以生產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 Production Approach

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目錄 Contents

1 引言 Introduction

1.1 本文件闡述按經濟活動劃分的本地生產總值（即以生產面編製的本地生產總值）的概念架構、編製方法及數據來源。以開支面編製的本地生產總值數列及相應詳情，可參閱政府統計處網站 (https://www.censtatd.gov.hk/tc/EIndexbySubject.html?pcode=B1030001&scode=250)。

1.1 This document describes the conceptual framework, methods and data sources for compiling Gross Domestic Product (GDP) by economic activity (i.e. GDP compiled using "production approach"). Data series and corresponding details on GDP compiled using "expenditure approach" are available on the Census and Statistics Department website (https://www.censtatd.gov.hk/en/EIndexbySubject.html?pcode=B1030001&scode=250).

以生產面編製的本地生產總值的概念架構及編製方法

Conceptual framework and methods of compiling GDP using production approach

1.2 本地生產總值（簡稱 GDP）編製架構，基本上是根據《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。

1.2 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.

1.3 本地生產總值可從不同方法計算。就香港而言，本地生產總值數字以「開支面」及「生產面」編製。以生產面方法編製的數列包括以當時價格和以物量計算的按年本地生產總值，以及以物量計算的按季本地生產總值。

1.3 GDP can be measured using different approaches. For Hong Kong, GDP is compiled using the "expenditure approach" and the "production approach". Production approach is used to compile annual GDP at current prices and in volume terms, and quarterly GDP in volume terms.

(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) 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 以生產面編製的本地生產總值是所有居民生產單位（例如工廠、商店及服務機構）的增加價值總額。增加價值量度淨產值，其定義是生產總額減去中間投產消耗（指在生產過程中所消耗的貨品及服務的價值）。從另一角度分析，增加價值是要素收益的總和，當中包括「僱員報酬」（包括工資、薪金及其他僱員福利）及企業的「經營盈餘總額」（即指非勞工生產要素產生的價值，包括固定資本消耗），以及生產稅。

1.4 Under the production approach, GDP is an aggregate measure of the total value of value added of all resident producing units, e.g. factories, shops and service organisations. Value added measures net output and is defined as the value of gross output *less* the value of intermediate consumption (that is the value of goods and services used up in the course of production). From an alternative angle, value added can be viewed as the sum of factor incomes, i.e. "compensation of employees" (comprising wages, salaries and other employee benefits) and "gross operating surplus" of enterprises (the value attributed to non-labour factors of production inclusive of the allowance for consumption of fixed capital), and taxes on production.

1.5 把所有居民生產單位的增加價值相加起來，便可獲得整個經濟體沒有重複計算的產值總額。此外，藉著把居民生產單位根據其主要從事的經濟活動分類，本地生產總值便可按經濟活動來劃分。按經濟活動劃分的本地生產總值可用作分析各類經濟活動（製造業、建造業、經銷業、商用服務業等）在本地生產總值中的相對比重，換言之可反映各類經濟活動對本地生產總值的相對貢獻。

1.5 Summation of the value added of all resident producing units gives an aggregate measures of production of an economy which is free of double counting. Moreover, by grouping resident producing units according to the economic activity mainly engaged in, GDP can be presented by economic activity. GDP by economic activity enables analysis on the relative shares of individual economic activities (manufacturing, construction, distributive trades, business services, etc.) in GDP or equivalently, the relative contribution of individual economic activities to GDP.

1.6 生產面編製的本地生產總值可以市場價格或基本價格來估值。以市場價格計算的生產總值是根據實際或設算的市價來進行估值，故包括生產稅及產品稅（例如關稅）。以基本價格計算的生產總值，則以生產成本來估值，故只包括生產稅，因此兩者的差額是產品稅。

1.6 Production-based GDP can be valued either at market prices or at basic prices. At market prices, it is valued at market or imputed prices and is thus inclusive of taxes on production and taxes on products such as customs and excise duties. At basic prices, it is valued at the cost of production and thus includes taxes on production only. Hence, they differ by the amount of taxes on products.

