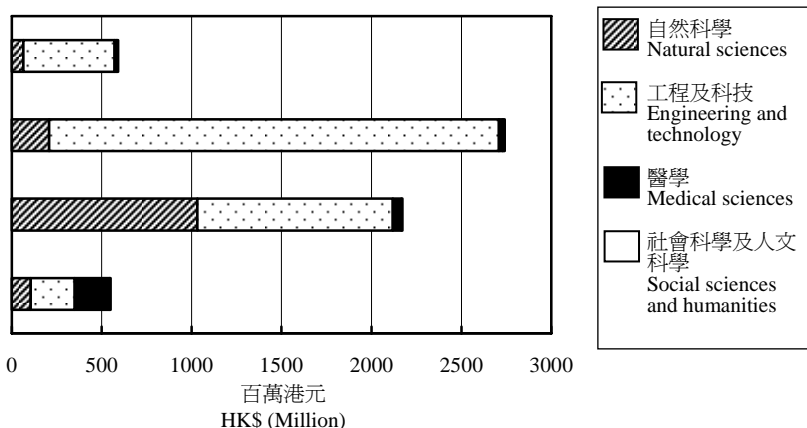
2.9 按研發活動範疇分析，絕大部分的研發活動總開支是用於自然科學及工程科技（99.5%），用於社會科學及人文科學的研發總開支只佔極小部分（0.5%）。（圖 2.3 和表 2.4）

2.9 Analysed by field of R&D activity, a predominant portion of total expenditure for in-house R&D activities was directed to the fields of natural sciences and engineering (99.5%). Only a very insignificant portion of total R&D expenditure was spent on social sciences and humanities (0.5%). (Chart 2.3 + Table 2.4)

圖 2.3 按研發活動範疇和按行業類別／機構單位規模劃分的 2007 年內部研發活動總開支
Chart 2.3 Total expenditure for in-house R&D activities in 2007 by field of R&D activity by industry sector / size of establishment

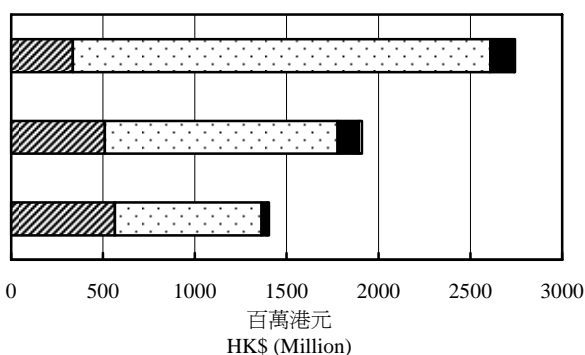
按行業類別劃分
 By industry sector

- 製造業
Manufacturing
- 批發、零售、進口與出口貿易、飲食及酒店業
Wholesale, retail and import and export trades, restaurants and hotels
- 金融、保險、地產及商用服務業
Financing, insurance, real estate and business services
- 其他
Others



按機構單位規模劃分
 By size of establishment

- 大型
Large
- 中型
Medium
- 小型
Small



按科技領域劃分的研發總開支

Total R&D expenditure by technology area

2.10 工商業的研發活動主要集中於資訊科技及工程科技領域，以研發總開支計算，首三類的科技領域分別是：資訊科技（42%）、電機及電子工程科技（34%）及製造科技（12%）。（圖 2.4 和表 2.5）

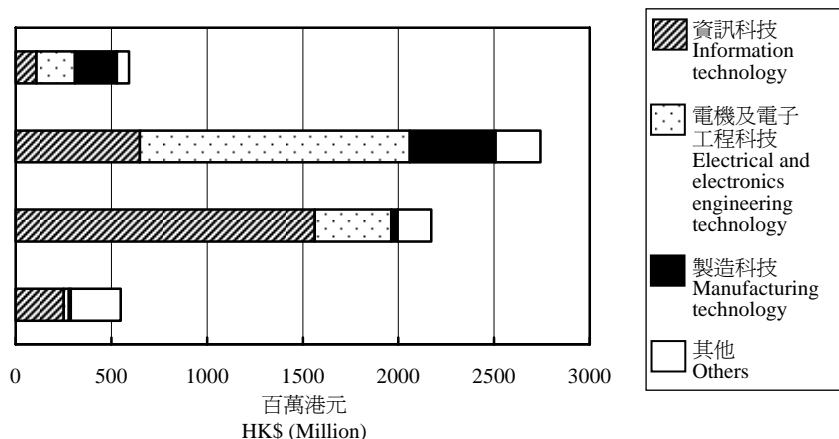
2.10 R&D activities in the business sector were mainly focused on the areas of information technology and engineering technology. Measured in terms of total expenditure for in-house R&D activities, the top three technology areas were: information technology (42%), electrical and electronics engineering technology (34%) and manufacturing technology (12%). (Chart 2.4 + Table 2.5)

圖 2.4 按科技領域和按行業類別／機構單位規模劃分的 2007 年內部研發活動總開支

Chart 2.4 Total expenditure for in-house R&D activities in 2007 by technology area by industry sector / size of establishment

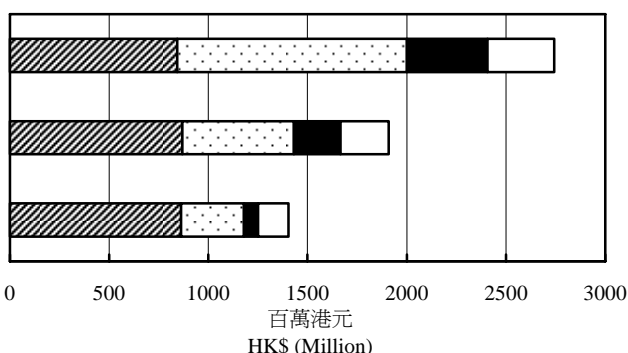
按行業類別劃分
By industry sector

- 製造業
Manufacturing
- 批發、零售、進口與出口貿易、飲食及酒店業
Wholesale, retail and import and export trades, restaurants and hotels
- 金融、保險、地產及商用服務業
Financing, insurance, real estate and business services
- 其他
Others



按機構單位規模劃分
By size of establishment

- 大型
Large
- 中型
Medium
- 小型
Small



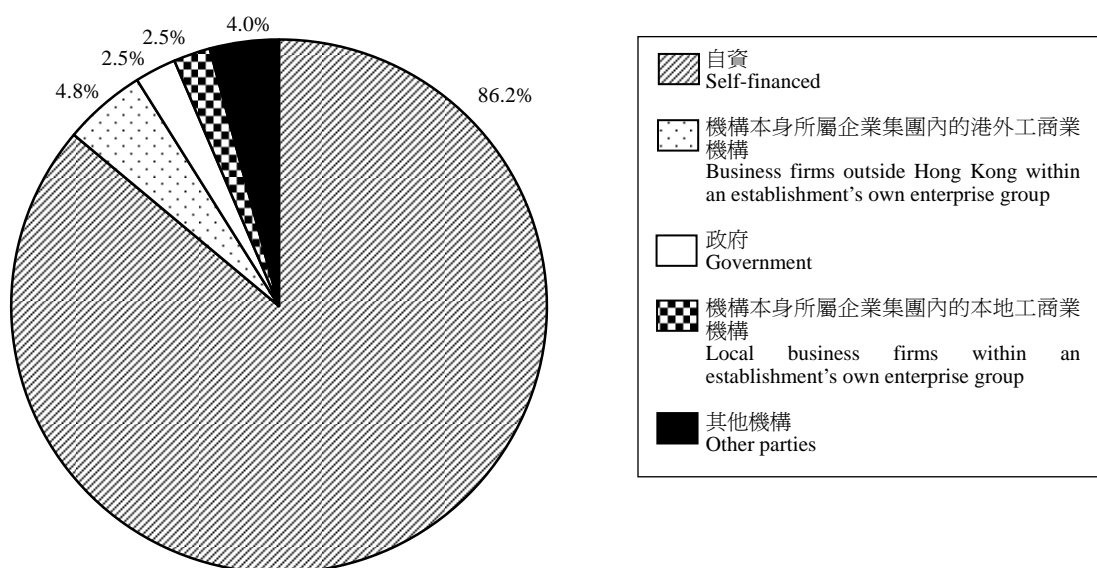
內部研發活動的資金來源

2.11 大約 93% 的內部研發活動總開支的資金是源自本地。機構單位本身為研發活動提供最大部分的資金 (86%)，其次是機構本身所屬企業集團內的港內及港外工商機構，為工商業的研發活動提供另外 7% 的資金。來自政府的資金所佔的比重則約為 2%。(圖 2.5 和表 2.6)

Source of funds for in-house R&D activities

2.11 Around 93% of total expenditure for in-house R&D activities was sourced locally. The establishments themselves provided most of the funds (86%) for R&D activities. Business firms (both in and outside Hong Kong) within an establishment's own enterprise group came second and provided 7% of the funds. The share of government funding was about 2%. (Chart 2.5 + Table 2.6)

圖 2.5 按主要資金來源劃分的 2007 年內部研發活動總開支分布
Chart 2.5 Distribution of total expenditure for in-house R&D activities in 2007 by major source of funds



外判研發活動的開支和執行機構

2.12 除內部研發活動開支的資料外，有關外判予其他機構進行的研發活動的開支數字，也有助分析研發活動資金的流動。

Expenditure and performing parties for outsourced R&D activities

2.12 Apart from the information on expenditure for in-house R&D activities, statistics on expenditure for R&D activities outsourced to other organisations are a useful supplement to help analyse the flows of funds for R&D activities.

2.13 2007 年用於外判研發活動的資金共 32.24 億港元。當中 4.29 億港元（13%）的研發活動外判給本地的機構，較 2006 年的相應數字（5.05 億港元）為低。其餘 27.94 億港元（87%）支付給香港以外的機構作外判研發活動，較 2006 年的 24.78 億港元為高。（表 2.7）

2.14 外判的研發工作主要由機構本身所屬企業集團內的香港及境外工商機構，以及其他本地和位於香港以外沒有聯繫的工商機構所進行，它們分別佔外判研發活動開支的 67% 及 30%。（圖 2.6 和表 2.8）

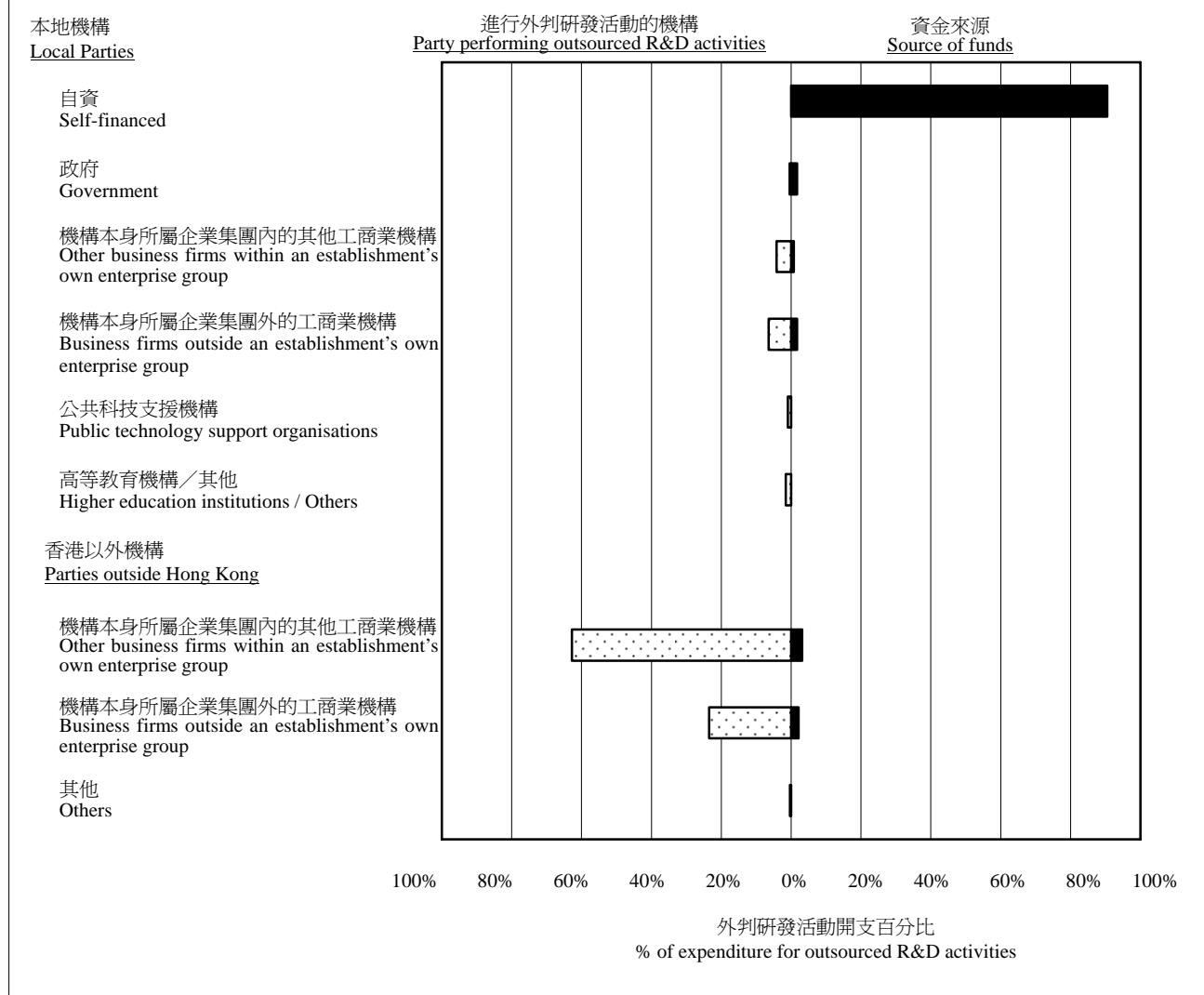
2.15 按外判研發活動的資金來源分析，91% 資金來自機構單位本身。第二大資金來源則是機構本身所屬企業集團內的其他港內及港外工商業機構（4%）。（圖 2.6 和表 2.8）

2.13 A total of HK\$3,224 million was spent on outsourced R&D activities in 2007. HK\$429 million of these R&D activities (13%) were outsourced to local parties, lower than the corresponding figure (HK\$505 million) in 2006. The other HK\$2,794 million (87%) were outsourced to parties outside Hong Kong, up from HK\$2,478 million in 2006. (Table 2.7)

2.14 Outsourced R&D projects were mainly undertaken by business firms (either local or abroad) within an establishment's own enterprise group and other unrelated business firms in and outside Hong Kong. They accounted for 67% and 30% of the total expenditure for outsourced R&D activities respectively. (Chart 2.6 + Table 2.8)

2.15 Analysed in terms of the source of funds for outsourced R&D activities, 91% of the funds were financed by the establishments themselves. The second major funding source came from business firms (both in and outside Hong Kong) within an establishment's own enterprise group (4%). (Chart 2.6 + Table 2.8)

圖 2.6 按進行機構和主要資金來源劃分的 2007 年外判研發活動總開支
Chart 2.6 Total expenditure for outsourced R&D activities in 2007 by performing party and major source of funds



按職業類別劃分的研發人員

2.16 除研發活動開支外，另一個反映內部研發投入的重要指標，是研發人員數目。概念上，研發人員的計算單位是「相當於全日制的人數」，其定義為僱員於填報年度內實際參與內部研發活動的工作月數除以 12。

2.17 工商業的內部研發人員數目按人數計算是 15 297 人，按相當於全日制的人數計算是 12 673 人。在 2007 年的 12 673 名研發人員當中，74% 是研究員／科學家／工程師，17% 是技術員，其餘 9% 是其他輔助人員。（圖 2.7 及 2.8 和表 2.9）

R&D personnel by type of occupation

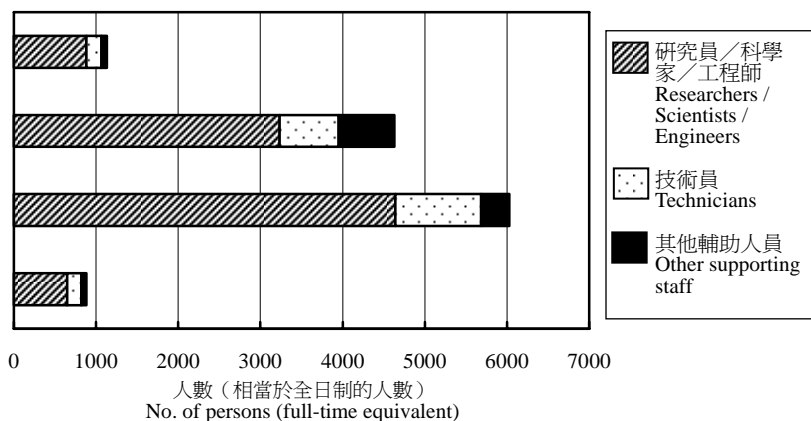
2.16 In addition to the expenditure on R&D activities, another important indicator to reflect the input into in-house R&D is the personnel devoted to R&D. The conceptual counting unit for the number of R&D personnel is *Full-time Equivalent (FTE)*, which is defined as the actual number of employee man-months deployed to in-house R&D activities during the reporting year divided by 12.

2.17 The number of in-house R&D personnel in the business sector stood at 15 297 in terms of headcount and 12 673 in terms of FTE. Among the 12 673 R&D personnel in 2007, 74% were researchers / scientists / engineers, 17% were technicians and the remaining 9% were other supporting staff. (Charts 2.7 and 2.8 + Table 2.9)

圖 2.7 按職業類別和按行業類別／機構單位規模劃分的 2007 年研發人員數目（相當於全日制的的人數）
Chart 2.7 R&D personnel (full-time equivalent) in 2007 by type of occupation by industry sector / size of establishment

按行業類別劃分
 By industry sector

製造業
 Manufacturing
 批發、零售、進口與出口貿易、飲食及酒店業
 Wholesale, retail and import and export trades, restaurants and hotels
 金融、保險、地產及商用服務業
 Financing, insurance, real estate and business services
 其他
 Others



按機構單位規模劃分
 By size of establishment

大型
 Large
 中型
 Medium
 小型
 Small

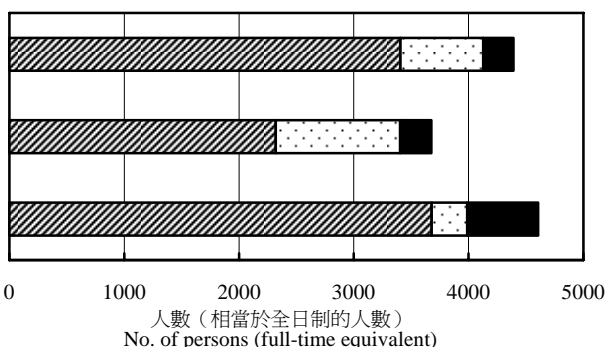
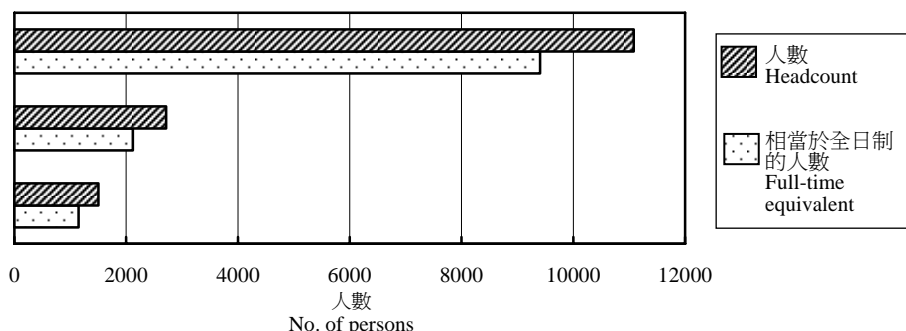


圖 2.8 按職業類別劃分的 2007 年研發人員數目（人數和相當於全日制的的人數）
Chart 2.8 R&D personnel (headcount and full-time equivalent) in 2007 by type of occupation

研究員／科學家／工程師
 Researchers / Scientists / Engineers
 技術員
 Technicians
 其他輔助人員
 Other supporting staff



按教育程度劃分的研發人員

R&D personnel by level of education

2.18 大部分研發人員具有學位或以上程度。2007 年的 12 673 名研發人員（相當於全日制的的人數）當中，6% 達博士程度，57% 具博士以下大學學位程度。（圖 2.9 及 2.10 和表 2.10）

2.18 Majority of the R&D personnel held degree or above qualifications. Of the 12 673 R&D personnel (FTE) in 2007, 6% attained Ph.D. level and 57% were holders of university degrees below Ph.D. level. (Charts 2.9 and 2.10 + Table 2.10)

圖 2.9 按教育程度劃分的 2007 年研發人員數目（相當於全日制的的人數）分布
Chart 2.9 Distribution of R&D personnel (full-time equivalent) in 2007 by level of education

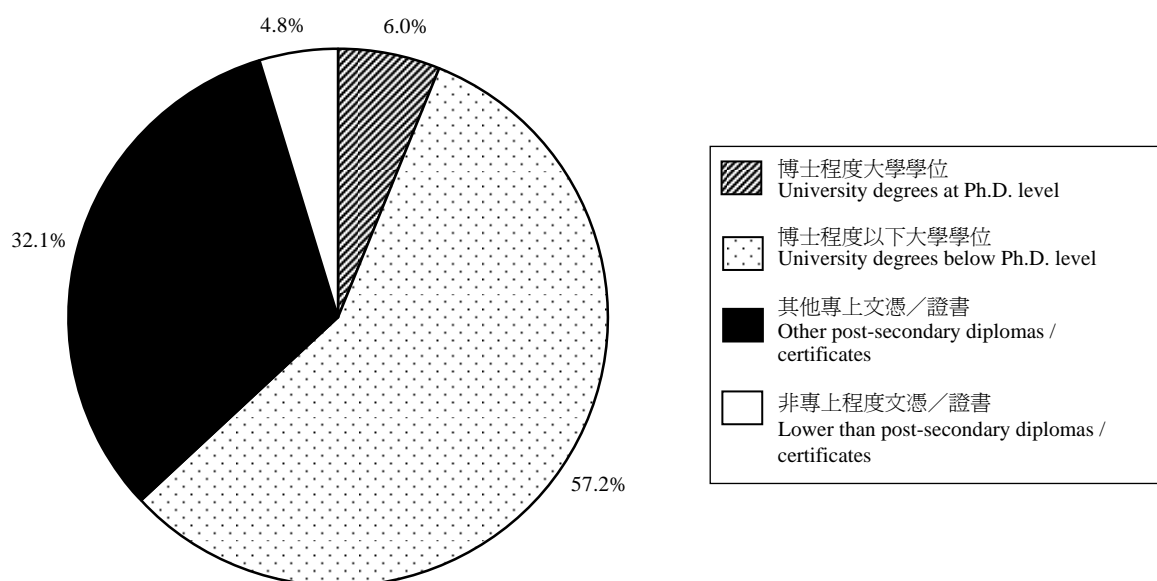
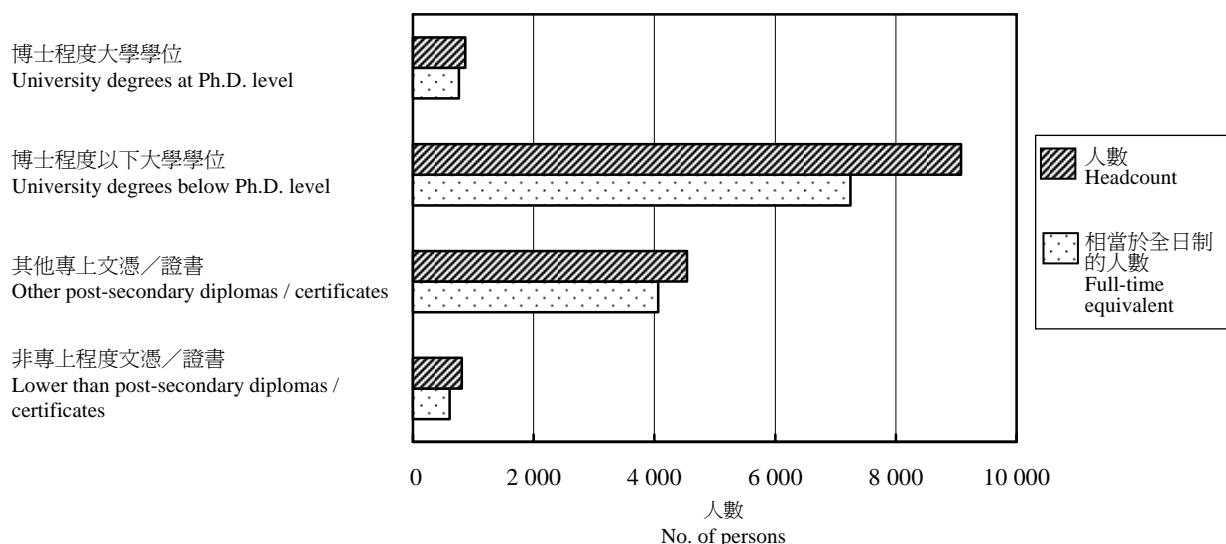


圖 2.10 按教育程度劃分的 2007 年研發人員數目（人數和相當於全日制的的人數）
Chart 2.10 R&D personnel (headcount and full-time equivalent) in 2007 by level of education



研發活動的合作安排

Cooperation arrangements on R&D activities

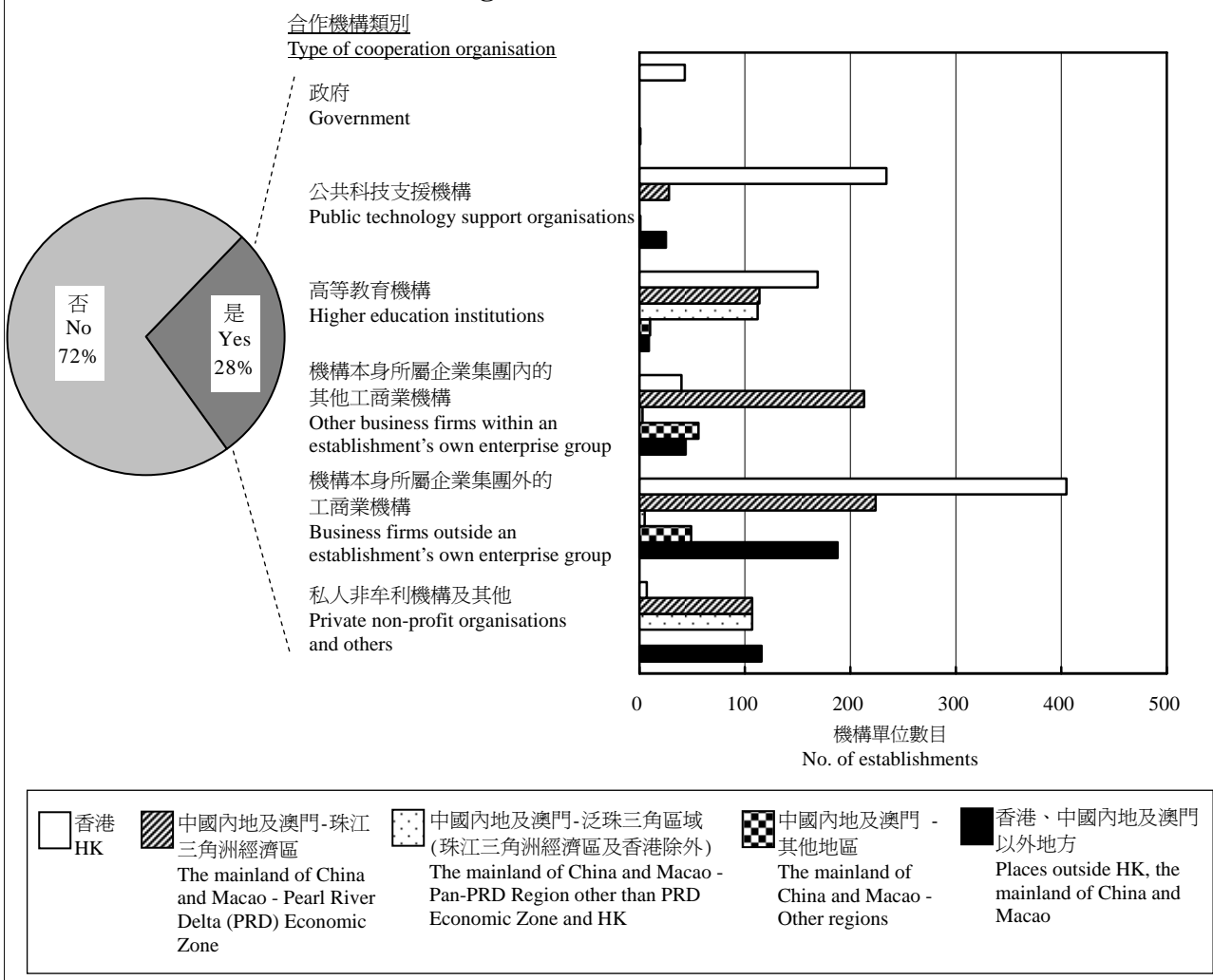
2.19 在 2007 年有進行研發活動的機構單位當中，28%（1 339 間）表示有就研發活動和其他機構訂立合作安排。按主要合作伙伴的類別分析，在 1 339 間機構單位當中，有 47% 報稱與其他沒有聯繫的工商業機構有合作安排，而另有 25% 則與機構本身所屬企業集團內的其他工商業機構。（圖 2.11 和表 2.11）

2.19 Some 28% (1 339) of the establishments which undertook R&D activities in 2007 reported that they had cooperation arrangements on R&D activities with other parties. Analysed by the type of major cooperation partner, 47% of these 1 339 establishments had cooperation arrangements with other unrelated business firms, and another 25% had cooperation arrangements with other business firms within an establishment's own enterprise group. (Chart 2.11 + Table 2.11)

2.20 統計調查結果亦顯示，香港的商業機構與位於中國內地珠江三角洲經濟區的機構有緊密的研發活動合作安排。在有研發活動合作安排的機構中，43% 的合作伙伴在珠江三角洲經濟區。（圖 2.11 和表 2.11）

2.20 The survey results also depicted close ties of cooperation on R&D activities between Hong Kong businesses and organisations in the Pearl River Delta (PRD) Economic Zone of the mainland of China. Among the establishments with cooperation arrangements on R&D activities, 43% had cooperation with organisations in the PRD Economic Zone. (Chart 2.11 + Table 2.11)

圖 2.11 2007 年就研發活動和其他機構訂立合作安排的機構單位分布
Chart 2.11 Distribution of establishments with cooperation arrangements on R&D activities with other organisations in 2007



