

以開支面編製本地生產總值
的方法及數據來源

Methods and Data Sources for
Compilation of Gross Domestic Product
by the Expenditure Approach



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1. 引言

本地生產總值的概念架構及編製方法

1.1 本地生產總值編製架構，基本上是根据《2008年國民經濟核算體系》¹所訂定的國際統計標準。本地生產總值指一個經濟體的所有居民生產單位，在一個指定的期間內（一般是1年或1季），未扣除固定資本消耗的生產總值。如果一個生產單位以一個經濟體的經濟領域為主要經濟利益中心，這生產單位就是該經濟體的居民生產單位。以個人而言，居民指在該經濟體的經濟領域內通常居留的人，與其國籍無關。如某人已在該經濟體居留至少12個月或打算這樣做，即被視為在該經濟體通常居留。以機構而言，居民指在該經濟體的經濟領域內通常經營業務的機構。經濟領域指該經濟體的政府有效管治的地域。本地生產總值可從不同方法計算。就香港而言，以當時價格及以物量計算的按年本地生產總值數字均以「開支面」及「生產面」編製。至於按季本地生產總值，以物量計算的數字以「開支面」及「生產面」編製，而以當時價格計算的按季本地生產總值則只以「開支面」編製。

1.2 以開支面編製的本地生產總值，是把作最終用途的貨品及服務的總產值，扣除其進口成分來計算的。作最終用途的貨品及服務包括由住戶和政府所消費的、用作資本形成的，以及用作出的貨品及服務。它不包括用於生產本地其他貨品及服務時所投入的貨品及服務。其計算方法是把用在貨品及服務方面的最終開支（包括私人消費開支、政府消費開支、本地固定資本形成總額、存貨增減以及貨品出口及服務輸出）的總和，減去貨品進口及服務輸入。

1.3 本地生產總值數字可以當時價格或以物量計算顯示。在物量數列中，價格變動的影響已被撇除，數列反映在一段期間內所生產或購買的貨品及服務與另一段期間相比的實質變動（即物量變動）情況。政府統計處已編製回溯至1961年以物量計算按開支組成部分劃分的本地生產總值數列。以物量計算的本地生產總值數字，是採用按年重訂權數及環比連接法編製而成的。詳情請參閱第2.50-2.59段。

¹ 《2008年國民經濟核算體系》是編製國民經濟核算統計數字的國際統計手冊的最新版本，供全球所有經濟體編製本地生產總值統計數字時使用。上一個版本是《1993年國民經濟核算體系》，政府統計處以往編製本地生產總值統計數字時一直採用該版本。

1. Introduction

Conceptual framework and methods of compiling Gross Domestic Product (GDP)

1.1 The compilation framework of GDP accords essentially with the international statistical standards as stipulated in the *System of National Accounts 2008 (2008 SNA)*¹. GDP is a measure of the total value of production of all resident producing units of an economy in a specified period (typically a year or a quarter), before deducting the consumption of fixed capital. A producing unit is considered as a resident in an economy if it maintains a centre of predominant economic interest in the economic territory of that economy. For individuals, residents refer to those who normally stay in the economic territory of the economy, irrespective of their nationality. If an individual has stayed in the economy for at least 12 months or intends to do so, he / she is considered as normally staying in that economy. For organisations, residents refer to those which ordinarily operate in the economic territory of the economy. The economic territory is the geographic territory under the effective control of the government of that economy. GDP can be measured using different approaches. For Hong Kong, annual GDP at current prices and in volume terms are compiled using both the “expenditure approach” and the “production approach”. For quarterly GDP, volume measures are compiled using both approaches while quarterly GDP at current prices is compiled using the “expenditure approach” only.

1.2 Under the expenditure approach, GDP is measured as the total value of goods and services produced for final use, net of their import content. Goods and services for final use include those consumed by households and government, those for capital formation and those for export. Goods and services used as input in producing other domestically produced goods and services are excluded. It is compiled as the total final expenditures on goods and services (including private consumption expenditure, government consumption expenditure, gross domestic fixed capital formation, changes in inventories and exports of goods and services), less imports of goods and services.

1.3 GDP figures may be expressed at current prices or in volume terms. In a volume series, the effects of price changes are eliminated and the series reflects the real changes (*i.e.* the changes in the volume) of goods and services produced or purchased from one period to another. The Census and Statistics Department has compiled data series of GDP by expenditure component in volume terms since 1961. In compiling the volume measures of GDP, the annually re-weighted chain linking approach is adopted. Please see paragraphs 2.50- 2.59 for details.

¹ The *2008 SNA* is the latest version of the international statistical manual on the compilation of national accounts statistics. The last version is the *1993 SNA*, which was previously adopted by Hong Kong in the compilation of GDP statistics. The *2008 SNA* is intended for use by all economies in the world for the compilation of GDP statistics.

1.4 編製本地生產總值是一項技術性工作。這項工作基本上是依據在《國民經濟核算體系》內訂明的國際標準進行。這套體系是根據多個國家或地區的統計專家的研究和商討結果而制訂的。不過，由於不同的經濟體有不同的經濟結構及商業習慣，故此有關標準也須加以適當調整，以切合當地情況。

1.5 從開支面編製本地生產總值所需的數據，是根據多項不同的數據來源，包括對外貿易統計數字、對工商機構及住戶進行的按年、按季及按月統計調查、政府帳目，以及政府部門和其他組織的行政數據。

1.6 一個經濟體的按人口平均計算的本地生產總值指把該經濟體在某統計年的本地生產總值除以該經濟體在同年的年中人口總數所得的數字。

1.7 1997年7月1日，香港成為中華人民共和國的特別行政區。根據「一國兩制」原則，香港與中國內地進行的交易視作國際交易（如貨品貿易及服務貿易）。

本地生產總值統計數字的名稱法、修訂及公布

1.8 為使本地生產總值數字能及時公布，並同時確保數據的質素，政府統計處依從國際一貫的做法，盡早採用部分數據來編製和公布本地生產總值數字。當獲得最新的資料後，本地生產總值的數字會作出修訂。在香港，首次公布的某一期間的按開支組成部分劃分的本地生產總值數字稱為「預先估計數字」。當獲得更多數據後，已發表的本地生產總值數字會作出修訂。繼預先估計數字後公布的所有數字稱為「修訂數字」。這些「修訂數字」在納入更多數據後，在日後仍會作出進一步定期修訂。一般而言，已採納了全部定期資料來源所得的最終數據編製而成的數字，則為最終的數字。本地生產總值數列，亦會因納入較疏頻次得到的基準數據（如每5年進行一次的「住戶開支統計調查」結果，以及國際結算銀行3年一度的外匯與衍生工具市場成交額調查結果）而作出例行修訂。

1.9 現時，按開支組成部分劃分的按年本地生產總值預先估計數字，是在統計年度結束後約1個月公布。隨後，已發表的按年本地生產總值數字便會根據最新資料作出修訂。每年的最終數字會在該統計年度結束後第3年的2月份公布。

1.10 按開支組成部分劃分的按季本地生產總值預先估計數字，會在統計季度結束後約1個月以新聞稿形式公布。預先估計數字只包括整體本地生產總值及其主要開支組成部分的實質增長。這些按季數列其後會根據最新資料作出修訂。經修訂的按季本地生產總值數字（及更詳細分項統

1.4 The compilation of GDP is a technical exercise. It follows basically the international standards as stipulated in the *System of National Accounts*, which are the results of research and consultations amongst statistical experts in many different countries or territories. Nevertheless, there are differences in economic structure and commercial practices in different economies so that the technical standards have to be duly adapted to suit local circumstances.

1.5 The compilation of GDP using the expenditure approach is based on many different data sources including external trade statistics; annual, quarterly and monthly surveys on industrial / business establishments and on households; government accounts and administrative data from government departments and other organisations.

1.6 Per capita GDP of an economy is obtained by dividing the total GDP in a year by the mid-year population of that economy in the same year.

1.7 On 1 July 1997, Hong Kong became a Special Administrative Region of the People's Republic of China. Under the "One Country, Two Systems" principle, transactions with the mainland of China are treated as international transactions (e.g. trade in goods and trade in services).

Nomenclature, revision and publication of GDP statistics

1.8 To achieve a balance between timeliness and data quality, the Census and Statistics Department follows the international practice to compile and release GDP figures at the earliest possible time by using partial data, and revise these figures as more information becomes available. In Hong Kong, the first released figures on GDP by expenditure component in respect of a period are called "advance estimates". When more data become available, GDP figures will be revised. All those figures published subsequently, after the advance estimates, are called "revised figures". These "revised figures" are still subject to further regular revision later on when more data are incorporated. In general, the figures are finalised when finalised data from all regular sources are incorporated. The GDP series is also subject to routine revision to incorporate benchmark data available at less frequent intervals, e.g. results of the Household Expenditure Survey conducted once every 5 years, and results of the Bank for International Settlements triennial survey of foreign exchange and derivatives market turnover.

1.9 At present, advance estimates on annual GDP by expenditure component are released about 1 month after the reference year. Subsequently, annual GDP figures are revised based on latest information available until they become finalised around the third February after the reference year.

1.10 Advance estimates on quarterly GDP by expenditure component are released about 1 month after the reference quarter in a press release. The advance estimates include only the real growth of overall GDP and its major expenditure components. The quarterly series is then revised and released based on latest information available. The revised quarterly figures on GDP (and more detailed statistics) as well as the

計數字），以及以當時市價計算的本地生產總值和本地生產總值平減物價指數會在政府統計處網站和《按開支組成部分劃分的本地生產總值》報告公布。

1.11 除了上述的例行修訂外，政府統計處會按照慣常做法，不時對本地生產總值統計數字作非例行的技術性修訂，適當地納入最新的數據來源、經改良的估算方法，以及國際標準、定義和分類方法上的改變。這些都是不斷研究及發展本地生產總值編製架構的成果。持續提升本地生產總值統計數字的質素和可靠性，是符合國際一貫的做法的。在非例行修訂工作中，本地生產總值及其組成部分的整系數列可能會因應有關工作的範圍而作出修訂。

1.12 自 1980 年起，政府統計處對本地生產總值已作出 10 次技術性修訂。修訂結果已分別於 1980 年、1984 年、1987 年、1991 年、1994 年、2002 年、2005 年、2007 年、2012 年及 2013 年發表。2005 年 10 月的修訂引進了《國民經濟核算體系》所建議用作編製非直接計算的金融中介服務的改良估算方法，並把有關服務分配到相關的使用者（或行業）。該建議使國民經濟核算統計數字更有效地反映銀行在促進資金從擁有盈餘資金的單位（例如存款者）轉移到需求資金的單位（例如貸款者）所帶來的經濟貢獻。整系本地生產總值過往的數列已因而作出修訂。

1.13 2007 年 10 月的修訂採用了以環比物量計算本地生產總值的數字，取代以前以固定價格計算的數字。這是要配合最新的國際指引來編製本地生產總值的物量數字，以提供一個更佳的指標量度一個經濟體的總體經濟活動的實質增長。為了保持以物量計算的本地生產總值及各組成部分數列的可比性，因此盡可能以新的按年重訂權數及環比連接計算方法後向估計過往的數列。就本地生產總值及其開支組成部分而言，整系物量數列已作出後向估計至 1987 年。然而，由於數據所限，1961 年至 1986 年早期年份的數字，並不能以新的編製方法重新計算可靠的本地生產總值及其組成部分的物量估計。1961 年至 1986 年的數列是以固定價格計算的本地生產總值數字的實質增長率，用外推法連接到新的環比物量數列，以獲得有連續性的物量數列。

1.14 2012 年 9 月的修訂實施了《2008 年國民經濟核算體系》的最新國際統計標準，包括 (1) 採用所有權轉移原則，記錄外地加工貨品和轉手商貿活動；(2) 把研究及發展開支作為固定資本計算；(3) 使用參照利率方法估算非直接計算的金融中介服務的產值；(4) 計算僱員報酬時包括僱員股票期權的價值；以及 (5) 採用新的分類和改良的估算方法編製服務貿易內有關組別的統計數字。改良的估算方法亦適當地納入本地生產總值的編製架構。而整系本地生產總值過往的數列已因而

current price GDP and GDP deflator are released at the Census and Statistics Department website and the *Gross Domestic Product by Expenditure Component* report.

1.11 In addition to the above routine revisions, it is an established practice of the Census and Statistics Department to undertake non-routine technical revision exercises from time to time to enhance the quality of Hong Kong's GDP statistics by incorporating new data sources, improved estimation methods, and changes in international standards, definitions and classifications where applicable, which are results of continuous research and development on the GDP compilation framework. This is in line with the international practice to improve the quality and reliability of GDP statistics on a continuous basis. In a non-routine revision exercise, the entire series of GDP and its components may be subject to revision in accordance with the scope of the exercise concerned.

1.12 The Census and Statistics Department has conducted 10 rounds of technical revision of Hong Kong's GDP since 1980. Results of these revisions were released in 1980, 1984, 1987, 1991, 1994, 2002, 2005, 2007, 2012 and 2013 respectively. In October 2005, the enhanced estimation method for financial intermediation services indirectly measured (FISIM) and their allocation by user / sector as recommended in the *System of National Accounts* were introduced. This recommendation enabled national accounts statistics to reflect in a better way the economic contribution of banks in facilitating the channeling of funds from units with surplus funds (e.g. depositors) to units with demand for funds (e.g. borrowers). As a result, the entire GDP historical series was revised.