1.7 根據國際的建議，在記錄政府因應2019冠狀病毒病大流行而向機構提供的一次性紓困措施時，如措施的主要目的是協助機構維持業務，以儘快恢復生產活動，相關措施的資助應記錄為「生產補貼」（即從「生產稅」中扣除）。政府統計處亦採納有關建議編製2020年及2021年的「生產稅」數字。

1.7 According to international recommendation, when recording the one-off relief measures rolled out by the government in light of the COVID-19 pandemic, if the major purpose of the measures is to help institutions maintain their businesses with a view to having a quick return to production, the financial assistance from these measures will be recorded as the "subsidies on production" (i.e. deducted from the "taxes on production"). This recommendation has also been adopted by the Census and Statistics Department in compiling "taxes on production" figures in 2020 and 2021.

1.8 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 2000 年以物量計算按經濟活動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。技術詳情請參閱附件一。

1.8 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. In Hong Kong, data series of GDP by economic activity in volume terms is available since 2000. In compiling the volume measures of GDP, the annually re-weighted chain linking approach is adopted. Please see Annex 1 for technical details.

1.9 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。

1.9 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.

1.10 編製以當時價格計算按經濟活動劃分的按年本地生產總值數列所需的數據，主要是根據涵蓋所有主要經濟活動的「經濟活動按年統計調查」以及行政記錄所得的數據。而編製以環比物量計算按經濟活動劃分的按季本地生產總值的數據來源，主要包括對工商機構及住戶進行的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。以環比物量計算按經濟活動劃分的按年本地生產總值是該年度 4 季數字的總和。

1.10 Annual data series of GDP by economic activity at current prices is compiled mainly based on data collected from the Annual Survey of Economic Activities (ASEA) which covers all major economic activities, and administrative records. Data sources for compiling quarterly chain volume measures of GDP by economic activity mainly include quarterly and monthly surveys on industrial / business establishments and on households; government accounts and administrative data from government departments and other organisations. Annual chain volume measures of GDP by economic activity are the sum of the quarterly figures of the year.

1.11 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）。

1.11 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).

按經濟活動劃分的本地生產總值統計數字的名稱法、修訂及公布

Nomenclature, revision and publication of GDP statistics by economic activity

1.12 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經濟活動劃分的本地生產總值數字稱為「初步數字」。當獲得更多數據後，這些數字會作出修訂。繼初步數字後公布的所有數字均稱為「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。按經濟活動劃分的本地生產總值數列，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。

1.12 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 economic activity in respect of a period are called "preliminary figures". These figures will be revised when more data become available. All figures published subsequently after the preliminary figures 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 by economic activity 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.

1.13 現時，以當時價格計算按經濟活動劃分的按年本地生產總值初步數字，會在該統計年度結束後約 11 個月公布。而以物量計算按經濟活動劃分的本地生產總值按季數列，初步數字會在統計季度結束後略少於 3 個月以新聞稿形式公布。

1.13 At present, preliminary figures of annual GDP by economic activity at current prices are released about 11 months after the reference year. As for quarterly series of volume measures of GDP by economic activity, preliminary figures are released with a time lag of slightly less than 3 months after the reference quarter in a press release.

1.14 一般而言，當年以及前 2 年的估計數字日後或有修訂。在首次公布數字的 3 年後，有關數字已採納了全部定期資料來源所得的最終數據編製而成，為最終的數字。

1.14 In general, GDP figures by economic activity for the current year and the preceding 2 years are subject to revision. The figures are finalised 3 years after the first release when finalised data from all regular sources are incorporated.

1.15 編製按經濟活動劃分的本地生產總值的時滯，比編製按開支組成部分劃分的本地生產總值的較長，這是因為編製按經濟活動劃分的本地生產總值所需的數據，大部分是從以機構為統計調查單位的各類經濟統計調查得來，這些機構通常需要較多時間填報數據給予政府統計處。

1.15 The time lag for producing GDP by economic activity is longer than that of GDP by expenditure component. This is because GDP by economic activity are mainly compiled from data collected in various economic surveys on establishments, for which more time is normally required for the establishments to report data to the Census and Statistics Department.

1.16 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。

1.16 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.