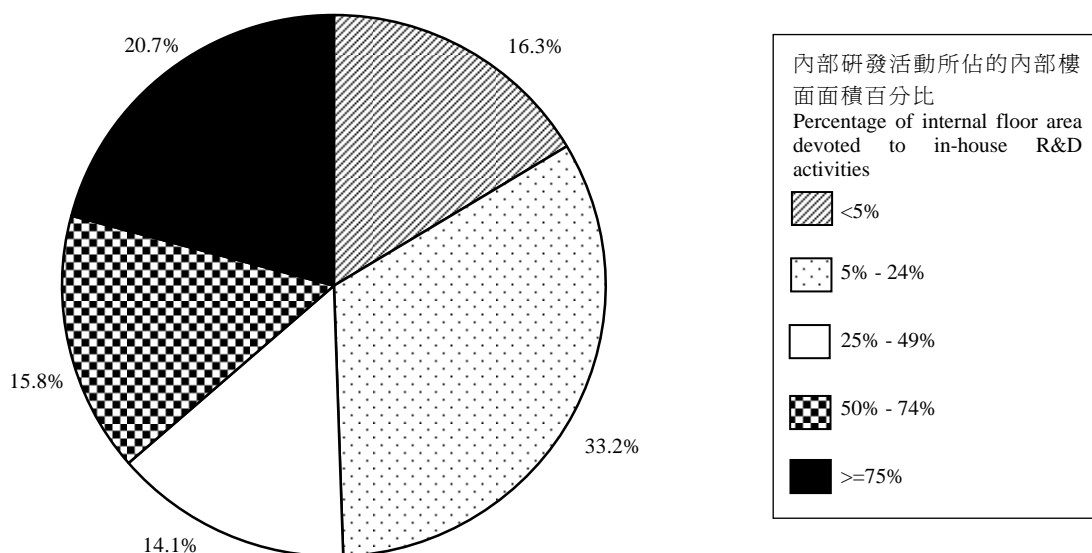
內部研發活動所佔的內部樓面面積

Internal floor area devoted to in-house R&D activities

2.21 調查結果顯示，2007年33%有內部研發活動的機構單位使用5% - 24%的內部樓面面積進行內部研發活動，另外21%的有關機構單位則使用75%或以上的內部樓面面積進行有關活動。（圖2.12和表2.12）

2.21 The survey results revealed that 33% of the establishments which undertook in-house R&D activities in 2007 devoted 5% - 24% of their internal floor area to in-house R&D activities, while some other 21% of the establishments devoted 75% or more of their internal floor area for the purpose. (Chart 2.12 + Table 2.12)

圖 2.12 按內部研發活動所佔內部樓面面積百分比（截至 2007 年 12 月底）劃分的 2007 年有內部研發活動的機構單位分布
Chart 2.12 Distribution of establishments having undertaken in-house R&D activities in 2007 by percentage of internal floor area devoted to in-house R&D activities as at end December 2007



研發活動開始產生盈利的預期時間範圍

Expected time frame for R&D activities to start generating profit

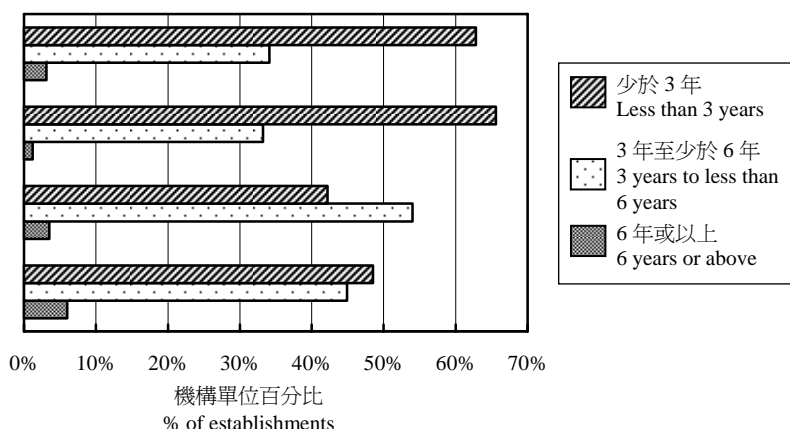
2.22 在 2007 年，差不多所有機構單位均預期研發活動會帶來盈利。其中，56%的機構單位預期研發活動少於 3 年便會產生盈利，而另外 41%則預期於 3 年至少於 6 年便會開始產生盈利。
(圖 2.13 和表 2.13)

2.22 In 2007, almost all of the establishments conducted R&D activities expected that relevant activities would bring about profit for them. Among them, 56% expected that the R&D activities would start generating profit in less than 3 years. Another 41% indicated that the expected time frame of generating profit would be from 3 years to less than 6 years.
(Chart 2.13 + Table 2.13)

圖 2.13 按研發活動開始產生盈利的預期時間範圍和按行業類別／機構單位規模劃分在 2007 年有研發活動的機構單位百分比
Chart 2.13 Percentage of establishments having undertaken R&D activities in 2007 by expected time frame for R&D activities to start generating profit by industry sector / size of establishment

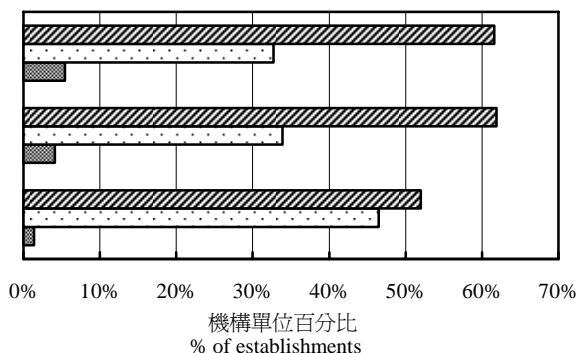
按行業類別劃分
By industry sector

- 製造業
Manufacturing
- 批發、零售、進口與出口貿易、飲食及酒店業
Wholesale, retail and import and export trades, restaurants and hotels
- 金融、保險、地產及商用服務業
Financing, insurance, real estate and business services
- 其他
Others



按機構單位規模劃分
By size of establishment

- 大型
Large
- 中型
Medium
- 小型
Small



不包括表示研發活動不會產生盈利的機構單位。

Exclude establishments indicating that there would be no profit generated by the R&D activities.

2008 年度研發活動的預算

Budget allocation for R&D activities in 2008

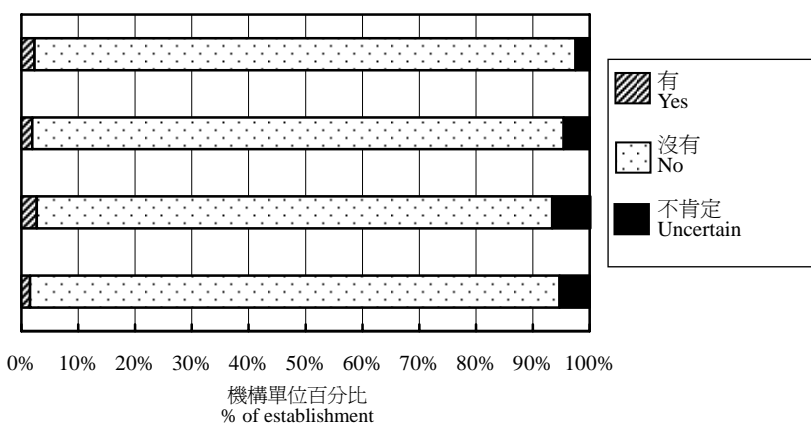
2.23 約 2% 的機構單位有為 2008 年度的研發活動制定預算。按機構單位規模分析，大型機構單位的比例(12%)顯著高於中型(4%)和小型(1%)機構單位。(圖 2.14 和表 2.14)

2.23 Some 2% of the establishments had allocated budget for R&D activities for 2008. Analysed by size of establishment, the proportion was significantly higher in large establishments (12%) than medium (4%) and small establishments (1%). (Chart 2.14 + Table 2.14)

圖 2.14 按有否就 2008 年度的研發活動制定預算和按行業類別／機構單位規模劃分的機構單位分布
Chart 2.14 Distribution of establishments by whether having budget allocation for R&D activities for 2008 by industry sector / size of establishment

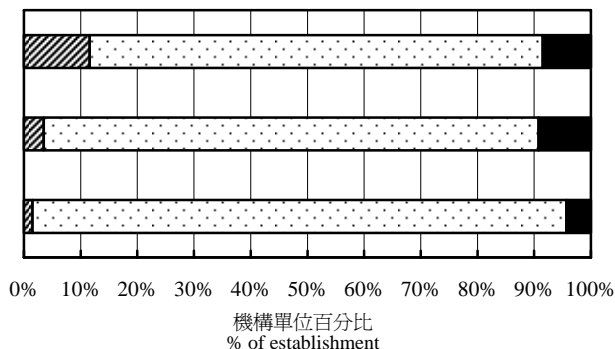
按行業類別劃分
By industry sector

- 製造業
Manufacturing
- 批發、零售、進口與出口貿易、飲食及酒店業
Wholesale, retail and import and export trades, restaurants and hotels
- 金融、保險、地產及商用服務業
Financing, insurance, real estate and business services
- 其他
Others



按機構單位規模劃分
By size of establishment

- 大型
Large
- 中型
Medium
- 小型
Small



3 技術創新活動 Technological Innovation Activities

技術創新活動在工商業的普遍程度

3.1 創新活動在知識型經濟中扮演著一個重要的角色。除研發外，一間機構單位可從事一些與研發無直接關係但對其創新和表現有所貢獻的其他技術創新活動。

3.2 約 5% 的機構單位在 2007 年曾進行一類或以上的技術創新活動，高於 2006 的數字。2007 年的統計調查結果顯示，從事製造業（佔該行業所有機構單位的 7%）以及金融、保險、地產及商用服務業（6%）的機構單位較多進行技術創新活動。（圖 3.1 和表 1.2）

3.3 統計調查結果顯示，技術創新活動的普遍程度會按機構單位的規模而有差別。大型機構單位較中小型機構單位傾向於進行技術創新活動，大型機構當中有 23% 有參與技術創新活動，而中型和小型機構單位的相應數字分別為 13% 和 4%。（表 1.2）

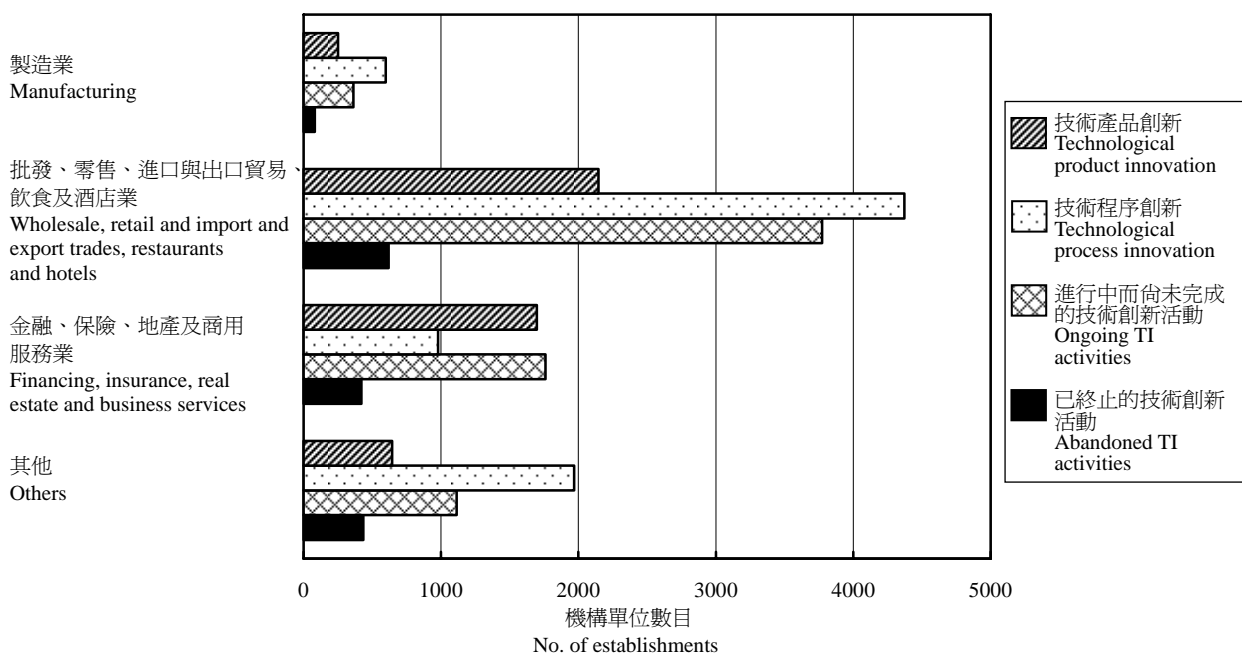
Diffusion of technological innovation (TI) activities in the business sector

3.1 Innovation activities play an important role in a knowledge-based economy. Other than conducting R&D, an establishment may undertake other technological innovation activities not directly related to R&D and yet contribute to the innovation and the performance of the establishment.

3.2 About 5% of establishments had undertaken one or more types of TI activities in 2007, higher than that in 2006. The 2007 survey results indicated that TI activities were more prevalent in establishments engaging in the manufacturing sector (7% of total establishments in the sector) and in the financing, insurance, real estate and business services sector (6%). (Chart 3.1 + Table 1.2)

3.3 Some differentials in the diffusion of TI activities among establishments of different sizes were observed. Large establishments had a higher propensity to undertake TI activities than medium and small establishments. About 23% of large establishments were involved in TI activities, as compared with 13% and 4% in medium and small establishments respectively. (Table 1.2)

圖 3.1 按行業類別劃分在 2007 年有進行技術創新活動的機構單位分布
Chart 3.1 Distribution of establishments having undertaken TI activities in 2007 by industry sector



技術產品創新

3.4 約 2% 的機構單位在 2007 年有在市場上推出一種或以上技術嶄新或經顯著改良的產品（貨品或服務）。這些機構單位平均每間推出 2.2 項技術嶄新或經顯著改良的產品。（表 1.2、3.1 及 3.2）

3.5 在 2007 年曾進行技術產品創新的機構單位當中，約 68% 是自行開發有關產品，12% 的機構單位是與其他機構合作開發有關產品。整體而言，2007 年技術創新產品帶來的業務收益佔有關機構單位的業務收益總額的 12%。（表 3.2）

3.6 至於推出不單對機構單位而且對市場均是技術嶄新或經顯著改良的產品（貨品或服務）方面，約 1.0% 的機構單位表示在 2007 年有進行這類活動。（表 3.1）

技術程序創新

3.7 約有 3% 的機構單位在 2007 年進行技術程序創新。不同行業進行技術程序創新的比率介乎 2% 至 4% 不等。然而，大型機構單位進行技術程序創新活動的比率（14%）則顯著較中型（9%）及小型機構為高（2%）。（表 3.3）

3.8 約 18% 在 2007 年有進行技術程序創新的機構單位表示，有關程序主要是由機構本身自行開發而並非與其他伙伴合作開發，有 79% 的機構單位表示有關程序主要由其他機構開發。平均而言，每間在 2007 年有進行技術程序創新的機構單位所推出的技術程序創新數目為 1.2 項。（表 3.4）

仍在進行而尚未完成或已終止的技術創新活動

3.9 統計調查結果顯示，約 3% 的機構單位在 2007 年有仍在進行中的技術創新活動。其中，大型機構的比率最高（16%）。另一方面，約 0.6% 的機構單位在 2007 年曾終止已開展的技術創新活動。（表 3.5 及 3.6）

Technological product innovation

3.4 About 2% of the establishments had introduced into the market one or more technologically new or significantly improved products (goods or services) in 2007. The average number of technologically new or significantly improved products put into the market by these establishments was 2.2. (Tables 1.2, 3.1 and 3.2)

3.5 For establishments having undertaken technological product innovation in 2007, about 68% of them developed the products by themselves, 12% cooperated with other parties in developing the products. Overall, these innovative products contributed 12% to the total business receipts of establishments undertaking technological product innovation in 2007. (Table 3.2)

3.6 Regarding the introduction of technologically new or significantly improved products (goods or services) not only new to the firm but also new to the market, about 1.0% of the establishments were involved in these activities in 2007. (Table 3.1)

Technological process innovation

3.7 About 3% of the establishments undertook technological process innovation in 2007. The rate of undertaking technological process innovation ranged from 2% to 4% among different industry sectors. Nevertheless, the rate of undertaking technological process innovation was significantly higher in large establishments (14%) than in medium (9%) and small establishments (2%). (Table 3.3)

3.8 Around 18% of the establishments with technological process innovation in 2007 indicated that the processes were developed by the establishments themselves rather than in cooperation with other parties. 79% mentioned that the processes were developed by other parties. On average, the number of technological process innovations per establishment with technological process innovation was 1.2 in 2007. (Table 3.4)

TI activities ongoing but not yet completed or TI activities abandoned

3.9 The survey results revealed that around 3% of the establishments had ongoing TI activities in 2007. Large establishments registered the highest percentage of having ongoing TI activities (16%). On the other hand, 0.6% of the establishments had abandoned their TI activities in 2007. (Tables 3.5 and 3.6)

技術創新活動的開支

3.10 2007 年技術創新活動的投資總額為 156.76 億港元。對技術創新活動投資較多的兩個行業類別是：批發、零售、進口與出口貿易、飲食及酒店業和金融、保險、地產及商用服務業，分別佔技術創新活動開支總額的 46% 和 29%。（表 1.2 及 3.7）

3.11 統計調查結果亦顯示，大型機構單位比中小型機構單位傾向於用較多資金來進行技術創新活動。以機構單位數目而言，大、中、小型機構單位分別佔在 2007 年曾進行技術創新的機構單位的 9%、31% 和 60%。然而，它們佔技術創新開支總額的百分比卻分別是 43%、33% 和 24%。（表 1.2 及 3.7）

3.12 按技術創新活動開支類別分析，大部分的技术創新活動開支是用於機構本身的內部研發活動（36%），其次是購置生產用的機器和設備（24%）。（圖 3.2 和表 3.7）

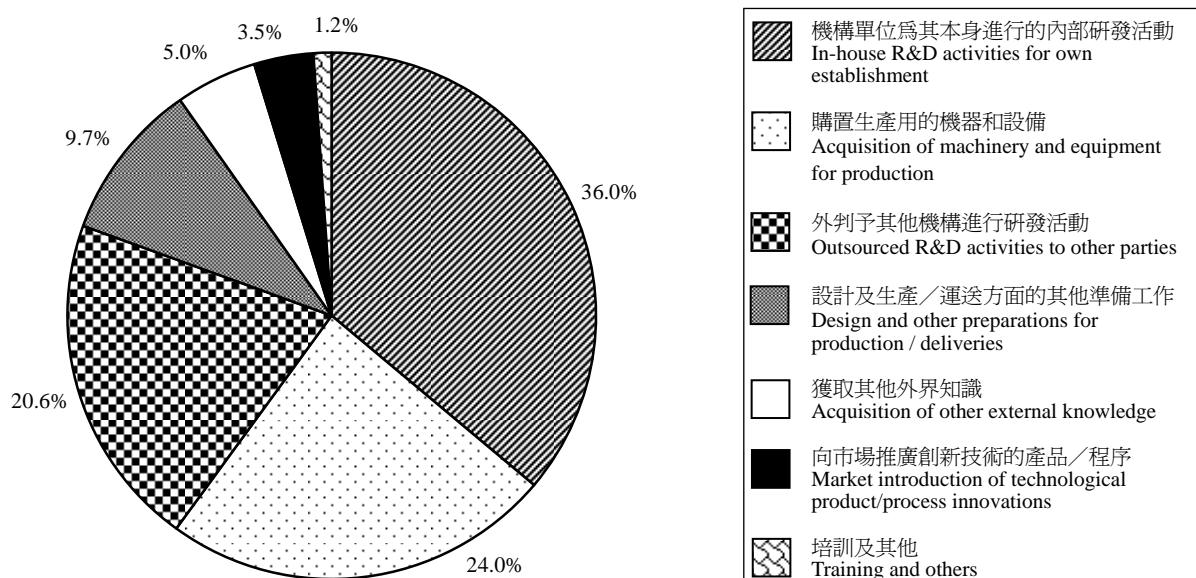
Expenditure on TI activities

3.10 The total amount invested in TI activities in 2007 was HK\$15,676 million. The two industry sectors with higher spending on TI activities were: the wholesale, retail and import and export trades, restaurants and hotels sector and the financing, insurance, real estate and business services sector, constituting 46% and 29% of the total TI expenditure respectively. (Tables 1.2 and 3.7)

3.11 The survey results also revealed that large establishments tended to spend more on TI activities than medium and small establishments. While large, medium and small establishments constituted 9%, 31% and 60% of the establishments that had undertaken TI activities in 2007, they accounted for 43%, 33% and 24% of the total TI expenditure respectively. (Tables 1.2 and 3.7)

3.12 Analysed by type of TI expenditure, a large portion of TI expenditure was spent on in-house R&D activities for own establishment (36%), followed by acquisition of machinery and equipment for production (24%). (Chart 3.2 + Table 3.7)

圖 3.2 按技術創新活動類別劃分的 2007 年技術創新活動開支分布
Chart 3.2 Distribution of TI expenditure in 2007 by type of TI activity



工商業技術創新活動的特性

Characteristics of TI activities in the business sector

技術創新活動的影響

Impact of TI activities

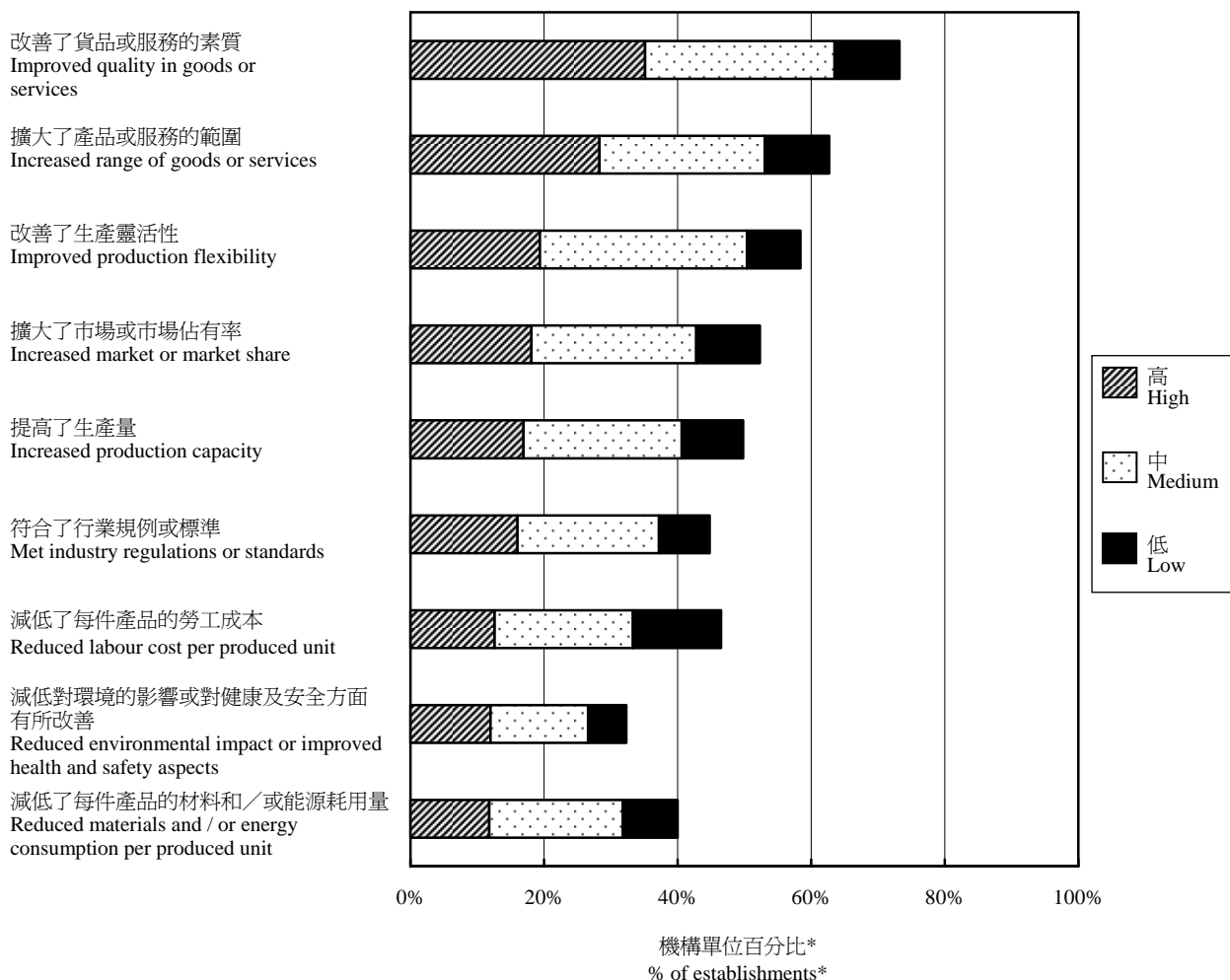
3.13 整體而言，大部分在 2007 年曾進行技術創新活動的機構單位均報稱有關活動對其機構單位有正面的影響，尤其是在產品方面。技術創新活動對機構單位產生的四大影響（以獲機構單位評為影響程度高的百分比計算）是：

3.13 Overall speaking, most of the establishments with TI activities in 2007 reported that there was positive impact of undertaking TI activities. The more significant positive effects were product-related. The top 4 effects of TI activities on the establishments (in terms of the percentage of establishments with high rating on such aspects) were:

- (a) 改善了貨品或服務的素質 (35%)
 - (b) 擴大了產品或服務的範圍 (28%)
 - (c) 改善了生產靈活性 (19%)
 - (d) 擴大了市場或市場佔有率 (18%)
- (圖 3.3 和表 3.8)

- (a) Improved quality in goods or services (35%)
 - (b) Increased range of goods or services (28%)
 - (c) Improved production flexibility (19%)
 - (d) Increased market or market share (18%)
- (Chart 3.3 + Table 3.8)

圖 3.3 2007 年技術創新活動對機構單位的影響程度
Chart 3.3 Degree of impact of TI activities on the establishment in 2007



* 認為相關影響不適用的機構單位百分比沒有在圖中展示。
* The % of establishments that considered the effect irrelevant is not presented in the chart.

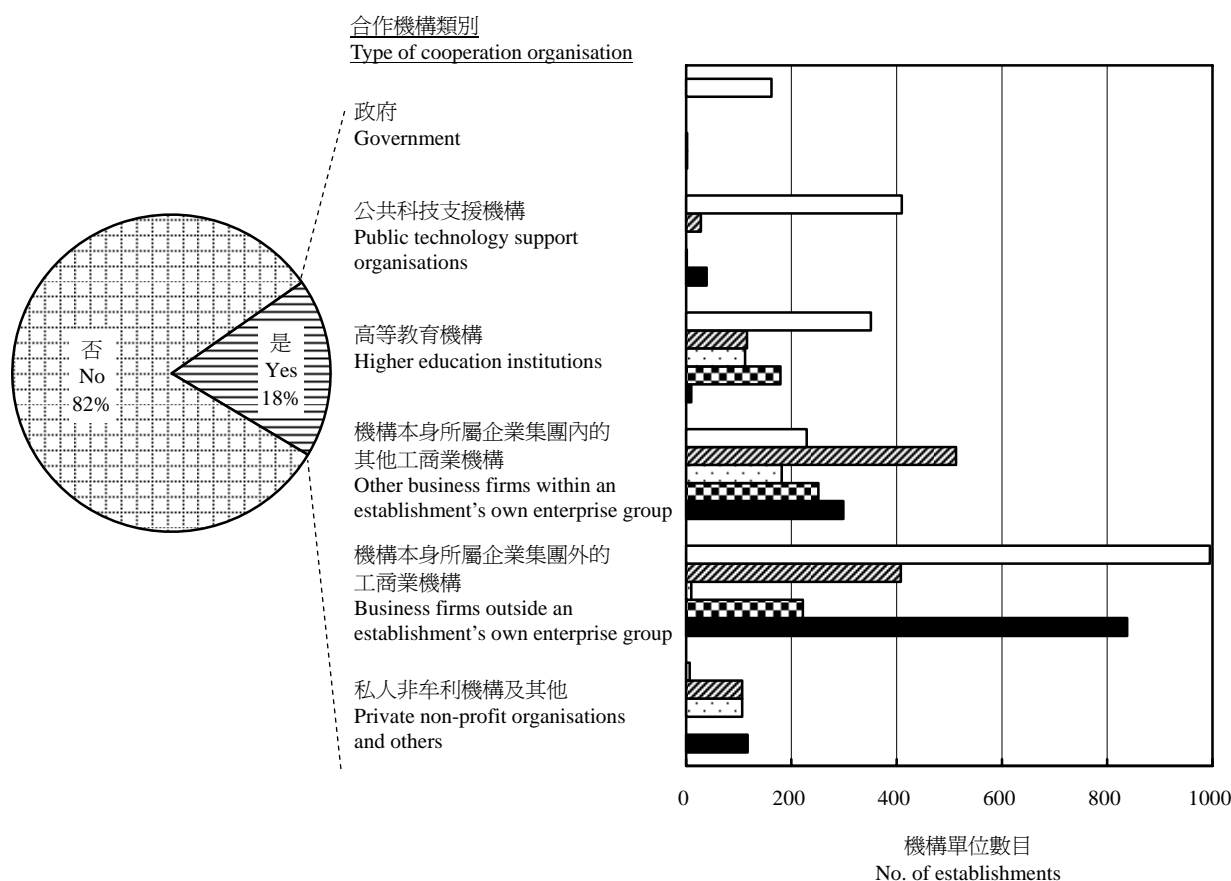
技術創新活動的合作安排

Cooperation arrangements on TI activities

3.14 約 18% (2 625 間) 在 2007 年有進行技術創新活動的機構報稱有就技術創新活動和其他機構訂立合作安排。按合作機構所在地分析, 有 53% 與本地機構合作, 其次為香港、中國內地及澳門以外的港外機構 (42%) 及珠江三角洲經濟區的機構 (34%)。至於合作機構的類別, 主要為機構本身所屬企業集團外的工商業機構, 其次為機構本身所屬企業集團內的其他工商機構。(圖 3.4 和表 3.9)

3.14 About 18% (2 625) of the establishments with TI activities in 2007 reported to have cooperation arrangements on TI activities with other organisations. Analysed by the location of the cooperation organisations, 53% cooperated with local organisations, followed by organisations in places outside Hong Kong, the mainland of China and Macao (42%), and organisations in the PRD Economic Zone (34%). As regards the type of cooperation organisations, the majority were business firms outside an establishment's own enterprise group, followed by other business firms within an establishment's own enterprise group. (Chart 3.4 + Table 3.9)

圖 3.4 2007 年有就技術創新活動和其他機構訂立合作安排的機構單位分布
Chart 3.4 Distribution of establishments with cooperation arrangements on TI activities with other organisations in 2007



香港 HK
 中國內地及澳門-珠江三角洲經濟區
 The mainland of China and Macao - Pearl River Delta (PRD) Economic Zone
 中國內地及澳門-泛珠三角區域 (珠江三角洲經濟區及香港除外)
 The mainland of China and Macao - Pan-PRD Region other than PRD Economic Zone and HK
 中國內地及澳門 - 其他地區
 The mainland of China and Macao - Other regions
 香港、中國內地及澳門以外地方
 Places outside HK, the mainland of China and Macao

技術創新活動的知識或資訊來源

3.15 引發技術創新活動的靈感或知識可來自多方面。一般而言，機構單位會從內部和外界收集技術創新活動的知識和意念。至於對個別資料來源的重要性，首五項獲評價最高（以獲機構單位評為重要性高的百分比計算）的項目是：

- (a) 設備、材料、組件或軟件的供應商（35%）
- (b) 客戶或顧客（29%）
- (c) 機構內部（例如：研發成果）（27%）
- (d) 業內的競爭者及其他機構（22%）
- (e) 電腦資訊網絡（例如：互聯網）（20%）

（圖 3.5 和表 3.10）

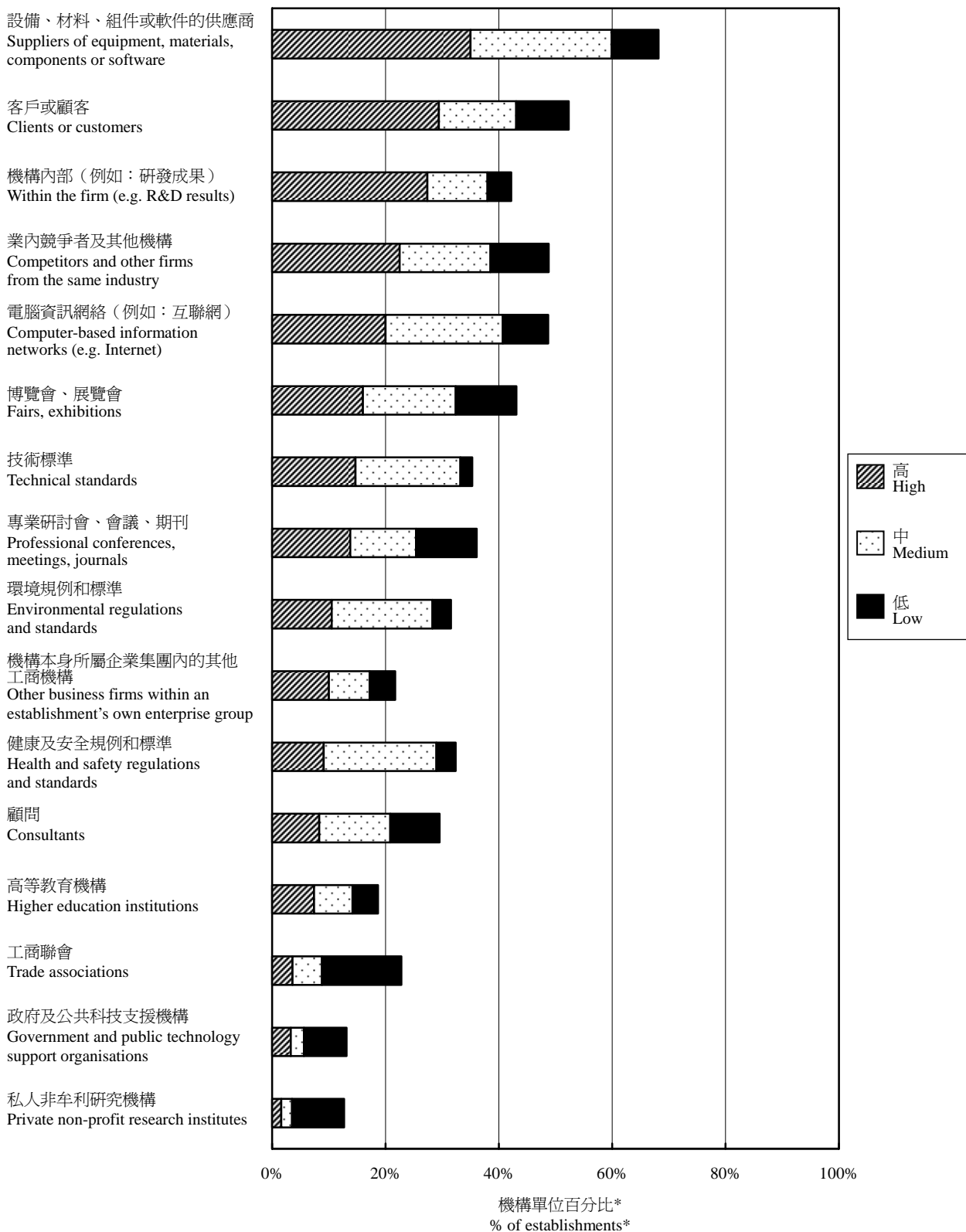
Source of knowledge or information on TI activities

3.15 The inspiration or knowledge for undertaking TI activities could be sourced from a wide variety of channels. Generally, establishments used both internal and external sources to obtain knowledge and ideas for undertaking TI activities. As regards the rating on the importance of individual sources of information, the top 5 choices (in terms of the percentage of establishments with high rating on the importance of such sources) were:

- (a) Suppliers of equipment, materials, components or software (35%)
- (b) Clients or customers (29%)
- (c) Within the firm (e.g. R&D results) (27%)
- (d) Competitors and other firms from the same industry (22%)
- (e) Computer-based information networks (e.g. Internet) (20%)

(Chart 3.5 + Table 3.10)

圖 3.5 2007 年用於機構單位技術創新活動的資料來源的重要程度
Chart 3.5 Degree of importance of the sources of knowledge or information used in the establishment for TI activities in 2007



* 認為相關來源不適用的機構單位百分比沒有在圖中展示。
 * The % of establishments that considered the source irrelevant is not presented in the chart.