1.13 In October 2007, the compilation of chain volume measures of GDP was adopted in place of the previous constant price measures. This was to gear with the latest international standards in the compilation of GDP in volume terms so as to provide a better measure of the real growth of the aggregate economic activity of an economy. In order to maintain the comparability of the volume series of GDP and its components, backcasting of historical series based on the new calculation method of the annually re-weighted chain linking approach was made as far as possible. For GDP and its expenditure components, the entire volume series was backcast to 1987. Application of the new calculation method for the earlier period of 1961 to 1986 was not feasible due to limited input data available for re-calculation of reliable volume estimates of GDP and its components. To obtain a continuous time series, the data series for 1961 to 1986 was linked to the chain volume series by extrapolation based on real growth rates calculated from the constant price GDP figures.

1.14 In September 2012, the latest international statistical standards presented in the *2008 SNA* were implemented, including (1) adoption of the change of ownership principle in recording goods sent abroad for processing and merchandising; (2) capitalisation of research and development expenditure; (3) estimating the output of financial intermediation services indirectly measured using the reference rate method; (4) recording employee stock options as compensation of employees; and (5) adoption of new classification and enhanced estimation methods for trade in services statistics. Enhanced estimation methods were also incorporated into the GDP compilation framework where applicable. As a result, the entire

作出修訂。這次修訂工作使香港的本地生產總值數字緊貼最新的國際標準，亦更能反映香港的經濟情況。

1.15 2013年8月的修訂改良了跨界貨品及服務流動的估算方法。這次工作修訂了2009年及以後的私人消費開支、貨品出口、服務輸出及輸入數字，但由於這次非例行修訂工作只涉及把居民與非居民之間的貨品及服務消費開支重新分類，故整體本地生產總值數列的數值和增長率均不受影響。

1.16 自2002年8月引進以物量計算按經濟活動劃分的按季本地生產總值後，以開支面編製的本地生產總值仍會繼續用作單一本地生產總值數字。以開支面編製的本地生產總值已編製了一段長時間，可準確和及時地量度經濟實質增長。

GDP historical series was revised. This revision exercise enabled Hong Kong's GDP figures to align closely with the latest international standards and better reflect the economic situation of Hong Kong.

1.15 In August 2013, the estimation method of cross-boundary movements of goods and services was enhanced. As a result, figures of private consumption expenditure, exports of goods, as well as exports and imports of services were revised back to 2009. The levels and growth rates pertaining to the entire series of overall GDP were however not affected, as this non-routine revision exercise involved only re-classification of consumption expenditure on goods and services between residents and non-residents.

1.16 Notwithstanding the introduction of the quarterly volume measures of GDP by economic activity since August 2002, the practice of using GDP compiled by the expenditure approach as the single measure of GDP is to continue. GDP compiled by the expenditure approach has been produced for a long time, providing a timely and accurate measure of economic growth in real terms.

2. 方法及數據來源

2.1 本節描述以開支面編製本地生產總值(包括以當時價格及以環比物量計算)的方法和數據來源。本地生產總值的按季及按年數字均採用完全相同的概念和定義來編製的。

以當時價格計算按開支組成部分劃分的本地生產總值

私人消費開支

2.2 私人消費開支指住戶和為住戶服務的私人非牟利機構用在貨品及服務方面的最終消費開支總值。計算方法是把本地市場內有關貨品及服務方面的消費開支，加上本地居民在境外的開支，減去非本地居民在本地市場的開支。

2.3 在編製本地市場內食品及消費品的消費開支時，政府統計處廣泛採用了商品流通法。對於同樣可用作最終消費或中間投產消耗的貨品，訂定適當的最終消費份額，以編製私人消費開支。所需的數據來源包括對外貿易統計數字、行政統計數字、經濟普查及統計調查、住戶開支統計調查及政府統計處負責進行的其他抽樣統計調查。此外，亦適當地輔以其他方面的資料來源。

2.4 消費者在某類貨品組別的開支，基本上是根據兩個主要供應來源而編製的，即本地生產貨品和留用進口貨品。私人消費開支所包括的貨品大部分是進口的。計算留用進口貨品的價值是根據詳細的對外貿易統計數字，把每類貨品的進口價值減去轉口價值。由於轉口價值是以離岸價計算，故轉口毛利已包含在內，要計算留用進口貨品的進口價值，便須把轉口毛利從轉口價值中扣除。在編製私人消費開支時，以往假設轉口毛利率一律為 5%。鑒於轉口活動對香港日益重要，政府統計處自 1989 年統計年度起，每月進行「轉口貿易統計調查」，統計調查結果可估算有關各類貨品組別的轉口毛利率，從而計算私人消費開支。至於 1989 年前的轉口毛利率，則參考了 1989 年和 1990 年的統計調查結果來設算。1989 年以前的留用進口貨品及私人消費開支數列是根據這些設算毛利率編製而成的。

2.5 供本地內部消費的本地漁農產品價值和數量的統計數字，由漁農自然護理署定期編製。

2.6 供本地內部消費的其他本地製品的統計數字，主要是根據由政府統計處進行的經濟普查及統計調查所搜集得的資料而計算；如有需要時，輔以其他統計數字補充。政府採用了在 1970 年、1973

2. Methods and Data Sources

2.1 This Section describes the methods and data sources used in compiling the current price and chain volume measures of GDP by the expenditure approach. The concepts and definitions used for the compilation of the quarterly and annual GDP are identical.

Current price GDP by expenditure component

Private consumption expenditure

2.2 Private consumption expenditure (PCE) refers to the total value of final consumption expenditure on goods and services by households and private non-profit institutions serving households (NPISHs). It is calculated as the sum of consumption expenditure on goods and services in the domestic market and the expenditure of residents abroad, less the expenditure of non-residents in the domestic market.

2.3 The commodity flow method has been used extensively in compiling consumption expenditure on food and consumer goods in the domestic market. An allocation for final use is made to commodities which can be used for both final and intermediate consumption. Data sources include external trade statistics, administrative statistics, economic censuses and surveys, household expenditure surveys and other sample surveys conducted by the Census and Statistics Department. These are supplemented by information from other miscellaneous sources where appropriate.

2.4 Consumers' expenditure on any particular commodity group is primarily compiled from two principal sources of supply, viz. local production and retained imports. A large proportion of the commodities included in PCE is imported and the value of retained imports is derived from detailed external trade statistics by deducting the value of re-exports from that of imports at commodity level. The value of re-exports is recorded on free-on-board (f.o.b.) basis. It therefore includes an element of re-export margin, which has to be deducted in deriving the value of retained imports for consumption. Previously, a flat rate of 5% was assumed for the "rate of re-export margin" (RRXM) when compiling PCE. In view of the growing importance of re-export activities, the Census and Statistics Department has been conducting the Survey of Re-export Trade at monthly intervals since the reference year of 1989. The survey results are used to estimate RRXMs at commodity group level for compiling the PCE. For years prior to 1989, imputations on the RRXMs were made with reference to the survey results for 1989 and 1990. Based on these imputed rates, the retained imports and PCE series for years prior to 1989 were compiled.

2.5 Statistics on local agricultural and fishery production for domestic consumption, both in value and in quantity terms, are regularly compiled by the Agriculture, Fisheries and Conservation Department.

2.6 Statistics for other domestically manufactured goods are based mainly on information collected from economic censuses / surveys conducted by the Census and Statistics Department, supplemented where necessary by other statistics. In the censuses

年、以及由 1976 年起的製造業普查／按年統計調查所搜集了貨品銷售方面的詳細資料。在編製消費者用於某一類貨品組別的開支時，採用以下兩種方法的其中一種：(1)「S-X」方法，即根據某段指定期間內製造商的總銷售額和有關貨品組別的本地產品出口額兩者的差額，來計算有關本地消費的統計數字；或(2)「FP」方法，即在製造商的總銷售額中設定一個固定百分比作為本地消費。這兩種方法中，通常採用方法(1)，只有在難於協調銷售統計數字和出口統計數字時除外。

2.7 在沒有進行按年經濟普查／統計調查的年份，上述的編製方法並不適用，因而要採用其他的程序。有關某類貨品組別在 1966 年至 1969 年的估計數字，是根據 1970 年的基準估計數字，再按照人口及物價的變動，用外推法計算出來。另一方面，由於已具備 1970 年和 1973 年的基準估計數字，所以 1971 年和 1972 年的估計數字是用內推法計算出來的，計算時假定這兩年的增長率相同。1974 年和 1975 年的估計數字，也是採用同樣的程序，根據 1973 年和 1976 年的基準數字計算出來。

2.8 進行按年經濟普查／統計調查是一項非常複雜的工作，需時甚久才能完成，按年經濟普查／統計調查的詳細數據通常遲至約 1 年後才可得到。在此期間，編製消費者用在本地產品方面的開支統計數字所根據的生產數據，來自政府統計處進行的「工業生產按季統計調查」。這些統計數字在獲得工業的「經濟活動按年統計調查」的結果時，會作出修訂。

2.9 根據本地製造商的貨品銷售和留用進口貨品價值編製有關消費者用在食品及消費品方面的開支價值必須再作若干調整。由於貨品要經過分銷渠道（即批發商及零售商），最後才到達最終消費者手中，因此貨品可能會暫時留作存貨。調整存貨增減所根據的基準資料，來自 1977 年及由 1979 年起的進出口貿易、批發及零售業以及住宿及膳食服務業的「經濟活動按年統計調查」。1977 年及由 1979 年起的分銷業手上存貨實質增減統計數字，是根據按用途類別劃分的存貨增減數據而編製的。由於缺乏分銷業在 1977 年以前的存貨增減資料，所以較早年份的存貨增減，是利用當時可獲取的代指標，以較粗略的方法作出調整。

2.10 除調整存貨增減外，亦須進行第二類調整。編製以當時市價計算的私人消費開支時，採用的是零售價值，而零售價值是要加上分銷商的分銷毛利總額而計算出來的。分銷毛利會因貨品組別及年份不同而有很大的差別。1977 年及由 1979 年起的毛利總額，得自進出口貿易、批發及零售業的「經濟活動按年統計調查」的結果。1978 年的毛利百分率設定為 1977 年和 1979 年兩年的平均數，而 1966 年至 1976 年的毛利百分率則以 1977 年至 1981 年

/ annual surveys conducted for the manufacturing industry for the years 1970, 1973 and from 1976 onwards, detailed information on sales of goods was collected and applied. In compiling consumers' expenditure on a commodity group, one of the following two methods is used: (1) "S-X" method, under which statistics of local consumption are based on the difference between the total sales of manufacturers and domestic exports of the commodity group concerned for a given period, or (2) "FP" method, under which a fixed percentage of total sales of manufacturers is taken as being consumed locally. Of the two methods, (1) is preferred in general, except where there are difficulties in reconciling the sales statistics and exports statistics.

2.7 The compilation methods described above do not apply to years for which an annual economic census / survey was not conducted, and alternative procedures had then to be adopted in such cases. For 1966-1969, the estimates for a given commodity group were based on the benchmark estimate for 1970 and extrapolated using changes in population and prices. On the other hand, with benchmark estimates available for 1970 and 1973, the 1971 and 1972 estimates were obtained by interpolation, assuming the same growth rates for these two years. The 1974 and 1975 estimates were similarly derived based on the 1973 and 1976 benchmarks.

2.8 An annual economic census / survey is an operationally complicated project requiring a long time to complete. The availability of detailed data from an annual economic census / survey is usually subject to a time lag of about 1 year. In the meantime, statistics of consumers' expenditure on locally produced goods are compiled based on production data collected from the Quarterly Survey of Industrial Production conducted by the Census and Statistics Department. Revisions are made to the statistics when results from the Annual Survey of Economic Activities (ASEA) for Industrial Sector become available.

2.9 The values of consumers' expenditure on food and consumer goods compiled from the values of sales of local producers and retained imports have to be further adjusted. Since the goods have to pass through distributive channels (*i.e.* wholesalers and retailers) before they ultimately reach the final consumers, they may be temporarily held as inventories. Benchmark information for making adjustment for changes in inventories for 1977 and from 1979 onwards was obtained from the ASEA for Import / Export, Wholesale and Retail Trades, and Accommodation and Food Services Sectors. Statistics on the physical changes in inventories of goods held by the distributive trades for 1977 and from 1979 onwards were compiled based on data on changes in inventories by end-use. Since information on changes in inventories of the distributive trades was not available for years before 1977, a cruder basis had to be adopted for making adjustment for changes in inventories in respect of earlier years using proxy indicators available.

2.10 Apart from the adjustment for changes in inventories, a second type of adjustment is required. In compiling PCE at current market prices, the retail value is used and this is arrived at by adding distributors' gross trade margins. The margin varies considerably among commodity groups and between years. The margins for 1977 and from 1979 onwards were derived from results of the ASEA for Import / Export, Wholesale and Retail Trades. The percentage margins for 1978 were taken to be the averages of those for 1977 and 1979, and those for 1966-1976 were imputed by taking the averages of the percentage margins

期間的平均毛利百分率設算。下述產品組別的分銷毛利可從統計調查結果中獲得：食品、燃料、煙酒、衣履、其他非耐用消費品、耐用消費品及資本貨品。

2.11 消費者開支亦可根據特別統計調查如「食肆的收入及購貨額按季統計調查」、政府稅收及其他行政統計數字而編製。許多服務組別的開支數字都是根據這些資料來編製。使用這些方法時，所獲得的基本統計數字通常已是用購買者所支付的價格來表示，故毋須就轉口 / 分銷毛利和存貨增減作出調整。

2.12 在編製若干組別的開支時，會以政府統計處每 5 年進行一次的「住戶開支統計調查」所得的數據作為相關年度的基準數字。其他年份的統計數字則根據其他資料來源或以相關指標利用外推法編製而成。住戶開支統計調查通常是一個方便的資料來源，因為從該項統計調查所得的數據可按貨品或服務的類別和住戶類別加以分析。

2.13 本地市場內貨品及服務的消費開支是根據聯合國倡議的「按目的劃分的個人消費分類」，因應本地情況分為下列組別：

for the period 1977-1981. The trade margins of the following product groups were available from the survey results: food, fuel, alcoholic drinks and tobacco, clothing and footwear, other consumer non-durables, consumer durables and capital goods.