1.17 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。然而，部分技術性修訂只與以開支面編製的本地生產總值有關，因此並不是所有以上的技術性修訂均使按經濟活動劃分的本地生產總值須作出修訂。

1.17 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. Yet, some of them are related to GDP under expenditure approach only and therefore not all of the above exercises entail revisions to GDP by economic activity.

1.18 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。整系本地生產總值數列已因而作出修訂。

1.18 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.

1.19 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。在生產面方面，按經濟活動劃分的增加價值的整系物量數列，已作出後向估計至 2000 年。在 2011 年 2 月，增加價值的估值亦根據國際標準，由以要素成本計算改為以基本價格計算。以基本價格計算的增加價值的定義，是以基本價格計算的生產總額*減去*以購買者價格計算的中間投產消耗。基本價格是生產者生產一個單位的貨品或服務，在扣除任何產品稅但包括產品補貼後所收取的價值。以基本價格計算的增加價值更能反映生產者實際支付及收取的價格。

1.19 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. On the production side, the entire volume series of the value added by economic activity was backcast to 2000. To follow international standards, the valuation of the value added was also changed from factor cost basis to basic prices basis in February 2011. Value added at basic prices is defined as the value of gross output at basic prices *less* intermediate consumption valued at purchasers' prices. Basic price is the amount receivable by a producer for a unit of good or service provided, which excludes any taxes on the product concerned, but includes subsidies on the product. Value added at basic prices can better reflect the prices actually paid and received by producers.

1.20 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數列已因而作出修訂。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。

1.20 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 merchanting; (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 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.

1.21 有關主要的非例行的技術性修訂詳情，請參閱《本地生產總值統計特刊》(https://www.censtatd.gov.hk/tc/EIndexbySubject.html?pcode=B1030003&scode=250)。

1.21 For details on major non-routine technical revision exercises, please refer to *Special Report on Gross Domestic Product* (https://www.censtatd.gov.hk/en/EIndexbySubject.html?pcode=B1030003&scode=250).

1.22 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。

1.22 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.

1.23 隨着政府統計處發表「香港標準行業分類 2.0 版」，按經濟活動劃分的按季及按年本地生產總值數列已採用「香港標準行業分類 2.0 版」的經濟活動分類編製。

1.24 在展示以當時價格計算按經濟活動劃分的本地生產總值時，各經濟活動組別以基本價格計算的增加價值的總和，*加上*產品稅及統計差額，相等於按開支組成部分劃分的本地生產總值。

1.25 統計差額指以當時價格計算，以開支面編製的本地生產總值與以生產面編製的本地生產總值之間的差額。這差額是由於在編製過程中數據來源及估算方法有所不同而引致的。從生產面及開支面所編製以當時價格計算的本地生產總值的差額在以往年份一般在 2%以內。以國際標準而言，這個差幅是頗理想的。在所有數據皆準確及齊全的理想情況下，從不同方面編製的本地生產總值數字應該會是相等的。不過，事實上數據來源及估算方法有許多局限及欠善之處，故此從不同方面編製的數字便不會得出相同結果。當從不同方面所編製的數字差距太大時，則須徹底審核這兩套數字所用的數據來源及方法。然而，倘數據來源及編製方法大致可靠，從這兩方面編製的結果應該是接近的。

1.23 With the release of the Hong Kong Standard Industrial Classification Version 2.0 (HSIC V2.0) by the Census and Statistics Department, the data series of quarterly and annual GDP by economic activity are compiled by adopting the HSIC V2.0.

1.24 In presenting GDP by economic activity at current prices, the sum of value added of respective economic activities at basic prices *plus* taxes on products *plus* statistical discrepancy is equal to GDP by expenditure component.

1.25 Statistical discrepancy refers to the difference in values of current price GDP compiled using the expenditure and production approaches, as a result of the adoption of different data sources and estimation methods in the compilation processes. The discrepancies between the current price GDP compiled using the expenditure approach and that using the production approach are generally within 2% throughout the past years. This is considered quite satisfactory by international standards. Ideally, if complete and accurate data were available, GDP figures compiled using different approaches would be identical. In practice, however, data sources and methods of estimation are subject to limitations and imperfections. As a result, different approaches of compilation do not give identical results. When GDP figures compiled using alternative approaches differ widely, the data sources and methods of both approaches have to be thoroughly investigated. Nevertheless, if the data sources and methods of compilation are generally reliable, close results would be expected.