阻礙技術創新的因素

3.16 在 2007 年沒有進行技術創新活動的機構中，他們不進行技術創新的最主要原因是「由於市場／行業情況，因此暫無需要」（88%）。（表 3.11）

3.17 所有受訪機構單位，不論在 2007 年是否有進行技術創新活動，均被問及阻礙技術創新的因素。結果顯示有進行和沒有進行技術創新活動的機構單位所提及的阻礙技術創新因素分別不大。

3.18 對於在 2007 年有進行技術創新活動的機構單位來說，阻礙技術創新活動的最重要因素（以獲機構單位評為高重要程度的百分比計算）是「創新成本太高」（46%）。其次是「缺乏適當的資金來源」（37%）和「預期的經濟風險太高」（27%）。（圖 3.6(i)和表 3.12）

3.19 對於在 2007 年沒有進行技術創新活動的機構單位來說，經濟因素也是普遍被認為阻礙技術創新活動的因素。阻礙這些機構單位進行技術創新活動的三大因素是「創新成本太高」（22%）、「缺乏適當的資金來源」（21%）和「預期的經濟風險太高」（17%），這與在 2007 年有進行技術創新活動的機構單位的意見相若。（圖 3.6(ii)和表 3.13）

2008 年技術創新活動的預算

3.20 約 3% 的機構單位有為 2008 年的技術創新活動制定預算。按機構單位規模分析，大型機構的比例(17%)顯著高於中型(7%)及小型(2%)機構單位。（表 3.14）

Barriers to TI

3.16 Among those establishments which had not undertaken TI activities in 2007, the prime reason for not innovating was “no need due to market / business conditions” (88%). (Table 3.11)

3.17 All the surveyed establishments, regardless of whether they had undertaken TI activities in 2007 or not, were asked to identify the barriers to TI. The results reflected that the barriers to TI did not differ much between those which had undertaken TI activities and those which had not.

3.18 For those establishments which had TI activities in 2007, the most important factor (in terms of the percentage of establishments with high rating on the importance of the factor) that inhibited their TI activities was “innovation costs too high” (46%). This was followed by “lack of appropriate sources of finance” (37%) and “excessive perceived economic risks” (27%). (Chart 3.6(i) + Table 3.12)

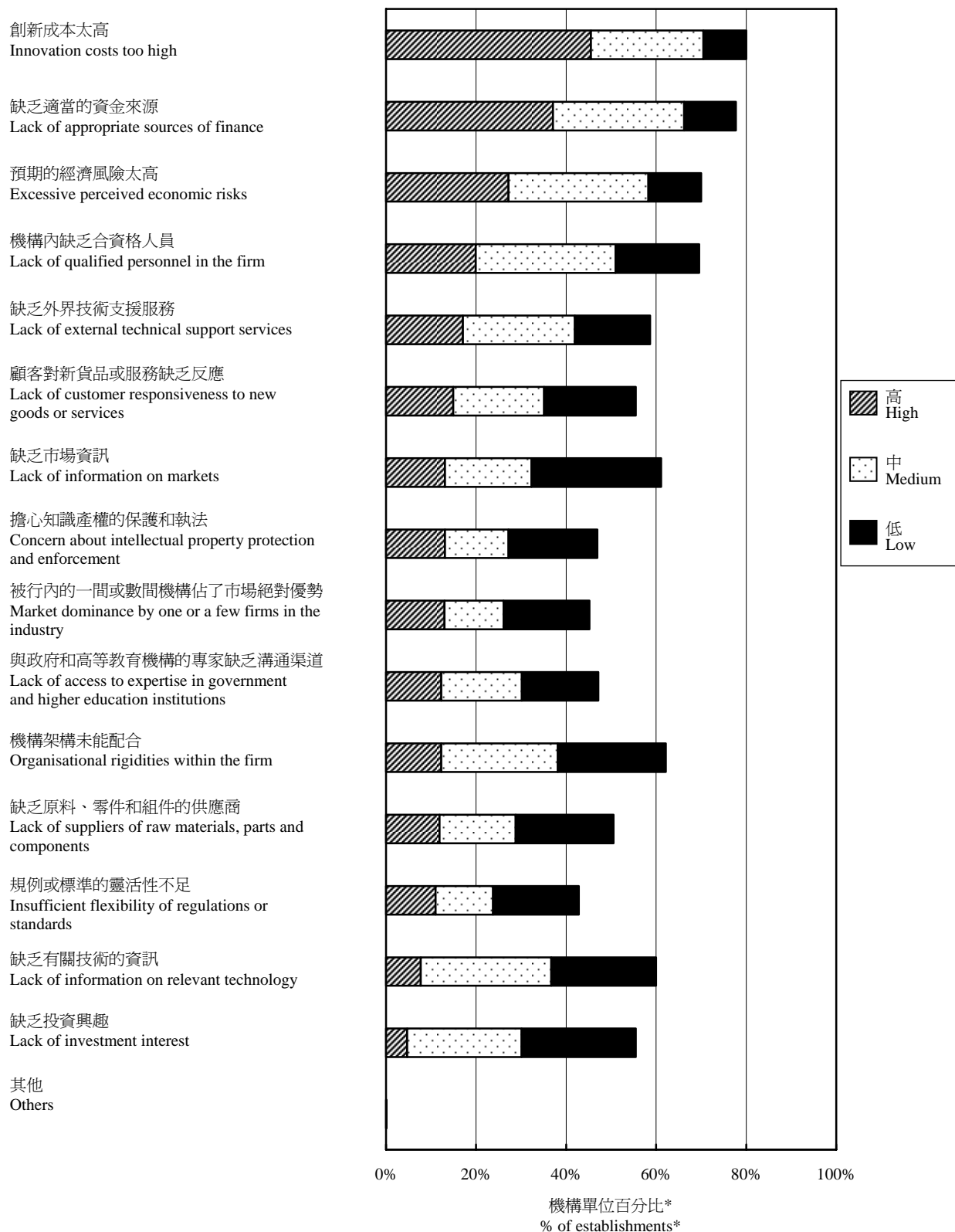
3.19 For establishments which had not undertaken TI activities in 2007, economic factors were also the most commonly mentioned barriers to TI. Similar to the views of the technological innovators in 2007, the top three impediments that discouraged these establishments to innovate were “innovation costs too high” (22%), “lack of appropriate sources of finance” (21%), and “excessive perceived economic risks” (17%). (Chart 3.6(ii) + Table 3.13)

Budget allocation for TI activities in 2008

3.20 Some 3% of the establishments had allocated budget for TI activities for 2008. Analysed by size of establishment, the proportion was significantly higher in large establishments (17%) than medium (7%) and small establishments (2%). (Table 3.14)

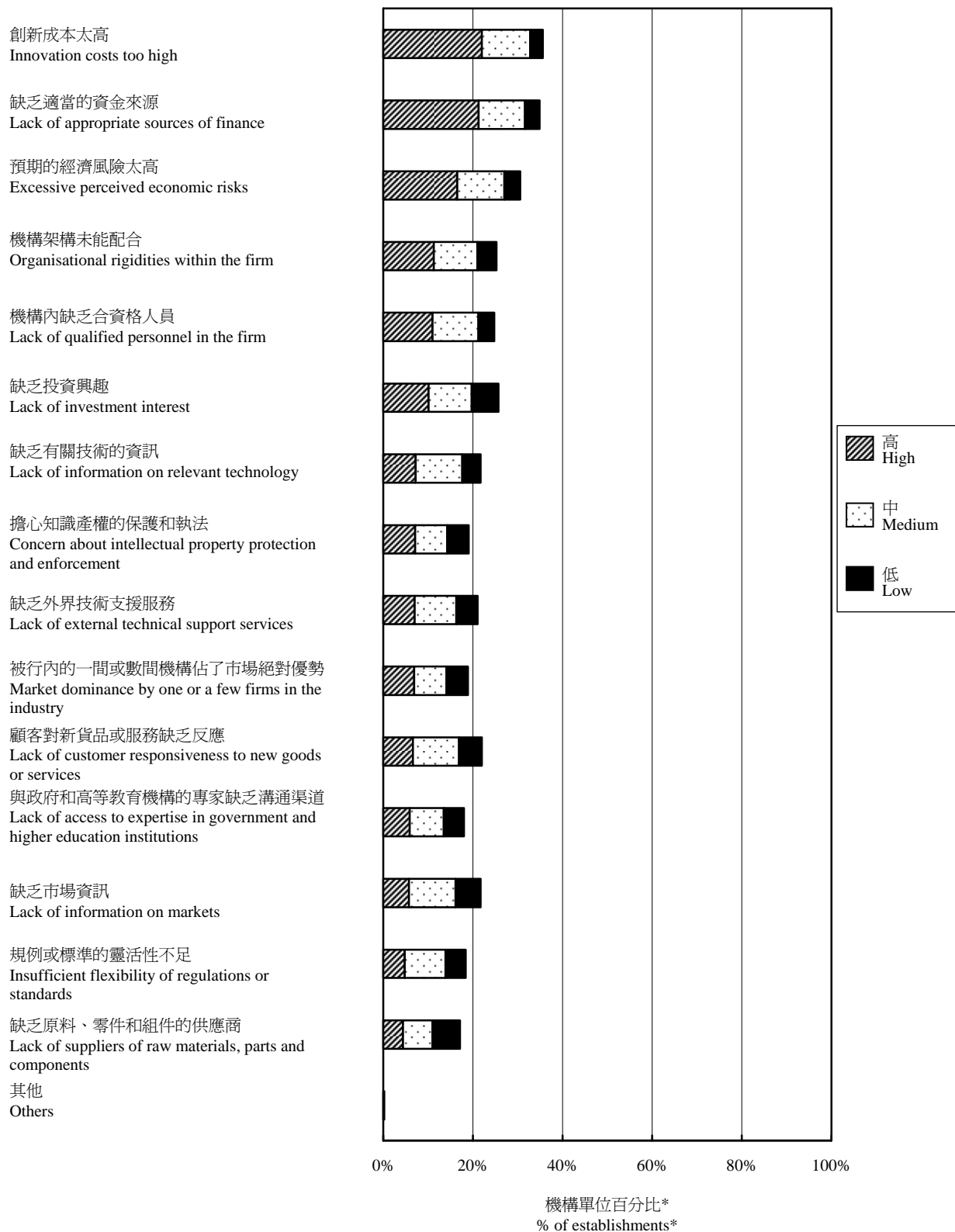
圖 3.6(i) 2007 年有進行技術創新活動的機構單位所面對的阻礙技術創新因素的重要程度

Chart 3.6(i) Degree of importance of barriers to TI activities for establishments having undertaken TI activities in 2007



* 認為相關因素不適用的機構單位百分比沒有在圖中展示。
 * The % of establishments that considered the factor irrelevant is not presented in the chart.

圖 3.6(ii) 2007 年沒有進行技術創新活動的機構單位所面對的阻礙技術創新因素的重要程度
Chart 3.6(ii) Degree of importance of barriers to TI activities for establishments not having undertaken TI activities in 2007



* 認為相關因素不適用的機構單位百分比沒有在圖中展示。
 * The % of establishments that considered the factor irrelevant is not presented in the chart.

4 較宏觀的創新活動

Innovation Activities from a Wider Perspective

非技術創新活動在工商業的普遍程度

4.1 除技術創新活動外，一間機構單位亦會從事很多與技術沒有直接關係的非技術創新活動，以助提升其競爭力及表現。這類活動的例子包括實施新的機構策略以開拓新市場，及重組架構以更有效運用人力資源等。

4.2 概括而言，機構單位主要圍繞以下各方面進行非技術創新活動：

- (a) **策略** – 實施嶄新或經重大改變的機構策略
- (b) **組織架構** – 實施嶄新或經重大改變的組織架構
- (c) **管理** – 在機構內實施先進的管理技術
- (d) **市場推廣** – 顯著地改變機構的市場推廣概念／策略
- (e) **產品外觀改變 (或其他主觀改變)** – 令機構最少一個產品在外觀美感或設計方面有重大改變或有其他主觀改變

基於非技術創新活動對提升機構單位的生產力和競爭力日益重要，政府統計處自 2003 年的統計調查開始，為搜集更詳盡的非技術創新活動資料，特別在統計調查問卷中，就上述的每一方面均提供一系列非技術創新活動的選擇，藉以加深了解創新活動在工商業的普遍程度。

4.3 統計調查結果顯示約 42% 的工商業機構在 2007 年曾進行一項或以上的非技術創新活動。香港的工商業機構向以迅速適應外在環境轉變見稱，故此工商業的非技術創新活動的普遍比率遠較技術創新活動的比率為高是可預期的。(圖 4.1 和表 4.1)

Diffusion of non-technological innovation (non-TI) activities in the business sector

4.1 Apart from technological innovation (TI) activities, an establishment may engage in many other non-TI activities that do not have straightforward relation to technology but may help enhance its competitiveness and performance. Examples of such activities include implementation of new corporate strategies to explore new markets and restructuring of organisation to better utilise human resources.

4.2 Broadly speaking, non-TI activities undertaken by establishments mainly encompass the following dimensions:

- (a) **Strategy** – Implementation of new or significantly changed corporate strategies
- (b) **Organisation** – Implementation of new or significantly changed organisational structure
- (c) **Management** – Implementation of advanced management techniques within the firm
- (d) **Marketing** – Significant changes in the firm's marketing concepts / strategies
- (e) **Aesthetic change (or other subjective changes) in products** – Significant changes in the aesthetic appearance or design or other subjective changes in at least one of the firm's products

Given the increasing importance of non-TI activities in raising a firm's productivity and competitiveness, more detailed information pertaining to non-TI activities was collected as from the 2003 survey. Specifically, an elaborated set of choices of non-TI activities under each of the above dimension was adopted in the survey questionnaire with a view to throwing light on the pervasiveness of innovation activities in the business sector.

4.3 The survey results indicated that about 42% of the establishments had undertaken one or more types of non-TI activities in 2007. The much higher diffusion rate of non-TI activities as compared with TI activities in the business sector was expected, given that the business firms in Hong Kong were renowned for their quick adaptation to the changes in the external environment. (Chart 4.1 + Table 4.1)

4.4 在不同行業中，非技術創新活動的普遍比率沒有明顯差別。然而，大型機構相對較熱衷於進行非技術創新活動，比率達 70%，而中型及小型機構的比率則分別為 60% 及 38%。（圖 4.1 和表 4.1）

4.4 The diffusion rates of non-TI activities did not differ much among industry sectors. However, large establishments were more keen to undertake non-TI activities (70%) than medium (60%) and small establishments (38%). (Chart 4.1 + Table 4.1)

圖 4.1 按行業類別／機構單位規模劃分在 2007 年有進行非技術創新活動的機構單位百分比

Chart 4.1 Percentage of establishments having undertaken non-TI activities in 2007 by industry sector / size of establishment

按行業類別劃分
By industry sector

製造業

Manufacturing

批發、零售、進口與出口貿易、飲食及酒店業

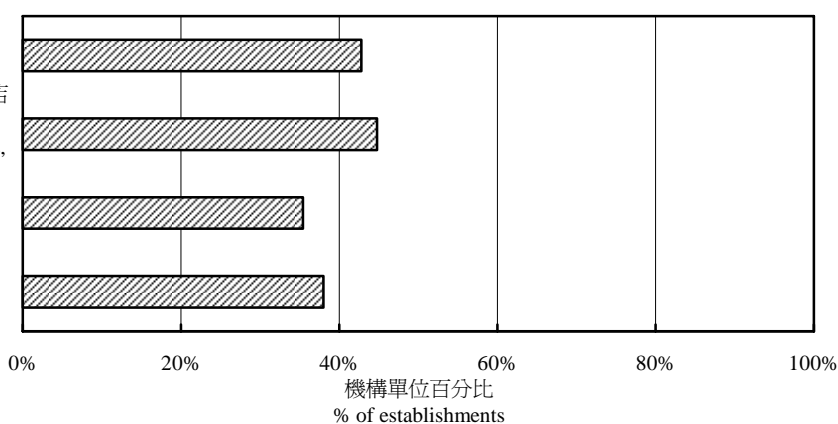
Wholesale, retail and import and export trades, restaurants and hotels

金融、保險、地產及商用服務業

Financing, insurance, real estate and business services

其他

Others



按機構單位規模劃分
By size of establishment

大型

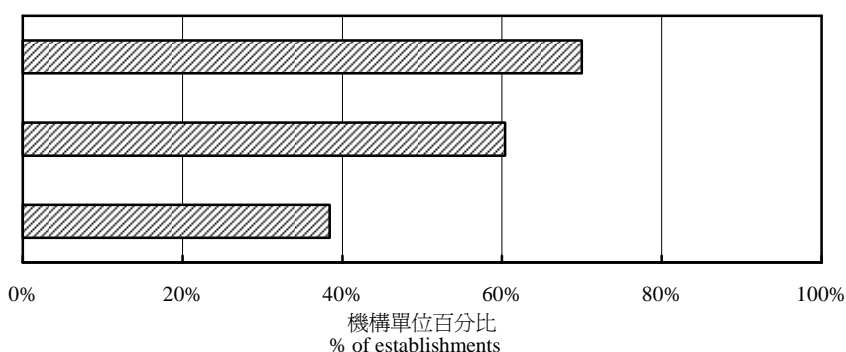
Large

中型

Medium

小型

Small

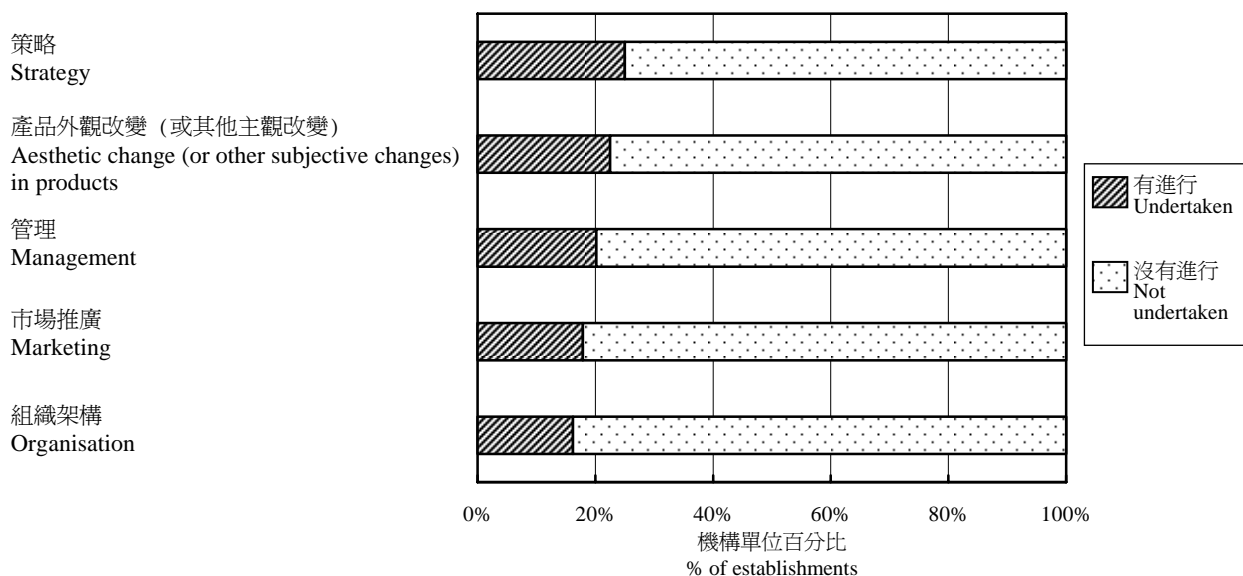


4.5 一般而言，最常被提及的非技術創新活動是「實施嶄新的或經重大改變的機構策略」（25%）。其次是「令機構最少一個產品在外觀美感或設計方面有重大改變或有其他主觀改變」，有 22% 的機構單位報稱有進行這項創新活動。（圖 4.2 和表 4.2）

4.5 Generally, the non-TI activity that was most frequently quoted by the establishments was “implementation of new or significantly changed corporate strategies” (25%). “Significant changes in the aesthetic appearance or design or other subjective changes in at least one of the products” ranked second and was reported by 22% of establishments. (Chart 4.2 + Table 4.2)

圖 4.2 按非技術創新活動的主要類別劃分在 2007 年有否進行非技術創新活動的機構單位分布

Chart 4.2 Distribution of establishments by whether having undertaken non-TI activities in 2007 by major type of non-TI activity



4.6 按各項非技術創新活動的成效評估，在五類主要非技術創新活動中，分別令機構單位的業務表現大有改善或略有改善的首選活動（以有進行有關活動的機構單位中所佔的百分比計算）是：

- 策略** – 實施策略以增加現時產品／服務的價值（51%）
- 產品外觀改變** – 按客戶需要調整設計（59%）
- 管理** – 實施品質管理技術（48%）
- 市場推廣** – 擴展推廣途徑以推廣品牌／產品／服務（44%）
- 組織架構** – 合理調整員工編制（50%）

（圖 4.3 和表 4.3）

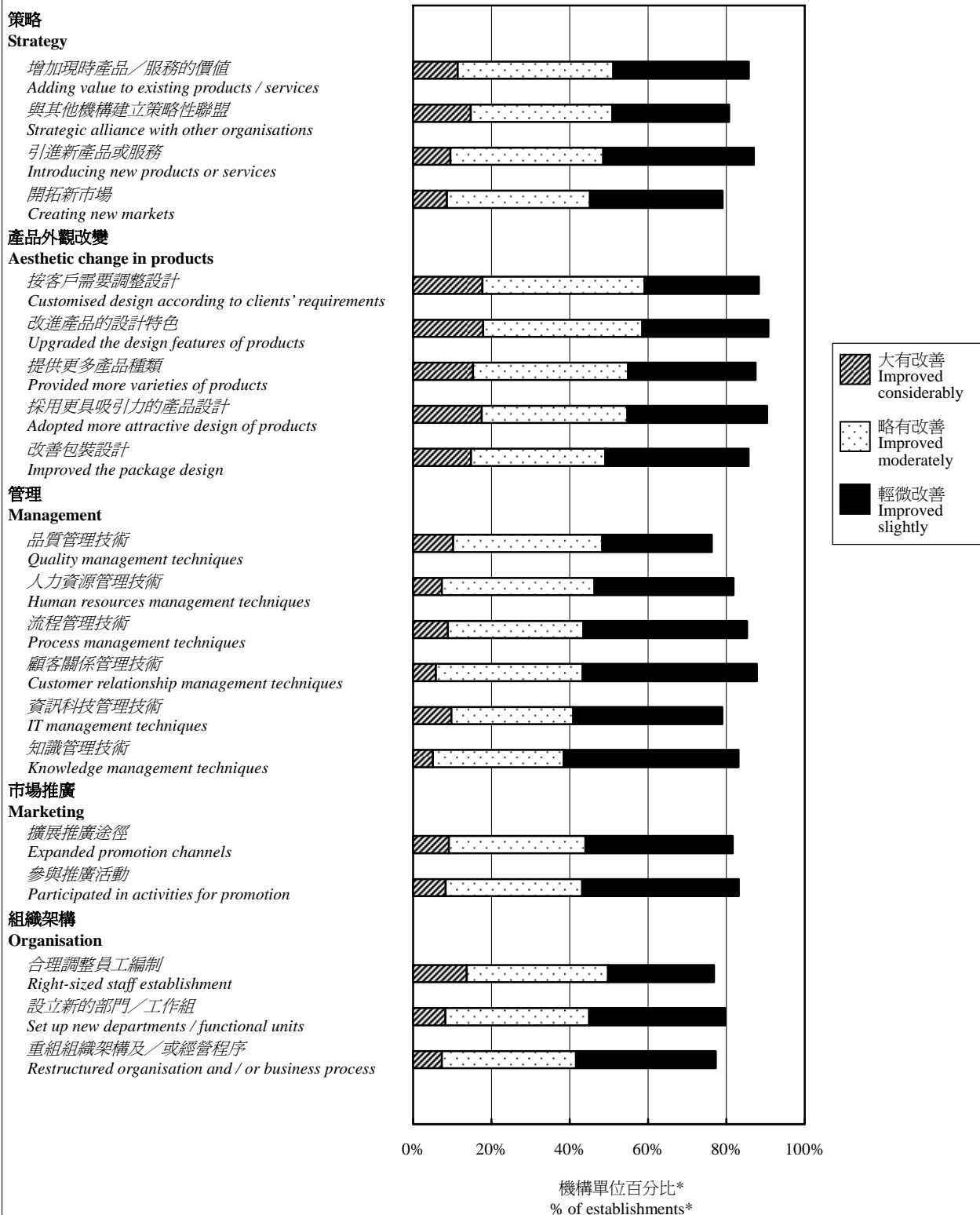
4.6 Assessed in terms of the effectiveness of individual aspects of non-TI activities, the top choice of activity under each of the 5 major categories of non-TI activities which could improve the business performance of the establishments considerably or moderately (in terms of the percentage of establishments having undertaken the respective activities) were summarised below:

- Strategy** – Implemented strategies for adding value to existing products / services (51%)
- Aesthetic change in products** – Customised design according to clients' requirements (59%)
- Management** – Implemented quality management techniques (48%)
- Marketing** – Expanded promotion channels to promote the brands / products / services (44%)
- Organisation** – Right-sized staff establishment (50%)

(Chart 4.3 + Table 4.3)

圖 4.3 2007年有進行非技術創新活動的機構單位中非技術創新活動對其業務表現的影響程度

Chart 4.3 Impact of non-TI activities on the performance of establishments for establishments having undertaken non-TI activities in 2007



* 認為相關活動對業務表現沒有改善的機構單位百分比沒有在圖中展示。
 * The % of establishments which considered that the activity could not improve the business performance is not presented in the chart.