2.11 Consumers' expenditure may also be compiled from special survey such as Quarterly Survey of Restaurant Receipts and Purchases, government revenue statistics and other administrative statistics. Expenditure figures for many service groups are compiled on this basis. Where such methods are used, the basic statistics provided are often expressed in purchasers' prices already and adjustments for re-export / trade margins and changes in inventories are not necessary.

2.12 To compile expenditure on certain groups, data from Household Expenditure Surveys conducted once every 5 years by the Census and Statistics Department were used as benchmarks for the years concerned. Statistics for other years were compiled based on information from other sources or extrapolated by relevant indicators. A household expenditure survey is usually a convenient source of information, since its data can be analysed by type of goods or services and by type of households.

2.13 Consumption expenditure on goods and services in the domestic market is classified based on the Classification of Individual Consumption by Purpose (COICOP) promulgated by the United Nations, with local adaptations as follows:

<i>貨品及服務組別</i> <i>Commodity and service group</i>	<i>消費範圍</i> <i>Expenditure coverage</i>
(1) 食品及不含酒精飲品 Food and non-alcoholic beverages	麵包和穀類；肉類和家禽；魚類和海產；奶類和蛋類；食油和脂肪質；蔬菜和生果；糖和糖果；不含酒精飲品及其他食物 Bread and cereals; meat and poultry; fish and sea products; milk and eggs; oils and fats; vegetables and fruit; sugar and confectionery; non-alcoholic beverages and other food
(2) 含酒精飲品 Alcoholic beverages	啤酒和其他酒類 Beer and liquor
(3) 煙草 Tobacco	香煙、雪茄和煙絲 Cigarettes, cigars and cut tobacco
(4) 衣履及其他個人用品 Clothing, footwear and other personal effects	成衣；衣料和縫工費用；鞋履；手錶；相機和光學用品；旅行和體育用品；文具；珠寶飾物及其他個人用品 Ready-made clothing; clothing materials and tailoring charges; footwear; watches, cameras and optical goods; travel and sports goods; stationery; jewellery and other personal effects
(5) 租金、差餉、水費及房屋維修費用 Rent, rates, water and housing main-tenance charges	租金和差餉；水費；房屋保險費及其他房屋費用 Rent and rates; water charges; house insurance and other housing charges
(6) 燃料及電力 Fuel and light	火水；石油氣；煤氣；電力及其他燃料（例如：炭、蠟燭、火柴等） Kerosene; liquefied petroleum gas; coal gas; electricity and other fuel (e.g. charcoal, candles, matches)

貨品及服務組別 (續)
Commodity and service group (Cont'd)

消費範圍 (續)
Expenditure coverage (Cont'd)

- | | |
|---|--|
| (7) 傢具及家居設備
Furniture, furnishings and household equipment | 傢具；窗簾、地氈等室內陳設品；家庭電器用品、影視及音響器材、家用電腦與其他耐用消費品；刀叉及餐桌器皿、廚房用具、衛生用具及家居擺設；以及這些項目的維修費用
Furniture; soft furnishings; electrical household appliances, visual and sound equipment, personal computers and other consumer durables; cutlery and tableware, kitchenware, sanitary ware and household ornamental articles; and maintenance and repair charges on these items |
| (8) 家居管理開銷
Household operation | 僱用家庭傭僕及未列入其他類別的非耐用家庭用品
Domestic help and non-durable household goods not elsewhere included |
| (9) 個人護理
Personal care | 香水、化粧品、肥皂及梳粧用品；洗熨和乾洗；補鞋；理髮及美容院服務；健身及桑拿服務
Perfumes, cosmetics, soaps and toilet requisites; laundry and dry cleaning; shoe repairing; hairdressing and beauty shop services; fitness and sauna services |
| (10) 醫療及保健
Medical care and health expenses | 中西醫藥及保健食品；住院護理；醫生、護士、牙醫、中醫及其他有關行醫者的服務；以及醫療保險費
Chinese and western medical, pharmaceutical and healthcare products; hospital care; services of physicians, nurses, dentists, herbalists and other related medical practitioners; and charges for medical insurance |
| (11) 交通及通訊
Transport and communication | 交通開支包括購買及維修汽車、電單車和其他車輛；汽油和機油；駕駛執照、保險和過戶費用、停車費和學車費；鐵路收費、巴士費、電車費和渡海輪船費；以及其他交通費用方面的開支。通訊開支包括郵費、電話（包括手提電話）、電報、傳呼服務費及互聯網接駁費
Expenditure on transport includes purchases of motor cars, cycles and other vehicles and their maintenance; petrol and oil; driving licences, insurance and fees for transfer of ownership, parking and driving instructors' fees; railway, bus, tram and ferry fares and expenses on other forms of transport. Expenditure on communication includes postages, telephone (including mobile phone), telegram, paging and internet connection service charges |
| (12) 娛樂及消遣
Recreation and entertainment | 報紙和期刊；書籍及其他消閒物品（例如：玩具、鮮花和人造花及寵物等）；電影消遣；博彩；住宿酒店及其他娛樂方面的開支
Newspapers and periodicals; books and other recreation goods (e.g. toys, fresh and artificial flowers and pets); cinema entertainment; betting; hotel accommodation and other recreational expenses |
| (13) 教育
Education | 學費及有關的開支（例如：考試費、私家補習費、學生宿舍費用等）
Education fees and related expenditure (e.g. examination fees, private tuition fees, boarding and lodging fees) |
| (14) 其他服務
Other services | 人壽保險；酒樓和咖啡室的服務費；股票買賣的經紀佣金和印花稅；投資基金服務費；由銀行所提供的金融中介服務的費用；退休基金服務費；其他服務的開支；以及為住戶服務的私人非牟利機構的消費開支
Life insurance; service charges in restaurants and cafes; brokers' commissions and stamp duties in the transaction of stocks; service charges for investment fund; service charges for financial intermediation services provided by banks; service charges for pension funds; expenditure on other services; and consumption expenditure of NPISHs |

2.14 把上述組成部分的數字加起來，可得出本地市場內的消費開支總額的數字。除上述分類外，本地市場內食品、消費品和服務類別的消費開支分項數字亦會公布。

2.14 Summing the components described above gives the total consumption expenditure in the domestic market. Apart from the above classification, breakdowns of consumption expenditures in the domestic market on food, consumer goods and services are also published.

2.15 私人消費開支的計算方法，是把本地市場內的消費開支總額加上本地居民在境外的開支，再減去非本地居民在本地的開支而得出。

2.16 非本地居民在本地市場的開支包括下列 8 類開支：過夜旅客、入境不過夜旅客、郵輪旅客、度假中的軍事人員和軍人、過境旅客、在港停留的外國船員或機員、在港求學的留學生，以及境外駐港機構官員和其留港家屬。境外駐港機構包括外國領事館及商務專員公署。

2.17 本地居民在境外的開支包括本港居民在境外作私人旅行（包括旅行團形式及非旅行團形式的私人旅行）的開支和本港居民付予非本地運輸營運者的國際客運服務費用。本港學生在境外留學的開支也包括在內。有一點值得注意的，就是所有本地居民在境外旅遊的開支都計算在服務輸入內，但只有為非商務理由在境外旅遊的開支，才歸類為私人消費開支中的「本地居民在境外的開支」。

2.18 根據《國民經濟核算體系》的建議，除了公布私人消費開支及政府消費開支統計數字外，「實際消費」的補充統計數字亦會編製及公布。住戶的實際最終消費涵蓋供住戶實際消耗的所有貨品及服務，不論這些貨品及服務費用的最終承擔者是政府、為住戶服務的私人非牟利機構或住戶本身。實際消費的概念，是基於政府消費開支中個人消費（受惠者是可予個別識認的住戶）和公共消費（受惠者是社會整體）兩者的差別。

政府消費開支

2.19 計算本地生產總值時，政府消費開支指非參與商業活動的各個政府部門用於消費貨品及服務的開支。除在狹義方面所指的政府部門外，政府消費開支亦包括半政府非牟利機構的消費開支。根據《國民經濟核算體系》，即使這些非牟利機構並非正式政府部門，但基於與政府的關係，這些機構很明顯是政府推行社會或經濟政策的工具，因此亦應計算在政府服務內。涵蓋在政府消費開支內的半政府機構的例子包括香港貿易發展局、香港生產力促進局、香港旅遊發展局、消費者委員會、醫院管理局、職業訓練局及僱員再培訓局。

2.20 政府消費開支不包括參與商業活動的政府單位。這些政府單位和其他政府部門的分別，在於前者生產的貨品及服務主要用作售予市民使用。界定商業活動會參考以下準則：(1) 有關活動涉及生產私營企業亦可提供的貨品及服務；(2) 向市民出

2.15 PCE is obtained by adding expenditure of residents abroad to the total consumption expenditure in the domestic market, and then deducting expenditure of non-residents in Hong Kong.

2.16 Expenditure of non-residents in the domestic market includes expenditure of the following 8 categories: overnight visitors; same-day in-town visitors; cruise passengers; military personnel and servicemen on rest and recreation; transit and transfer passengers; foreign crews stopping in Hong Kong; non-resident students studying in Hong Kong and employees of extra-territorial bodies and their dependants in Hong Kong. Extra-territorial bodies include foreign consulates and trade commissions.

2.17 Expenditure of residents abroad includes expenditure of residents travelling outside Hong Kong for personal purpose (including personal travel in package tour mode and non-package tour mode) and expenditure of residents on passenger fare relating to international transportation services provided by non-resident transport operators. It also includes expenditure of resident students studying abroad. While overseas expenditure of all residents travelling abroad comes under imports of services, only expenditure of residents travelling abroad for non-business purposes is classified under “expenditure of residents abroad” in PCE.

2.18 Following the recommendation in the *System of National Accounts*, supplementary statistics on actual consumption are also compiled and published in addition to statistics on PCE and government consumption expenditure (GCE). Actual final consumption of households covers goods and services which are effectively available to households, irrespective of whether the ultimate bearers of the expenditure are the government, NPISHs or households themselves. The actual consumption concept is based on the distinction between individual consumption (benefiting identifiable households) and collective consumption (benefiting society as a whole) of GCE.

Government consumption expenditure

2.19 Government consumption expenditure (GCE), for the purpose of calculating GDP, relates to expenditure on consumption goods and services by government departments which are not engaged in market activities. It also includes consumption expenditure of quasi-government non-profit institutions, in addition to that of government units in the narrower sense. According to the *System of National Accounts*, those non-profit institutions which, by virtue of their relations with the government, are clearly instruments of the social or economic policies of the government should be accounted for in government services, even though these institutions are not formally part of the government. Some examples of quasi-government institutions covered in GCE are the Hong Kong Trade Development Council, Hong Kong Productivity Council, Hong Kong Tourism Board, Consumer Council, Hospital Authority, Vocational Training Council and Employees Retraining Board.

2.20 GCE does not cover government units which are engaged in market activities. These government units are distinguished from other government departments in that they are engaged in the production of goods and services principally for sale to the public. Market activities are distinguished with reference to the

售貨品及服務，構成有關活動的主要部分。

2.21 參與商業活動的政府單位例子包括房屋署、香港郵政及水務署。

2.22 政府消費開支亦不包括由政府擁有並參與商業活動的公營機構。這些公營機構包括香港鐵路有限公司（包括在 2007 年 12 月合併前的九廣鐵路公司）及香港機場管理局。

2.23 計算政府消費開支的慣用方法是把下列各項開支合計：

- (1) 僱員報酬：包括工資和薪金、退休金、用於員工房屋及宿舍的開支（包括政府宿舍的設算租金），以及其他雜項僱員福利。
- (2) 購買貨品及服務扣除銷售所得：這是指政府在提供服務時，用於貨品及服務的開支。這些政府服務包括教育、醫療服務、消防、衛生及社會福利、維持治安及其他一般行政服務。購買貨品及服務的開支包括用於備用品及必需品、燃油及用電、房屋及工程維修、租金，以及其他服務的開支，亦包括政府在運作過程中擁有及耗用的固定資本消耗的估計。銷售所得包括學費、售賣政府刊物的收入、醫療及牙科服務收費、政府舉辦的文娛康樂節目門券收入，以及其他由政府提供的雜項服務所帶來的收入。

2.24 政府在津貼私人機構方面的支出並不計算在政府消費開支內。這類開支在國民經濟核算架構中當作轉撥款項。津貼開支主要是用來資助為住戶提供服務的私人非牟利機構的活動；這些機構的開支數字已分開列入私人消費開支內（參閱第 2.2 段）。

2.25 隨着醫院管理局的成立，前補助醫院（現稱公立醫院）的組別分類已根據《國民經濟核算體系》的指引作了檢討。前補助醫院的分類，由以前的「私人非牟利服務生產者」轉為「政府服務生產者」，原因是自醫院管理局成立後，前補助醫院便開始執行政府的醫療政策，協助政府提供補助式的醫院服務給市民大眾。

following criteria: (1) the activities involve the production of goods and services of a kind which might be provided by a private business, and (2) sales of goods and services to the public constitute the major part of the activities.