2 以生產面編製本地生產總值的方法及數據來源
Methods and Data Sources for Compilation of GDP by the Production Approach

2.1 本節闡述按經濟活動劃分的本地生產總值（包括以當時價格及以環比物量計算）的方法及數據來源。

2.1 This Section describes the methods and data sources for compiling the GDP by economic activity at current prices and in chain volume measures.

以當時價格計算按經濟活動劃分的按年本地生產總值

Current price annual GDP by economic activity

農業、漁業、採礦及採石

Agriculture, fishing, mining and quarrying

2.2 農業及漁業的統計數字是根據漁農自然護理署定期提供的生產數據計算的。此外，漁農自然護理署亦按主要產品類別，提供對投產資源結構方面的資料分析，以助編製有關中間投產消耗及投產要素的統計數字。編製採礦及採石業統計數字所需的數據則來自工業的「經濟活動按年統計調查」，並與以下第 2.4-2.6 段所闡述有關製造業統計數字的編製方法大致相同。

2.2 Statistics on agriculture and fishing activities are based on production data supplied regularly by the Agriculture, Fisheries and Conservation Department, which also provides analysis of the input structure of production by major product to enable the compilation of statistics on intermediate consumption and factor inputs. For statistics on mining and quarrying, the Annual Survey of Economic Activities (ASEA) for Industrial Sector provides the required data and the compilation method is similar to that for the manufacturing sector as described in paragraphs 2.4-2.6 below.

製造；電力、燃氣和自來水供應及廢棄物管理

Manufacturing; electricity, gas and water supply, and waste management

2.3 編製這些經濟行業的統計數字所需的數據來自工業的「經濟活動按年統計調查」。

2.3 The ASEA for Industrial Sector provides the data for compiling statistics on these economic activities.

2.4 製造業的主要活動是生產貨品。在該按年統計調查中，受訪者須填報所生產貨品的銷售價值。這個數字須根據製成品及半製成品存貨價值的增減而加以調整。存貨價值增減的估計，須扣除價格的升值（或貶值），以便獲知存貨量的實質轉變情況。用以調整價格升值（或貶值）的數據從按年統計調查搜集。

2.4 The major activity of manufacturing is the production of goods. In the annual survey, respondents reported the sales value of goods they produced. This is adjusted by the value of changes in inventories of finished goods and work-in-progress. In deriving the estimates for changes in inventories, price appreciation (or depreciation) is removed to give the value of physical changes in inventories. The data for adjusting price appreciation (or depreciation) are collected in the annual survey.

2.5 除生產貨品外，製造商亦從事其他業務。若為其他製造商提供加工服務，其產值會根據所做工作之收入計算。若出售未經過進一步加工及處理的貨品，例如出售過剩原料，其產值則會以轉售所得毛利計算，即貨品轉售價格和成本的差額。出租樓宇所得的租金收入及提供服務所得的佣金和服務費用，亦計算在製造業生產總額之內。相關業務被視為製造業的次要業務。

2.5 Besides production of goods, manufacturing establishments are also engaged in other activities. In the case of manufacturing establishments performing contract work for other manufacturers, output is measured by their receipts for the work performed. For sales of goods which have not been further processed by the selling establishment, such as sales of excess raw materials, output is measured by the resale margin, i.e. the difference between the sales value and the cost of goods resold. Rentals received from letting of premises, and commissions and fees received for services rendered are also included as components of gross output; such activities are considered as secondary activities of the manufacturing sector.