創新活動在工商業的整體情況

4.7 創新並非全然局限於技術的開發或使用。商業機構有時會改變業務策略，藉以增加競爭力，而有關的商業策略改變亦往往連帶技術改革。從較宏觀的角度把技術創新和非技術創新活動整體計算，在 2007 年有進行創新活動的機構單位約有 42%。（圖 4.4 和表 4.4）

4.8 按行業類別分析，以整體創新活動計，批發、零售、進口與出口貿易、飲食及酒店業機構單位進行創新活動的百分比在 2007 年最高，有 45%。（圖 4.4 和表 4.4）

Overall innovation activities in the business sector

4.7 Innovation is not wholly confined to development or use of technology. Firms may change their business strategies to make themselves more competitive, often in conjunction with technological change. From a wider perspective by taking TI and non-TI activities as a whole, some 42% of establishments had undertaken innovation activities in 2007. (Chart 4.4 + Table 4.4)

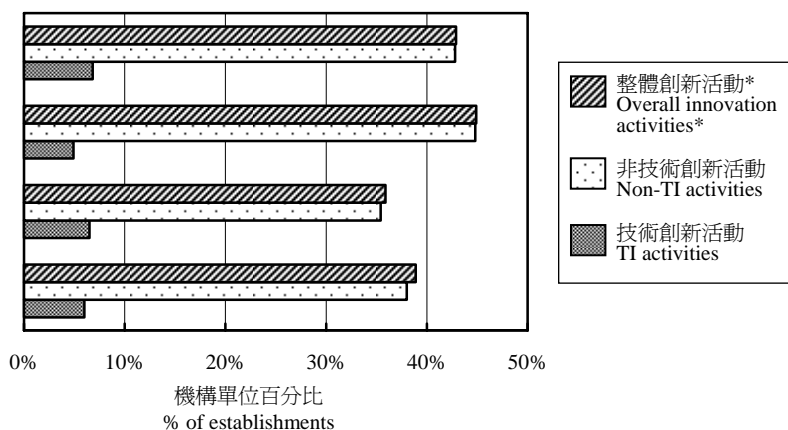
4.8 Analysed by industry sector, and measured in terms of overall innovation activities, the wholesale, retail and import and export trades, restaurants and hotels sector had the highest percentage of establishments undertaking innovation activities in 2007, at 45%. (Chart 4.4 + Table 4.4)

圖 4.4 按行業類別／機構單位規模及創新活動類別劃分的在 2007 年有進行創新活動的機構單位百分比

Chart 4.4 Percentage of establishments having undertaken innovation activities in 2007 by industry sector / size of establishment and type of innovation activity

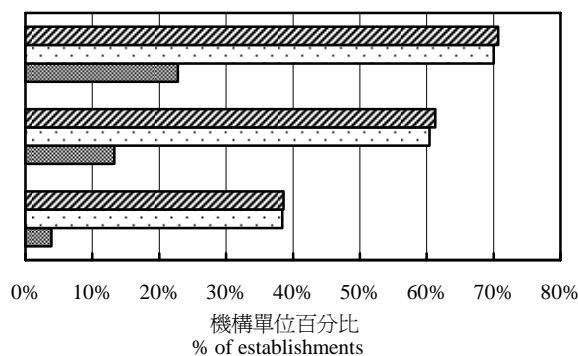
按行業類別劃分
By industry sector

製造業
Manufacturing
批發、零售、進口與出口貿易、飲食及酒店業
Wholesale, retail and import and export trades, restaurants and hotels
金融、保險、地產及商用服務業
Financing, insurance, real estate and business services
其他
Others



按機構單位規模劃分
By size of establishment

大型
Large
中型
Medium
小型
Small



* 數字代表有進行技術創新活動或非技術創新活動或兩者皆有進行的機構單位百分比。

* The figures refer to the % of establishments that had undertaken TI activities or non-TI activities or both.

創新活動對機構單位爭取競爭優勢的重要程度

4.9 在2007年，於各類創新活動中，非技術創新活動普遍被認為是對機構單位爭取競爭優勢有較大的重要性。而對機構單位爭取競爭優勢有較大影響的創新活動（以機構單位視其為影響度最高的百分比計算）是：

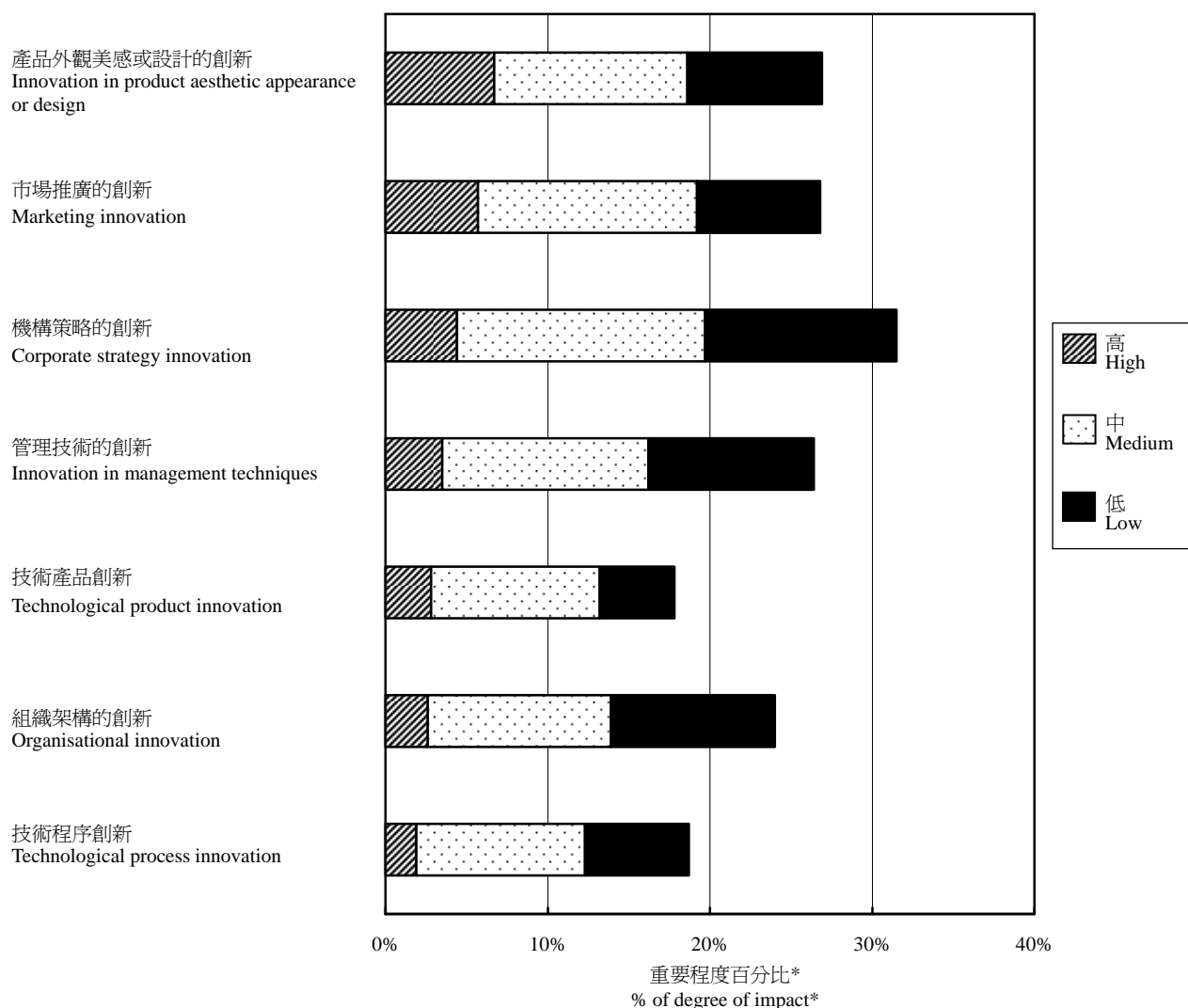
- (a) 產品外觀美感或設計的創新（7%）
 - (b) 市場推廣的創新（6%）
 - (c) 機構策略的創新（4%）
 - (d) 管理技術的創新（4%）
- （圖 4.5 和表 4.5）

Degree of impact of innovation activities on competitive advantage of establishment

4.9 Among different types of innovation activities, non-technological innovation activities were generally considered to have more significant positive impact on competitive advantage of establishments in 2007. The innovation activities having greater positive impact on competitive advantage (in terms of the percentage of establishments with high rating) were:

- (a) Innovation in product aesthetic appearance or design (7%)
 - (b) Marketing innovation (6%)
 - (c) Corporate strategy innovation (4%)
 - (d) Innovation in management techniques (4%)
- (Chart 4.5 + Table 4.5)

圖 4.5 2007 年創新活動對機構單位爭取競爭優勢的重要程度
Chart 4.5 Degree of impact of innovation activities on competitive advantage of establishment in 2007



工商業機構獲取／申請專利的 情況

5.1 專利是由國家或地區的官方機構賦予發明人的法律權利。專利擁有人在限定期間和地區內，可享有有關發明的專利，並可就有關發明進行工業或商業方面的開發。有關機構單位專利申請的數據，可以用作描述工商業的創意活動，以及其技術變更的速度和方向。

2007 年獲批予專利的知識產權

5.2 統計調查的結果顯示，在 2007 年約有 720 間機構單位獲批予專利，涉及 1 241 個知識產權。該些機構單位平均每間擁有獲批專利權的知識產權數目為 1.7 個。(表 5.1 及 5.2)

5.3 香港 (49%) 和中國內地 (47%) 是兩個主要批予專利給這些知識產權的地方。至於商業開發方面，74% 的有關知識產權已被開拓作商業應用。(圖 5.1 和表 5.2 及 5.3)

Patents granted / being applied in the business sector

5.1 A patent is a right in law conferred by a national or territorial official agency to an inventor. It gives the patent owner a monopoly of the invention and its industrial or commercial exploitation for a limited period and within a given territory. Data on patent applications of establishments could be regarded as a portrait of the inventive activities in the business sector as well as the rate and direction of technical changes.

Intellectual properties with patents granted in 2007

5.2 The survey results indicated that about 720 establishments had patents granted in 2007, involving 1 241 intellectual properties in total. For those establishments, there were 1.7 intellectual properties granted with patent right per establishment on average. (Tables 5.1 and 5.2)

5.3 The major granting country / territory of the patents for these intellectual properties were Hong Kong (49%) and the mainland of China (47%). Regarding the status of commercial exploitation, 74% of these intellectual properties had already been exploited for commercial application. (Chart 5.1 + Tables 5.2 and 5.3)

圖 5.1 按批予專利的國家或地區和按行業類別／機構單位規模劃分的在 2007 年獲批予專利的知識產權數目

Chart 5.1 Number of intellectual properties with patents granted in 2007 by granting country or territory by industry sector / size of establishment

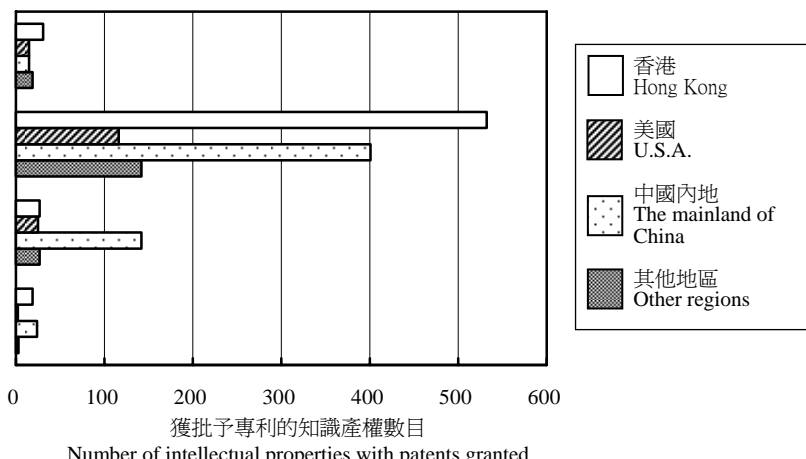
按行業類別劃分
By industry sector

製造業
Manufacturing

批發、零售、進口與出口貿易、飲食及酒店業
Wholesale, retail and import and export trades, restaurants and hotels

金融、保險、地產及商用服務業
Financing, insurance, real estate and business services

其他
Others

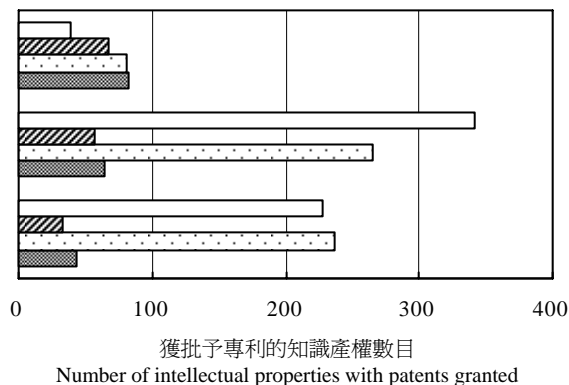


按機構單位規模劃分
By size of establishment

大型
Large

中型
Medium

小型
Small



2007 年已提交專利申請而仍未獲批准的知識產權

5.4 在 2007 年，有 956 間機構單位仍有未獲批准的專利申請，涉及共 1 499 個知識產權。(表 5.4 及 5.5)

5.5 在這些有待批准其專利申請的知識產權中，57%是在中國內地申請專利，40%則是在美國申請專利。這些知識產權在 2007 年有 40%已被開拓作商業應用。(圖 5.2 和表 5.5 及 5.6)

Intellectual properties with patent applications pending for approval in 2007

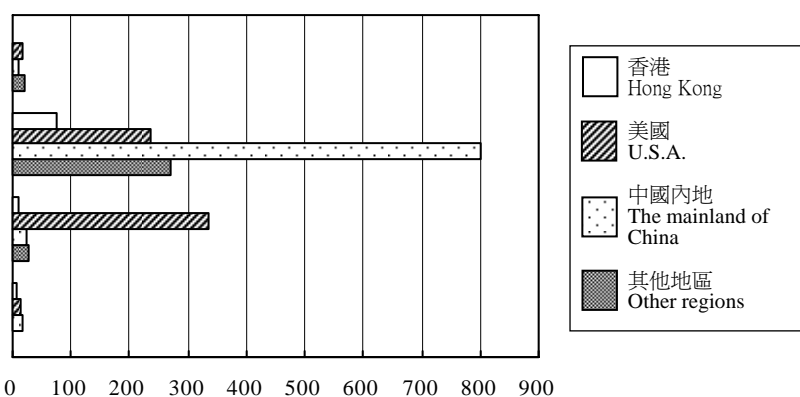
5.4 In 2007, 956 establishments had patent applications pending for approval. It involved 1 499 intellectual properties in total. (Tables 5.4 and 5.5)

5.5 Of these intellectual properties applied for patent right and pending for approval, 57% were filed in the mainland of China and another 40% were filed in the U.S.A. 40% of these intellectual properties had already been exploited for commercial application in 2007. (Chart 5.2 + Tables 5.5 and 5.6)

圖 5.2 按處理申請的國家或地區和按行業類別／機構單位規模劃分的在 2007 年已申請專利而仍未獲批准的知識產權數目
Chart 5.2 Number of intellectual properties with patent applications pending for approval in 2007 by country or territory of filing by industry sector / size of establishment

按行業類別劃分
By industry sector

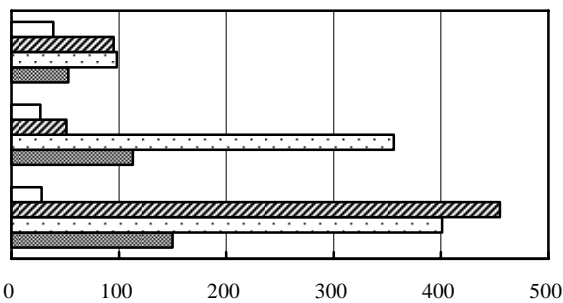
- 製造業
Manufacturing
- 批發、零售、進口與出口貿易、飲食及酒店業
Wholesale, retail and import and export trades, restaurants and hotels
- 金融、保險、地產及商用服務業
Financing, insurance, real estate and business services
- 其他
Others



已申請專利而仍未獲批准的知識產權數目
 Number of intellectual properties with patent applications pending for approval

按機構單位規模劃分
By size of establishment

- 大型
Large
- 中型
Medium
- 小型
Small



已申請專利而仍未獲批准的知識產權數目
 Number of intellectual properties with patent applications pending for approval

表 1.1 按行業類別／機構單位規模劃分的 2006 及 2007 年工商業研究及發展（研發）活動主要統計數字

Table 1.1 Key statistics on research and development (R&D) activities in the business sector in 2006 and 2007 by industry sector / size of establishment

	年度 Year	機構單位數目總計 Total no. of establishments	從事研發活動 的機構單位數目 No. of establishments having undertaken R&D activities	內部研發活動開支 ⁽¹⁾ (百萬港元) Expenditure for in-house R&D activities ⁽¹⁾ (HK\$ million)	研發人員數目 (相當於全日制的人數) No. of R&D personnel (full-time equivalent)
按行業類別劃分 By industry sector					
製造業 Manufacturing	2006	13 398	378 (8.1%)	369.0 (5.9%)	1 057 (8.3%)
	2007	13 442	337 (6.9%)	591.5 (9.8%)	1 132 (8.9%)
批發、零售、進口與出口貿易、飲食及酒店業 Wholesale, retail and import and export trades, restaurants and hotels	2006	167 095	2 341 (50.4%)	3,676.1 (58.5%)	6 214 (49.0%)
	2007	157 395	2 392 (49.2%)	2,741.4 (45.3%)	4 631 (36.5%)
金融、保險、地產及商用服務業 Financing, insurance, real estate and business services	2006	52 717	1 394 (30.0%)	1,528.5 (24.3%)	4 525 (35.7%)
	2007	46 560	1 428 (29.4%)	2,172.3 (35.9%)	6 027 (47.6%)
其他 Others	2006	44 267	530 (11.4%)	713.8 (11.4%)	886 (7.0%)
	2007	45 623	707 (14.5%)	549.4 (9.1%)	882 (7.0%)
總計 Total	2006	277 477	4 644 (100.0%)	6,287.4 (100.0%)	12 681 (100.0%)
	2007	263 020	4 864 (100.0%)	6,054.6 (100.0%)	12 673 (100.0%)
按機構單位規模劃分 By size of establishment					
大型 Large	2006	5 554	709 (15.3%)	2,825.1 (44.9%)	4 932 (38.9%)
	2007	5 796	728 (15.0%)	2,742.4 (45.3%)	4 389 (34.6%)
中型 Medium	2006	33 355	981 (21.1%)	1,457.9 (23.2%)	3 202 (25.2%)
	2007	33 203	1 288 (26.5%)	1,909.1 (31.5%)	3 677 (29.0%)
小型 Small	2006	238 568	2 954 (63.6%)	2,004.4 (31.9%)	4 548 (35.9%)
	2007	224 021	2 848 (58.6%)	1,403.1 (23.2%)	4 606 (36.3%)
總計 Total	2006	277 477	4 644 (100.0%)	6,287.4 (100.0%)	12 681 (100.0%)
	2007	263 020	4 864 (100.0%)	6,054.6 (100.0%)	12 673 (100.0%)

註釋：(1) 數字包括本地機構為本身及／或為其他機構進行的研發活動開支。

Note: (1) Figures include expenditure for in-house R&D activities conducted by a local party for itself and / or for other organisations.

表 1.2 按行業類別／機構單位規模劃分的 2006 及 2007 年工商業技術創新活動主要統計數字
Table 1.2 Key statistics on technological innovation (TI) activities in the business sector in 2006 and 2007 by industry sector / size of establishment

年份	機構單位 數目總計	有技術創新活動 的機構單位數目 ⁽¹⁾	有技術產品創新 的機構單位數目	有技術程序創新 的機構單位數目	有進行中而尚未完成 的技術創新活動 的機構單位數目	有已終止的技術 創新活動的 機構單位數目	技術創新 活動開支 (百萬港元)
Year	Total no. of establishments	No. of establishments having undertaken TI activities ⁽¹⁾	No. of establishments having undertaken technological product innovation	No. of establishments having undertaken technological process innovation	No. of establishments having undertaken ongoing TI activities	No. of establishments having undertaken abandoned TI activities	TI expenditure (HK\$ million)
按行業類別劃分 By industry sector							
製造業	2006	13 398	895 (6.7%)	299 (2.2%)	474 (3.5%)	378 (2.8%)	779.2 [5.1%]
Manufacturing	2007	13 442	908 (6.8%)	251 (1.9%)	599 (4.5%)	361 (2.7%)	1,335.0 [8.5%]
批發、零售、進口與出口貿易、飲 食及酒店業	2006	167 095	6 967 (4.2%)	2 021 (1.2%)	3 714 (2.2%)	2 728 (1.6%)	8,809.7 [57.5%]
Wholesale, retail and import and export trades, restaurants and hotels	2007	157 395	7 728 (4.9%)	2 147 (1.4%)	4 372 (2.8%)	3 773 (2.4%)	7,277.2 [46.4%]
金融、保險、地產及商用服務業	2006	52 717	2 772 (5.3%)	1 065 (2.0%)	843 (1.6%)	1 910 (3.6%)	3,300.0 [21.6%]
Financing, insurance, real estate and business services	2007	46 560	3 013 (6.5%)	1 698 (3.6%)	979 (2.1%)	1 760 (3.8%)	4,598.1 [29.3%]
其他	2006	44 267	2 308 (5.2%)	162 (0.4%)	1 907 (4.3%)	703 (1.6%)	2,419.6 [15.8%]
Others	2007	45 623	2 728 (6.0%)	644 (1.4%)	1 969 (4.3%)	1 113 (2.4%)	2,465.8 [15.7%]
總計	2006	277 477	12 941 (4.7%)	3 547 (1.3%)	6 939 (2.5%)	5 719 (2.1%)	15,308.5 [100.0%]
Total	2007	263 020	14 377 (5.5%)	4 740 (1.8%)	7 918 (3.0%)	7 008 (2.7%)	15,676.1 [100.0%]
按機構單位規模劃分 By size of establishment							
大型	2006	5 554	1 576 (28.4%)	227 (4.1%)	890 (16.0%)	820 (14.8%)	6,740.8 [44.0%]
Large	2007	5 796	1 319 (22.8%)	465 (8.0%)	801 (13.8%)	951 (16.4%)	6,790.7 [43.3%]
中型	2006	33 355	3 033 (9.1%)	673 (2.0%)	1 789 (5.4%)	1 380 (4.1%)	3,878.6 [25.3%]
Medium	2007	33 203	4 404 (13.3%)	1 275 (3.8%)	2 912 (8.8%)	2 243 (6.8%)	5,168.1 [33.0%]
小型	2006	238 568	8 332 (3.5%)	2 647 (1.1%)	4 260 (1.8%)	3 519 (1.5%)	4,689.1 [30.6%]
Small	2007	224 021	8 654 (3.9%)	3 001 (1.3%)	4 205 (1.9%)	3 815 (1.7%)	3,717.3 [23.7%]
總計	2006	277 477	12 941 (4.7%)	3 547 (1.3%)	6 939 (2.5%)	5 719 (2.1%)	15,308.5 [100.0%]
Total	2007	263 020	14 377 (5.5%)	4 740 (1.8%)	7 918 (3.0%)	7 008 (2.7%)	15,676.1 [100.0%]

註釋：(1) 數字代表在該統計年有參與技術創新活動的機構單位，不論其為技術產品創新、技術程序創新、進行中而尚未完成的技術創新活動或已終止的技術創新活動。

Notes: (1) The figures refer to establishments that had been engaged in TI activities in respective reference years, whether they be technological product innovation, technological process innovation, ongoing TI activities or abandoned TI activities.

圓括號內數字代表佔有關機構單位數目總計的百分比。
方括號內數字代表佔技術創新活動開支總計的百分比。

Figures in round brackets represent the percentages to total no. of establishments.
Figures in square brackets represent the percentages to total TI expenditure.

表 2.1 按行業類別／機構單位規模劃分在 2007 年有否進行研發活動的機構單位分布
 Table 2.1 Distribution of establishments by whether having undertaken R&D activities in 2007 by industry sector / size of establishment

	機構單位數目總計 Total no. of establishments	有研發活動 的機構單位數目 No. of establishments having undertaken R&D activities	沒有研發活動 的機構單位數目 No. of establishments not having undertaken R&D activities
按行業類別劃分 By industry sector			
製造業 Manufacturing	13 442	337 (2.5%)	13 105 (97.5%)
批發、零售、進口與出口貿易、飲食及酒店業 Wholesale, retail and import and export trades, restaurants and hotels	157 395	2 392 (1.5%)	155 003 (98.5%)
金融、保險、地產及商用服務業 Financing, insurance, real estate and business services	46 560	1 428 (3.1%)	45 131 (96.9%)
其他 Others	45 623	707 (1.5%)	44 917 (98.5%)
總計 Total	263 020	4 864 (1.8%)	258 156 (98.2%)
按機構單位規模劃分 By size of establishment			
大型 Large	5 796	728 (12.6%)	5 068 (87.4%)
中型 Medium	33 203	1 288 (3.9%)	31 915 (96.1%)
小型 Small	224 021	2 848 (1.3%)	221 173 (98.7%)
總計 Total	263 020	4 864 (1.8%)	258 156 (98.2%)

註釋：括號內數字代表佔機構單位數目總計的百分比。

Note: Figures in brackets represent the percentages to total no. of establishments.

表 2.2 按研發開支類別（即資本和經常開支）和按行業類別／機構單位規模劃分的 2007 年內部研發活動總開支
 Table 2.2 Total expenditure for in-house R&D activities in 2007 by type of R&D expenditure (i.e. capital and current) by industry sector / size of establishment

	(百萬港元) (HK\$ million)		
	內部研發活動經常開支 Current expenditure for in-house R&D activities	內部研發活動資本開支 Capital expenditure for in-house R&D activities	內部研發活動開支 ⁽¹⁾ Expenditure for in-house R&D activities ⁽¹⁾
按行業類別劃分 By industry sector			
製造業 Manufacturing	532.8 (90.1%)	58.8 (9.9%)	591.5 (100.0%)
批發、零售、進口與出口貿易、飲食及酒店業 Wholesale, retail and import and export trades, restaurants and hotels	2,349.7 (85.7%)	391.7 (14.3%)	2,741.4 (100.0%)
金融、保險、地產及商用服務業 Financing, insurance, real estate and business services	1,929.7 (88.8%)	242.5 (11.2%)	2,172.3 (100.0%)
其他 Others	457.2 (83.2%)	92.2 (16.8%)	549.4 (100.0%)
總計 Total	5,269.4 (87.0%)	785.2 (13.0%)	6,054.6 (100.0%)
按機構單位規模劃分 By size of establishment			
大型 Large	2,365.1 (86.2%)	377.3 (13.8%)	2,742.4 (100.0%)
中型 Medium	1,668.3 (87.4%)	240.9 (12.6%)	1,909.1 (100.0%)
小型 Small	1,236.0 (88.1%)	167.1 (11.9%)	1,403.1 (100.0%)
總計 Total	5,269.4 (87.0%)	785.2 (13.0%)	6,054.6 (100.0%)

註釋：(1) 數字包括本地機構為本身及／或為其他機構進行的研發活動開支。

Note: (1) Figures include expenditure for in-house R&D activities conducted by a local party for itself and / or for other organisations.

表 2.3 按研究類別和按行業類別／機構單位規模劃分的 2007 年內部研發活動總開支
Table 2.3 Total expenditure for in-house R&D activities in 2007 by type of research by industry sector / size of establishment

(百萬港元)
(HK\$ million)

	研究類別 Type of research				總計 ⁽¹⁾ Total ⁽¹⁾
	基礎研究 Basic research	應用研究 Applied research	實驗發展 Experimental development		
			產品發展 Product development	程序發展 Process development	
按行業類別劃分 By industry sector					
製造業 Manufacturing	11.7 (2.0%)	109.9 (18.6%)	384.1 (64.9%)	85.8 (14.5%)	591.5 (100.0%)
批發、零售、進口與出口貿易、飲食及酒店業 Wholesale, retail and import and export trades, restaurants and hotels	37.3 (1.4%)	310.8 (11.3%)	2,149.5 (78.4%)	243.8 (8.9%)	2,741.4 (100.0%)
金融、保險、地產及商用服務業 Financing, insurance, real estate and business services	50.6 (2.3%)	438.9 (20.2%)	1,261.8 (58.1%)	421.0 (19.4%)	2,172.3 (100.0%)
其他 Others	16.2 (2.9%)	254.4 (46.3%)	222.3 (40.5%)	56.5 (10.3%)	549.4 (100.0%)
總計 Total	115.8 (1.9%)	1,114.1 (18.4%)	4,017.7 (66.4%)	807.0 (13.3%)	6,054.6 (100.0%)
按機構單位規模劃分 By size of establishment					
大型 Large	24.8 (0.9%)	404.5 (14.7%)	1,901.7 (69.3%)	411.4 (15.0%)	2,742.4 (100.0%)
中型 Medium	75.9 (4.0%)	352.9 (18.5%)	1,300.6 (68.1%)	179.7 (9.4%)	1,909.1 (100.0%)
小型 Small	15.1 (1.1%)	356.7 (25.4%)	815.3 (58.1%)	215.9 (15.4%)	1,403.1 (100.0%)
總計 Total	115.8 (1.9%)	1,114.1 (18.4%)	4,017.7 (66.4%)	807.0 (13.3%)	6,054.6 (100.0%)

註釋：(1) 數字包括本地機構為本身及／或為其他機構進行的研發活動開支。

Note: (1) Figures include expenditure for in-house R&D activities conducted by a local party for itself and / or for other organisations.

表 2.4 按研發活動範疇和按行業類別／機構單位規模劃分的 2007 年內部研發活動總開支
Table 2.4 Total expenditure for in-house R&D activities in 2007 by field of R&D activity by industry sector / size of establishment

(百萬港元)
(HK\$ million)

	研發活動範疇 Field of R&D activity					總計 ⁽¹⁾ Total ⁽¹⁾
	自然科學及工程科技 Natural sciences and engineering			社會科學及人文科學 Social sciences and humanities		
	自然科學 Natural sciences	工程及科技 Engineering and technology	醫學 Medical sciences	社會科學 Social sciences	人文科學 Humanities	
按行業類別劃分 By industry sector						
製造業 Manufacturing	64.2 (10.9%)	506.3 (85.6%)	12.5 (2.1%)	* (#)	8.5 (1.4%)	591.5 (100.0%)
批發、零售、進口與出口貿易、飲食及酒店業 Wholesale, retail and import and export trades, restaurants and hotels	207.6 (7.6%)	2,502.2 (91.3%)	21.0 (0.8%)	5.3 (0.2%)	5.5 (0.2%)	2,741.4 (100.0%)
金融、保險、地產及商用服務業 Financing, insurance, real estate and business services	1,032.1 (47.5%)	1,086.9 (50.0%)	47.4 (2.2%)	5.8 (0.3%)	0.0 (0.0%)	2,172.3 (100.0%)
其他 Others	106.0 (19.3%)	243.6 (44.3%)	195.4 (35.6%)	0.1 (#)	4.2 (0.8%)	549.4 (100.0%)
總計 Total	1,409.9 (23.3%)	4,339.0 (71.7%)	276.3 (4.6%)	11.2 (0.2%)	18.2 (0.3%)	6,054.6 (100.0%)
按機構單位規模劃分 By size of establishment						
大型 Large	334.6 (12.2%)	2,274.0 (82.9%)	130.7 (4.8%)	3.1 (0.1%)	* (#)	2,742.4 (100.0%)
中型 Medium	510.9 (26.8%)	1,265.7 (66.3%)	114.9 (6.0%)	8.0 (0.4%)	9.6 (0.5%)	1,909.1 (100.0%)
小型 Small	564.4 (40.2%)	799.3 (57.0%)	30.7 (2.2%)	0.1 (#)	8.6 (0.6%)	1,403.1 (100.0%)
總計 Total	1,409.9 (23.3%)	4,339.0 (71.7%)	276.3 (4.6%)	11.2 (0.2%)	18.2 (0.3%)	6,054.6 (100.0%)

註釋：(1) 數字包括本地機構為本身及／或為其他機構進行的研發活動開支。

Notes: (1) Figures include expenditure for in-house R&D activities conducted by a local party for itself and / or for other organisations.

* 數值少於 HK\$50,000。

* Figure less than HK\$50,000.