2.21 Some examples of the government units that are taken as being engaged in market activities include the Housing Department, Hongkong Post, and the Water Supplies Department.

2.22 GCE also does not cover public corporations which are owned by government and engaged in market activities. These include the MTR Corporation Limited (including Kowloon-Canton Railway Corporation (KCRC) before the merger in December 2007) and Airport Authority Hong Kong.

2.23 By convention, GCE is computed as the sum of:

- (1) Compensation of employees: This comprises wages and salaries, pensions, expenditure on housing and quarters for its staff including imputed rent for all government-owned quarters, and other miscellaneous employee benefits.
- (2) Purchases of goods and services less sales: These refer to the expenses of the general government on goods and services in providing government services such as education, health services, services relating to fire fighting and protection, sanitation and social welfare, law and order enforcement and other general administration. Purchases of goods and services cover expenses on store and supplies, fuel and light, maintenance of buildings and works, rents, and other services as well as estimates of consumption of fixed capital owned and used by the government in the process of operation. Sales include school fees, sales of publications, medical and dental charges, ticket receipts from recreational and cultural programmes organised by the general government and revenues from other miscellaneous services rendered by the general government.

2.24 Expenditures incurred by the government in respect of subvention to private organisations are excluded in calculating GCE. Such expenditures are treated as transfer payments in the national accounting framework. Subvention expenditures are primarily utilised to finance the activities of NPISHs. The expenditure of these institutions has been separately accounted for in PCE (see paragraph 2.2).

2.25 In view of the establishment of the Hospital Authority, the sectoral classification of the ex-subsidised hospitals (now called public hospitals) has been reviewed in accordance with the guidelines published in the *System of National Accounts*. Ex-subsidised hospitals, which were previously classified as “producers of private non-profit services”, are now classified as “producers of government services” because after the establishment of the Hospital Authority, ex-subsidised hospitals started to function as instruments of the government to implement the provision of subsidised hospital services to the general public.

2.26 在計算 1992 年的政府消費開支按年增長率時，1991 年的數字已作出調整。調整後的數字，包括了前補助醫院的開支，可與 1992 年的政府消費開支數字直接比較。同樣，在計算 1992 年的私人消費開支按年增長率時，前補助醫院的開支已從 1991 年的私人消費開支數字內剔除，使該兩年的私人消費開支數字可作直接比較。這便可避免因分類改變而歪曲了按年增長率。

2.27 1972 年及以前的政府消費開支數據，是從庫務署署長的年報中取得，這些年報列出計至 3 月 31 日的各個財政年度內，每一個政府部門的實際開支。這些數據再轉以曆年為基礎，調整辦法是假定所有政府部門的開支在整個財政年度中是平均分布的。自 1973 年起，由於可從庫務署獲得按季的數字，所以毋須再作這項調整。有關半政府非牟利機構的數據是從就該些機構所進行的收入及開支特別統計調查中獲得。

2.28 根據聯合國倡議的「政府職能分類」，政府消費開支分為 9 項社會和經濟功能，包括：(1) 一般公共服務；(2) 公共秩序、安全和國防；(3) 經濟事務；(4) 環境保護；(5) 房屋和社區設施；(6) 保健；(7) 娛樂、文化和宗教；(8) 教育和 (9) 社會保障。透過把政府單位根據有意義的共同目的分類，「政府職能分類」可用於分析政府在特定功能的消費隨着時間的發展趨勢。有關按「政府職能分類」的政府消費開支詳情，請參閱政府統計處出版的 2005 年 12 月號《香港統計月刊》內題為「2000 年至 2004 年按社會和經濟功能劃分的政府消費開支的分析」的專題文章。

本地資本形成總額

2.29 本地資本形成總額包括本地固定資本形成總額，以及存貨的實質增減的價值。

2.30 本地固定資本形成總額是計算樓宇及建造，以及機器、設備及知識產權產品的投資開支總值。它顯示固定資產的總增幅。因此，購買現有的固定資產的開支，只涉及轉讓資產業權，並不計算在固定資本形成總額內。不過，轉讓資產業權的費用（包括繳付有關稅項）是在業權轉讓過程中使用服務須付出的費用，因而包括在內。

樓宇及建造

2.31 樓宇及建造的開支包括住宅樓宇、非住宅樓宇和其他建造工程的所建成工程部分的價值（即支付給承建商的費用及其他與物業發展直接有關的開支，例如建築設計及技術顧問服務等）及地產發展商的毛利。有關編製地產發展商毛利數字的詳情，請參閱第 2.33-2.34 段。樓宇及建造開支統計數字亦有按公營部門和私營部門分類列出。地產發

2.26 In calculating the year-on-year growth rate of GCE for 1992, the 1991 figure was adjusted to include the expenditure of ex-subsvented hospitals, so that it could be comparable with the GCE figure for 1992. Similarly, in calculating the year-on-year growth rate of PCE for 1992, the expenditure of ex-subsvented hospitals was excluded from the PCE figure for 1991 for comparability with the PCE figure for 1992. This avoids any distortion of the year-on-year growth rates due to the change in classification.

2.27 GCE data up to 1972 were obtained from the annual reports of Director of Accounting Services which gave the actual expenditure of each department by financial year ending 31 March. The data were adjusted to a calendar year basis by assuming that expenditures by all departments were evenly spread throughout the financial year. Since 1973, quarterly figures have been available from the Treasury and such adjustment is no longer required. Data in respect of quasi-government non-profit institutions are obtained from special enquiries on the income and expenditure of these institutions.

2.28 GCE is classified into 9 social and economic functions according to the Classification of the Functions of Government (COFOG) promulgated by the United Nations. These include: (1) general public services; (2) public order, safety and defence; (3) economic affairs; (4) environmental protection; (5) housing and community amenities; (6) health; (7) recreation, culture and religion; (8) education and (9) social protection. Through grouping government units by common meaningful purpose, COFOG enables analysis of trends in government consumption on particular functions over time. Details of COFOG are described in a feature article entitled "Analysis of Government Consumption Expenditure by Social and Economic Function, 2000 to 2004" in the December 2005 issue of the *Hong Kong Monthly Digest of Statistics* published by the Census and Statistics Department.

Gross domestic capital formation

2.29 Gross domestic capital formation (GDCF) consists of gross domestic fixed capital formation and the value of physical changes in inventories.

2.30 Gross domestic fixed capital formation is measured by the gross value of investment expenditure on building and construction as well as machinery, equipment and intellectual property products. It represents the gross addition to fixed assets. Expenditure incurred in the acquisition of existing fixed assets which corresponds simply to the transfer of ownership of the assets is therefore not included. Costs incurred in the transfer of ownership of assets (including related taxes or duties paid), representing payment for services used in the course of the ownership transfer, are nevertheless included.

Building and construction

2.31 Expenditure on building and construction relates to the value of construction works put in place (amounts payable to contractors, and other expenses directly related to property development, such as architectural design and technical consultancy services) in respect of residential buildings, non-residential buildings and other construction works as well as the real estate developers' margin (REDM). For details of compilation of REDM figures, please see paragraphs 2.33-2.34.

展商毛利只適用於私營部門。

2.32 由 1979 年起，私營部門的統計數字是根據屋宇建築、建造及地產業的「經濟活動按年統計調查」所搜集的數據計算。按季統計數字是根據「建造工程完成量按季統計調查」所搜集的數據編製，在獲取從按年統計調查所得的按年數據後，再作修訂。在較早年份，這些統計數字是根據比較粗略的資料編製，即利用建築物條例執行處編製的每月報告所載已獲發入伙紙的新落成樓宇和建築物的建造成本數據來計算。公營部門指政府部門、半政府機構和公營機構，例如香港鐵路有限公司（包括在 2007 年 12 月合併前的九廣鐵路公司）和香港機場管理局，並從這些機構的行政記錄取得相關數據。根據資產擁有權分類，出租公屋的建築開支屬公營部門開支，而「居者有其屋計劃」的建築開支則屬私營部門開支。

2.33 地產發展商的毛利量度發展商透過買地，安排建築師、承建商、工程師、設計師和其他有關的專業人士進行新建樓宇工程，以及負責統籌各有關工作單位所提供的服務。此外，他們並以本身或借來的款項為工程提供資金以及負責銷售樓宇單位。地產發展商從出售新建物業所得的毛利，可用來量度他們從事經濟活動的價值，並構成固定資本形成的組成部分。地產發展商的毛利是以物業售價減去物業所在的地皮市價和工程發展開支（包括支付給承建商的費用，建築、工程及其他專業人士的費用，以及有關的工程開支）的總和來作計算，並須作出調整，以扣除在工程發展期間，因地價升值而得的利潤。

2.34 1979 年及由 1981 年起的地產發展商毛利的估計是根據屋宇建築、建造及地產業的「經濟活動按年統計調查」結果編製。由於 1979 年以前及 1980 年均沒有進行統計調查，因此有關數字是利用相關的數量及價格變動，從 1979 年的基準數據推算出來。

擁有權轉讓費用

2.35 擁有權轉讓費用包括與轉讓土地及樓宇業權有關的開支，如印花稅、律師費和代理人的佣金。印花稅開支是根據政府徵收的物業交易印花稅計算。律師費及地產代理的佣金方面的開支，是根據在土地註冊處登記的物業轉讓數目、物業平均交易價和平均收費率計算出來。

Statistics of expenditure on building and construction are classified into private and public sectors. REDM is applicable to the private sector only.

2.32 Statistics for the private sector from 1979 onwards are based on data from the ASEA for Building, Construction and Real Estate Sectors. Quarterly statistics are compiled using data collected from the Quarterly Survey of Construction Output. Revisions are made when annual data become available from the annual survey. For earlier years, the statistics were compiled on a much cruder basis, using information on construction cost data of newly completed buildings for which occupation permits had been issued as recorded in the monthly reports of the Buildings Ordinance Office. The public sector covers government departments, quasi-government institutions and public corporations such as the MTR Corporation Limited (including KCRC before the merger in December 2007) and Airport Authority Hong Kong, and relevant data are obtained from their administrative records. According to the ownership criterion for classifying fixed assets into public and private sectors, construction expenditure on public rental housing is classified to the public sector whereas that on Home Ownership Scheme is classified to the private sector.

2.33 REDM measures the services rendered by developers to new building projects through acquiring land; arranging and co-ordinating architects, building contractors, engineers, designers and other related professionals to carry out the development of building and construction projects; financing the development of the projects either with their own capital or borrowed capital; and marketing the building units. The gross margin from selling newly developed property is taken as a measure of the economic activity of real estate developers and is included as a component of fixed capital formation. The value of REDM is compiled by taking the sales value of property *less* the sum of the current cost of the land which the property stands on and the project development outlays (including payments to contractors, architectural, engineering, other professional fees and project related expenses). Adjustments are made to discount gains due to appreciation in land value over the course of project development.

2.34 The estimates of REDM for the reference years of 1979 and from 1981 onwards have been compiled based on the results of the ASEA for Building, Construction and Real Estate Sectors. Since no surveys were undertaken for 1980 and for years prior to 1979, the respective figures were derived from the 1979 benchmark data by applying relevant volume and price changes.

Costs of ownership transfer

2.35 Costs of ownership transfer include the expenditure incurred in connection with the transfer of ownership of land and buildings, such as stamp duties, legal fees and agents' commissions. Expenditure on stamp duties is based on the amount of stamp duties collected by the government in connection with property transactions. Expenditure on legal fees and real estate agents' commissions is computed based on the number of property transfer cases registered with the Land Registry, the average property transaction value and the average rate of charge.

2.36 機器及設備方面的投資開支，主要是根據留用進口資本貨品的價值來編製。方法跟編製食品及消費品的留用進口相似（參閱第 2.4 段）。投資開支是在留用進口價值上加上分銷商的毛利，作為經銷商的利潤、運費、裝嵌費、安裝費及其他費用。毛利數字是從進出口貿易、批發及零售業的「經濟活動按年統計調查」結果計算出來。在有製造業按季及按年統計調查結果的年份，有關本地製造且由本地商人購買的機器及設備的估計數字，是根據調查結果而計算。在沒有統計調查數據的年份，有關數字是根據基準數據，用外推法計算出來。機器及設備投資的開支數字亦有就分銷商所持有資本貨品的存貨增減作出調整，有關存貨數據是從進出口貿易、批發及零售業的「經濟活動按年統計調查」得來的。公營部門在機器及設備的投資開支，包括政府部門、半政府機構及公營機構（參閱第 2.32 段）在這方面的投資開支。政府部門的有關數據，是根據政府部門的帳目編製，而半政府機構及公營機構的數據，則是根據有關機構所提供的資料計算。私營部門在機器及設備的投資開支，是從投資開支總值減去公營部門的數字而計算得來。

2.37 知識產權產品涵蓋電腦軟件、資料庫，以及研究和發展開支。私營部門用於知識產權產品（包括購買及自行開發的產品）的開支數據主要透過政府統計處進行的按年經濟統計調查和「創新活動統計調查」搜集。有關的數據分別自 1998 年和 2001 年統計年度起搜集，較早年份的數列則是使用代指標作出後向估計。公營部門，即政府部門、半政府機構及公營機構用於知識產權產品的投資開支數據是從政府帳目及有關機構填報的資料獲得。並輔以電腦專業人員進行電腦系統設計和程式編寫工作的僱員報酬及有關的非勞工開支的估計。

存貨增減

2.38 存貨增減指在一段會計期內，製造商、批發商、零售商以及其他分銷商，以至所有一般行業所持有的半製成品、原料及各類貨品的存貨量的實質增減價值。但除了製造業及分銷業外，其他行業應不會持有大批存貨。

2.39 存貨增減的計算方法是以存貨的入庫價值減去出庫價值，並就在會計期內由於價格變動所引致存貨的增值（或貶值）作出調整。在國民經濟核算中，存貨交易的處理方法與其他資產交易的處理方法相同。當貨品進入存貨後，便成為擁有者的資產。存貨增減是整體經濟活動的一部分，並記錄在

2.36 Investment expenditure on machinery and equipment is mainly compiled from the value of retained imports of capital goods. The method used is similar to that used in compiling the retained imports of food and consumer goods (see paragraph 2.4). A distributors' margin is then added to this value to allow for dealers' profits, transportation and assembly charges, installation and other expenses. The margin is derived from results of the ASEA for Import / Export, Wholesale and Retail Trades. Estimates of domestically manufactured machinery and equipment locally purchased are based on the results of the quarterly and annual surveys of the manufacturing sector where available, and extrapolation from the benchmark data for those years in which survey data were not available. An adjustment for changes in distributors' inventories of capital goods is also made, based on relevant data obtained from the ASEA for Import / Export, Wholesale and Retail Trades. Public sector investment expenditure on machinery and equipment comprises that of government departments, quasi-government institutions and public corporations (see paragraph 2.32). The data for government departments are derived from the accounts of government departments, while those for quasi-government institutions and public corporations are based on information supplied by the respective bodies. Private sector investment expenditure on machinery and equipment is derived by deducting the public sector figures from the overall value.