2.6 有關製造業的中間投產消耗，包括租金、生產過程中所耗用的物料和供應品的開支、維修費用及運輸費用等。支付其他製造商的判工費用，亦包括在中間投產消耗內。而外發工人的工資，則包括在僱員報酬內。至於物料和供應品的耗用量，是根據其購入價值，以及原料和半製成品的存貨增減數字而計算出來的。

2.6 The intermediate consumption in respect of manufacturing industries comprises rentals, expenses on materials and supplies consumed in production, repair and maintenance, transportation, etc. Payments for sub-contract work done by others are included in intermediate consumption, while payments to outworkers are included in compensation of employees. Consumption of materials and supplies is obtained by adjusting the value of purchases for changes in inventories of raw materials and semi-manufactures.

2.7 有關電力、燃氣和自來水供應及廢棄物管理業統計數字的編製方法與製造業大致相同。水務署被視為一個參與商業活動的政府部門，故列入電力、燃氣和自來水供應及廢棄物管理業。

2.7 The compilation of statistics on electricity, gas and water supply, and waste management industries is similar to that for the manufacturing sector. The Water Supplies Department is treated as a government unit engaged in market activities and is classified to the electricity, gas and water supply, and waste management sector.

建造

Construction

2.8 這裏所指的建造業，只包括建造業承建商所進行的工程，並不包括物業發展活動。有關樓宇及其他建築物和設施的興建工程活動，即由建造業承建商負責的上層結構、打樁、建築物拆卸、地盤平整、土木工程建造和機電安裝等工程均包括在內。用以編製這行業統計數字的數據，取自建造業的「經濟活動按年統計調查」所訪問的建造業承建商。

2.8 The construction industry here refers to construction contractors only. It does not cover the activities of property development. The construction activities in respect of both buildings and other structures and facilities are covered. Construction contractors engaging in the erection of architectural superstructures, piling, demolition, site formation, civil engineering construction, electrical and mechanical installation work, etc. are included. Data for compiling statistics on the construction industry are collected from construction contractors enumerated in the ASEA for Construction Sector.

2.9 建造業的生產總額，是以統計期內工程已建部分的價值或已完成工程的價值計算。工程已建部分的價值取自有關進度付款的商業會計記錄，相等於統計期內收得的有關進度付款價值*減去*統計期之前已完成但其後始獲付款的工程價值，再*加上*統計期內已完成但其後才獲付款的工程價值。

2.9 The gross output of the construction industry is measured by the value of work put in place, or value of work performed during the reference period. The value of work put in place is derived from business accounting records of progress payments. It is equal to the value of progress payments received during the reporting period, *less* the value of work performed prior to the reporting period but only paid for subsequently, *plus* the value of work performed during the reporting period but to be paid for thereafter.

2.10　根據統計調查結果編製生產總額數字時，是以「已完成的建造工程淨值」計算。分判的情況在本港建造業非常普遍，雖然主要承建商是由地產發展商聘用負責進行建造工程，但他們或會僱用分判承建商負責部分相關建造工程。此外，某地盤的分判承建商又或會僱用另一個分判承建商。再者，分判承建商有兩類，即連工包料分判承建商和只供應勞工的分判承建商。只供應勞工的分判承建商僅負責提供勞動服務，即供應地盤工人，行內人士普遍稱之為「工頭」。連工包料分判承建商負責完成工程的某一指定部分，包括提供所需材料。進行建造業的經濟統計調查時，地盤的主要承建商和所有連工包料分判承建商都是調查對象。他們須填報「合約總額」，而一切開支，包括分判承建商的費用，都是由這筆款項撥出。由於分判承建費用在調查問卷內須另行填報，對聘有連工包料分判承建商負責部分地盤工程的主要承建商來說，連工包料分判承建商所做的工程價值，會在統計調查中重複填報。因此，已完成的建造工程淨值的計算方法是把所有主要承建商和連工包料分判承建商的合約總額總和，扣除所報的連工包料分判承建的費用。這便稱為「已完成的建造工程淨值」。