數值少於 0.05%。

Figure less than 0.05%

表 2.5 按科技領域和按行業類別／機構單位規模劃分的 2007 年內部研發活動總開支
Table 2.5 Total expenditure for in-house R&D activities in 2007 by technology area by industry sector / size of establishment

(百萬港元)
(HK\$ million)

	科技領域 Technology area												總計 ⁽¹⁾ Total ⁽¹⁾
	資訊科技 Information technology				小計 Subtotal	電機及電子 工程科技 [@] Electrical & electronics engineering technology [@]	製造科技 Manu- facturing technology	生物科技 Bio- technology	中藥 Chinese medicine	納米科技 Nano- technology	先進 材料科技 Advanced materials technology	其他 Others	
	資訊系統 及科技 Information system and technology	電腦 硬件科技 Computer hardware technology	電腦 軟件科技 Computer software technology	通訊科技 Com- munication technology									
按行業類別劃分 By industry sector													
製造業 Manufacturing	25.7 (4.3%)	47.6 (8.0%)	27.0 (4.6%)	8.1 (1.4%)	108.3 (18.3%)	201.0 (34.0%)	220.2 (37.2%)	4.3 (0.7%)	3.8 (0.7%)	3.9 (0.7%)	49.9 (8.4%)	0.1 (#)	591.5 (100.0%)
批發、零售、進口與出口貿易、 飲食及酒店業 Wholesale, retail and import and export trades, restaurants and hotels	60.0 (2.2%)	126.1 (4.6%)	189.4 (6.9%)	273.2 (10.0%)	648.8 (23.7%)	1,410.8 (51.5%)	448.9 (16.4%)	31.6 (1.2%)	0.0 (0.0%)	45.1 (1.6%)	156.3 (5.7%)	0.0 (0.0%)	2,741.4 (100.0%)
金融、保險、地產及 商用服務業 Financing, insurance, real estate and business services	616.5 (28.4%)	189.6 (8.7%)	610.2 (28.1%)	146.9 (6.8%)	1,563.2 (72.0%)	399.3 (18.4%)	32.9 (1.5%)	65.5 (3.0%)	1.4 (0.1%)	14.8 (0.7%)	92.9 (4.3%)	2.2 (0.1%)	2,172.3 (100.0%)
其他 Others	68.5 (12.5%)	25.3 (4.6%)	76.9 (14.0%)	80.9 (14.7%)	251.7 (45.8%)	26.1 (4.8%)	10.4 (1.9%)	238.5 (43.4%)	0.5 (0.1%)	0.1 (#)	0.9 (0.2%)	21.1 (3.8%)	549.4 (100.0%)
總計 Total	770.7 (12.7%)	388.6 (6.4%)	903.5 (14.9%)	509.2 (8.4%)	2,572.0 (42.5%)	2,037.2 (33.6%)	712.5 (11.8%)	339.9 (5.6%)	5.8 (0.1%)	63.9 (1.1%)	299.9 (5.0%)	23.4 (0.4%)	6,054.6 (100.0%)
按機構單位規模劃分 By size of establishment													
大型 Large	317.2 (11.6%)	130.2 (4.7%)	230.1 (8.4%)	165.4 (6.0%)	842.9 (30.7%)	1,157.1 (42.2%)	405.7 (14.8%)	124.7 (4.5%)	4.9 (0.2%)	3.6 (0.1%)	182.9 (6.7%)	20.6 (0.8%)	2,742.4 (100.0%)
中型 Medium	125.2 (6.6%)	172.6 (9.0%)	303.4 (15.9%)	266.5 (14.0%)	867.7 (45.4%)	563.0 (29.5%)	235.6 (12.3%)	179.6 (9.4%)	* (#)	45.0 (2.4%)	15.7 (0.8%)	2.5 (0.1%)	1,909.1 (100.0%)
小型 Small	328.4 (23.4%)	85.8 (6.1%)	370.0 (26.4%)	77.3 (5.5%)	861.5 (61.4%)	317.1 (22.6%)	71.2 (5.1%)	35.6 (2.5%)	0.8 (0.1%)	15.3 (1.1%)	101.3 (7.2%)	0.3 (#)	1,403.1 (100.0%)
總計 Total	770.7 (12.7%)	388.6 (6.4%)	903.5 (14.9%)	509.2 (8.4%)	2,572.0 (42.5%)	2,037.2 (33.6%)	712.5 (11.8%)	339.9 (5.6%)	5.8 (0.1%)	63.9 (1.1%)	299.9 (5.0%)	23.4 (0.4%)	6,054.6 (100.0%)

註釋：(1) 數字包括本地機構為本身及／或為其他機構進行的研發活動開支。

Notes: (1) Figures include expenditure for in-house R&D activities conducted by a local party for itself and / or for other organisations.

* 數值少於 HK\$50,000。

* Figure less than HK\$50,000.

數值少於 0.05%。

Figure less than 0.05%.

@ 電機及電子工程科技若涉及 (a) 電腦硬件 (如集成電路) 則包括在電腦硬件科技領域;
(b) 通訊科技則包括在通訊科技領域。

@ Electrical and electronics engineering technology associated with (a) computer hardware (such as integrated circuits) was included in the area of computer hardware technology; (b) communication technology was included in the area of communication technology.

表 2.6 按資金來源和按行業類別／機構單位規模劃分的 2007 年內部研發活動總開支
Table 2.6 Total expenditure for in-house R&D activities in 2007 by source of funds by industry sector / size of establishment

(百萬港元)
(HK\$ million)

	資金來源 Source of funds								總計 ⁽¹⁾ Total ⁽¹⁾
	本地機構 Local parties				香港以外機構 Parties outside Hong Kong				
	自資 Self-financed	政府 Government	高等教育 機構 Higher education institutions	機構本身所屬企業集團 內的其他工商業機構 Other business firms within an establishment's own enterprise group	其他工商 業機構 Other business firms	其他 Others	機構本身所屬企業集團 內的其他工商業機構 Other business firms within an establishment's own enterprise group	其他 Others	
按行業類別劃分 By industry sector									
製造業 Manufacturing	585.0 (98.9%)	4.1 (0.7%)	* (#)	0.0 (0.0%)	0.2 (#)	0.0 (0.0%)	2.2 (0.4%)	0.0 (0.0%)	591.5 (100.0%)
批發、零售、進口與出口貿易、飲 食及酒店業 Wholesale, retail and import and export trades, restaurants and hotels	2,383.8 (87.0%)	86.6 (3.2%)	0.3 (#)	145.8 (5.3%)	17.7 (0.6%)	0.0 (0.0%)	106.9 (3.9%)	0.3 (#)	2,741.4 (100.0%)
金融、保險、地產及商用服務業 Financing, insurance, real estate and business services	1,723.7 (79.3%)	53.7 (2.5%)	30.4 (1.4%)	3.4 (0.2%)	35.9 (1.7%)	0.4 (#)	181.6 (8.4%)	143.2 (6.6%)	2,172.3 (100.0%)
其他 Others	524.2 (95.4%)	5.0 (0.9%)	15.8 (2.9%)	1.8 (0.3%)	0.0 (0.0%)	0.0 (0.0%)	2.5 (0.5%)	0.0 (0.0%)	549.4 (100.0%)
總計 Total	5,216.6 (86.2%)	149.4 (2.5%)	46.5 (0.8%)	151.0 (2.5%)	53.9 (0.9%)	0.4 (#)	293.2 (4.8%)	143.4 (2.4%)	6,054.6 (100.0%)
按機構單位規模劃分 By size of establishment									
大型 Large	2,330.5 (85.0%)	81.7 (3.0%)	* (#)	144.2 (5.3%)	8.9 (0.3%)	0.0 (0.0%)	156.5 (5.7%)	20.6 (0.8%)	2,742.4 (100.0%)
中型 Medium	1,691.0 (88.6%)	14.2 (0.7%)	46.3 (2.4%)	2.5 (0.1%)	29.3 (1.5%)	0.3 (#)	123.6 (6.5%)	1.8 (0.1%)	1,909.1 (100.0%)
小型 Small	1,195.1 (85.2%)	53.5 (3.8%)	0.2 (#)	4.3 (0.3%)	15.8 (1.1%)	0.1 (#)	13.1 (0.9%)	121.0 (8.6%)	1,403.1 (100.0%)
總計 Total	5,216.6 (86.2%)	149.4 (2.5%)	46.5 (0.8%)	151.0 (2.5%)	53.9 (0.9%)	0.4 (#)	293.2 (4.8%)	143.4 (2.4%)	6,054.6 (100.0%)

註釋：(1) 數字包括本地機構為本身及／或為其他機構進行的研發活動開支。

Notes: (1) Figures include expenditure for in-house R&D activities conducted by a local party for itself and / or for other organisations.

* 數值少於 HK\$50,000。

* Figure less than HK\$50,000.

數值少於 0.05%。

Figure less than 0.05%.

表 2.7 按外判機構和按行業類別／機構單位規模劃分的 2007 年外判研發活動總開支
 Table 2.7 Total expenditure for outsourced R&D activities in 2007 by outsourced party by industry sector / size of establishment

	(百萬港元) (HK\$ million)		
	外判予本地機構的研發活動開支 Expenditure for outsourced R&D activities to local parties	外判予香港以外機構的研發活動開支 Expenditure for outsourced R&D activities to parties outside Hong Kong	外判研發活動開支總額 Total expenditure for outsourced R&D activities
按行業類別劃分 By industry sector			
製造業 Manufacturing	22.6 (62.6%)	13.5 (37.4%)	36.1 (100.0%)
批發、零售、進口與出口貿易、飲食及酒店業 Wholesale, retail and import and export trades, restaurants and hotels	149.1 (6.1%)	2,293.4 (93.9%)	2,442.5 (100.0%)
金融、保險、地產及商用服務業 Financing, insurance, real estate and business services	137.6 (25.2%)	408.8 (74.8%)	546.3 (100.0%)
其他 Others	120.0 (60.4%)	78.7 (39.6%)	198.7 (100.0%)
總計 Total	429.3 (13.3%)	2,794.4 (86.7%)	3,223.7 (100.0%)
按機構單位規模劃分 By size of establishment			
大型 Large	176.5 (24.2%)	553.8 (75.8%)	730.3 (100.0%)
中型 Medium	166.0 (11.9%)	1,229.5 (88.1%)	1,395.5 (100.0%)
小型 Small	86.8 (7.9%)	1,011.1 (92.1%)	1,097.9 (100.0%)
總計 Total	429.3 (13.3%)	2,794.4 (86.7%)	3,223.7 (100.0%)

表 2.8 按進行機構和資金來源劃分的 2007 年外判研發活動總開支
Table 2.8 Total expenditure for outsourced R&D activities in 2007 by performing party and source of funds

組織類別 Type of organisation	進行研發活動的機構 Party performing R&D activities		資金來源 Source of funds			
			外判予本地機構 Outsourced to local parties		外判予香港以外機構 Outsourced to parties outside Hong Kong	
本地機構 Local parties						
自資 Self-financed	-	(-)	310.1	(72.2%)	2,607.5	(93.3%)
政府 Government	11.9	(0.4%)	46.7	(10.9%)	8.7	(0.3%)
公共科技支援機構 Public technology support organisations	28.1	(0.9%)	-	(-)	-	(-)
高等教育機構 Higher education institutions	47.9	(1.5%)	0.7	(0.2%)	0.0	(0.0%)
機構本身所屬企業集團內的其他工商業機構 Other business firms within an establishment's own enterprise group	136.4	(4.2%)	16.1	(3.8%)	8.9	(0.3%)
機構本身所屬企業集團外的工商業機構 Business firms outside an establishment's own enterprise group	204.9	(6.4%)	54.3	(12.6%)	1.4	(#)
其他 Others	0.1	(#)	0.0	(0.0%)	0.0	(0.0%)
香港以外的機構 Parties outside Hong Kong						
機構本身所屬企業集團內的其他工商業機構 Other business firms within an establishment's own enterprise group	2,025.9	(62.8%)	0.9	(0.2%)	101.2	(3.6%)
機構本身所屬企業集團外的工商業機構 Business firms outside an establishment's own enterprise group	758.0	(23.5%)	0.5	(0.1%)	66.7	(2.4%)
其他 Others	10.5	(0.3%)	0.0	(0.0%)	0.0	(0.0%)
總計 Total	3,223.7	(100.0%)	429.3	(100.0%)	2,794.4	(100.0%)

註釋： - 不適用。

數值少於 0.05%。

Notes: - Not applicable.

Figure less than 0.05%.

表 2.9 按職業類別和按行業類別／機構單位規模劃分的 2007 年研發人員數目（人數和相當於全日制的人數）
Table 2.9 R&D personnel (headcount and full-time equivalent) in 2007 by type of occupation by industry sector / size of establishment

	職業類別 Type of occupation							
	研究員／科學家／工程師 Researchers/Scientists/Engineers		技術員 Technicians		其他輔助人員 Other supporting staff		總計 Total	
	人數 Headcount	相當於全日制 的人數 Full-time equivalent	人數 Headcount	相當於全日制 的人數 Full-time equivalent	人數 Headcount	相當於全日制 的人數 Full-time equivalent	人數 Headcount	相當於全日制 的人數 Full-time equivalent
按行業類別劃分 By industry sector								
製造業 Manufacturing	970 (72.6%)	884 (78.1%)	247 (18.5%)	183 (16.1%)	119 (8.9%)	65 (5.8%)	1 337 (100.0%)	1 132 (100.0%)
批發、零售、進口與出口貿易、飲食 及酒店業 Wholesale, retail and import and export trades, restaurants and hotels	3 797 (70.0%)	3 232 (69.8%)	816 (15.1%)	718 (15.5%)	808 (14.9%)	681 (14.7%)	5 420 (100.0%)	4 631 (100.0%)
金融、保險、地產及商用服務業 Financing, insurance, real estate and business services	5 442 (74.8%)	4 642 (77.0%)	1 330 (18.3%)	1 042 (17.3%)	504 (6.9%)	343 (5.7%)	7 276 (100.0%)	6 027 (100.0%)
其他 Others	872 (69.0%)	647 (73.4%)	320 (25.3%)	173 (19.6%)	72 (5.7%)	62 (7.0%)	1 264 (100.0%)	882 (100.0%)
總計 Total	11 081 (72.4%)	9 406 (74.2%)	2 713 (17.7%)	2 116 (16.7%)	1 503 (9.8%)	1 151 (9.1%)	15 297 (100.0%)	12 673 (100.0%)
按機構單位規模劃分 By size of establishment								
大型 Large	3 813 (74.0%)	3 407 (77.6%)	983 (19.1%)	722 (16.4%)	355 (6.9%)	261 (5.9%)	5 151 (100.0%)	4 389 (100.0%)
中型 Medium	2 814 (62.2%)	2 320 (63.1%)	1 389 (30.7%)	1 085 (29.5%)	325 (7.2%)	271 (7.4%)	4 528 (100.0%)	3 677 (100.0%)
小型 Small	4 454 (79.3%)	3 679 (79.9%)	340 (6.1%)	309 (6.7%)	823 (14.7%)	619 (13.4%)	5 617 (100.0%)	4 606 (100.0%)
總計 Total	11 081 (72.4%)	9 406 (74.2%)	2 713 (17.7%)	2 116 (16.7%)	1 503 (9.8%)	1 151 (9.1%)	15 297 (100.0%)	12 673 (100.0%)

表 2.10 按教育程度和按行業類別／機構單位規模劃分的 2007 年研發人員數目（人數和相當於全日制的人數）
Table 2.10 R&D personnel (headcount and full-time equivalent) in 2007 by level of education by industry sector / size of establishment

	教育程度 Level of education								總計 Total	
	博士程度大學學位 University degrees at Ph.D. level		博士程度以下大學學位 University degrees below Ph.D. level		其他專上文憑／證書 Other post-secondary diplomas/certificates		非專上程度文憑／證書 Lower than post-secondary diplomas/certificates			
	人數 Headcount	相當於 全日制 的人數 Full-time equivalent	人數 Headcount	相當於 全日制 的人數 Full-time equivalent	人數 Headcount	相當於 全日制 的人數 Full-time equivalent	人數 Headcount	相當於 全日制 的人數 Full-time equivalent	人數 Headcount	相當於 全日制 的人數 Full-time equivalent
按行業類別劃分 By industry sector										
製造業 Manufacturing	87 (6.5%)	82 (7.2%)	793 (59.3%)	686 (60.6%)	282 (21.1%)	222 (19.7%)	174 (13.0%)	142 (12.5%)	1 337 (100.0%)	1 132 (100.0%)
批發、零售、進口與出口貿易、飲食 及酒店業 Wholesale, retail and import and export trades, restaurants and hotels	299 (5.5%)	219 (4.7%)	3 110 (57.4%)	2 707 (58.5%)	1 625 (30.0%)	1 400 (30.2%)	387 (7.1%)	305 (6.6%)	5 420 (100.0%)	4 631 (100.0%)
金融、保險、地產及商用服務業 Financing, insurance, real estate and business services	408 (5.6%)	391 (6.5%)	4 126 (56.7%)	3 154 (52.3%)	2 524 (34.7%)	2 346 (38.9%)	218 (3.0%)	136 (2.3%)	7 276 (100.0%)	6 027 (100.0%)
其他 Others	70 (5.5%)	67 (7.6%)	1 053 (83.3%)	698 (79.1%)	111 (8.8%)	95 (10.7%)	30 (2.4%)	22 (2.5%)	1 264 (100.0%)	882 (100.0%)
總計 Total	864 (5.6%)	760 (6.0%)	9 081 (59.4%)	7 246 (57.2%)	4 542 (29.7%)	4 063 (32.1%)	809 (5.3%)	604 (4.8%)	15 297 (100.0%)	12 673 (100.0%)
按機構單位規模劃分 By size of establishment										
大型 Large	311 (6.0%)	284 (6.5%)	3 878 (75.3%)	3 272 (74.5%)	672 (13.0%)	637 (14.5%)	291 (5.7%)	196 (4.5%)	5 151 (100.0%)	4 389 (100.0%)
中型 Medium	120 (2.7%)	109 (3.0%)	3 071 (67.8%)	2 499 (68.0%)	1 095 (24.2%)	867 (23.6%)	242 (5.3%)	202 (5.5%)	4 528 (100.0%)	3 677 (100.0%)
小型 Small	433 (7.7%)	366 (7.9%)	2 133 (38.0%)	1 475 (32.0%)	2 775 (49.4%)	2 559 (55.6%)	276 (4.9%)	207 (4.5%)	5 617 (100.0%)	4 606 (100.0%)
總計 Total	864 (5.6%)	760 (6.0%)	9 081 (59.4%)	7 246 (57.2%)	4 542 (29.7%)	4 063 (32.1%)	809 (5.3%)	604 (4.8%)	15 297 (100.0%)	12 673 (100.0%)

表 2.11 按有否就研發活動和其他機構訂立合作安排／合作機構的類別和所在地劃分在 2007 年有研發活動的機構單位分布
Table 2.11 Distribution of establishments having undertaken R&D activities in 2007 by whether having cooperation arrangements on R&D activities with other organisations / type and location of cooperation organisation

有否就研發活動和其他機構訂立合作安排／ 合作機構類別 ⁽¹⁾ Whether having cooperation arrangements on R&D activities with other organisations / Type of cooperation organisation ⁽¹⁾	有研發活動的 機構單位數目 No. of establishments having undertaken R&D activities	合作機構所在地 ⁽¹⁾ Location of cooperation organisation ⁽¹⁾					合計 Overall	
		中國內地及澳門 The mainland of China and Macao						
		香港 HK	泛珠三角區域 ⁽³⁾ Pearl River Delta (珠江三角洲經濟區 及香港除外) Pan-PRD Region ⁽³⁾ other than PRD Economic Zone and HK			其他地區 Other regions		香港、中國 內地及澳門 以外地方 Places outside HK, the mainland of China and Macao
			珠江三角洲 經濟區 ⁽²⁾ Pearl River Delta (PRD) Economic Zone ⁽²⁾					
有就研發活動和其他機構訂立合作安排 Having cooperation arrangements on R&D activities with other organisations	1 339 [27.5%]							
政府 Government	43 (3.2%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (0.1%)	44 (3.3%)		
公共科技支援機構 ⁽⁴⁾ Public technology support organisations ⁽⁴⁾	234 (17.5%)	28 (2.1%)	0 (0.0%)	1 (0.1%)	25 (1.9%)	259 (19.3%)		
高等教育機構 Higher education institutions	169 (12.6%)	114 (8.5%)	112 (8.4%)	10 (0.7%)	9 (0.7%)	284 (21.2%)		
機構本身所屬企業集團內的其他工商業機構 Other business firms within an establishment's own enterprise group	40 (3.0%)	213 (15.9%)	3 (0.2%)	56 (4.2%)	44 (3.3%)	336 (25.1%)		
機構本身所屬企業集團外的工商業機構 Business firms outside an establishment's own enterprise group	405 (30.2%)	224 (16.7%)	5 (0.4%)	49 (3.7%)	188 (14.0%)	636 (47.5%)		
私人非牟利機構及其他 Private non-profit organisations and others	7 (0.5%)	107 (8.0%)	107 (8.0%)	0 (0.0%)	116 (8.7%)	230 (17.2%)		
合計 Overall	751 (56.1%)	574 (42.9%)	120 (9.0%)	96 (7.2%)	373 (27.9%)			

表 2.11 (續) 按有否就研發活動和其他機構訂立合作安排／合作機構的類別和所在地劃分在 2007 年有研發活動的機構單位分布
 Table 2.11 (cont'd) Distribution of establishments having undertaken R&D activities in 2007 by whether having cooperation arrangements on R&D activities with other organisations / type and location of cooperation organisation

有否就研發活動和其他機構訂立合作安排／ 合作機構類別 ⁽¹⁾ Whether having cooperation arrangements on R&D activities with other organisations / Type of cooperation organisation ⁽¹⁾	有研發活動的 機構單位數目 No. of establishments having undertaken R&D activities	合作機構所在地 ⁽¹⁾ Location of cooperation organisation ⁽¹⁾					合計 Overall	
		中國內地及澳門 The mainland of China and Macao						
		香港 HK	泛珠三角區域 ⁽³⁾ Pearl River Delta (珠江三角洲經濟區 經濟區 ⁽²⁾ 及香港除外) Pan-PRD Region ⁽³⁾ other than PRD Economic Zone and HK		其他地區 Other regions	香港、中國 內地及澳門 以外地方 Places outside HK, the mainland of China and Macao		
			珠江三角洲 (PRD) Economic Zone ⁽²⁾	其他地區 Economic Zone and HK		其他地區 Other regions		其他地區 Other regions
沒有就研發活動和其他機構訂立合作安排 Not having cooperation arrangements on R&D activities with other organisations	3 525 [72.5%]							
總計 Total	4 864 [100.0%]							

註釋：(1) 可選擇多於一個機構及／或地點。

(2) 珠江三角洲經濟區包括 14 個市、縣；分別是廣州、深圳、珠海、佛山、江門、東莞、中山、惠州市區、惠陽縣、惠東縣、博羅縣、肇慶市區、高要市和四會市。

(3) 泛珠三角區域包括福建、江西、湖南、廣東、廣西、海南、四川、貴州、雲南九個省，以及香港和澳門特別行政區。此欄不包括與珠江三角洲經濟區及香港機構的合作安排。

(4) 例子包括香港生產力促進局，香港應用科技研究院有限公司，香港賽馬會中藥研究院有限公司及研發中心。

方括號內數字代表佔有研發活動機構單位數目總計的百分比。

圓括號內數字代表佔有就研發活動和其他機構訂立合作安排的機構單位數目總計的百分比。

Notes: (1) May select more than one organisation and/or location.

(2) The Pearl River Delta (PRD) Economic Zone covers urban area of 14 cities and counties including Guangzhou, Shenzhen, Zhuhai, Foshan, Jiangmen, Dongguan, Zhongshan, Huizhou City, Huiyang county, Huidong county, Poluo county, Zhaoqing City, Gaoyao and Sihui.

(3) The Pan-PRD region covers Fujian, Jiangxi, Hunan, Guangdong, Guangxi, Hainan, Sichuan, Guizhou, Yunnan as well as Hong Kong and Macao. Cooperation arrangements with PRD Economic Zone and Hong Kong are excluded in this column.

(4) Examples are Hong Kong Productivity Council (HKPC), Hong Kong Applied Science and Technology Research Institute Company Limited (ASTRI), Hong Kong Jockey Club Institute of Chinese Medicine Limited (HKJICM) and R&D Centres.

Figures in square brackets represent the percentages to total no. of establishments having undertaken R&D activities.

Figures in round brackets represent the percentages to total no. of establishments having cooperation arrangements on R&D activities with other organisations.

表 2.12 按截至 2007 年 12 月底內部研發活動所佔的內部樓面面積百分比和按行業類別／機構單位規模劃分在 2007 年有內部研發活動的機構單位分布
 Table 2.12 Distribution of establishments having undertaken in-house R&D activities in 2007 by percentage of internal floor area devoted to in-house R&D activities as at end December 2007 by industry sector / size of establishment

	內部研發活動所佔的內部樓面面積百分比 Percentage of internal floor area devoted to in-house R&D activities					有內部研發活動的機構單位數目 No. of establishments having undertaken in-house R&D activities
	< 5%	5% – 24%	25% – 49%	50% – 74%	≥ 75%	
按行業類別劃分 By industry sector						
批發、零售、進口與出口貿易、飲食及酒店業 Wholesale, retail and import and export trades, restaurants and hotels	206 (17.7%)	461 (39.6%)	177 (15.2%)	298 (25.6%)	23 (2.0%)	1 165 (100.0%)
金融、保險、地產及商用服務業 Financing, insurance, real estate and business services	152 (10.9%)	165 (11.9%)	259 (18.7%)	198 (14.3%)	613 (44.2%)	1 387 (100.0%)
製造業及其他 Manufacturing and others	173 (24.6%)	454 (64.4%)	21 (3.0%)	17 (2.5%)	38 (5.5%)	704 (100.0%)
總計 Total	531 (16.3%)	1 080 (33.2%)	458 (14.1%)	513 (15.8%)	675 (20.7%)	3 256 (100.0%)
按機構單位規模劃分 By size of establishment						
大型 Large	161 (28.6%)	355 (63.0%)	22 (3.9%)	20 (3.6%)	5 (0.9%)	564 (100.0%)
中型 Medium	224 (21.7%)	403 (39.1%)	276 (26.8%)	68 (6.6%)	61 (5.9%)	1 031 (100.0%)
小型 Small	146 (8.8%)	322 (19.4%)	160 (9.6%)	425 (25.6%)	609 (36.7%)	1 662 (100.0%)
總計 Total	531 (16.3%)	1 080 (33.2%)	458 (14.1%)	513 (15.8%)	675 (20.7%)	3 256 (100.0%)

表 2.13 按研發活動開始產生盈利的預期時間範圍和按行業類別／機構單位規模劃分在 2007 年有研發活動的機構單位分布
 Table 2.13 Distribution of establishments having undertaken R&D activities in 2007 by expected time frame for R&D activities to start generating profit by industry sector / size of establishment

	有研發活動的 機構單位數目 No. of establishments having undertaken R&D activities	預期研發活動開始產生盈利的時間範圍 ⁽¹⁾ Expected time frame for R&D activities to start generating profit ⁽¹⁾		
		少於 3 年 Less than 3 years	3 年至少於 6 年 3 years to less than 6 years	6 年或以上 6 years or above
按行業類別劃分 By industry sector				
製造業 Manufacturing	337	212 (62.8%)	115 (34.1%)	10 (3.1%)
批發、零售、進口與出口貿易、飲食 及酒店業 Wholesale, retail and import and export trades, restaurants and hotels	2 392	1 568 (65.6%)	793 (33.2%)	29 (1.2%)
金融、保險、地產及商用服務業 Financing, insurance, real estate and business services	1 428	603 (42.2%)	772 (54.0%)	50 (3.5%)
其他 Others	707	343 (48.5%)	317 (44.9%)	42 (6.0%)
總計 Total	4 864	2 726 (56.0%)	1 997 (41.1%)	132 (2.7%)
按機構單位規模劃分 By size of establishment				
大型 Large	728	448 (61.6%)	238 (32.7%)	39 (5.4%)
中型 Medium	1 288	797 (61.9%)	437 (33.9%)	53 (4.1%)
小型 Small	2 848	1 481 (52.0%)	1 323 (46.5%)	39 (1.4%)
總計 Total	4 864	2 726 (56.0%)	1 997 (41.1%)	132 (2.7%)

註釋：(1) 數字不包括八間表示研發活動不會產生盈利的機構單位。

括號內數字代表佔有研發活動機構單位數目總計的百分比。

Notes: (1) Figures exclude eight establishments indicating that there would be no profit generated by the R&D activities.

Figures in brackets represent the percentages to total no. of establishments having undertaken R&D activities.

表 2.14 按有否就 2008 年度的研發活動制定預算和按行業類別／機構單位規模劃分的機構單位分布
 Table 2.14 Distribution of establishments by whether having budget allocation for R&D activities for 2008 by industry sector / size of establishment

	機構單位數目總計 Total no. of establishments	在 2008 年度有沒有為研發活動制定預算 Whether having budget allocation for R&D activities for 2008					
		有 Yes		沒有 No		不肯定 Uncertain	
按行業類別劃分 By industry sector							
製造業 Manufacturing	13 442	308	(2.3%)	12 793	(95.2%)	341	(2.5%)
批發、零售、進口與出口貿易、飲食及酒店業 Wholesale, retail and import and export trades, restaurants and hotels	157 395	2 935	(1.9%)	147 187	(93.5%)	7 273	(4.6%)
金融、保險、地產及商用服務業 Financing, insurance, real estate and business services	46 560	1 235	(2.7%)	42 215	(90.7%)	3 110	(6.7%)
其他 Others	45 623	695	(1.5%)	42 499	(93.2%)	2 429	(5.3%)
總計 Total	263 020	5 174	(2.0%)	244 694	(93.0%)	13 152	(5.0%)
按機構單位規模劃分 By size of establishment							
大型 Large	5 796	671	(11.6%)	4 632	(79.9%)	493	(8.5%)
中型 Medium	33 203	1 169	(3.5%)	28 978	(87.3%)	3 056	(9.2%)
小型 Small	224 021	3 334	(1.5%)	211 084	(94.2%)	9 603	(4.3%)
總計 Total	263 020	5 174	(2.0%)	244 694	(93.0%)	13 152	(5.0%)

註釋：括號內數字代表佔機構單位數目總計的百分比。

Note: Figures in brackets represent the percentages to total no. of establishments.

表 3.1 按行業類別／機構單位規模劃分在 2007 年有否進行技術產品創新及推出對市場來說是嶄新技術產品的機構單位分布
 Table 3.1 Distribution of establishments by whether having undertaken technological product innovation and technological product innovation new to the market in 2007 by industry sector / size of establishment

	機構單位數目總計 Total no. of establishments	有技術創新產品的機構單位數目 No. of establishments having undertaken technological product innovation		有推出對市場來說是嶄新技術產品 的機構單位數目 No. of establishments having undertaken technological product innovation new to the market	
按行業類別劃分 By industry sector					
製造業 Manufacturing	13 442	251	(1.9%)	195	(1.5%)
批發、零售、進口與出口貿易、飲食 及酒店業 Wholesale, retail and import and export trades, restaurants and hotels	157 395	2 147	(1.4%)	1 064	(0.7%)
金融、保險、地產及商用服務業 Financing, insurance, real estate and business services	46 560	1 698	(3.6%)	916	(2.0%)
其他 Others	45 623	644	(1.4%)	328	(0.7%)
總計 Total	263 020	4 740	(1.8%)	2 503	(1.0%)
按機構單位規模劃分 By size of establishment					
大型 Large	5 796	465	(8.0%)	323	(5.6%)
中型 Medium	33 203	1 275	(3.8%)	842	(2.5%)
小型 Small	224 021	3 001	(1.3%)	1 338	(0.6%)
總計 Total	263 020	4 740	(1.8%)	2 503	(1.0%)

註釋：括號內數字代表佔機構單位數目總計的百分比。

Note: Figures in brackets represent the percentages to total no. of establishments.