2.37 Intellectual property products include computer software, databases, and expenditure on research and development. Data on expenditure on intellectual property products (including those purchased and developed in-house) by the private sector are mainly collected through annual economic surveys and Survey of Innovation Activities conducted by the Census and Statistics Department since the reference years of 1998 and 2001 respectively. Backcasting of data series to earlier years was made using proxy indicators. Data on investment expenditure on intellectual property products by the public sector, viz. government departments, quasi-government institutions and public corporations are obtained from records of government accounts and returns of respective bodies. This is supplemented by the estimates of the compensation of employees to professional computer specialists for system design and programming and the data on the corresponding non-labour costs.

Changes in inventories

2.38 Changes in inventories (CIV) refer to the value of physical change, over an accounting period, in the inventories of work-in-progress, raw materials and all kinds of goods held by manufacturers and wholesalers, retailers and other distributors, and in fact all business enterprises in general. However, businesses other than those engaged in manufacturing and distribution activities are not expected to hold significant level of inventories.

2.39 CIV is measured by the value of the entries into inventories less the value of withdrawals, with adjustment for appreciation (or depreciation) in the value of inventories due to price changes during the accounting period. In national accounting, transactions involving inventories are treated in the same way as transactions involving other assets. When a product is entered into inventories, it is acquired as an asset by the owner.

以開支面編製本地生產總值的資本形成組別內。

2.40 存貨增減估計數字包括以下的貨品類別：燃料、食品、消費品、資本貨品、原料及半製成品。燃料方面，石油公司的碳氫油類按季存貨數量數據，由機電工程署提供。至於其他類別的貨品，用作編製存貨增減估計數字的數據，主要從工業的「經濟活動按年統計調查」和進出口貿易、批發及零售業以及住宿及膳食服務業的「經濟活動按年統計調查」中獲得。至於沒有統計調查數據的年份，則採用較為粗略的方法進行估算。

2.41 由於「經濟活動按年統計調查」進行後要經一段時間始有結果，有關製造商和分銷商存貨增減的季度估計數字，是根據從「零售業銷貨額按月統計調查」、「服務行業按季統計調查」及「工業生產按季統計調查」所搜集得的數據編製而成的。

2.42 編製以當時價格計算的存貨增減估計數字時，須把期初至期末間由於存貨增值（或貶值）而引起的存貨帳面上增加（或減少）的數額剔除。在國民經濟核算中，此舉純屬會計上的調整。調整存貨增／貶值的辦法，是利用適當的物價指數，按期間的當時平均價格水平，重估期初和期末的存貨的帳面價值。此兩個經調整的存貨價值的差額，便是存貨量的實質增減價值。

貨品出口及進口與服務輸出及輸入

貨品出口及進口

2.43 貨品出口包括以離岸價計算的本地產品出口及貨品轉口。貨品進口亦是以離岸價計算的。以離岸價計算進口貨值，是把由「進口貿易保險費及運費按月統計調查」所得結果估算的保險費及運費，從對外商品貿易統計系統中以到岸價計算的進口貨值中剔除而獲得。非貨幣黃金的進出口亦包括在內。

2.44 在本地生產總值架構下，貨品出口及進口數字是根據《2008年國民經濟核算體系》的標準，採用所有權轉移原則記錄外地加工貨品及轉手商貿活動編製而成的。輸往外地加工的貨品及加工後運回香港的貨品，因沒有涉及實際買賣活動，所以該等貨品不會記錄在貨品貿易內，而所支付給加工單位的加工費，則會記錄在服務貿易內（作為服務輸入）。至於透過分判加工程序生產，在加工後沒有運回香港而直接售給香港以外地方的貨品，由於涉及所有權轉移，有關貨品會記錄在貨品出口內。

2.45 轉手商貿活動指從境外賣家買入並直接賣

The CIV is an integral part of economic activities and is recorded under capital formation in the GDP measured by the expenditure approach.

2.40 Estimates of CIV cover the following categories of goods: fuel, food, consumer goods, capital goods, raw materials and work-in-progress. For fuel, data on quantities of hydrocarbon oil kept as inventory by oil companies are obtained from the Electrical and Mechanical Services Department on a quarterly basis. For other kinds of goods, data for compiling the CIV estimates are mainly obtained from the ASEA for Industrial Sector and ASEA for Import / Export, Wholesale and Retail Trades, and Accommodation and Food Services Sectors. For years in which data from surveys were not available, cruder methods of estimation were applied.

2.41 As data from the ASEA are available with a time lag, quarterly estimates of changes in manufacturers' and distributors' inventories are compiled based on data collected from the Monthly Survey of Retail Sales, the Quarterly Survey of Service Industries and the Quarterly Survey of Industrial Production.

2.42 Compilation of estimates of CIV at current prices involves the elimination of increases (or decreases) in the book values of inventories between the beginning and the end of the period concerned due to appreciation (or depreciation) of inventories, which is treated as purely a financial adjustment in national accounts. The adjustment for appreciation / depreciation of inventories is made by revaluing the opening and closing book values of inventories at the average current prices of the period by means of appropriate price indices. The value of physical changes in inventories is then the difference of the two re-valued figures.

Exports and imports of goods and services

Exports and imports of goods

2.43 Exports of goods include domestic exports and re-exports of goods recorded on f.o.b. basis. Imports of goods are also valued on f.o.b. basis. To derive import values on f.o.b. basis, values of insurance and freight costs as estimated from results of the Monthly Survey on Insurance and Freight Costs for Import Trade are removed from the import values recorded on cost, insurance and freight (c.i.f.) basis under the external merchandise trade statistics system. Exports and imports of non-monetary gold are also included.

2.44 Figures on exports and imports of goods in the context of GDP are compiled based on the change of ownership principle in recording goods sent abroad for processing and merchanting under the standards stipulated in the 2008 SNA. For goods sent abroad for processing and subsequently returned to Hong Kong which do not involve any actual buying and selling activities, they are not recorded as trade in goods. Instead, the processing fees paid to the processing units are recorded as trade in services (as imports of services). For goods manufactured through sub-contract processing arrangement which are subsequently sold to places outside Hong Kong without having been imported into Hong Kong after processing, they are recorded as exports of goods since a change of ownership is involved.

2.45 Merchanting relates to activities associated with the trading of goods which are purchased from and then sold to parties

給香港以外買家的貨品買賣活動，而有關貨品沒有進出香港。從事轉手商貿活動者具有所涉及貨品的物主身分。由於該些貨品涉及實際買賣活動，故此儘管有關貨品並沒有進出香港，根據所有權轉移原則，有關貨品也會記錄在貨品貿易內。在轉手商貿活動下，出售的貨品價值記錄在香港的貨品出口內，另一方面，香港貿易商從外地貿易商購入作轉售的貨品價值，則記錄為貨品負出口。

服務輸出及輸入

2.46 服務輸出及輸入指一個經濟體的「本地居民」與「非本地居民」之間進行的交易。有關服務輸出及輸入的概念、定義和分類方法，是根據《國際收支平衡手冊》和《國民經濟核算體系》所開列的國際建議而訂定的。在本地生產總值架構下，服務輸出及輸入數字是根據《2008年國民經濟核算體系》的標準，採用所有權轉移原則編製而成的。各個服務組成部分所涵蓋的範圍如下：

- (1) 運輸包括以各種運輸模式（空運、海運和其他）提供的貨運和客運服務，以及其他分銷和輔助服務如貨運代理、連操作人員的運輸工具租賃、貨櫃碼頭和機場服務，以及郵遞和速遞服務。
- (2) 旅遊包括非居民旅客因商務或私人理由到訪某個經濟體時所購買的貨品和服務。旅遊輸出主要包括到訪旅客的消費，而旅遊輸入則指香港居民在境外購買貨品和服務的開支。
- (3) 保險及退休金服務包括直接保險和分保服務，涉及人壽、貨運以及其他非人壽保險如意外及健康保險，以及船舶、航機及其他交通工具保險。
- (4) 金融服務包括投資銀行服務、財務租賃服務、金融資產交易及經紀服務、投資組合管理服務、信託服務、證券保管服務、外幣兌換服務、金融中介服務及其他支援性的金融中介服務。
- (5) 製造服務包括在物料上進行的加工、裝配及標籤，而提供這些製造服務的加工單位並不擁有有關貨品。
- (6) 除上述的服務組成部分外，服務輸出及輸入亦包括多種不同類別的服務：保養及維修服務；建造服務；知識產權使用費；電子通訊、電腦及資訊服務；其他

outside Hong Kong without the goods ever entering and leaving Hong Kong, while the trader engaged in merchanting takes ownership of the goods involved. Such goods which involve actual buying and selling activities are recorded as trade in goods according to the change of ownership principle, despite the fact that these goods do not enter or leave Hong Kong. Under merchanting, the value of goods sold are recorded as Hong Kong's exports of goods, and on the other hand, the values of goods acquired by the Hong Kong traders from non-resident traders for resale are recorded as negative exports of goods.

Exports and imports of services

2.46 Exports and imports of services represent transactions between “residents” and “non-residents” of an economy. The concept, definition and classification of exports and imports of services are based on international recommendations given in the *Balance of Payments Manual* and the *System of National Accounts*. Figures on exports and imports of services in the context of GDP are compiled based on the change of ownership principle under the standards stipulated in the *2008 SNA*. The coverage of different service components is as follows:

- (1) Transport includes freight and passenger transportation by all modes of transportation (air, sea and others) and other distributive and auxiliary services such as cargo forwarding, rentals of carriers with crew, container terminal and airport terminal services, and postal and courier services.
- (2) Travel includes goods and services acquired in an economy by non-resident travellers for business and personal purposes during their visits to that economy. Exports of travel cover mainly visitor spending whereas imports of travel relate to expenditure on all goods and services acquired by Hong Kong residents travelling abroad.
- (3) Insurance and pension services include services provided for direct insurance and reinsurance in respect of life, freight and other non-life insurance such as accident and health insurance; and marine, aviation and other transport insurance.
- (4) Financial services include investment banking services; financial leasing services; financial asset dealing and brokerage services; portfolio management services, trust services, security custody services, foreign exchange services, financial intermediation services and other services auxiliary to financial intermediation.
- (5) Manufacturing services include activities such as processing, assembly and labelling, where the services are undertaken by processing units that do not own the goods concerned.
- (6) Apart from the above-mentioned service components, exports and imports of services also include a wide variety of services: maintenance and repair services; construction services; charges for the use of intellectual property;

商業服務（例如：研究及發展、法律、會計、核數、簿記及稅務顧問、商業及管理顧問，以及公共關係、廣告、市場研究及公眾意見調查、建築、工程、科學及其他技術、營運租賃；與貿易相關的服務和雜項商業服務）；個人、文化及康樂服務；以及政府貨品及服務（境外駐港機構官員及其家屬在本港的開支和政府駐境外辦事處的開支）。

2.47 編製本地居民在境外開支（服務輸入）的估計數字，是根據行政記錄和住戶統計調查所搜集的數據。編製旅客在香港開支（服務輸出）的估計數字，是根據香港旅遊發展局所提供的數據。境外駐港機構官員及其家屬在香港的開支是根據這類留港人士的數目及其平均開支來估算的。境外駐港機構包括外國領事館及商務專員公署。政府海外辦事處在境外的開支及政府在境外的雜項開支的數據則從政府帳目中獲得。金融中介服務數值是根據「對外申索、負債及收益統計調查」所搜集的數據，並採用「參照利率」²的方法間接地量度出來。銀行、接受存款公司、有限牌照銀行及外地銀行代表辦事處的「經濟活動按年統計調查」自1980年統計年度起搜集銀行服務輸出及輸入的數據。其他服務類別的估計數字主要根據「服務輸入及輸出按年統計調查」所搜集的數據，並輔以行政數據而編製。「服務輸入及輸出按年統計調查」自1978年統計年度起進行。較早年份的估計數字，是參考1978年的估計數字以及貨品進出口數據編製而成的。由於數據方面的局限，未能就每項服務數列提供詳細的分項數字。

2.48 政府統計處不斷致力改良各經濟統計調查和其他行政數據來源中有關服務輸出及輸入的涵蓋範圍。「服務輸入及輸出按年統計調查」自1995年統計年度起，已加強搜集按服務類別劃分的服務貿易數據。從加強了的「服務輸入及輸出按年統計調查」所搜集的基準數據亦用作後向估計按服務類

telecommunications, computer and information services; other business services (e.g. research and development, legal, accounting, auditing, book-keeping, tax consultancy, business and management consulting and public relations, advertising, market research and public opinion polling, architectural, engineering, scientific and other technical, operational leasing, trade-related services and miscellaneous business services); personal, cultural and recreational services; and government goods and services (expenditure of employees of extra-territorial bodies and their dependants in Hong Kong and expenditure of government offices abroad).

2.47 Estimates of residents' expenditure abroad (an imported service) are based on administrative data and household surveys. Expenditure of visitors in Hong Kong (an exported service) is estimated based on data provided by the Hong Kong Tourism Board. Expenditure of employees of extra-territorial bodies and their dependants in Hong Kong is estimated based on the number of such persons staying in Hong Kong and their average expenditure. Extra-territorial bodies include foreign consulates and trade commissions. Data on expenditure abroad of overseas offices and miscellaneous expenditure abroad of the government are obtained from the government accounts. The values of financial intermediation services are based on data collected from the Survey of External Claims, Liabilities and Income and indirectly measured using the "reference rate"² method. The ASEA for Banks, Deposit-taking Companies, Restricted Licence Banks and Representative Offices of Foreign Banks has been conducted since the reference year of 1980 to collect data on exports and imports of banking services. Estimates in respect of other service categories are mainly based on data collected from the Annual Survey of Imports and Exports of Services, supplemented by administrative data. The Annual Survey of Imports and Exports of Services has been launched starting from the reference year of 1978. For earlier years, the estimates were compiled with reference to the 1978 estimates and data on exports and imports of goods. Owing to data limitations, breakdowns by type of services cannot be provided.

2.48 The Census and Statistics Department has made continuous effort to improve the coverage of exports and imports of services in economic surveys and other administrative data sources. The Annual Survey of Imports and Exports of Services has been enhanced as from the reference year of 1995 to collect trade in services data by type of services. Benchmark data collected from the enhanced Annual Survey of Imports and

² 「參照利率」是一個不考慮服務因素，且能適當地反映存貸款的風險和期限結構的利率。銀行間拆借利率不包含任何金融中介服務因素，是一個合適的參照利率。運用參照利率的概念可以估計金融中介服務的產值，以及不同的存款者和貸款者（例如住戶、商業機構單位、非本地居民）使用該等服務的價值，估計的方法如下：

- i 每一類存款者使用金融中介服務的價值，相等於該類別的存款總額乘以該類存款者的平均息差；
- ii 同樣地，每一類貸款者使用金融中介服務的價值，相等於該類別的貸款總額乘以該類貸款者的平均息差。

² The "reference rate" of interest refers to the rate that should contain no service element and duly reflect the risk and maturity structure of deposits and loans. The rate prevailing for inter-bank borrowing and lending which does not include element of financial intermediation services provides a suitable choice as a reference rate.

Using the concept of reference rate of interest, the output of the financial intermediation services and the value of subsequent consumption of these services by different types of depositors and borrowers (e.g. households, business establishments, non-residents) can be estimated as follows:

- i For each type of depositor, the value of financial intermediation services consumed is equal to the stock of deposits multiplied by the average interest margins of that type of depositor;
- ii Similarly, for each type of borrower, the value of financial intermediation services consumed is equal to the stock of loans multiplied by the average interest margins of that type of borrower.

別劃分的過往數列。

2.49 服務輸出及輸入按季統計數字的編製，參考了對外商品貿易數據、政府統計處在按季統計調查所搜集的數據，以及各政府部門提供的數據。就根據統計調查數據而編製的初步數字而言，及後會根據「服務輸入及輸出按年統計調查」搜集到的最新結果，作出修訂。

以環比物量計算按開支組成部分劃分的本地生產總值

2.50 概念上，以當時價格計算的本地生產總值隨時間的變動可被分解成兩個部分：(1) 所生產或購買的貨品及服務的價格變動，及 (2) 其物量的變動。要量度本地生產總值及其組成部分的物量增長，須撇除價格變動的影響。以物量計算的本地生產總值的按年變動提供一個量度某經濟體的「實質」增長的指標。

2.51 以物量計算的本地生產總值及其組成部分，是採用按年重訂權數及環比連接法編製而成的。在編製某一年度的本地生產總值的物量估計時，首先是根據對上一年的價格重新計算本地生產總值各個主要組成部分的物量估計，編製的方法是就各個組成部分中的最細分項目，採用相關的價格指數「平減」以當時價格計算的數值（或在某些情況下以對上一年的價格及當時數量重新計算數值）。本地生產總值的物量估計是把按對上一年價格計算的各個主要組成部分的物量估計涵總而得出。由於價格變動的因素已被撇除，物量估計可反映本地生產總值的實質增長。根據對上一年權數所編製的以物量計算的本地生產總值及其組成部分再以環比的方式連接到所選定的參照年，便可得出以環比物量計算的本地生產總值及各組成部分的連續時間數列。

2.52 在編製本地生產總值的物量數字時，「基年」與「參照年」應視為兩個獨立的概念。

2.53 *基年*指編製總體物量估計時所採用的價格結構作為權數的所屬年份。就以環比物量計算的本地生產總值而言，基年原則是對上一年。以環比物量計算的總體物量所採用的價格權數是會每年更新（因此應用了「按年重訂權數」的概念）。就統計方法而言，這與以固定價格計算的本地生產總值數列作每年更新基年的效果相同。以環比物量計算的本地生產總值採用了最新的價格結構作為權數來涵總各組成部分的物量估計，因此能較佳地量度一個經濟體的實質增長率。

2.54 *參照年*指編製物量估計時間數列時的參照年份。按對上一年價格權數計算的物量計量，反映本地生產總值及其組成部分在兩個相連年份之間的物量變動。參照年的目的是提供一個參照時點，以便把年與年之間的物量變動連接起來，以獲得總

Exports of Services are used for backcasting the historical series by type of services.

2.49 Quarterly statistics of exports and imports of services are compiled with reference to external merchandise trade data, data from quarterly surveys conducted by the Census and Statistics Department and data from various government departments. For survey-based data, the preliminary figures are subsequently revised to incorporate latest available results from the Annual Survey of Imports and Exports of Services.

Chain volume measures of GDP by expenditure component

2.50 Conceptually, changes over time in the GDP at current prices can be factored into two components, reflecting (1) changes in the prices of goods and services produced or purchased, and (2) changes in their volumes. In order to measure the volume growth of GDP and its components, the effect of price changes has to be eliminated. The year-on-year change in the volume measure of GDP gives a measure of the “real” growth of an economy.

2.51 To compile the volume measures of GDP and its components, the annually re-weighted chain linking approach is adopted. For a particular year, the volume estimates of major components of GDP revalued at preceding year prices are first derived by “deflating” the current price values of sub-components by the relevant price indices (or in some cases by revaluing the current period quantities at preceding year prices) at the most disaggregated levels. The volume estimate of GDP is then obtained by aggregating the volume estimates of GDP major components revalued at preceding year prices. With the effect of price changes eliminated, the volume estimate reflects the real growth of GDP. The preceding-year weighted volume measures of GDP and its components are chain linked to a selected reference year in order to obtain a continuous time series of the chain volume measures of GDP and its components.

2.52 In the compilation of the volume measures of GDP, “base year” and “reference year” are two concepts that should be seen as independent.

2.53 *Base year* refers to the year from which the price structures are used as weights for deriving the aggregate volume measures. For the chain volume measures of GDP, the base year is always the preceding year in principle. The price weights for the chain volume measures are updated every year (hence the concept of “annually re-weighted”). Statistically speaking, it has the same effect of rebasing the constant price GDP series every year. The chain volume measures of GDP take account of the up-to-date price structures as weights in aggregating the volume estimates of the GDP components, thus providing a better measure of the real growth rate of an economy.

2.54 *Reference year* refers to the year to which the time series of the volume measures is referenced. The preceding-year weighted volume measures reflect the change in volume of GDP and its components between two adjacent years. The purpose of the reference year is to provide a reference time point for linking up these year-to-year movements in volume terms in order to

體物量連續的時間數列(因此應用了「環比連接法」的概念)。參照年是會每年更新的。

obtain a continuous time series of the aggregate volume measure (hence the concept of “chain linking”). The reference year is updated annually.

2.55 如根據基年的價格重新計算本地生產總值的物量估計，其程序比較簡單。但如用平減物價的方法，在選擇指數數字時會產生一些實際的問題。例如，嚴格來說，要把當時價格平減，應採用以當時權數加權的價格指數，但價格指數數列，例如消費物價指數，通常是按基年權數加權而編製，而沒有以當時權數加權的數列。然而，這不會令以物量計算的本地生產總值數列出現嚴重的問題，尤其是當平減過程是在最細分項目的層面進行。

2.55 Where revaluation at base-year prices is involved in the compilation of volume estimates of GDP, the procedure is relatively straightforward. But where the deflation method is used, there are some practical issues associated with the choice of index numbers. For instance, current-weighted price indices, strictly speaking, are required for deflating current values. But price index series, e.g. the Consumer Price Index (CPI), is usually available in base-weighted form and current-weighted series is not available. This, however, will unlikely introduce serious problems to the GDP volume series, especially when the deflation process is carried out at the most detailed level.

2.56 下表列出本地生產總值各開支組成部分的物量估計編製方法：

2.56 The methods for compiling the volume estimates of various expenditure components of GDP are summarised below:

開支組成部分
Expenditure component

方法
Method

私人消費開支

Private consumption expenditure

本地市場的消費開支
Consumption expenditure in
the domestic market

多數項目是以個別消費物價指數平減每組的開支。某些開支項目則以基年的價格把數字重估。為住戶提供服務的私人非牟利機構的開支是以政府僱員的薪金率指數平減。

Most of the items are deflated by CPIs at PCE group level. Other items are revalued at base-year prices. Expenditure of NPISHs is deflated by the salary rate index for government employees.

本地居民在境外的開支
Expenditure of residents
abroad

以若干國家的消費物價指數的綜合價格指數平減。
Deflated by a composite price index derived based on the CPIs of various countries.

非本地居民在本地的開支
Expenditure of non-residents
in Hong Kong

以旅客價格指數平減；該指數是根據消費物價指數內的相關組成部分指數及旅客購買的各項貨品及服務的平均價格變化而編製。至於以物量計算的在香港求學的留學生的開支和境外駐港機構官員及其家屬在香港的開支是把這些類別人士的數目乘以相應的基年平均開支而得出來的。

Deflated by a tourist price index derived based on relevant component indices in CPIs and average price changes of various tourist products and services, except for expenditure of non-resident students studying in Hong Kong and expenditure of employees of extra-territorial bodies and their dependants in Hong Kong which are obtained by multiplying the number of such persons and their corresponding average expenditure in the base year.

政府消費開支

Government consumption expenditure

僱員報酬
Compensation of employees

以政府僱員的薪金率指數平減。
Deflated by the salary rate index for government employees.

購買貨品及服務
Purchases of goods and
services

以政府購買貨品及服務的價格指數平減。
Deflated by the price index for government purchases of goods and services.

政府售予家庭住戶及企業的銷售額
Sales by government to
households and enterprises

以政府向住戶及企業銷售的產品及服務的價格指數平減。
Deflated by the price index of sales by government to households and enterprises.

本地資本形成總額
Gross domestic capital formation

建造工程完成量
Construction output

由 1991 年第 1 季統計期開始，建造工程完成量是透過採用一套按類別劃分的建造工程完成量平減物價指數進行平減。該等指數是參考包括由香港房屋委員會、建築署，及私營物業測量機構編製的投標價格指數；由土木工程拓展署編製的土木工程指數；以及由建築署編製的屋宇設備投標價格指數而計算的。由於缺乏有關數據（例如各建造工程的投標日期），以致未能在 1991 年第 1 季統計期之前採用按類別劃分的平減物價指數，由建築署編製的建築成本指數為主要採用的平減物價指數。

Starting from the reference period of first quarter 1991, construction output in real terms is derived based on a set of type-specific output deflators. Such deflators are derived with reference to tender price indices compiled by the Hong Kong Housing Authority, the Architectural Services Department and private quantity surveying firms; Civil Engineering Works Index compiled by the Civil Engineering and Development Department; and Building Services Tender Price Index compiled by the Architectural Services Department. It was however not possible to adopt the type-specific deflators for earlier periods mainly due to the lack of relevant data (e.g. tender date of individual construction projects), the Building Cost Index compiled by the Architectural Services Department was the main deflator used.

地產發展商的毛利
Real estate developers' margin (REDM)

以物量計算的地產發展商毛利，是根據基年的地產發展商毛利（以當時價格計算），以及私營部門所建樓宇在統計年建成量的按年實際增長率而推算。The REDM in volume terms is derived by applying the annual real growth rate of the output in respect of private sector buildings in the reference year to the REDM at current prices in the base year.

擁有權轉讓費用
Costs of ownership transfer

律師費是以差餉物業估價署編製的物業價格指數平減，再以律師收費率的指數平減。至於印花稅，則是以差餉物業估價署編製的物業價格指數平減，再以印花稅率的指數平減。地產代理佣金是以差餉物業估價署編製的物業價格指數平減，再以地產代理佣金率的指數平減。

The legal fees are deflated by the property price indices compiled by the Rating and Valuation Department and then further deflated by the index of the rate of legal charges. For stamp duties, data are deflated by the property price indices compiled by the Rating and Valuation Department and then further deflated by the indices of stamp duty rates. The real estate agents' commissions are deflated by the property price indices compiled by the Rating and Valuation Department and then further deflated by the index of the rate of commissions for real estate agents.