表 3.2 按行業類別／機構單位規模劃分而以發展技術產品創新的機構類別、技術產品創新數目和技術產品創新的收入佔業務收益總額⁽¹⁾百分比計算在 2007 年有進行技術產品創新的機構單位概況

Table 3.2 Profile of establishments having undertaken technological product innovation in 2007 in terms of development party, no. of technological product innovation, and percentage contribution of technological product innovation to total business receipts⁽¹⁾ by industry sector / size of establishment

	發展技術產品創新的機構類別 ⁽²⁾									
	Party for developing technological product innovation ⁽²⁾									
	機構單位本身 The establishment itself			機構單位與 其他機構合作 Establishment in cooperation with other parties			其他機構 Other parties			
有進行技術 產品創新的 機構單位 數目 No. of establish- ments having undertaken techno- logical product innovation	機構單位 數目 No. of establish- ments	技術產品 創新數目 No. of technological product innovation	機構單位 數目 No. of establish- ments	技術產品 創新數目 No. of technological product innovation	機構單位 數目 No. of establish- ments	技術產品 創新數目 No. of technological product innovation	技術產品 創新總數 Total no. of technological product innovation	技術產品 創新總數 Total no. of technological product innovation	技術產品 創新總數 Total no. of technological product innovation	技術產品創新的 收入佔業務收益 總額 ⁽¹⁾ 百分比 % contribution of technological product innovation to total business receipts ⁽¹⁾
按行業類別劃分										
By industry sector										
製造業 Manufacturing	251	233 (92.8%)	631	26 (10.4%)	26	16 (6.4%)	32	688		11.8%
批發、零售、進口與出口貿易、飲食及酒店業 Wholesale, retail and import and export trades, restaurants and hotels	2 147	1 390 (64.7%)	5 697	218 (10.1%)	356	544 (25.3%)	936	6 989		23.1%
金融、保險、地產及商用服務業 Financing, insurance, real estate and business services	1 698	1 346 (79.3%)	1 815	66 (3.9%)	159	293 (17.2%)	312	2 286		4.3%
其他 Others	644	270 (41.9%)	115	253 (39.3%)	99	287 (44.5%)	318	531		5.2%
總計 Total	4 740	3 239 (68.3%)	8 258	563 (11.9%)	640	1 139 (24.0%)	1 597	10 495		12.4%

表 3.2 (續) 按行業類別／機構單位規模劃分而以發展技術產品創新的機構類別、技術產品創新數目和技術產品創新的收入佔業務收益總額⁽¹⁾百分比計算在 2007 年有進行技術產品創新的機構單位概況

Table 3.2 (cont'd) Profile of establishments having undertaken technological product innovation in 2007 in terms of development party, no. of technological product innovation, and percentage contribution of technological product innovation to total business receipts⁽¹⁾ by industry sector / size of establishment

	發展技術產品創新的機構類別 ⁽²⁾								
	Party for developing technological product innovation ⁽²⁾								
	機構單位本身 The establishment itself		機構單位與 其他機構合作 Establishment in cooperation with other parties			其他機構 Other parties			
有進行技術 產品創新的 機構單位 數目 No. of establish- ments having undertaken techno- logical product innovation	機構單位 數目 No. of establish- ments	技術產品 創新數目 No. of technological product innovation	機構單位 數目 No. of establish- ments	技術產品 創新數目 No. of technological product innovation	機構單位 數目 No. of establish- ments	技術產品 創新數目 No. of technological product innovation	技術產品 創新總數 Total no. of technological product innovation	技術產品 創新總數 Total no. of technological product innovation	技術產品創新的 收入佔業務收益 總額 ⁽¹⁾ 百分比 % contribution of technological product innovation to total business receipts ⁽¹⁾
按機構單位規模劃分									
By size of establishment									
大型 Large	465	417 (89.7%)	476	193 (41.6%)	101	21 (4.6%)	38	616	10.0%
中型 Medium	1 275	770 (60.4%)	1 841	237 (18.6%)	399	274 (21.5%)	420	2 660	24.2%
小型 Small	3 001	2 052 (68.4%)	5 940	132 (4.4%)	140	844 (28.1%)	1 139	7 220	29.7%
總計 Total	4 740	3 239 (68.3%)	8 258	563 (11.9%)	640	1 139 (24.0%)	1 597	10 495	12.4%

註釋：(1) 有技術產品創新的機構單位的業務收益總額。

(2) 可選擇多於一個類別。

括號內數字代表佔有進行技術產品創新的機構單位數目總計的百分比。

Notes: (1) Total business receipts for establishments undertaking technological product innovation.

(2) May select more than one item.

Figures in brackets represent the percentages to total no. of establishments having undertaken technological product innovation.

表 3.3 按行業類別／機構單位規模劃分在 2007 年有否進行技術程序創新的機構單位分布
Table 3.3 Distribution of establishments by whether having undertaken technological process innovation in 2007 by industry sector / size of establishment

	機構單位數目總計 Total no. of establishments	有進行技術程序創新的機構單位數目 No. of establishments having undertaken technological process innovation	
按行業類別劃分 By industry sector			
製造業 Manufacturing	13 442	599	(4.5%)
批發、零售、進口與出口貿易、飲食及酒店業 Wholesale, retail and import and export trades, restaurants and hotels	157 395	4 372	(2.8%)
金融、保險、地產及商用服務業 Financing, insurance, real estate and business services	46 560	979	(2.1%)
其他 Others	45 623	1 969	(4.3%)
總計 Total	263 020	7 918	(3.0%)
按機構單位規模劃分 By size of establishment			
大型 Large	5 796	801	(13.8%)
中型 Medium	33 203	2 912	(8.8%)
小型 Small	224 021	4 205	(1.9%)
總計 Total	263 020	7 918	(3.0%)

註釋：括號內數字代表佔機構單位數目總計的百分比。

Note: Figures in brackets represent the percentages to total no. of establishments.

表 3.4 按行業類別／機構單位規模劃分而以發展技術程序創新的機構類別和技術程序創新數目計算在 2007 年有進行技術程序創新的機構單位概況

Table 3.4 Profile of establishments having undertaken technological process innovation in 2007 in terms of development party and no. of technological process innovation by industry sector / size of establishment

	發展技術程序創新的機構類別 ⁽¹⁾								技術程序創新總數 Total no. of technological process innovation
	Party for developing technological process innovation ⁽¹⁾								
	有進行技術程序創新的機構單位數目 No. of establishments having undertaken technological process innovation	機構單位本身 The establishment itself		機構單位與其他機構合作 Establishment in cooperation with other parties		其他機構 Other parties		技術程序創新數目 No. of technological process innovation	
機構單位數目 No. of establishments		技術程序創新數目 No. of technological process innovation	機構單位數目 No. of establishments	技術程序創新數目 No. of technological process innovation	機構單位數目 No. of establishments	技術程序創新數目 No. of technological process innovation			
按行業類別劃分 By industry sector									
製造業 Manufacturing	599	157 (26.1%)	526	33 (5.5%)	5	441 (73.5%)	410	940	
批發、零售、進口與出口貿易、飲食及酒店業 Wholesale, retail and import and export trades, restaurants and hotels	4 372	637 (14.6%)	704	139 (3.2%)	148	3 597 (82.3%)	4 087	4 938	
金融、保險、地產及商用服務業 Financing, insurance, real estate and business services	979	250 (25.5%)	419	30 (3.0%)	38	700 (71.5%)	717	1 174	
其他 Others	1 969	378 (19.2%)	175	182 (9.3%)	201	1 495 (75.9%)	1 812	2 187	
總計 Total	7 918	1 422 (18.0%)	1 823	384 (4.9%)	391	6 233 (78.7%)	7 026	9 240	
按機構單位規模劃分 By size of establishment									
大型 Large	801	499 (62.3%)	347	138 (17.3%)	132	269 (33.6%)	427	906	
中型 Medium	2 912	479 (16.4%)	910	240 (8.2%)	253	2 208 (75.8%)	2 123	3 286	
小型 Small	4 205	444 (10.6%)	566	6 (0.1%)	6	3 755 (89.3%)	4 476	5 048	
總計 Total	7 918	1 422 (18.0%)	1 823	384 (4.9%)	391	6 233 (78.7%)	7 026	9 240	

註釋：(1) 可選擇多於一個類別。
括號內數字代表佔有進行技術程序創新的機構單位數目總計的百分比。

Notes: (1) May select more than one item.
Figures in brackets represent the percentages to total no. of establishments having undertaken technological process innovation.

表 3.5 按在 2007 年有否進行中而尚未完成的技術創新活動和按行業類別／機構單位規模劃分的機構單位分布
 Table 3.5 Distribution of establishments by whether having undertaken ongoing TI activities in 2007 by industry sector / size of establishment

	機構單位數目總計 Total no. of establishments	有進行中而尚未完成的技術創新活動的機構單位數目 No. of establishments having undertaken ongoing TI activities	
按行業類別劃分 By industry sector			
製造業 Manufacturing	13 442	361	(2.7%)
批發、零售、進口與出口貿易、飲食及酒店業 Wholesale, retail and import and export trades, restaurants and hotels	157 395	3 773	(2.4%)
金融、保險、地產及商用服務業 Financing, insurance, real estate and business services	46 560	1 760	(3.8%)
其他 Others	45 623	1 113	(2.4%)
總計 Total	263 020	7 008	(2.7%)
按機構單位規模劃分 By size of establishment			
大型 Large	5 796	951	(16.4%)
中型 Medium	33 203	2 243	(6.8%)
小型 Small	224 021	3 815	(1.7%)
總計 Total	263 020	7 008	(2.7%)

註釋：括號內數字代表佔機構單位數目總計的百分比。

Note: Figures in brackets represent the percentages to total no. of establishments.

表 3.6 按在 2007 年有否已終止的技術創新活動和按行業類別／機構單位規模劃分的機構單位分布
 Table 3.6 Distribution of establishments by whether having undertaken abandoned TI activities in 2007 by industry sector / size of establishment

	機構單位數目總計 Total no. of establishments	有已終止的技術創新活動的機構單位數目 No. of establishments having undertaken abandoned TI activities	
按行業類別劃分 By industry sector			
製造業 Manufacturing	13 442	82	(0.6%)
批發、零售、進口與出口貿易、飲食及酒店業 Wholesale, retail and import and export trades, restaurants and hotels	157 395	619	(0.4%)
金融、保險、地產及商用服務業 Financing, insurance, real estate and business services	46 560	420	(0.9%)
其他 Others	45 623	435	(1.0%)
總計 Total	263 020	1 556	(0.6%)
按機構單位規模劃分 By size of establishment			
大型 Large	5 796	76	(1.3%)
中型 Medium	33 203	412	(1.2%)
小型 Small	224 021	1 067	(0.5%)
總計 Total	263 020	1 556	(0.6%)

註釋：括號內數字代表佔機構單位數目總計的百分比。

Note: Figures in brackets represent the percentages to total no. of establishments.

表 3.7 按技術創新活動類別和按行業類別／機構單位規模劃分的 2007 年技術創新活動開支
Table 3.7 Expenditure on TI activities in 2007 by type of TI activity by industry sector / size of establishment

(百萬港元)
(HK\$ million)

	技術創新活動的類別 Type of TI activity								技術創新活動開支總額 Total TI expenditure
	機構單位為其本身進行的內部研發活動 In-house R&D activities for own establishment	外判予其他機構進行的研發活動 Outsourced R&D activities to other parties	購置生產用的機器和設備 Acquisition of machinery and equipment for production	獲取其他外界知識 Acquisition of other external knowledge	培訓 Training	向市場推廣創新技術的產品／程序 Market introduction of technological product/process innovations	設計及生產／運送方面的其他準備工作 Design and other preparations for production/deliveries	其他 Others	
按行業類別劃分 By industry sector									
製造業 Manufacturing	589.1 (44.1%)	36.1 (2.7%)	365.7 (27.4%)	69.8 (5.2%)	29.7 (2.2%)	21.8 (1.6%)	222.8 (16.7%)	0.0 (0.0%)	1,335.0 (100.0%)
批發、零售、進口與出口貿易、飲食及酒店業 Wholesale, retail and import and export trades, restaurants and hotels	2,682.9 (36.9%)	2,442.5 (33.6%)	1,104.8 (15.2%)	147.3 (2.0%)	57.7 (0.8%)	356.3 (4.9%)	485.6 (6.7%)	0.0 (0.0%)	7,277.2 (100.0%)
金融、保險、地產及商用服務業 Financing, insurance, real estate and business services	1,911.7 (41.6%)	546.3 (11.9%)	1,001.4 (21.8%)	451.4 (9.8%)	72.3 (1.6%)	53.6 (1.2%)	554.1 (12.1%)	7.2 (0.2%)	4,598.1 (100.0%)
其他 Others	457.9 (18.6%)	198.7 (8.1%)	1,288.0 (52.2%)	122.1 (4.9%)	27.7 (1.1%)	120.6 (4.9%)	250.9 (10.2%)	0.0 (0.0%)	2,465.8 (100.0%)
總計 Total	5,641.5 (36.0%)	3,223.7 (20.6%)	3,759.9 (24.0%)	790.6 (5.0%)	187.4 (1.2%)	552.3 (3.5%)	1,513.4 (9.7%)	7.2 (#)	15,676.1 (100.0%)
按機構單位規模劃分 By size of establishment									
大型 Large	2,584.7 (38.1%)	730.3 (10.8%)	2,086.4 (30.7%)	570.4 (8.4%)	129.2 (1.9%)	347.0 (5.1%)	335.4 (4.9%)	7.2 (0.1%)	6,790.7 (100.0%)
中型 Medium	1,736.3 (33.6%)	1,395.5 (27.0%)	1,132.7 (21.9%)	165.3 (3.2%)	42.6 (0.8%)	76.0 (1.5%)	619.7 (12.0%)	0.0 (0.0%)	5,168.1 (100.0%)
小型 Small	1,320.4 (35.5%)	1,097.9 (29.5%)	540.8 (14.5%)	55.0 (1.5%)	15.6 (0.4%)	129.3 (3.5%)	558.3 (15.0%)	0.0 (0.0%)	3,717.3 (100.0%)
總計 Total	5,641.5 (36.0%)	3,223.7 (20.6%)	3,759.9 (24.0%)	790.6 (5.0%)	187.4 (1.2%)	552.3 (3.5%)	1,513.4 (9.7%)	7.2 (#)	15,676.1 (100.0%)

註釋：# 數值少於 0.05%。

Note: # Figure less than 0.05%.

表 3.8 按在 2007 年技術創新活動對機構單位的影響程度劃分的機構單位分布
Table 3.8 Distribution of establishments by degree of impact of TI activities on the establishment in 2007

	影響程度 Degree of impact				總計 Total
	高 High	中 Medium	低 Low	不適用 Not applicable	
對產品的影響 Product oriented effects					
擴大了產品或服務的範圍 Increased range of goods or services	4 062 (28.3%)	3 563 (24.8%)	1 382 (9.6%)	5 370 (37.4%)	14 377 (100.0%)
擴大了市場或市場佔有率 Increased market or market share	2 597 (18.1%)	3 547 (24.7%)	1 373 (9.5%)	6 860 (47.7%)	14 377 (100.0%)
改善了貨品或服務的素質 Improved quality in goods or services	5 046 (35.1%)	4 085 (28.4%)	1 396 (9.7%)	3 851 (26.8%)	14 377 (100.0%)
對程序的影響 Process oriented effects					
改善了生產靈活性 Improved production flexibility	2 784 (19.4%)	4 458 (31.0%)	1 150 (8.0%)	5 985 (41.6%)	14 377 (100.0%)
提高了生產量 Increased production capacity	2 434 (16.9%)	3 404 (23.7%)	1 322 (9.2%)	7 218 (50.2%)	14 377 (100.0%)
減低了每件產品的勞工成本 Reduced labour cost per produced unit	1 809 (12.6%)	2 976 (20.7%)	1 904 (13.2%)	7 689 (53.5%)	14 377 (100.0%)
減低了每件產品的材料和／或能源耗用量 Reduced materials and/or energy consumption per produced unit	1 701 (11.8%)	2 876 (20.0%)	1 180 (8.2%)	8 621 (60.0%)	14 377 (100.0%)
其他影響 Other effects					
減低對環境的影響或對健康及安全方面有所改善 Reduced environmental impact or improved health and safety aspects	1 723 (12.0%)	2 096 (14.6%)	825 (5.7%)	9 733 (67.7%)	14 377 (100.0%)
符合了行業規例或標準 Met industry regulations or standards	2 303 (16.0%)	3 041 (21.2%)	1 098 (7.6%)	7 934 (55.2%)	14 377 (100.0%)

表 3.9 按有否就技術創新活動和其他機構訂立合作安排／合作機構的類別和所在地劃分在 2007 年有技術創新活動的機構單位分布
Table 3.9 Distribution of establishments having TI activities in 2007 by whether having cooperation arrangements on TI activities with other organisations / type and location of cooperation organisation

有否就技術創新活動和其他機構訂立合作安排／ 合作機構類別 ⁽¹⁾ Whether having cooperation arrangements on TI activities with other organisations / Type of cooperation organisation ⁽¹⁾	有技術創新活動 的機構單位數目 No. of establishments having undertaken TI activities	合作機構所在地 ⁽¹⁾ Location of cooperation organisation ⁽¹⁾					合計 Overall	
		中國內地及澳門 The mainland of China and Macao						
		香港 HK	泛珠三角區域 ⁽³⁾ (珠江三角洲經濟 區及香港除外) Pan-PRD Region ⁽³⁾ other than PRD Economic Zone and HK		其他地區 Other regions	香港、中國 內地及澳門 以外地方 Places outside HK, the mainland of China and Macao		
			珠江三角洲 經濟區 ⁽²⁾ Pearl River Delta (PRD) Economic Zone ⁽²⁾	其他地區 Other regions		香港、中國 內地及澳門 以外地方 Places outside HK, the mainland of China and Macao		合計 Overall
有就技術創新活動和其他機構訂立合作安排 Having cooperation arrangements on TI activities with other organisations	2 625 [18.3%]							
政府 Government	162 (6.2%)	0 (0.0%)	0 (0.0%)	2 (0.1%)	2 (0.1%)	165 (6.3%)		
公共科技支援機構 ⁽⁴⁾ Public technology support organisations ⁽⁴⁾	410 (15.6%)	28 (1.1%)	0 (0.0%)	1 (#)	39 (1.5%)	449 (17.1%)		
高等教育機構 Higher education institutions	351 (13.4%)	116 (4.4%)	112 (4.3%)	179 (6.8%)	10 (0.4%)	466 (17.8%)		
機構本身所屬企業集團內的其他工商業機構 Other business firms within an establishment's own enterprise group	229 (8.7%)	513 (19.5%)	182 (6.9%)	251 (9.6%)	299 (11.4%)	772 (29.4%)		
機構本身所屬企業集團外的工商業機構 Business firms outside an establishment's own enterprise group	995 (37.9%)	408 (15.5%)	10 (0.4%)	222 (8.5%)	838 (31.9%)	1 781 (67.9%)		
私人非牟利機構及其他 Private non-profit organisations and others	7 (0.3%)	107 (4.1%)	107 (4.1%)	0 (0.0%)	117 (4.5%)	231 (8.8%)		
合計 Overall	1 382 (52.7%)	893 (34.0%)	303 (11.5%)	303 (11.5%)	1 112 (42.4%)			

表 3.9 (續) 按有否就技術創新活動和其他機構訂立合作安排／合作機構的類別和所在地劃分在 2007 年有技術創新活動的機構單位分布
 Table 3.9 (cont'd) Distribution of establishments having TI activities in 2007 by whether having cooperation arrangements on TI activities with other organisations / type and location of cooperation organisation

有否就技術創新活動和其他機構訂立合作安排／ 合作機構類別 ⁽¹⁾ Whether having cooperation arrangements on TI activities with other organisations / Type of cooperation organisation ⁽¹⁾	有技術創新活動 的機構單位數目 No. of establishments having undertaken TI activities	合作機構所在地 ⁽¹⁾ Location of cooperation organisation ⁽¹⁾					合計 Overall	
		中國內地及澳門 The mainland of China and Macao						
		香港 HK	泛珠三角區域 ⁽³⁾ (珠江三角洲經濟 區及香港除外) Pearl River Delta Economic Zone ⁽²⁾ Pan-PRD Region ⁽³⁾ other than PRD Economic Zone and HK		其他地區 Other regions	香港、中國 內地及澳門 以外地方 Places outside HK, the mainland of China and Macao		
			珠江三角洲 經濟區 ⁽²⁾ Pearl River Delta (PRD) Economic Zone ⁽²⁾	其他地區 Other regions		香港、中國 內地及澳門 以外地方 Places outside HK, the mainland of China and Macao		合計 Overall
沒有就技術創新活動和其他機構訂立合作安排 Not having cooperation arrangements on TI activities with other organisations	11 752 [81.7%]							
總計 Total	14 377 [100.0%]							

註釋：(1) 可選擇多於一個機構及／或地點。

(2) 珠江三角洲經濟區包括 14 個市、縣；分別是廣州、深圳、珠海、佛山、江門、東莞、中山、惠州市區、惠陽縣、惠東縣、博羅縣、肇慶市區、高要市和四會市。

(3) 泛珠三角區域包括福建、江西、湖南、廣東、廣西、海南、四川、貴州、雲南九個省，以及香港和澳門特別行政區。此欄不包括與珠江三角洲經濟區及香港機構的合作安排。

(4) 例子包括香港生產力促進局，香港應用科技研究院有限公司，香港賽馬會中藥研究院有限公司及研發中心。

方括號內數字代表佔有技術創新活動機構單位數目總計的百分比。

圓括號內數字代表佔有就技術創新活動和其他機構訂立合作安排的機構單位數目總計的百分比。

數值少於 0.05%。

Notes: (1) May select more than one organisation and/or location.

(2) The Pearl River Delta (PRD) Economic Zone covers urban area of 14 cities and counties including Guangzhou, Shenzhen, Zhuhai, Foshan, Jiangmen, Dongguan, Zhongshan, Huizhou City, Huiyang county, Huidong county, Poluo county, Zhaoqing City, Gaoyao and Sihui.

(3) The Pan-PRD region covers Fujian, Jiangxi, Hunan, Guangdong, Guangxi, Hainan, Sichuan, Guizhou, Yunnan as well as Hong Kong and Macao. Cooperation arrangements with PRD Economic Zone and Hong Kong are excluded in this column.

(4) Examples are Hong Kong Productivity Council (HKPC), Hong Kong Applied Science and Technology Research Institute Company Limited (ASTRI), Hong Kong Jockey Club Institute of Chinese Medicine Limited (HKJICM) and R&D Centres.

Figures in square brackets represent the percentages to total no. of establishments having undertaken TI activities.

Figures in round brackets represent the percentages to total no. of establishments having cooperation arrangements on TI activities with other organisations.

Figure less than 0.05%.

表 3.10 按在 2007 年技術創新活動的知識或資訊來源的重要程度劃分的機構單位分布
 Table 3.10 Distribution of establishments by degree of importance of sources of knowledge or information used for TI activities in 2007

技術創新的知識或資訊來源 Sources of knowledge or information used for TI activities	重要程度 Degree of importance				總計 Total
	高 High	中 Medium	低 Low	沒有使用 Not used	
機構內部來源 Internal sources					
機構內部（例如：研發成果） Within the firm (e.g. R&D results)	3 935 (27.4%)	1 528 (10.6%)	600 (4.2%)	8 315 (57.8%)	14 377 (100.0%)
機構本身所屬企業集團內的其他工商機構 Other business firms within an establishment's own enterprise group	1 431 (10.0%)	1 040 (7.2%)	647 (4.5%)	11 259 (78.3%)	14 377 (100.0%)
市場來源 Market sources					
設備、材料、組件或軟件的供應商 Suppliers of equipment, materials, components or software	5 033 (35.0%)	3 574 (24.9%)	1 199 (8.3%)	4 572 (31.8%)	14 377 (100.0%)
客戶或顧客 Clients or customers	4 227 (29.4%)	1 960 (13.6%)	1 343 (9.3%)	6 847 (47.6%)	14 377 (100.0%)
業內競爭者或其他機構 Competitors and other firms from the same industry	3 229 (22.5%)	2 299 (16.0%)	1 483 (10.3%)	7 366 (51.2%)	14 377 (100.0%)
顧問 Consultants	1 195 (8.3%)	1 800 (12.5%)	1 254 (8.7%)	10 128 (70.4%)	14 377 (100.0%)
教育及研究機構來源 Institutional sources					
高等教育機構 Higher education institutions	1 057 (7.4%)	985 (6.8%)	646 (4.5%)	11 689 (81.3%)	14 377 (100.0%)
政府及公共科技支援機構 Government and public technology support organisations	472 (3.3%)	336 (2.3%)	1 082 (7.5%)	12 486 (86.8%)	14 377 (100.0%)
私人非牟利研究機構 Private non-profit research institutes	236 (1.6%)	268 (1.9%)	1 322 (9.2%)	12 551 (87.3%)	14 377 (100.0%)

表 3.10 (續) 按在 2007 年技術創新活動的知識或資訊來源的重要程度劃分的機構單位分布
 Table 3.10 (cont'd) Distribution of establishments by degree of importance of sources of knowledge or information used for TI activities in 2007

技術創新的知識或資訊來源 Sources of knowledge or information used for TI activities	重要程度 Degree of importance				總計 Total
	高 High	中 Medium	低 Low	沒有使用 Not used	
其他來源 Other sources					
專業研討會、會議、期刊 Professional conferences, meetings, journals	1 980 (13.8%)	1 672 (11.6%)	1 536 (10.7%)	9 188 (63.9%)	14 377 (100.0%)
博覽會、展覽會 Fairs, exhibitions	2 300 (16.0%)	2 354 (16.4%)	1 543 (10.7%)	8 180 (56.9%)	14 377 (100.0%)
電腦資訊網絡 (例如：互聯網) Computer-based information networks (e.g. Internet)	2 873 (20.0%)	2 974 (20.7%)	1 152 (8.0%)	7 378 (51.3%)	14 377 (100.0%)
工商聯會 Trade associations	522 (3.6%)	741 (5.2%)	2 012 (14.0%)	11 102 (77.2%)	14 377 (100.0%)
專門來源 Specialised sources					
技術標準 Technical standards	2 116 (14.7%)	2 660 (18.5%)	298 (2.1%)	9 303 (64.7%)	14 377 (100.0%)
健康及安全規例和標準 Health and safety regulations and standards	1 301 (9.1%)	2 858 (19.9%)	488 (3.4%)	9 729 (67.7%)	14 377 (100.0%)
環境規例和標準 Environmental regulations and standards	1 505 (10.5%)	2 555 (17.8%)	471 (3.3%)	9 846 (68.5%)	14 377 (100.0%)

表 3.11 按在 2007 年沒有進行技術創新活動原因和按行業類別／機構單位規模劃分的機構單位分布
 Table 3.11 Distribution of establishments by reason for not having undertaken TI activities in 2007 by industry sector / size of establishment

	沒有進行技術創新活動的機構單位數目 No. of establishments not having undertaken TI activities	沒有進行技術創新活動的原因 ⁽¹⁾ Reason ⁽¹⁾ for not having undertaken TI activities				
		由於以前曾有技術創新活動，因此暫無需要 No need due to prior technological innovations	由於市場／行業情況，因此暫無需要 No need due to market/business conditions	由於技術創新活動由母公司或機構本身所屬企業集團內的其他工商業機構進行，因此暫無需要 No need as TI activities were performed by parent company or other business firms within an establishment's own enterprise group	由於有阻礙技術創新的因素 Barriers to technological innovation	其他 Others
按行業類別劃分 By industry sector						
製造業 Manufacturing	12 534	181 (1.4%)	11 404 (91.0%)	233 (1.9%)	7 026 (56.1%)	137 (1.1%)
批發、零售、進口與出口貿易、飲食及酒店業 Wholesale, retail and import and export trades, restaurants and hotels	149 667	3 780 (2.5%)	131 215 (87.7%)	6 161 (4.1%)	73 226 (48.9%)	1 309 (0.9%)
金融、保險、地產及商用服務業 Financing, insurance, real estate and business services	43 546	2 250 (5.2%)	37 684 (86.5%)	2 105 (4.8%)	15 696 (36.0%)	370 (0.9%)
其他 Others	42 895	1 496 (3.5%)	38 936 (90.8%)	704 (1.6%)	19 623 (45.7%)	1 (#)
總計 Total	248 642	7 708 (3.1%)	219 240 (88.2%)	9 203 (3.7%)	115 570 (46.5%)	1 817 (0.7%)
按機構單位規模劃分 By size of establishment						
大型 Large	4 476	245 (5.5%)	3 723 (83.2%)	578 (12.9%)	1 858 (41.5%)	17 (0.4%)
中型 Medium	28 799	954 (3.3%)	24 834 (86.2%)	2 428 (8.4%)	13 832 (48.0%)	65 (0.2%)
小型 Small	215 367	6 509 (3.0%)	190 682 (88.5%)	6 197 (2.9%)	99 880 (46.4%)	1 735 (0.8%)
總計 Total	248 642	7 708 (3.1%)	219 240 (88.2%)	9 203 (3.7%)	115 570 (46.5%)	1 817 (0.7%)

註釋：(1) 可選擇多於一個原因。

數值少於 0.05%。

括號內數字代表佔沒有進行技術創新活動的機構單位數目的百分比。

Notes: (1) May select more than one reason.

Figure less than 0.05%.

Figures in brackets represent the percentages to no. of establishments not having undertaken TI activities.