機器及設備
Machinery and equipment

機器及設備的進口數值及轉口數值是分別以資本貨品的進口物價指數及轉口物價指數平減，得出以物量計算的機器及設備留用進口。本地製造且由本地商人購買的機器及設備的估計數字，是以留用進口機器及設備的內含平減物價指數平減。

The import value and the re-export value of machinery and equipment are deflated by the import price index and re-export price index of capital goods respectively to derive the volume measure of retained imports of machinery and equipment. The value of domestically manufactured machinery and equipment locally purchased is deflated by the implicit price deflator of the retained imports of machinery and equipment.

本地資本形成總額 (續)
Gross domestic capital formation (cont'd)

知識產權產品
Intellectual property
products

因美國是知識產權產品的主要生產者及供應者，所以由美國經濟分析局編製的物價指數被用作購買軟件和其他知識產權產品的平減物價指數。自行開發的知識產權產品的當時價格數據，則以相關的薪酬指數及非勞工開支的物價指數進行平減。

The price index compiled by the U.S. Bureau of Economic Analysis is adopted as the price deflator for purchased software and other intellectual property products considering that the U.S. is the major producer and supplier of relevant products. For intellectual property products developed in-house, the relevant salary indices and price indices of non-labour costs are used to deflate the current price data.

存貨增減
Changes in inventories

製造業存貨是以本地產品出口和留用進口原料的綜合價格指數平減；而分銷業的存貨則是以有關貨品組別（即食品、消費品、原料和資本貨品）的留用進口價格指數平減。石油產品存貨則以增減數量按基年的價格重估。

Inventories of the manufacturing sector are deflated by a composite price index based on the price indices of domestic exports and retained imports of raw materials whilst inventories of the distributive trades are deflated by the price indices of retained imports of the respective commodity groups (*i.e.* food, consumer goods, raw materials and capital goods). For petroleum products, the quantities of changes in inventories are revalued at base-year prices.

貨品出口及進口
Exports and imports of goods

貨品出口及進口實質總額的計算方法，是首先把以當時價格計算的數字，在貨品的分項層面平減，然後把各分項經平減後的數值加起來。

Real aggregates of exports and imports of goods are derived by deflating the current price figures at disaggregated levels and then adding up the deflated sub-aggregates.

服務輸出及輸入
Exports and imports of services

就大多數的服務類別來說，是把以當時價格計算的數據，使用特別編訂的價格指數進行平減。採用的價格指數包括旅客價格指數及主要旅遊目的地的消費物價指數、生產者價格指數和其他與生產投入成本有關的價格指數。而若干服務類別的物量估計，則是利用數量指標及按基年的價格重估而推算。

For most categories of services, the current price data are deflated by specially constructed price indices. These include tourist price index and consumer price indices of major destinations in respect of travel, producer price indices and other input-related price indices. For some categories, the volume estimates are derived using quantity indicators and revaluation at base-year prices.

2.57 每年的本地生產總值物量指數是把該年本地生產總值的物量估計除以對上一年以當時價格計算的本地生產總值而得出。把各年份按對上一年權數計算的物量指數以環比的方式連接到所選定的參照年，便可得出本地生產總值及各組成部分的環比物量指數的連續時間數列。環比物量指數數列是可以轉換為以環比物量計算的價值的，方法是把相關的環比物量指數乘以參照年的以當時價格計算的數值。換言之，以環比物量計算的價值是應用環比物量指數作為外推指標，以外推法把參照年的以當時價格計算的數值向前及向後推算。因此，根據以環比物量計算的價值所計算的本地生產總值及其組成部分的實質增長率，與根據相應的環比物量指數所計算的實質增長率是相同的。

2.57 For each year, the volume index of GDP is calculated by dividing the volume estimate of GDP for that year by the current price GDP for the preceding year. To obtain a continuous time series of the chain volume indices of GDP and its components, the preceding-year weighted volume indices for various years are chain linked to a selected reference year. The chain volume index series can be converted into the chained dollar series by multiplying the chain volume index for each year by the current price value for the reference year. In other words, the chained dollar series is derived by extrapolation of the current price value for the reference year backward and forward using the chain volume index as the extrapolator. Thus, real growth rates of GDP and its components calculated from the chained dollar estimates are the same as those calculated from the corresponding chain volume indices.

2.58 由於在編製以環比物量計算的數列時，本

2.58 As the extrapolation process is carried out for GDP and its components independently in calculating the chained dollar

地生產總值及其組成部分的外推過程是獨立地進行（以確保不影響本地生產總值及其組成部分過往的實質增長率），所以參照年以前時段的以環比物量計算的本地生產總值與其以環比物量計算的組成部分的總和可能出現差額。在接近參照年的年份，差額的幅度通常較小，但當距離參照年越遠，差額的幅度會逐漸擴大。

2.59 應注意的是，環比物量價值出現不可相加的性質純粹是基於數學理由，因此有關差額不應被視為反映本地生產總值統計數字的數據質素的指標。國際統計指引並不建議對本地生產總值環比物量價值的不可相加數列作出調整，因為這會影響物量數列的質素。畢竟，編製以物量計算的本地生產總值的主要目的，是提供一個較佳的指標以量度一個經濟體在一段時間內的實質增長。

各組成部分在本地生產總值的按年實質變動百分率中所佔的比率

2.60 本地生產總值各組成部分在本地生產總值實質變動百分率中所佔的比率，可量度個別組成部分的變動對本地生產總值變動率的影響。計算個別組成部分 *i* 在某季 *t* 的本地生產總值的按年實質變動百分率中所佔的比率的方法，是把該組成部分 *i* 在某季 *t* 的按年實質變動百分率乘以該組成部分 *i* 在對上一年相同季度內相對本地生產總值的物量比率而得來。

本地生產總值及其組成部分的內含平減物價指數

2.61 要計算本地生產總值及其開支組成部分的內含平減物價指數，須把以當時價格計算的有關數值除以相應的以物量計算的數值，然後再乘以 100。本地生產總值及本地內部需求的內含平減物價指數，都是通貨膨脹的衡量標準。本地生產總值是把貨品及服務方面的最終開支（包括私人消費開支、政府消費開支、本地資本形成總額以及貨品出口及服務輸出）的總和，減去貨品進口及服務輸入。本地內部需求是私人消費開支、政府消費開支及本地資本形成總額的總和。兩者的內含平減物價指數的計算方法大致相同，是把以當時價格計算的有關組成部分的總和，除以相應的以物量計算的數值，然後再乘以 100。換言之，本地生產總值及其開支組成部分的內含平減物價指數，並不是用以計算相關的以物量計算的數值的。同一原理，本地生產總值及其主要開支組成部分的實質變動率，並不是使用有關的內含平減物價指數變動率和以幣值計的相應變動率計算出來。有關的實質變動率是透過比較兩段時期的物量數值而直接計算的。

2.62 本地生產總值及其組成部分的內含平減物價指數並不是價格變動的直接量度指標，它們是由以當時價格及以物量計算的數據所衍生出的價格變動指標。

series (in order to preserve the historical real growth rates of GDP and its components), discrepancies may exist between the chain volume measure of GDP and the sum of the chain volume measures of its components for periods prior to the reference year. The extent of non-additivity is usually small for periods around the reference year and the discrepancy enlarges as the data series moves further away from the reference year.

2.59 It should be noted that such non-additivity arises from purely mathematical reasons; the discrepancies should not be interpreted as an indicator to reflect the data quality of GDP statistics. International statistical guidelines do not recommend adjustments for non-additivity of the chained dollar GDP series which will undermine the quality of the GDP volume measures. After all, the primary purpose of compiling the volume measures of GDP is to provide a good indicator of the real growth of an economy over time.

Component contribution to year-on-year percentage change in real terms of GDP

2.60 The contributions of GDP components to the percentage change in real terms of GDP provide a measure of the composition of GDP rate of change that is attributable to changes in individual components. The percentage point contribution of component *i* to the year-on-year percentage change of GDP in a particular quarter *t* is compiled by multiplying the year-on-year percentage change of component *i* in quarter *t* by the volume ratio of component *i* to GDP in the same quarter of previous year.

Implicit price deflators of GDP and its components

2.61 The implicit price deflators (IPDs) of GDP and its expenditure components are obtained by dividing the respective current price values by the corresponding volume measures and then multiplying by 100. Both the IPDs of GDP and domestic demand are measures of inflation. GDP is compiled as total final expenditure on goods and services (including PCE, GCE, GDCF and exports of goods and services), less imports of goods and services. Domestic demand is the sum of PCE, GCE and GDCF. The two IPDs are similarly derived by dividing the sum of the respective components at current market prices by the respective volume measures and then multiplying by 100. Hence as it stands, the IPDs of GDP and its expenditure components are not used as input for compiling the corresponding volume measures. By the same token, the growth rates in real terms of GDP and its main expenditure components are not derived from their corresponding growth rates in money terms using the rates of change in the respective IPDs. Rather, the growth rates in real terms are directly calculated by comparing the volume measures at two different periods.

2.62 The IPDs of GDP and its expenditure components are not direct measures of price changes. They are derived measures of price changes compiled based on the current price data and the volume estimates.

2.63 本地生產總值內含平減物價指數和消費物價指數的變動率通常都被數據使用者用作量度通貨膨脹（即價格水平的變動）。然而，本地生產總值內含平減物價指數的變動或會有別於消費物價指數的變動。本地生產總值內含平減物價指數的變動率，可用作概括地量度一個經濟體的整體通貨膨脹，這個指數涵蓋有關消費、投資和進出口的價格變動。而消費物價指數的變動率只量度住戶所購買的各類貨品及服務的價格變動。

經季節性調整的本地生產總值及其主要開支組成部分

2.64 本地生產總值及其中一些開支組成部分（包括私人消費開支、政府消費開支、貨品出口、服務輸出、貨品進口及服務輸入）的經季節性調整的按季數列，現時皆有編製。然而，由於本地資本形成總額並沒有明顯的季節性模式，所以並沒有就這組成部分編製經季節性調整的數列。

2.65 經季節性調整的本地生產總值數列，由於已使用統計方法剔除了季節性因素的影響，所以兩個相連季度的數字可以進行更有意義的比較。把本地生產總值原始季度數列的按年變動數字與經季節性調整的本地生產總值數列的相連季度變動數字一起進行分析，便能更清楚顯示本地生產總值的趨勢。

2.66 經季節性調整的本地生產總值及其組成部分的數列是採用「X-12自迴歸—求和—移動平均(X-12 ARIMA)」方法編製。X-12 ARIMA及其相關版本是編製經季節性調整數列的常用標準方法。該方法可用作檢測原有數列是否有離群值，以估算季節性因素。

2.67 雖然經季節性調整的本地生產總值數列能較迅速地反映經濟周期的轉向，但在闡釋有關的數字時，必須注意以下的技術性細節。在某些情況下，由於原來數列含有較明顯的不規則因素，經季節性調整數列的指標作用會被削弱。季節性調整方法只是剔除季節性因素，而非不規則因素。大規模不規則因素的存在，會擾亂對基本趨勢的估算。此外，由於經濟體的結構性轉變而引致的數列特徵變化，亦有可能影響經季節性調整的數字。

2.68 經季節性調整的數列可在取得更多數據後作出修訂。一般而言，較近期數列的修訂幅度較大，而早期的較小。基本上，經季節性調整數列的修訂幅度，是和原來數列新近出現的不規則因素有關，例如出現新的沖擊及特別事況。除以上因素外，修訂經季節性調整本地生產總值數列的部分原因，是由於編製本地生產總值時，採用了更新及最新獲得的數據，令原來的本地生產總值數列作出例行的修訂。

2.63 The rates of change in the IPD of GDP and Consumer Price Index (CPI) are commonly used as measures of inflation (*i.e.* change in price levels) by data users. However, the movement of the IPD of GDP may at times differ from that of the CPI. The rate of change in the IPD of GDP can be used as a broad measure of overall inflation in an economy. It takes account of all price changes relating to consumption, investment, exports and imports. The rate of change in the CPI only measures the price changes encompassing goods and services purchased by households.

Seasonally adjusted GDP and its major expenditure components

2.64 Seasonally adjusted data series is currently compiled for the quarterly series of the aggregate GDP and some of its expenditure components, including private consumption expenditure, government consumption expenditure, exports of goods, exports of services, imports of goods and imports of services. However, seasonally adjusted data series is not compiled for gross domestic capital formation as no clear seasonal pattern is identified for this component.

2.65 In the seasonally adjusted GDP series, since seasonal effects have been removed statistically, figures for consecutive quarters can be compared more meaningfully. When the year-on-year changes for the quarterly figures in the original GDP series and the quarter-to-quarter changes in the seasonally adjusted GDP series are analysed together, the trend of the GDP can be more clearly discerned.

2.66 The seasonally adjusted series of GDP and its components are compiled by the X-12 ARIMA method. The X-12 ARIMA method and its related versions are the standard method commonly employed in compiling seasonally adjusted data series. The method can be used to detect whether outlier(s) is present in the original series for estimation of seasonal factors.

2.67 While the seasonally adjusted GDP series is more responsive to turns in economic cycle, there are some technical aspects that should be noted in the interpretation of the seasonally adjusted figures. There are some instances where the indicativeness of the seasonally adjusted series is reduced by the relatively significant extent of irregular factors at play in the original data series. Seasonal adjustment seeks to remove only the seasonal variations but not such irregularities. The presence of large irregularities could even disrupt the estimation of the underlying trend. Furthermore, changes in the characteristics of the data series arising from structural changes in the economy may also affect the seasonally adjusted figures.