表 3.12 按阻礙技術創新活動因素的重要程度劃分在 2007 年有進行技術創新活動的機構單位分布
 Table 3.12 Distribution of establishments having undertaken TI activities in 2007 by degree of importance of barriers to TI activities

阻礙技術創新活動因素 Barriers to TI activities	重要程度 Degree of importance				總計 Total
	高 High	中 Medium	低 Low	不適用 Not applicable	
經濟因素 Economic factors					
預期的經濟風險太高 Excessive perceived economic risks	3 906 (27.2%)	4 475 (31.1%)	1 681 (11.7%)	4 315 (30.0%)	14 377 (100.0%)
創新成本太高 Innovation costs too high	6 544 (45.5%)	3 595 (25.0%)	1 361 (9.5%)	2 877 (20.0%)	14 377 (100.0%)
缺乏適當的資金來源 Lack of appropriate sources of finance	5 335 (37.1%)	4 188 (29.1%)	1 646 (11.5%)	3 208 (22.3%)	14 377 (100.0%)
機構內部因素 Internal factors					
機構架構未能配合 Organisational rigidities within the firm	1 763 (12.3%)	3 720 (25.9%)	3 445 (24.0%)	5 449 (37.9%)	14 377 (100.0%)
機構內缺乏合資格人員 Lack of qualified personnel in the firm	2 867 (19.9%)	4 463 (31.0%)	2 672 (18.6%)	4 376 (30.4%)	14 377 (100.0%)
缺乏有關技術的資訊 Lack of information on relevant technology	1 103 (7.7%)	4 175 (29.0%)	3 349 (23.3%)	5 750 (40.0%)	14 377 (100.0%)
缺乏市場資訊 Lack of information on markets	1 882 (13.1%)	2 754 (19.2%)	4 142 (28.8%)	5 598 (38.9%)	14 377 (100.0%)
缺乏投資興趣 Lack of investment interest	674 (4.7%)	3 658 (25.4%)	3 648 (25.4%)	6 397 (44.5%)	14 377 (100.0%)

表 3.12 (續) 按阻礙技術創新活動因素的重要程度劃分在 2007 年有進行技術創新活動的機構單位分布
 Table 3.12 (cont'd) Distribution of establishments having undertaken TI activities in 2007 by degree of importance of barriers to TI activities

阻礙技術創新活動因素 Barriers to TI activities	重要程度 Degree of importance				總計 Total
	高 High	中 Medium	低 Low	不適用 Not applicable	
其他因素 Other factors					
規例或標準的靈活性不足 Insufficient flexibility of regulations or standards	1 575 (11.0%)	1 846 (12.8%)	2 734 (19.0%)	8 222 (57.2%)	14 377 (100.0%)
顧客對新貨品或服務缺乏反應 Lack of customer responsiveness to new goods or services	2 149 (14.9%)	2 901 (20.2%)	2 924 (20.3%)	6 403 (44.5%)	14 377 (100.0%)
缺乏外界技術支援服務 Lack of external technical support services	2 462 (17.1%)	3 573 (24.9%)	2 396 (16.7%)	5 947 (41.4%)	14 377 (100.0%)
與政府和高等教育機構的專家缺乏溝通渠道 Lack of access to expertise in government and higher education institutions	1 767 (12.3%)	2 567 (17.9%)	2 444 (17.0%)	7 599 (52.9%)	14 377 (100.0%)
缺乏原料、零件和組件的供應商 Lack of suppliers of raw materials, parts and components	1 705 (11.9%)	2 432 (16.9%)	3 130 (21.8%)	7 110 (49.5%)	14 377 (100.0%)
擔心知識產權的保護和執法 Concern about intellectual property protection and enforcement	1 878 (13.1%)	2 022 (14.1%)	2 841 (19.8%)	7 637 (53.1%)	14 377 (100.0%)
被行內的一間或數間機構佔了市場絕對優勢 ⁽¹⁾ Market dominance ⁽¹⁾ by one or a few firms in the industry	1 863 (13.0%)	1 889 (13.1%)	2 745 (19.1%)	7 880 (54.8%)	14 377 (100.0%)
其他 Others	17 (0.1%)	0 (0.0%)	1 (#)	14 359 (99.9%)	14 377 (100.0%)

註釋：(1) 市場絕對優勢是指超過一半的總銷售額由一間或數間公司所佔有的情況。

數值少於 0.05%。

Notes: (1) Market dominance refers to a situation where more than half of the total sales volume is accounted for by a single or a few leading firms.

Figure less than 0.05%.

表 3.13 按阻礙技術創新活動因素的重要程度劃分在 2007 年沒有進行技術創新活動的機構單位分布
 Table 3.13 Distribution of establishments not having undertaken TI activities in 2007 by degree of importance of barriers to TI activities

阻礙技術創新活動因素 Barriers to TI activities	重要程度 Degree of importance				總計 Total
	高 High	中 Medium	低 Low	不適用 Not applicable	
經濟因素 Economic factors					
預期的經濟風險太高 Excessive perceived economic risks	41 057 (16.5%)	26 182 (10.5%)	8 721 (3.5%)	172 681 (69.4%)	248 642 (100.0%)
創新成本太高 Innovation costs too high	54 825 (22.0%)	26 764 (10.8%)	6 903 (2.8%)	160 151 (64.4%)	248 642 (100.0%)
缺乏適當的資金來源 Lack of appropriate sources of finance	52 900 (21.3%)	25 727 (10.3%)	8 259 (3.3%)	161 756 (65.1%)	248 642 (100.0%)
機構內部因素 Internal factors					
機構架構未能配合 Organisational rigidities within the firm	28 113 (11.3%)	24 139 (9.7%)	10 687 (4.3%)	185 703 (74.7%)	248 642 (100.0%)
機構內缺乏合資格人員 Lack of qualified personnel in the firm	27 248 (11.0%)	25 263 (10.2%)	9 045 (3.6%)	187 086 (75.2%)	248 642 (100.0%)
缺乏有關技術的資訊 Lack of information on relevant technology	17 813 (7.2%)	25 796 (10.4%)	10 300 (4.1%)	194 734 (78.3%)	248 642 (100.0%)
缺乏市場資訊 Lack of information on markets	14 209 (5.7%)	25 864 (10.4%)	13 988 (5.6%)	194 582 (78.3%)	248 642 (100.0%)
缺乏投資興趣 Lack of investment interest	25 178 (10.1%)	23 935 (9.6%)	14 989 (6.0%)	184 541 (74.2%)	248 642 (100.0%)

表 3.13 (續) 按阻礙技術創新活動因素的重要程度劃分在 2007 年沒有進行技術創新活動的機構單位分布
 Table 3.13 (cont'd) Distribution of establishments not having undertaken TI activities in 2007 by degree of importance of barriers to TI activities

阻礙技術創新活動因素 Barriers to TI activities	重要程度 Degree of importance				總計 Total
	高 High	中 Medium	低 Low	不適用 Not applicable	
其他因素 Other factors					
規例或標準的靈活性不足 Insufficient flexibility of regulations or standards	12 049 (4.8%)	22 511 (9.1%)	11 153 (4.5%)	202 930 (81.6%)	248 642 (100.0%)
顧客對新貨品或服務缺乏反應 Lack of customer responsiveness to new goods or services	16 297 (6.6%)	25 717 (10.3%)	12 787 (5.1%)	193 840 (78.0%)	248 642 (100.0%)
缺乏外界技術支援服務 Lack of external technical support services	17 291 (7.0%)	23 173 (9.3%)	11 872 (4.8%)	196 306 (79.0%)	248 642 (100.0%)
與政府和高等教育機構的專家缺乏溝通渠道 Lack of access to expertise in government and higher education institutions	14 749 (5.9%)	18 816 (7.6%)	11 263 (4.5%)	203 814 (82.0%)	248 642 (100.0%)
缺乏原料、零件和組件的供應商 Lack of suppliers of raw materials, parts and components	10 915 (4.4%)	16 421 (6.6%)	15 274 (6.1%)	206 033 (82.9%)	248 642 (100.0%)
擔心知識產權的保護和執法 Concern about intellectual property protection and enforcement	17 547 (7.1%)	17 841 (7.2%)	11 904 (4.8%)	201 351 (81.0%)	248 642 (100.0%)
被行內的一間或數間機構佔了市場絕對優勢 ⁽¹⁾ Market dominance ⁽¹⁾ by one or a few firms in the industry	17 121 (6.9%)	17 933 (7.2%)	11 917 (4.8%)	201 672 (81.1%)	248 642 (100.0%)
其他 Others	396 (0.2%)	0 (0.0%)	0 (0.0%)	248 246 (99.8%)	248 642 (100.0%)

註釋：(1) 市場絕對優勢是指超過一半的總銷售額由一間或數間公司所佔有的情況。

Note: (1) Market dominance refers to a situation where more than half of the total sales volume is accounted for by a single or a few leading firms.

表 3.14 按在 2008 年度有否就技術創新活動制定預算和按行業類別／機構單位規模劃分的機構單位分布
Table 3.14 Distribution of establishments by whether having budget allocation for TI activities for 2008 by industry sector / size of establishment

	機構單位數目總計 Total no. of establishments	在 2008 年度有沒有制定技術創新活動的預算 Whether having budget allocation for TI activities for 2008					
		有 Yes		沒有 No		不肯定 Uncertain	
按行業類別劃分 By industry sector							
製造業 Manufacturing	13 442	567	(4.2%)	11 431	(85.0%)	1 444	(10.7%)
批發、零售、進口與出口貿易、飲食及酒店業 Wholesale, retail and import and export trades, restaurants and hotels	157 395	5 039	(3.2%)	140 621	(89.3%)	11 735	(7.5%)
金融、保險、地產及商用服務業 Financing, insurance, real estate and business services	46 560	1 766	(3.8%)	38 571	(82.8%)	6 222	(13.4%)
其他 Others	45 623	1 174	(2.6%)	40 984	(89.8%)	3 465	(7.6%)
總計 Total	263 020	8 546	(3.2%)	231 606	(88.1%)	22 867	(8.7%)
按機構單位規模劃分 By size of establishment							
大型 Large	5 796	970	(16.7%)	3 927	(67.8%)	898	(15.5%)
中型 Medium	33 203	2 316	(7.0%)	26 256	(79.1%)	4 631	(13.9%)
小型 Small	224 021	5 261	(2.3%)	201 423	(89.9%)	17 337	(7.7%)
總計 Total	263 020	8 546	(3.2%)	231 606	(88.1%)	22 867	(8.7%)

註釋：括號內數字代表佔機構單位數目總計的百分比。

Note: Figures in brackets represent the percentages to total no. of establishments.

表 4.1 按行業類別／機構單位規模劃分在 2007 年有否進行非技術創新活動的機構單位分布
 Table 4.1 Distribution of establishments by whether having undertaken non-TI activities in 2007 by industry sector / size of establishment

	機構單位數目總計 Total no. of establishments	有進行非技術創新活動的機構單位數目 No. of establishments having undertaken non-TI activities	
按行業類別劃分 By industry sector			
製造業 Manufacturing	13 442	5 753	(42.8%)
批發、零售、進口與出口貿易、飲食及酒店業 Wholesale, retail and import and export trades, restaurants and hotels	157 395	70 567	(44.8%)
金融、保險、地產及商用服務業 Financing, insurance, real estate and business services	46 560	16 463	(35.4%)
其他 Others	45 623	17 354	(38.0%)
總計 Total	263 020	110 137	(41.9%)
按機構單位規模劃分 By size of establishment			
大型 Large	5 796	4 060	(70.0%)
中型 Medium	33 203	20 064	(60.4%)
小型 Small	224 021	86 014	(38.4%)
總計 Total	263 020	110 137	(41.9%)

註釋：括號內數字代表佔機構單位數目總計的百分比。

Note: Figures in brackets represent the percentages to total no. of establishments.

表 4.2 按非技術創新活動主要類別劃分在 2007 年有否進行非技術創新活動的機構單位分布
Table 4.2 Distribution of establishments by whether having undertaken non-TI activities in 2007 by major type of non-TI activity

非技術創新活動主要類別 Major type of non-TI activity	有否進行非技術創新活動 Whether having undertaken non-TI activities			
	有進行 Have undertaken		沒有進行 Have not undertaken	
實施嶄新或經重大改變的機構策略 Implementation of new or significantly changed corporate strategies	65 656	(25.0%)	197 364	(75.0%)
實施嶄新或經重大改變的組織架構 Implementation of new or significantly changed organisational structure	42 564	(16.2%)	220 455	(83.8%)
在機構內實施先進的管理技術 Implementation of advanced management techniques within the firm	53 150	(20.2%)	209 869	(79.8%)
顯著地改變機構的市場推廣概念／策略 Changing significantly the firm's marketing concepts/strategies	47 048	(17.9%)	215 971	(82.1%)
令機構最少一個產品在外觀美感或設計方面有重大改變或有其他主觀改變 Significant changes in the aesthetic appearance or design or other subjective changes in at least one of the products	59 070	(22.5%)	203 950	(77.5%)

註釋：括號內數字代表佔機構單位數目總計的百分比。

Note: Figures in brackets represent the percentages to total no. of establishments.

表 4.3 按在 2007 年非技術創新活動對機構單位業務表現的影響劃分的機構單位分布
Table 4.3 Distribution of establishments by impact of non-TI activities on the performance of establishment in 2007

非技術創新活動類別 Type of non-TI activity	對業務表現的影響 Impact on performance				總計 Total
	大有改善 Improved considerably	略有改善 Improved moderately	輕微改善 Improved slightly	沒有改善 Nil	
實施嶄新或經重大改變的機構策略 Implementation of new or significantly changed corporate strategies					
實施策略以引進新產品或服務 <i>Implemented strategies for introducing new products or services</i>	3 606 (9.5%)	14 873 (39.1%)	14 657 (38.5%)	4 935 (13.0%)	38 070 (100.0%)
實施策略以增加現時產品/服務的價值 <i>Implemented strategies for adding value to existing products/services</i>	4 924 (11.4%)	17 158 (39.7%)	14 933 (34.6%)	6 189 (14.3%)	43 204 (100.0%)
與其他機構建立策略性聯盟 <i>Implemented strategic alliance with other organisations</i>	2 760 (14.7%)	6 813 (36.2%)	5 603 (29.8%)	3 631 (19.3%)	18 808 (100.0%)
實施策略以開拓新市場 <i>Implemented strategies for creating new markets</i>	3 500 (8.6%)	14 954 (36.6%)	13 845 (33.9%)	8 563 (21.0%)	40 862 (100.0%)
實施嶄新或經重大改變的組織架構 Implementation of new or significantly changed organisational structures					
合理調整員工編制 <i>Right-sized staff establishment</i>	3 250 (13.7%)	8 534 (36.0%)	6 415 (27.1%)	5 479 (23.1%)	23 679 (100.0%)
設立新的部門/工作組，透過增聘人手以應付新增業務需要 <i>Set up new departments/functional units by hiring more staff to carry out new business activities</i>	2 091 (8.2%)	9 354 (36.7%)	8 858 (34.8%)	5 153 (20.2%)	25 456 (100.0%)
重組組織架構及/或經營程序以保持競爭力 <i>Restructured organisation and/or business process to stay competitive</i>	1 740 (7.3%)	8 132 (34.3%)	8 451 (35.7%)	5 370 (22.7%)	23 693 (100.0%)

表 4.3 (續) 按在 2007 年非技術創新活動對機構單位業務表現的影響劃分的機構單位分布
Table 4.3 (cont'd) Distribution of establishments by impact of non-TI activities on the performance of establishment in 2007

非技術創新活動類別 Type of non-TI activity	對業務表現的影響 Impact on performance				總計 Total
	大有改善 Improved considerably	略有改善 Improved moderately	輕微改善 Improved slightly	沒有改善 Nil	
在機構內實施先進的管理技術 Implementation of advanced management techniques within the firm					
實施資訊科技管理技術 Implemented IT management techniques	2 841 (9.8%)	9 060 (31.1%)	11 092 (38.1%)	6 113 (21.0%)	29 106 (100.0%)
實施人力資源管理技術 Implemented human resources management techniques	1 670 (7.3%)	8 885 (39.0%)	8 074 (35.5%)	4 141 (18.2%)	22 770 (100.0%)
實施流程管理技術 Implemented process management techniques	2 502 (8.9%)	9 704 (34.6%)	11 710 (41.8%)	4 111 (14.7%)	28 026 (100.0%)
實施品質管理技術 Implemented quality management techniques	1 413 (10.2%)	5 273 (38.1%)	3 881 (28.0%)	3 277 (23.7%)	13 845 (100.0%)
實施知識管理技術 Implemented knowledge management techniques	1 037 (5.0%)	6 883 (33.4%)	9 180 (44.6%)	3 487 (16.9%)	20 587 (100.0%)
實施顧客關係管理技術 Implemented customer relationship management techniques	1 580 (5.8%)	10 196 (37.5%)	12 076 (44.5%)	3 309 (12.2%)	27 161 (100.0%)
顯著地改變機構的市場推廣概念/策略 Changing significantly the firm's marketing concepts/strategies					
擴展推廣途徑以推廣品牌/產品/服務 Expanded promotion channels to promote the brand/products/services	3 374 (9.1%)	12 877 (34.9%)	13 867 (37.6%)	6 796 (18.4%)	36 915 (100.0%)
參與推廣活動 Participated in activities for promotion	2 429 (8.3%)	10 166 (34.8%)	11 683 (40.0%)	4 915 (16.8%)	29 193 (100.0%)

表 4.3 (續) 按在 2007 年非技術創新活動對機構單位業務表現的影響劃分的機構單位分布
 Table 4.3 (cont'd) Distribution of establishments by impact of non-TI activities on the performance of establishment in 2007

非技術創新活動類別 Type of non-TI activity	對業務表現的影響 Impact on performance				總計 Total
	大有改善 Improved considerably	略有改善 Improved moderately	輕微改善 Improved slightly	沒有改善 Nil	
令機構最少一個產品在外觀美感或設計方面有重大改變或有其他主觀改變 Significant changes in the aesthetic appearance or design or other subjective changes in at least one of the firm's products					
採用更具吸引力的產品設計 <i>Adopted more attractive design of products</i>	5 254 (17.5%)	11 130 (37.2%)	10 695 (35.7%)	2 864 (9.6%)	29 943 (100.0%)
按客戶需要調整設計 <i>Customised design according to clients' requirements</i>	7 696 (17.7%)	17 948 (41.4%)	12 654 (29.2%)	5 064 (11.7%)	43 363 (100.0%)
改進產品的設計特色 <i>Upgraded the design features of products</i>	5 260 (17.9%)	11 968 (40.7%)	9 480 (32.2%)	2 733 (9.3%)	29 440 (100.0%)
改善包裝設計 <i>Improved the package design</i>	4 066 (14.8%)	9 375 (34.2%)	10 033 (36.6%)	3 926 (14.3%)	27 400 (100.0%)
提供更多產品種類 <i>Provided more varieties of products</i>	6 648 (15.3%)	17 117 (39.5%)	14 132 (32.6%)	5 430 (12.5%)	43 327 (100.0%)

表 4.4 按行業類別／機構單位規模劃分在 2007 年有否進行創新活動的機構單位分布
Table 4.4 Distribution of establishments by whether having undertaken innovation activities in 2007 by industry sector / size of establishment

	機構單位數目總計 Total no. of establishments	有進行技術創新活動 的機構單位數目 No. of establishments having undertaken TI activities	有進行非技術創新活動 的機構單位數目 No. of establishments having undertaken non-TI activities	有進行創新活動 的機構單位數目 ⁽¹⁾ No. of establishments having undertaken innovation activities ⁽¹⁾
按行業類別劃分 By industry sector				
製造業 Manufacturing	13 442	908 (6.8%)	5 753 (42.8%)	5 765 (42.9%)
批發、零售、進口與出口貿易、飲食及酒店業 Wholesale, retail and import and export trades, restaurants and hotels	157 395	7 728 (4.9%)	70 567 (44.8%)	70 675 (44.9%)
金融、保險、地產及商用服務業 Financing, insurance, real estate and business services	46 560	3 013 (6.5%)	16 463 (35.4%)	16 735 (35.9%)
其他 Others	45 623	2 728 (6.0%)	17 354 (38.0%)	17 761 (38.9%)
總計 Total	263 020	14 377 (5.5%)	110 137 (41.9%)	110 936 (42.2%)
按機構單位規模劃分 By size of establishment				
大型 Large	5 796	1 319 (22.8%)	4 060 (70.0%)	4 098 (70.7%)
中型 Medium	33 203	4 404 (13.3%)	20 064 (60.4%)	20 367 (61.3%)
小型 Small	224 021	8 654 (3.9%)	86 014 (38.4%)	86 471 (38.6%)
總計 Total	263 020	14 377 (5.5%)	110 137 (41.9%)	110 936 (42.2%)

註釋：(1) 數字代表有進行技術創新活動或非技術創新活動或兩者皆有進行的機構單位。
括號內數字代表佔機構單位總數的百分比。

Notes: (1) The figures refer to establishments that had undertaken TI activities or non-TI activities or both.
Figures in brackets represent the percentages to total no. of establishments.

表 4.5 按在 2007 年創新活動對機構單位爭取競爭優勢的重要程度劃分的機構單位分布
 Table 4.5 Distribution of establishments by degree of impact of innovation activities on competitive advantage of establishment in 2007

創新活動類別 Type of innovation activities	重要程度 Degree of impact				總計 Total
	高 High	中 Medium	低 Low	不適用 Not applicable	
技術產品創新 Technological product innovation	7 319 (2.8%)	27 439 (10.4%)	12 000 (4.6%)	216 262 (82.2%)	263 020 (100.0%)
技術程序創新 Technological process innovation	5 097 (1.9%)	27 408 (10.4%)	16 881 (6.4%)	213 634 (81.2%)	263 020 (100.0%)
機構策略的創新 Corporate strategy innovation	11 642 (4.4%)	40 327 (15.3%)	31 119 (11.8%)	179 931 (68.4%)	263 020 (100.0%)
組織架構的創新 Organisational innovation	6 735 (2.6%)	29 789 (11.3%)	26 467 (10.1%)	200 028 (76.1%)	263 020 (100.0%)
管理技術的創新 Innovation in management techniques	9 237 (3.5%)	33 402 (12.7%)	26 849 (10.2%)	193 532 (73.6%)	263 020 (100.0%)
市場推廣的創新 Marketing innovation	14 952 (5.7%)	35 547 (13.5%)	20 000 (7.6%)	192 521 (73.2%)	263 020 (100.0%)
產品外觀美感或設計的創新 Innovation in product aesthetic appearance or design	17 612 (6.7%)	31 292 (11.9%)	21 933 (8.3%)	192 182 (73.1%)	263 020 (100.0%)

表 5.1 按有否在 2007 年獲批予專利和按行業類別／機構單位規模劃分的機構單位分布
 Table 5.1 Distribution of establishments by whether having patents granted in 2007 by industry sector / size of establishment

	機構單位數目總計 Total no. of establishments	獲批予專利的機構單位數目 No. of establishments having patents granted	
按行業類別劃分 By industry sector			
製造業 Manufacturing	13 442	33	(4.6%)
批發、零售、進口與出口貿易、飲食及酒店業 Wholesale, retail and import and export trades, restaurants and hotels	157 395	514	(71.4%)
金融、保險、地產及商用服務業 Financing, insurance, real estate and business services	46 560	160	(22.2%)
其他 Others	45 623	12	(1.7%)
總計 Total	263 020	720	(100.0%)
按機構單位規模劃分 By size of establishment			
大型 Large	5 796	41	(5.7%)
中型 Medium	33 203	329	(45.7%)
小型 Small	224 021	350	(48.6%)
總計 Total	263 020	720	(100.0%)

表 5.2 按批予專利的國家或地區和按行業類別／機構單位規模劃分在 2007 年獲批予專利的知識產權數目
Table 5.2 Number of intellectual properties with patents granted in 2007 by granting country or territory by industry sector / size of establishment

	獲批予專利的 知識產權數目 Number of intellectual properties with patents granted	批予專利的國家或地區 ⁽¹⁾ Granting country or territory ⁽¹⁾			
		香港 Hong Kong	美國 U.S.A.	中國內地 The mainland of China	其他地區 Other regions
按行業類別劃分 By industry sector					
製造業 Manufacturing	55	31 (57.2%)	15 (28.2%)	15 (26.6%)	19 (34.8%)
批發、零售、進口與出口貿易、飲食 及酒店業 Wholesale, retail and import and export trades, restaurants and hotels	939	532 (56.6%)	116 (12.3%)	401 (42.7%)	142 (15.1%)
金融、保險、地產及商用服務業 Financing, insurance, real estate and business services	208	27 (12.8%)	25 (12.2%)	142 (68.5%)	27 (12.9%)
其他 Others	39	19 (47.2%)	2 (5.3%)	24 (61.0%)	3 (7.9%)
總計 Total	1 241	608 (49.0%)	158 (12.8%)	582 (46.9%)	191 (15.3%)
按機構單位規模劃分 By size of establishment					
大型 Large	203	39 (19.5%)	68 (33.5%)	81 (40.2%)	83 (40.9%)
中型 Medium	608	341 (56.1%)	57 (9.5%)	265 (43.5%)	65 (10.6%)
小型 Small	431	228 (52.8%)	33 (7.7%)	236 (54.8%)	43 (10.0%)
總計 Total	1 241	608 (49.0%)	158 (12.8%)	582 (46.9%)	191 (15.3%)

註釋：(1) 可選擇多於一個國家或地區。
括號內數字代表佔獲批予專利的知識產權數目的百分比。

Notes: (1) May select more than one country or territory.
Figures in brackets represent the percentages to number of intellectual properties with patents granted.

表 5.3 按是否已被開拓作商業應用和按行業類別／機構單位規模劃分在 2007 年獲批予專利的知識產權數目
Table 5.3 Number of intellectual properties with patents granted in 2007 by whether having been exploited for commercial application by industry sector / size of establishment

	獲批予專利的知識產權數目 Number of intellectual properties with patents granted	是否已被開拓作商業應用 Whether having been exploited for commercial application	
		已被開拓作商業應用 Have been exploited for commercial application	未被開拓作商業應用 Have not been exploited for commercial application
按行業類別劃分 By industry sector			
製造業 Manufacturing	55	54 (98.2%)	1 (1.8%)
批發、零售、進口與出口貿易、飲食及酒店業 Wholesale, retail and import and export trades, restaurants and hotels	939	776 (82.6%)	164 (17.4%)
金融、保險、地產及商用服務業 Financing, insurance, real estate and business services	208	71 (33.9%)	137 (66.1%)
其他 Others	39	20 (49.8%)	20 (50.2%)
總計 Total	1 241	919 (74.1%)	322 (25.9%)
按機構單位規模劃分 By size of establishment			
大型 Large	203	166 (82.1%)	36 (17.9%)
中型 Medium	608	471 (77.4%)	137 (22.6%)
小型 Small	431	282 (65.5%)	149 (34.5%)
總計 Total	1 241	919 (74.1%)	322 (25.9%)

註釋：括號內數字代表佔獲批予專利的知識產權數目的百分比。

Note: Figures in brackets represent the percentages to number of intellectual properties with patents granted.

表 5.4 按有否在 2007 年已申請專利而仍未獲批准和按行業類別／機構單位規模劃分的機構單位分布
Table 5.4 Distribution of establishments by whether with patent applications pending for approval in 2007 by industry sector / size of establishment

	機構單位數目總計 Total no. of establishments	已申請專利而仍未 獲批准的機構單位數目 No. of establishments with patent applications pending for approval	
按行業類別劃分 By industry sector			
製造業 Manufacturing	13 442	8	(0.8%)
批發、零售、進口與出口貿易、飲食及酒店業 Wholesale, retail and import and export trades, restaurants and hotels	157 395	625	(65.4%)
金融、保險、地產及商用服務業 Financing, insurance, real estate and business services	46 560	312	(32.6%)
其他 Others	45 623	11	(1.1%)
總計 Total	263 020	956	(100.0%)
按機構單位規模劃分 By size of establishment			
大型 Large	5 796	40	(4.2%)
中型 Medium	33 203	230	(24.0%)
小型 Small	224 021	686	(71.7%)
總計 Total	263 020	956	(100.0%)

表 5.5 按處理申請的國家或地區和按行業類別／機構單位規模劃分在 2007 年已申請專利而仍未獲批准的知識產權數目
 Table 5.5 Number of intellectual properties with patent applications pending for approval in 2007 by country or territory of filing by industry sector / size of establishment

	已申請專利而仍未獲批准的知識產權數目 Number of intellectual properties with patent applications pending for approval	處理申請的國家或地區 ⁽¹⁾ Country or territory of filing ⁽¹⁾			
		香港 Hong Kong	美國 U.S.A.	中國內地 The mainland of China	其他地區 Other regions
按行業類別劃分 By industry sector					
製造業 Manufacturing	34	2 (7.1%)	18 (52.3%)	11 (31.9%)	19 (55.1%)
批發、零售、進口與出口貿易、飲食及酒店業 Wholesale, retail and import and export trades, restaurants and hotels	1 067	75 (7.0%)	236 (22.1%)	801 (75.1%)	269 (25.2%)
金融、保險、地產及商用服務業 Financing, insurance, real estate and business services	357	10 (2.7%)	334 (93.5%)	25 (7.1%)	27 (7.6%)
其他 Others	41	8 (19.5%)	14 (33.6%)	18 (44.4%)	1 (2.5%)
總計 Total	1 499	95 (6.3%)	601 (40.1%)	855 (57.1%)	316 (21.1%)
按機構單位規模劃分 By size of establishment					
大型 Large	163	39 (24.2%)	95 (58.3%)	98 (60.1%)	53 (32.8%)
中型 Medium	486	27 (5.6%)	51 (10.5%)	356 (73.3%)	113 (23.2%)
小型 Small	851	28 (3.3%)	455 (53.5%)	401 (47.2%)	150 (17.6%)
總計 Total	1 499	95 (6.3%)	601 (40.1%)	855 (57.1%)	316 (21.1%)

註釋：(1) 可選擇多於一個國家或地區。
 括號內數字代表佔正在申請專利而仍未獲批准的知識產權數目的百分比。

Notes: (1) May select more than one country or territory.
 Figures in brackets represent the percentages to number of intellectual properties with patent applications still pending for approval.

表 5.6 按是否已被開拓作商業應用和按行業類別／機構單位規模劃分在 2007 年已申請專利而仍未獲批准的知識產權數目
 Table 5.6 Number of intellectual properties with patent applications pending for approval in 2007 by whether having been exploited for commercial application by industry sector / size of establishment

	已申請專利而仍未獲 批准的知識產權數目 Number of intellectual properties with patent applications and pending for approval	是否已被開拓作商業應用 Whether having been exploited for commercial application	
		已被開拓作商業應用 Have been exploited for commercial application	未被開拓作商業應用 Have not been exploited for commercial application
按行業類別劃分 By industry sector			
製造業 Manufacturing	34	27 (78.9%)	7 (21.1%)
批發、零售、進口與出口貿易、飲食及酒店業 Wholesale, retail and import and export trades, restaurants and hotels	1 067	534 (50.0%)	533 (50.0%)
金融、保險、地產及商用服務業 Financing, insurance, real estate and business services	357	32 (9.1%)	324 (90.9%)
其他 Others	41	7 (17.7%)	34 (82.3%)
總計 Total	1 499	600 (40.1%)	898 (59.9%)
按機構單位規模劃分 By size of establishment			
大型 Large	163	114 (70.1%)	49 (29.9%)
中型 Medium	486	101 (20.9%)	384 (79.1%)
小型 Small	851	385 (45.3%)	465 (54.7%)
總計 Total	1 499	600 (40.1%)	898 (59.9%)

註釋：括號內數字代表佔正在申請專利而仍未獲批准的知識產權數目的百分比。

Note: Figures in brackets represent the percentages to number of intellectual properties with patent applications still pending for approval.

附錄甲：用語及定義

Appendix A : Terms and Definitions

I. 一般資料

就業人數 包括在職東主、在職合夥人、無酬家屬幫工以及在機構內每日工作不少於一小時的僱員。

業務總收益 一般指透過售賣貨品和服務獲得的收入。並包括：

- 出租機器和設備的收入；
- 利息收入；
- 出租／分租土地和樓宇的收入；
- 股息；
- 買賣金融資產的收入／虧損；以及
- 從其他來源獲得的收入，如離岸貿易的毛利總額（即銷貨價值減去貨品成本）及佣金。

II. 研究及發展(以下簡稱研發)活動

研發活動 是指有系統的創意活動，目的是增進知識，包括對於人類、文化和社會的知識，從而運用這些知識來發明新產品、提供新服務或擴大用途，以及改良現有產品、服務或用途。它們通常都帶有相當的新穎或創新元素，並可於自然科學、工程及技術、醫學、社會科學和人文科學等範疇進行。

研發活動和類似活動的分別，是前者帶有相當的新穎或創新元素，以及能夠解決科學及／或技術方面的疑難，即擁有有關方面的常識和技術的人也不知如何解決的問題。

機構內部研發活動 是指由一間機構的直屬僱員在機構內進行的研發活動，而不論資金的來源。

研發活動可於自然科學、工程及技術、醫學、社會科學和人文科學等範疇進行。

包括：

- 基礎研究（即沒有預定直接實際目的而進行的實驗或理論工作）；
- 應用研究（即主要為達到一特定實際目標或目的而進行的研究）；以及
- 為開發新儀器、產品或程序而進行的實驗發展工作。

I. General information

Persons engaged include working proprietors, active partners, unpaid family workers and all employees of a firm who worked at least for one hour a day in the firm.