2.68 Seasonally adjusted series may be revised as more data become available. The extent of revision is normally more significant for the recent time points and less for earlier time points. Primarily, the degree of revision to the seasonally adjusted series is related to the extent of irregularities newly emerging in the original series, *e.g.* occurrence of new shocks and particular events. Apart from this, it should also be noted that part of the revision in the seasonally adjusted GDP data is due to routine revision in the original GDP data series brought about by the

編製系統的局限

2.69 開支面編製本地生產總值需要大量數據，包括對外貿易統計數字、機構統計調查、住戶開支統計調查、政府帳目及其他行政統計數字。雖然由 80 年代開始，隨着香港在統計方面的發展已提供了很多新的數據來源，但由於各種局限，仍有某些方面的估計是根據較不齊備的數據而作出的。用以編製本地生產總值按季數字的數據，一般不及用以編製按年數字的可靠。與按年數字所根據的按年統計調查比較，作為編製按季數字主要數據來源的按季統計調查通常樣本規模較小，而所搜集資料的詳細程度亦較低。此外，用以編製以物量計算的本地生產總值數字的一些平減物價指數，只有按年而沒有按季的數字。使用者應當留意由於數據所限，本地生產總值及其組成部分的按季數列，有時會作出重大修訂。普遍來說，本地生產總值按季數列的準確程度較按年數列為低。有關用以編製本地生產總值的統計調查數據來源的方法，可參考以上段落所提及的統計調查的有關報告。這些統計報告可於政府統計處網站 (www.censtatd.gov.hk/tc/) 下載。以下簡述編製本地生產總值各項開支組成部分估計數字的局限。

私人消費開支

2.70 雖然編製以市價計算的留用進口貨品的方法已有所改善，即可根據進出口貿易、批發及零售業的「經濟活動按年統計調查」結果，估計適用於不同貨品組別的不同分銷商毛利，但估算方法仍須依賴若干基本假設。要確定分銷商毛利的真正價值極為困難，因為嚴格來說，必須先要知道某一種貨品從每一分銷途徑所得的分銷毛利。由於實際上無法得到這些資料，因此只能根據批發商和零售商整體分銷所得毛利總值的資料，以計算分銷商在某貨品組別的毛利。這方法最多只能根據一些不詳備的資料作估計，故受到一定的局限。

2.71 用來計算留用進口貨品價值的進口貨值和轉口貨值，在記錄上會出現時間上的差距，因為作轉口用的某類進口貨品，未必在同一段時間內轉口。此外，各種貨品都要按最終用途類別加以分配，即按最終消費、中間投產用途或資本形成而分類。故除非可獲得貨品流通情況的全部資料，否則實際上頗難準確地把貨品分配。目前僅是根據對貨品用途的認識和個人判斷盡力把貨品分配，故有一定的局限。不過，所採用的分配方法，會經常加以檢討，以便能按照經濟結構的發展，作出所需的修改。

Limitations of the compilation system

2.69 Compilation of GDP using the expenditure approach requires data from numerous sources, including external trade statistics, establishment surveys, household expenditure surveys, government accounts and other administrative statistics. While the development of statistics in Hong Kong since the 1980s has provided many new data sources, there are still areas where estimates are less firmly based because of various limitations. In general, data sources for compiling quarterly GDP are less solidly based than those for compiling annual GDP. Quarterly surveys, which are one main source of data for the quarterly GDP, normally incur smaller sample size and collect less detailed information as compared with annual surveys on which the annual GDP figures are based. Besides, some price deflators used for compiling volume measures of GDP are only available on an annual basis but not on a quarterly basis. Users should note that quarterly series of GDP and its components are sometimes subject to large revision because of data limitations. Generally speaking, the quarterly series is less precise than the annual series. For details on the methodology of the survey data sources used in the compilation of the GDP, reference can be made to the reports of the respective surveys as mentioned in previous paragraphs. The respective survey reports can be downloaded from the website of the Census and Statistics Department (www.censtatd.gov.hk/en/). Limitations relating to the compilation of estimates of specific expenditure components of GDP are briefly described below.

Private consumption expenditure

2.70 Although improvements have been made in valuing retained imports at market prices by introducing variable distributors' margins for different commodity groups based on results of the ASEA for Import / Export, Wholesale and Retail Trades, there are certain underlying assumptions in the method of estimation. It is very difficult to ascertain the true value of distributors' margins, since strictly speaking the trade margin for each distributive channel of a given type of commodity has to be known. As the collection of this information is impracticable, the overall gross trading margins of the wholesalers and of the retailers are applied collectively to derive the distributors' margin for a given commodity group. There are certain limitations in this method which is based on partial information at best.

2.71 The values of imports and re-exports, which are used for deriving the value of retained imports, are subject to time lag in recording since a given commodity imported for re-export may not be re-exported in the same period. Moreover, each commodity has to be allocated to its respective end-use categories *viz.* final consumption, intermediate consumption or capital formation. The allocation of commodities cannot be very precise in practice unless full information is available on the commodity flow. The present allocation adopted is based on knowledge about the relative disposition of the commodity and best judgement. Hence, this is subject to certain limitations. However, the scheme of allocation is constantly reviewed so as to incorporate necessary changes arising from structural developments in the economy.

政府消費開支

2.72 政府消費開支的編製方法比較簡單。不過，在 1973 年之前，各政府部門的數據只以財政年度為基礎，由於要把數字換算為以曆年為基礎計算，故假定開支在全年中是平均分布的。此外，由於編製這個組成部分是採用會計數據，因此所得的數字是現金流通的數據，而非應計項目的數據。因資金流通模式每年不同，使這個組成部分在按季的數列中亦同樣顯示出相當大的短期變動。但一些重要的開支類別則已另作調整使所編製的數據大致接近應計會計基礎。

本地資本形成總額

2.73 1979 年之前，私營部門在樓宇及建造工程方面的投資開支數字，是根據建築物條例執行處編訂的每月統計報表而計算。該報表是關於已獲發入伙紙的新落成樓宇和建造工程的建造成本。把已完成工程的成本在工程實際進行期間均一分配的方法，內中已假定建造工程已建成部分的價值在整個期間內是平均分配的。由於缺乏工程進度的詳細資料，而各工程的進度各有不同，故按上述方法計算出的統計數字便會有估算誤差。此外，私營部門在機器及設備方面的投資開支，主要是根據留用進口的統計數字編製，因此亦同樣出現上文第 2.70-2.71 段所述有關編製私人消費開支的問題。

2.74 至於公營部門的投資開支數字，由於採用政府部門的會計數據，因此所得的數字是現金流通的數據而非應計項目的數據，在按季的數列中亦可能顯示出一些短期變動。

2.75 存貨增減即是期初與期末間存貨值的差額。正如世界上大多數經濟體一樣，其可靠程度通常較其他組成部分的為低。尤其在獲得「經濟活動按年統計調查」的結果前，按季和按年統計數字只是根據樣本規模較小的統計調查的結果而估算。即使期初和期末的存貨價值只出現輕微的估算誤差，有關存貨增減的估計數字的誤差也可能很大。這組成部分的修訂幅度可以相當大，故在闡釋存貨增減數列時必須謹慎。

服務輸出及輸入

2.76 1978 年之前服務輸出及輸入的數據，其質素在很大程度上取決於用貨品進出口資料作為有關服務組別輸出及輸入的指標的辦法是否正確。計算方法是把指標用於 1978 年獲得的某些服務輸出及輸入的基準數據上。如這些指標有不足之處，則較早年份的統計數字可能出現較大的誤差。因此，在使用 1961 年至 1977 年的服務輸出及輸入數列時，必須相當謹慎。此外，雖然已盡

Government consumption expenditure

2.72 The compilation of GCE is relatively straightforward. However, for years before 1973, data in respect of government departments were available only on a financial year basis, and expenditures were assumed to be evenly spread out over the year so as to convert figures to a calendar year basis. Besides, as accounts data are used in compiling this component, the figures are derived on a cash-flow basis rather than accrual basis. To the extent that the cash-flow pattern varies from year to year, this component exhibits considerable short-term fluctuations in the quarterly series. However, adjustments have been made to some important types of expenditures to approximate accrual-based data.

Gross domestic capital formation

2.73 Figures prior to 1979 of the private sector investment expenditure in building and construction were based on information from the Buildings Ordinance Office's monthly statistical returns on the cost of construction of newly completed buildings and construction works for which occupation permits were issued. The method by which the cost of completed projects was distributed uniformly over the duration of the project implicitly assumed that construction works put in place over the entire period were evenly spread out. As detailed information regarding the progress of work was not available, the statistics so derived were subject to estimation errors arising from fluctuations in the work progress of different projects. Moreover, the compilation of investment expenditure in machinery and equipment by the private sector is mainly based on statistics on retained imports. They are therefore subject to the same problems as those of PCE as mentioned in paragraphs 2.70-2.71.

2.74 As for public sector investment expenditure, since government accounts data are used, the figures are mainly on a cash-flow basis rather than accrual basis and thus may exhibit some short-term fluctuations in the quarterly series.

2.75 Changes in inventories, which are taken as the difference between the beginning and the ending values of inventories, always tend to be less reliable than other components, similar to the case for most economies in the world. In particular, before results of the ASEA become available, quarterly and annual statistics are estimated based on results of surveys with rather small sample sizes. The error margin of the estimates of changes in inventories can be large even with small estimation errors on the beginning and the ending values of inventories. Revisions to this component can be substantial. The series of data on changes in inventories must therefore be interpreted with particular caution.

Exports and imports of services

2.76 The data quality of this component for years before 1978 depends much on the validity of the use of exports and imports of goods as indicators, which were applied to the benchmark data of exports and imports, respectively, of certain services derived in 1978. To the extent that the indicators were inadequate, the statistics for the earlier years might be subject to significant error. The series of data on exports and imports of services for 1961-1977 should therefore be used with caution. Besides, although various sources of information are used as far as possible to

可能利用不同的資料來源，為不同類別的輸出及輸入服務編製個別的平減物價指數，但要注意的是，以物量計算的度量方法仍然有其局限。以物量計算服務輸出及輸入時，缺乏數據不是唯一的問題，另一難題是要為各類服務界定有意義的平減物價指數。故以物量計算的數字不能非常精確。

2.77 雖然有關的統計調查已涵蓋被識別有大量服務貿易的交易的主要行業，但統計調查的範圍須經常進行檢討，藉以識別因服務貿易的交易有所增長而變得重要的行業。

實質本地總收入

2.78 在國民經濟核算的範疇內，最適用於量度本地經濟體的表現或實質生產量的綜合指標是實質本地生產總值。但是，為了進行某些分析，亦可編製以對上一年價格計算的實質本地總收入，即把本地生產總值的物量數字加上貿易價格比率變動的調整計算所得。由於進出口價格的相對變動，引致以一定數量的出口產品（來自本地的出產）所能換取的進口產品（來自外地的出產）有所改變，這指標可反映實質生產量的對外購買力。在一個有龐大貿易額（相對於整體經濟活動而言）的經濟體，如進口及出口價格變動有頗大的差異，實質收入和實質本地生產總值的增長率可能有顯著的差別。

2.79 從實質生產數列求出實質收入數列時所涉及的貿易價格比率變動的調整是 $(\frac{X}{P_m} - \frac{X}{P_x})$ ，其中X為以當時價格計算的貨品出口及服務輸出的總值，P_m為貨品進口及服務輸入的價格指數，P_x為貨品出口及服務輸出的價格指數，分別以它們的內含平減物價指數略算得來。如進口價格及出口價格自基年起的升幅相同，則貿易價格比率等於1，在把實質生產數列換算為實質收入數列時，便毋須作出調整。以環比物量計算的實質本地總收入是採用按年重訂權數及環比連接法編製而成的。

develop specific deflators for different categories of exports and imports of services, there are still limitations in the volume measures. In compiling volume measures of exports and imports of services, there are difficulties not only due to the lack of data but also in defining the relevant deflators for various types of services. Hence, the volume measures cannot be very precise.

2.77 Although most of the important sectors with significant trade in services transactions have been identified and included in the relevant surveys, the coverage of the surveys requires regular reviews to identify sectors which have grown in importance in respect of transactions in trade in services.

Real Gross Domestic Income

2.78 In the national accounts context, the most comprehensive measure of performance or real output in the local economy is the real GDP. However, for certain analytical purposes, it may also be of interest to compute the real Gross Domestic Income (RGDI) at preceding year prices, which is calculated as the GDP in volume terms plus terms of trade adjustment. It reflects the external purchasing power of the real output, as the relative movements in import and export prices result in a varying volume of imports (which comes from overseas output) being exchangeable for a given volume of exports (which comes from domestic output). The growth rate of real income could show noticeable deviations from that of real GDP if there is appreciable difference in the movement of import and export prices in an economy which has a substantial turnover of trade relative to its overall economic activities.

2.79 The terms of trade adjustment that has to be applied to the real product series for producing the real income series is equal to $(\frac{X}{P_m} - \frac{X}{P_x})$, where X is the total value of exports of goods and services at current prices, P_m the price index for imports of goods and services and P_x the price index for exports of goods and services, approximated by the implicit price deflators for imports and exports of goods and services respectively. In the event that export and import prices of goods and services have risen to the same degree since the base year, the terms of trade equals 1 and no adjustment is required in converting the real product series to the real income series. The RGDI in chained dollars is calculated using the annually re-weighted chain linking approach.