Total business receipts in general refer to income received through sales of goods and services. Include also:

- receipts from rental of machinery and equipment;
- interest receipts;
- rental income from letting/subletting land and premises;
- dividends;
- gain/loss from trading of financial assets; and
- income from other sources, e.g. gross margin (i.e. sales of goods less costs of goods sold) and commissions realised from offshore trading.

II. Research and development (R&D) activities

R&D activities refer to creative work undertaken on a systematic basis so as to increase the stock of knowledge, including knowledge of man, culture and society, and the use of this knowledge to devise new products/services/applications and improve existing products/services/applications. They usually carry an appreciable element of novelty or innovation and can be conducted in such fields as natural sciences, engineering and technology, medical sciences, social sciences and humanities.

The way to distinguish R&D from similar activities is the presence of an appreciable element of novelty or innovation and the resolution of scientific and/or technological uncertainty, i.e. when the solution to a problem is not readily apparent to someone familiar with the stock of commonly used knowledge and techniques in the area concerned.

In-house R&D activities refer to R&D activities performed within a firm by direct employees of the firm regardless of the source of funds.

R&D activities can be conducted in such fields as natural sciences, engineering and technology, medical sciences, social sciences and humanities.

Include:

- basic research (i.e. experimental or theoretical work undertaken with no immediate practical purpose in mind);
- applied research (i.e. research directed primarily towards a special practical aim or objective); and
- experimental development work leading to new devices, products or processes.

不包括：

- 科學和技術服務（例如：提供科學或技術資料、一般性資料搜集）；
- 市場研究；以及
- 與專利及牌照有關的活動。

進行研發活動的機構單位 包括 (i) 曾為本身及／或其他機構進行內部研發活動的機構單位；及 (ii) 透過外判形式進行研發活動的機構單位。

直接參與研發活動的直屬僱員 是指受僱於一間機構，於報告期內在其正常工作時間內從事研發活動或為研發計劃提供直接輔助服務的僱員。

不包括：

- 為研發計劃提供間接輔助服務的僱員，例如：在中央電腦部門、中央財務及人事部門的僱員以及保安、清潔及保養人員。

研究員／科學家／工程師 是指曾接受科學或技術訓練（一般指完成包括自然科學、工程及技術、醫學、社會科學和人文科學等範疇的高等教育），並有參與研發活動的專業工作的人員，以及監督研發活動的行政人員及其他高層人員。

技術員 是指參與研發活動的技術工作，並曾接受科技方面的職業或專業訓練及達到一定水平的人員。技術員通常是在研究員／科學家／工程師督導下，透過應用概念和運作方法，執行研發工作中的科學及技術任務。

其他輔助人員 是指工作與研發活動有直接關係的人員，他們通常是研發部門／組別的人員，或研發計劃小組的人員。

包括：

- 文員、秘書、行政人員、以及各類技術、半技術、非技術工人和其他輔助人員。

不包括：

- 只參與一般管理工作如保安、看更和維修人員。

Exclude:

- scientific and technical services (e.g. scientific and technical information, general-purpose data collection);
- marketing research; and
- activities relating to patents and licenses.

Establishments undertaking R&D activities include (i) the establishments having conducted in-house R&D activities for own use and / or for other organisations; and (ii) those having undertaken R&D activities through contracting-out arrangement.

Direct employees engaged in R&D activities refer to those employees who had been employed by a firm and had spent some of their normal working hours on conducting R&D activities, or providing direct support services to R&D projects during the report period.

Exclude:

- employees providing indirect support services to the R&D project, e.g. employees in central computer department, central finance and personnel departments, and security, cleaning and maintenance personnel.

Researchers/Scientists/Engineers refer to persons with scientific or technological training (usually with completion of tertiary education in a field of science such as natural sciences, engineering and technology, medical sciences, social sciences and humanities) who are engaged in professional work of R&D activities; and administrators and other high-level personnel who direct R&D activities.

Technicians refer to persons engaged in that capacity in R&D activities who have received vocational or technical training in a branch of knowledge or technology of a specified standard. They participate in R&D by performing scientific and technical tasks involving the application of concepts and operational methods, and usually work under the supervision of researchers/scientists/engineers.

Other supporting staff refer to persons whose work are directly associated with the performance of R&D activities. They are usually staff of a R&D department/unit or staff of a R&D project team.

Include:

- clerical, secretarial and administrative personnel; skilled, semi-skilled and unskilled workers in various trades and all other auxiliary personnel.

Exclude:

- security, janitorial and maintenance personnel engaged in general housekeeping activities.

內部樓面面積 的量度範圍是指一間機構的單位牆壁(或與毗連單位的共用牆)向內的一面所圍繞的全部面積。

本地機構為本身進行的研發活動 指本港機構在機構內進行的內部研發活動。

為其他機構進行的研發活動 指一間機構單位為其他機構進行的內部研發活動，該等活動是在機構單位內進行，並可能不收取費用或按訂立合約進行。

內部研發活動的經常開支

僱員薪酬 包括：

- 研發僱員的工資和薪金；以及
- 研發僱員的實質利益費用和僱主為研發僱員支付的社會保障開支。

其他經常開支 包括：

- 支援一間機構研發的材料、物料及設備的非資本成本（例如：水和燃料、書籍、期刊、參考資料、小型樣板的成本、實驗室的材料）；
- 行政及其他間接成本（例如：租金、差餉、電訊）；以及
- 間接服務方面的開支，不論有關服務在有關機構內提供或向外界供應商租用或購買（例如：購買知識產權而定期支付的專利費、保安、貯物、樓宇和設備的使用、保養及維修、電腦服務以及印刷研發報告）。

內部研發活動的資本開支

土地及樓宇 包括：

- 用於購買研發用地（例如：實驗場地、實驗室和小型實驗工廠）和興建或購買樓宇的實際開支，包括主要的改善、改裝和維修工程。

機器、設備及其他 包括：

- 為進行研發活動而購買的主要儀器、設備、一筆過支付知識產權費用、軟件及自行發展的軟件。

資本資產的折舊不包括在內。

Internal floor area of a firm is defined as the area of all enclosed space of the unit measured to the internal face of enclosing external and/or party walls.

R&D activities conducted by a local party for itself refer to in-house R&D performed within a firm in Hong Kong for the firm itself.

R&D activities conducted for other organisations refer to in-house R&D performed within a firm for other organisations, either free or under a contractual arrangement.

Current expenditure for in-house R&D activities

Compensation of employees include:

- wages and salaries of R&D employees; and
- payments in kind and employee's social security expenditure of R&D employees.

Other current expenditure include:

- non-capital cost of materials, supplies and equipment to support R&D performed by a firm (e.g. water and fuel, books, journals, reference materials, cost of small prototypes, materials for laboratories);
- administrative and other overhead costs (e.g. rents and rates, telecommunications); and
- expenditure on indirect services, whether carried out within the firm concerned or hired or purchased from outside suppliers (e.g. periodic royalty payment for the use of intellectual property; security; storage; use, repair and maintenance of buildings and equipment; computer services; and printing of R&D reports).

Capital expenditure for in-house R&D activities

Land and buildings include:

- actual expenditure on land acquired for R&D (e.g. testing grounds, sites for laboratories and pilot plants) and buildings constructed or purchased, including major improvements, modifications, and repair.

Machinery, equipment and others include:

- major instruments, equipment, payment for purchase of intellectual property, software acquired and software developed on own account for use in the performance of R&D.

Depreciation of capital assets should be excluded.

基礎研究 是主要為了獲取有關一些現象和客觀事實的基本原理的新知識而進行的實驗性或理論性工作，而並沒有預設任何特定應用範圍或用途。

應用研究 也是為了獲得新知識而進行的研究，但主要是為一特定實際目標或目的而進行。

實驗發展 是運用來自研究和實習經驗的現有知識進行的有系統工作。其目的是生產新物料、產品和器材；實施新程序、系統和服務；或為現時的產品、工序或服務作重大改良。

產品發展 指發展新產品，而新產品的表現特徵、特性或使用的材料和組件顯著地有別於現有產品；或顯著加強或改善現有產品。

程序發展 指發展新的或經顯著改良的生產方法或提供服務和運送產品的方法。

研發活動範疇 有助一間機構根據研究的領域，即在哪方面進行研究，劃分研發資源的分配。研發活動的範疇分為下列五大類別：

自然科學 包括數學及電腦學、物理學、化學、地球科學及有關的環境科學、生物科學以及農業科學。

工程及科技 包括土木工程、電機工程、電子學以及其他工程學（例如化學工程、機械工程、冶金學及材料工程、紡織技術和其他有關學科）。

醫學 包括基本醫學、臨床醫學及衛生科學。

社會科學 包括心理學、經濟學、教育學和其他社會科學（例如工商管理、法律、政治學、社會學）。

人文科學 包括歷史、語言文學和其他人文科學（例如哲學、藝術、音樂學、神學）。

Basic research is experimental or theoretical work undertaken primarily to acquire new knowledge of the underlying foundations of phenomena and observable facts, without any particular application or use in view.

Applied research is also original investigation undertaken in order to acquire new knowledge. It is, however, directed primarily towards a specific practical aim or objective.

Experimental development is systematic work, drawing on existing knowledge gained from research and practical experience, that is directed to producing new materials, products and devices; to installing new processes, systems and services; or to improving substantially those already produced or installed.

Product development refers to the development of new products whose performance characteristics, attributes or use of materials and components differs significantly from existing products; or significant enhancement or upgrading of an existing product.

Process development refers to development of new or significantly improved production methods, or methods of supplying services and of delivering products.

Field of R&D activity allows an organisation to classify their R&D resource allocation according to the area of research i.e. what area of research is being performed. Five major fields of R&D activity are identified as follows:

Natural sciences cover mathematics and computer sciences; physical sciences; chemical sciences; earth and related environmental sciences; biological sciences and agricultural sciences.

Engineering and technology cover civil engineering; electrical engineering; electronics; and other engineering sciences (such as chemical, mechanical, metallurgical and materials engineering, textile technology, other allied subjects).

Medical sciences cover basic medicine; clinical medicine; and health sciences.

Social sciences cover psychology; economics; educational sciences; and other social sciences (such as business management, law, political sciences, sociology).

Humanities cover history; languages and literature; and other humanities (such as philosophy, arts, musicology, theology).

科技領域

資訊系統及科技 包括資訊系統的組織；資訊系統管理；人工智能及專家系統；並行處理及體系結構；電腦圖像；影像處理；語音辨識；認知科學；以及其他資訊科技，如資料貯存及檢索、數據保安。

電腦硬件科技 包括運算及邏輯結構；記憶體結構；輸入、輸出及數據通訊；邏輯設計；集成電路；以及其他電腦硬件。

電腦軟件科技 包括程式編寫技術；軟件工程學；電腦語言；操作系統；以及其他電腦軟件。

通訊科技 包括天線技術；光學及光子系統；數碼系統；無線電通訊及其他廣播；微波技術；以及其他通訊技術，如電腦通訊網絡；寬頻網絡技術；調解器技術；以及衛星通訊。

電機及電子工程科技 包括電機工程(一般)及電子工程。電機及電子工程是一門有關各種形式的電力的實際應用，包括電子方面的應用工程。電子工程則是一門關於電磁譜的應用，以及如集成電路、晶體管及真空管等電子器件的應用。

不包括：

- 已列在電腦硬件科技領域之內，與電腦硬件(如集成電路)有關的電機或電子工程。
- 已列在通訊科技領域之內，與通訊科技有關的電機或電子工程。

製造科技 包括機械人、機械操作系統及機電一體化；靈活的製造系統；電腦輔助設計及電腦輔助生產；操控工程；焊接技術；紡織品生產程序及技術；包裝、貯存及運輸；以及生產的安全和品質。

Technology area

Information system and technology cover information system organisation; information system management; artificial intelligence and expert systems; parallel processing and architecture; computer graphics; image processing; speech recognition; cognitive science; and other IT technologies such as information storage & retrieval, and data security.

Computer hardware technology covers arithmetic and logic structures; memory structures; input, output and data communications; logic design; integrated circuits; and other computer hardware n.e.c.

Computer software technology covers programming techniques; software engineering; computer languages; operating systems; and computer software n.e.c.

Communication technology includes antenna technology; optical and photonic systems; digital systems; radio communication and broadcasting n.e.c.; microwave technology; and other communication technologies such as computer communication networks; broadband network technology; modem technology; and satellite communications.

Electrical and electronics engineering technology covers electrical engineering (general); and electronics engineering. It is the branch of engineering concerned with the practical applications of electricity in all its forms, including those of the field of electronics. Electronics engineering is that branch of electrical engineering concerned with the uses of the electromagnetic spectrum and with the application of such electronic devices as integrated circuits, transistors, and vacuum tubes.

Exclude:

- electrical or electronics engineering associated with computer hardware (such as integrated circuits) which is included in the area of computer hardware technology.
- electrical or electronics engineering associated with communication technology which is included in the area of communication technology.

Manufacturing technology covers robots, robotic systems and mechatronics; flexible manufacturing systems; computer-aided design (CAD) and computer-aided manufacture (CAM); control engineering; welding technology; textile manufacturing process and technologies; packing, storage and transportation; and safety and quality in manufacturing.

生物科技 包括在應用科技於生物上，以及有關部分、產品及模型，以改變生物或非生物的物料，從而產生知識，開發產品及服務。

生物科技以下列五個範疇為基礎（只屬指示性質，並不代表已列出所有範疇）：

- 脫氧核糖核酸 DNA（編碼）：基因組學；藥理遺傳學；基因探測；DNA 序列／合成／放大；遺傳工程學。
- 蛋白質及分子（功能元件）：蛋白質／肽序列／合成；脂類／蛋白質乙二醇工程；蛋白質體學；激素及生長因子；細胞受體／信息傳遞／信息素。
- 細胞及組織培養與工程學：細胞／組織培養；組織工程學；雜交；細胞併合；疫苗／免疫力增強劑；胚胎操縱技術。
- 加工生物技術：生物反應器；發酵；生物製程；生物溶濾法；生物製漿法；生物漂白法；生物脫硫法；生物治理法及生物過濾法。
- 亞細胞生物：基因治療法；病毒載體。

中藥 包括開發中成藥及中藥材的技術。

納米科技 指通過把物質控制在 1 至 100 毫微米的尺度之下（1 毫微米 = 10^{-9} 米），開發實用的物料、器材及系統，並且探索物質在同一尺度之下出現的新性質和現象。

先進材料科技 涵蓋創造新物料的技術，以及為配合特定用途調校物料的性質而控制物料的成分或結構的程序。

資金來源 指一間機構進行研發活動時所應用資金的來源。在歸類某筆資金來源時，須符合兩個條件：

- 當中必須涉及該筆資金的直接轉移；以及
- 有關資金轉移的**目的**必須為在收取資金的機構內進行研發活動，並**實際**用於有關活動。

Biotechnology is defined as the application of science and technology to living organisms as well as parts, products and models thereof, to alter living or non-living materials for the production of knowledge, goods and services.

It is based on the following five categories (indicative, not exhaustive):

- DNA (coding): genomics; pharmaco-genetics; gene probes; DNA sequencing/synthesis/amplification; genetic engineering.
- proteins and molecules (functional blocks): protein/peptide sequencing/synthesis; lipid/protein glycol-engineering; proteomics; hormones and growth factors; cell receptors/signaling/pheromones.
- cell and tissue culture and engineering: cell/tissue culture; tissue engineering; hybridization; cellular fusion; vaccine/immune stimulants; embryo manipulation.
- process biotechnologies: bioreactors; fermentation; bioprocessing; bioleaching; biopulping; biobleaching; biodesulphurisation; bioremediation and biofiltration.
- sub-cellular organisms: gene therapy; viral vectors.

Chinese medicine includes the techniques related to the development of both proprietary Chinese medicines and Chinese herbal medicines.

Nanotechnology is the development of functional materials, devices and systems through control of matter at the scale of 1 to 100 nanometers (1 nanometer = 10^{-9} meter), and the exploitation of novel properties and phenomena at the same scale.

Advanced materials technology covers techniques to create new materials, processes to control the composition or structure of material with a view to tailoring its properties to a specific application.

Source of funds refers to the source from which an organisation has received funds for the performance of R&D activities. For the source of funds to be correctly identified, two criteria must be fulfilled:

- there must be a direct transfer of the funds; and
- the transfer must be both **intended** and **used** for the performance of R&D in the receiving organisation.

資金的轉移可以用合約、撥款或捐款形式進行。須歸還的貸款**不算**是轉移。除非資金來源符合上述條件，否則有關研發活動的資金應視為自資。

機構類別

政府 包括香港特別行政區政府所有局／部門／辦公室。政府的資助**包括**來自創新及科技基金的資助。

公共科技支援機構 包括參與研究、開發和技術轉移活動的公共機構。這些機構由香港特別行政區政府資助部分或全部經費。[例如：香港生產力促進局、香港應用科技研究院有限公司、研發中心]。

高等教育機構 包括：

- 大學和其他專上教育機構，不論其資金來源或法律身分；以及
- 與大學或高等教育機構有關或受其直接控制或管理的研究機構、實驗所和診所。

工商業機構 包括：

- 其主要活動為生產貨品或服務（高等教育除外），並以相當價錢賣給市民的工商機構、組織和機構；以及
- 主要為上述機構服務的私人非牟利機構，例如：商會或行業組織。

企業集團 由連鎖的**直接企業投資者**和**有聯繫公司**組成。**有聯繫公司**包括企業集團內任何公司轄下各分公司、附屬公司及聯營公司，或企業集團有參與權益的公司。**分公司**是指由母公司全權擁有的非法人公司；並與母公司有同一法律身份。**附屬公司**是指任何其他公司持有 50% 以上股權的公司。**聯營公司**是指被另一公司持有 20% 至 50% 股份的公司。如某公司是另一公司的有聯繫公司，則後者是前者的**直接企業投資者**。

The transfers of fund may take the form of contracts, grants or donations. Loans to be repaid are *not* considered transfers. Unless a source fulfilling the above criteria can be identified, funding for supporting R&D activities should be considered as self-financed.

Types of organisation

Government sector is composed of all bureaux/ departments/offices in the HKSAR Government. Funding from government *include* funding from the Innovation and Technology Fund.

Public technology support organisations comprise the public institutes that engaged in research, development and technology transfer activities. They are partly or wholly financed by the HKSAR Government. [e.g. Hong Kong Productivity Council (HKPC), Hong Kong Applied Science and Technology Research Institute Company Limited (ASTRI), R&D Centres].

Higher education institutions comprise:

- universities and other institutions of post-secondary education regardless of their source of finance or legal status; and
- research institutes, experimental stations and clinics operating under the direct control of or administered by or associated with universities or higher education institutions.

Business firms include:

- firms, organisations, and institutions whose primary activity is the market production of goods or services (other than higher education) for sale to the general public at an economically significant price; and
- private non-profit institutions mainly serving them, e.g. chambers of commerce, trade associations.

An **enterprise group** is made up of a chain of **direct enterprise investors** and **affiliated companies**. **Affiliated companies** include branches, subsidiaries and associates of any company in an enterprise group, or firms in which a company in an enterprise group has a participating interest. **Branches** refer to unincorporated companies which are wholly owned by a parent company, and have the same legal identity as the parent. **Subsidiary** refers to any company where over 50% of its equity are being held by another company. **Associate** is a company the equity of which is between 20% and 50% owned by another company. A company is the **direct enterprise investor** of another company if the latter is an affiliated company of the former.

私人非牟利機構 包括：

- 為市民服務的非市場私人非牟利機構，例如專業人員協會、慈善組織和工會；以及
- 個人或住戶。

外判研發活動 指在一間機構以外透過合約安排由其他組織或個人進行的研發活動。

研發活動的合作安排 是指積極參與和其他機構共同進行的研發項目。積極參與包括為研發項目提供撥款資助、知識和專門技能，以及定立目標和方向。純粹將研發項目外判而沒有積極參與者，在本統計調查不視為合作安排。

III. 創新活動

技術創新 是指一間機構在市場上推出一個技術嶄新或經顯著改良的產品（貨品或服務），或在機構內部實施一個技術嶄新或經顯著改良的程序。這項技術創新是源自新技術發展、現有技術的重新結合或機構所汲取的其他知識的運用。技術創新包括任何內部或外判研發活動。

Private non-profit organisations include:

- non-market, private non-profit institutions serving the general public, such as professional societies, charities and trade unions; and
- private individuals or households.

Outsourced R&D activities refer to R&D performed by other organisations or individuals outside a firm under a contractual arrangement.

Cooperation arrangements on R&D activities means active participation in joint R&D projects with other organisations. Active participation involves contribution of project funding, knowledge and technology know-how plus project goals and direction setting. Pure contracting out of R&D work with no active participation is not regarded as cooperation in this survey.

III. Innovation activities

Technological innovation (TI) refers to the introduction of a technologically new or significantly improved product (goods or service) to the market or of a technologically new or significantly improved process within a firm. The TI is based on the results of new technological developments, new combinations of existing technology or utilisation of other knowledge acquired by the firm. TI activities cover all in-house or outsourced R&D activities.

技術產品創新

技術嶄新產品（貨品或服務）是一間機構從未推出過的產品（但未必是市場上的新產品），而有關產品的技術特徵或預期用途與該機構以前生產的產品有顯著分別。此類嶄新產品在統計調查時必須已推出市場。技術改良產品（貨品或服務）是指經顯著改良的現有產品。

例子：

- 改用經改良性質的物料（例如：透氣的紡織品、輕巧但堅固的合成物、環保的塑膠）；
- 顯著節約能源的產品（例如：省電燈泡）；
- 以寬頻在互聯網上播放自選視訊；
- 一項新的銀行或保險服務；以及
- 一個新的多媒體套裝軟件。

不包括：

- 純粹在美感上改變或只涉及輕微修改的機構現有產品；以及
- 純粹交易或售賣全部由其他機構生產和發展的技術嶄新或經顯著改良的產品。

技術程序創新

技術嶄新程序是一間機構從未實施過的程序（但該機構未必是在市場上首間實施這程序的機構）。有關程序涉及使用嶄新或經顯著改良的技術，以生產或提供與機構以前的生產、物流處理或控制程序有顯著分別的貨品和服務。經技術改良的程序涉及對該機構現有的生產、物流處理或控制程序產生的顯著改變。

例子：

- 添置新的或經改良的生產技術，例如可調節工序的自動設備或即時感應器；
- 印刷工序數碼化；
- 電子銀行和保險服務；
- 與網站有關的服務和電子商貿（但只提供資料而不設網上服務的除外）；
- 電腦輔助設計；
- 實施電子銷售點終端設備；
- 條碼系統；

Technological product innovation

A technologically new product (goods or service) is a product which is new to a firm (but not necessarily new to the market) whose technological characteristics or intended uses differ significantly from those of the firm's previously produced products. Such new product must have already been introduced to the market at the time of the survey. A technologically improved product (goods or service) is an existing product whose performance has been significantly improved.

Examples:

- change of materials with improved characteristics (e.g. breathable textiles, light but strong composites, environmentally friendly plastics);
- products with significantly reduced energy consumption (e.g. energy efficient light bulbs);
- video on demand via broadband Internet;
- a new banking or insurance service; and
- a new multimedia software package.

Exclude:

- changes to the firm's existing products which are purely aesthetic or which only involve minor modifications; and
- pure trading or selling of technologically new or significantly improved products wholly produced and developed by other firms.

Technological process innovation

A technologically new process is a process new to a firm (but not necessarily be the first one in the market to introduce the process). It involves the use of new or significantly improved technology for production or the supply of goods and services which differs significantly from the firm's previous production, logistic or control processes. A technologically improved process involves significant changes to the firm's existing production, logistic or control processes.

Examples:

- installation of new or improved manufacturing technology, such as automation equipment or real-time sensors that can adjust processes;
- digitisation of printing processes;
- electronic banking and insurance;
- Web-related services and e-commerce (but exclude those only creating an information site without on-line services);
- Computer Aided Design;
- introduction of Electronic Point of Sale equipment;
- barcode systems;

- 光學數據處理；
- 企業資源策劃系統；
- 客戶關係管理系統；
- 智能卡系統；
- 運輸設備的全球定位追蹤系統；
- 引進自動語音回應系統；以及
- 新的或顯著改良的電腦網絡。

不包括：

- 純粹組織架構或管理上的改變；以及
- 生產、物流處理或控制程序的輕微或例行改變。

購置生產用的機器和設備 包括特別為發展技術嶄新或經顯著改良產品（貨品或服務）及／或程序而購置的具改良性能的機器和電腦硬件。

獲取其他外界知識 包括向其他方面購買專利權和非專利發明、特許、技能、商標、軟件和其他類別的知識，以便用於一間機構的技術嶄新或經顯著改良產品（貨品或服務）及／或程序。

培訓 指為一間機構人員而設的內部或由外界提供的培訓，直接目的是發展及／或推出技術嶄新或經顯著改良的產品（貨品或服務）及／或程序。

向市場推廣技術產品／程序創新 指直接為了向市場推廣一間機構的技術嶄新或經顯著改良產品（貨品或服務）／程序的內部和對外市場推廣活動。有關活動可包括初步市場研究、市場測試和宣傳，但不包括例行市場推廣活動。

設計及生產／運送方面的其他準備工作 指為推出技術嶄新或經顯著改良的產品（貨品或服務）及／或程序而實施的程序和所作的技術準備，而有關工作不納入其他類別之內。

- optical processing of data;
- Enterprise Resources Planning Systems;
- Customer Relationship Management Systems;
- Smart Card System;
- Global positioning systems (GPS) tracking system for transport equipment;
- introduction of automated voice-response system; and
- new or significantly improved computer networks.

Exclude:

- purely organisational or managerial changes; and
- minor or routine changes to production, logistics or control processes.

Acquisition of machinery and equipment for production includes machinery and computer hardware with improved technological performance specifically purchased to implement technologically new or significantly improved products (goods or services) and/or processes.

Acquisition of other external knowledge includes purchase of rights to use patents and non-patented inventions, licenses, know-how, trademarks, software and other types of knowledge from others for use in a firm's technologically new or significantly improved products (goods or services) and/or processes.

Training refers to internal or external training for a firm's personnel directly aimed at the development and/or introduction of technologically new or significantly improved products (goods or services) and/or processes.

Market introduction of technological product/process innovations refer to internal or external marketing activities directly aimed at the market introduction of a firm's technologically new or significantly improved products (goods or services)/processes. It may include preliminary market research, market tests and launch advertising, but exclude routine marketing activities.

Design and other preparations for production/deliveries refer to procedures and technical preparations to realise the actual implementation of technologically new or significantly improved products (goods or services) and/or process not covered elsewhere.

每項技術創新活動的開支 應包括：

- 參與技術創新活動的人員的僱員薪酬；
- 技術創新活動的其他經常開支；
- 為進行技術創新活動而購置的土地和樓宇；以及
- 供技術創新活動用的機器、設備和其他資本開支。

技術創新活動的合作安排 是指積極參與和其他機構共同進行的技術創新項目（包括研發）。積極參與包括為技術創新項目提供撥款資助、知識和專門技能，以及定立目標和方向。純粹將技術創新項目外判而沒有積極參與者，在本統計調查不視為合作安排。

IV. 專利

專利權 是由國家或地域官方組織賦予發明者就其發明的一種法定權利，以換取發明者同意將其發明公開。專利權賦予專利權所有者在有限期間及指定地域獨佔該發明的權利，並獨享在工業及商業上開發該發明所得的利益，專利權的全部或部分可以買賣或特許的形式轉讓。

已被開拓作商業應用 指專利權所有者/申請者使用或特許其他機構使用其專利，進行生產產品/服務或研發的工作。

Expenditure on each item of TI activity should include:

- compensation of employee of staff engaged in TI activities;
- other current expenditures for the TI activities;
- land and buildings acquired for the TI activities; and
- machinery, equipment and other capital expenditures for the TI activities.

Cooperation arrangements on TI activities means active participation in joint TI projects (including R&D) with other organisations. Active participation involves contribution of project funding, knowledge and technology know-how plus project goals and direction setting. Pure contracting out of TI work with no active participation is not regarded as cooperation in this survey.

IV. Patent

Patent is a right in law conferred by a national or regional official agency to an inventor in exchange for the inventor's agreement for publication of his/her invention. It gives the patentee a monopoly of the invention and its industrial or commercial exploitation for a limited period and within a given territory. A patent can be bought/sold or transferred under a licence, either in whole or in part.

Being exploited for commercial applications means that the patentee/applicant has used or has granted the right to a third party to exploit the patent for product/service production or R&D.

附錄乙：獲取政府統計處刊物及其他統計產品的方法
Appendix B : Means of Obtaining Publications and Other Statistical Products
of the Census and Statistics Department

網站

用戶可以在政府統計處網站 (www.censtatd.gov.hk/products_and_services/products/publications/index_tc.jsp) 免費下載統計刊物。

政府統計處刊物的印刷版於政府新聞處的政府書店 (www.bookstore.gov.hk) 網站有售。

郵購服務

本處大部分的刊物均附有郵購表格，供訂購或按期訂閱刊物的印刷版。請填妥郵購表格，連同所需費用和郵費的支票或匯票寄回辦理。郵購表格亦可在政府統計處網站下載 (www.censtatd.gov.hk/products_and_services/other_services/provision_of_stat/mail_ordering_of_publications/index_tc.jsp)。

銷售中心

市民可親臨政府統計處刊物出版組購買刊物的印刷版和唯讀光碟產品，並即時提取。刊物出版組的地址是：

香港灣仔港灣道十二號
灣仔政府大樓十九樓

電話：(852) 2582 3025
圖文傳真：(852) 2827 1708

該組並設有閱讀區，讓使用者翻閱陳列的統計處各類的刊物。閱讀區也備有統計處編製的宣傳／教育單張和小冊子，歡迎索閱。

Website

Users may download statistical publications free of charge from the website of the Census and Statistics Department (www.censtatd.gov.hk/products_and_services/products/publications/index.jsp).

Print versions of publications of the Census and Statistics Department are available for sale online at the Government Bookstore of the Information Services Department (www.bookstore.gov.hk).

Mail Order Service

A mail order form for ordering or subscribing to print versions of publications is available in most of the Department's publications. Completed form should be sent back together with a cheque or bank draft covering all necessary cost and postage. The order form is also available for downloading from the website of the Department (www.censtatd.gov.hk/products_and_services/other_services/provision_of_stat/mail_ordering_of_publications/index.jsp).

Sales Centre

Print versions of publications and CD-ROM products are available for purchase and collection on the spot at the Publications Unit of the Census and Statistics Department at the following address :

19/F Wanchai Tower
12 Harbour Road, Wan Chai, Hong Kong.

Tel. : (852) 2582 3025
Fax : (852) 2827 1708

The Unit also provides a reading area where users may browse through various publications of the Department on display. Publicity/educational leaflets and pamphlets of the Department are also available for collection.

附錄丙：郵購表格（只適用於印刷版）
Appendix C : Mail Order Form (Applicable to print versions only)

致：香港北角英皇道二百五十號北角城中心六樓
 政府統計處 科技統計組
 電話：(852) 2887 5560 圖文傳真：(852) 2887 5117

To: Science and Technology Statistics Section,
 Census and Statistics Department, 6/F., Fortress Tower,
 250 King's Road, North Point, Hong Kong.
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