2.10　In compiling the gross output figures from the survey results, the "net value of construction work performed" is applied. Sub-contracting is a common practice in the construction industry in Hong Kong. While main contractors are engaged by property developers for construction work, they may employ sub-contractors to do part of the construction work concerned. Moreover, a sub-contractor at a particular site may employ another sub-contractor. In addition, there are two types of sub-contractors, viz. fee sub-contractors and labour-only sub-contractors. Labour-only sub-contractors are responsible for supplying labour services only, in the form of site operatives. They are commonly known as "gang leaders" in the industry. Fee sub-contractors are responsible for completing a specified segment of work, including supplying the necessary materials. In the economic survey for the construction industry, the main contractor and all fee sub-contractors at a particular site are enumerated. They are required to report their "overall contract sum" from which all outgoings, including sub-contract payments, are to be met. Payments for sub-contract work are separately reported in the questionnaire. For main contractors employing fee sub-contractors for part of the site work, the value of work done by fee sub-contractors is thus reported more than once in the survey. Consequently, the net value of construction work performed is derived as the grand total of overall contract sum for all main contractors and fee sub-contractors *less* the value of payment for fee sub-contract work recorded. This is termed the "net value of construction work performed".

2.11　除根據建造工程的進度而獲付款外，承建商亦可從出租物業和出租機械及設備（不連操作員）得到收入，或從提供顧問或其他服務獲得佣金及服務費。這些收入也包括在生產總額內。

2.11　Besides progress payments made in respect of construction work, a contractor may receive rental income from leased property, letting out of machinery and equipment without operator, or commissions and fees for consultancy or other services rendered. These are also included in the value of gross output.

2.12　有關建造業的中間投產消耗，包括地盤內所耗用的建築材料及供應品、業務上所需的雜項用品的開支、租金、維修費用，以及運輸、技術顧問、保險等其他服務的開支。至於材料和供應品的耗用，可根據購入材料物品價值，以及已扣除價格升值（或貶值）的存貨量增減數字而計算出來。支付給只供應勞工的分判承建商的款項，則計算在僱員報酬內。

2.12　The intermediate consumption in respect of the construction industry comprises the expenses on consumption of building materials and supplies on sites and sundry supplies in business operation, rentals, expenses on repair and maintenance and other services such as transportation, technical consultancy, insurance, etc. Consumption of materials and supplies is obtained by adjusting the value of purchases by changes in inventories net of price appreciation (or depreciation). Payments to labour-only sub-contractors are included in compensation of employees.

進出口貿易、批發及零售

Import / export, wholesale and retail trades

2.13　這些活動的統計數字是根據進出口貿易、批發及零售業的「經濟活動按年統計調查」提供的數據編製的。

2.13　The ASEA for Import / Export, Wholesale and Retail Trades provides the data for compiling statistics for these activities.

2.14　　進出口貿易、批發及零售業的主要業務是銷售貨品。從銷售貨品所得的產值是以交易中所賺得的毛利總額，即貨品的售價和成本之間的差額計算。根據購買物品的價值，以及已扣除價格升值（或貶值）的存貨增減數字，便可得出售出貨品的成本。經濟統計調查中所搜集得的存貨帳面價值包括價格的升值（或貶值）在內，為剔除價格升值（或貶值）的影響，便須使用特定的價格指數，把統計年的年初及年底帳面價值按當年平均價格重新計算。重估後所得數字的差額，便是存貨的實質增減數字，可用作計算售出貨品的成本。

2.15　　進出口貿易、批發及零售業公司除在轉售貨品方面獲取毛利外，亦在提供其他種類的服務時，例如為顧客提供代理服務，從中收取佣金、費用及其他服務費用。從這些方面得到的收入，以及租金收入和轉售貨品的毛利相加起來，便是這行業的生產總額。

2.16　　有關進出口貿易、批發及零售業的中間投產消耗，包括租金、業務上所耗用的物料和供應品的開支及其他服務，例如廣告、保險及運輸等開支。值得注意的是購買貨品作銷售用途的開支，並不包括在中間投產消耗內，因為這類貨品不是由這些公司耗用；反之，在計算貨品轉售毛利總額時，這些支出要從銷售價值中扣除。

2.17　　由於批發及零售業的統計調查未有把街頭小販的業務計算在內，所以須根據食物環境衞生署提供的小販人數及「綜合住戶統計調查」所搜集得有關小販收入的數據，另行編製小販業務對本地生產總值的貢獻。

住宿及膳食服務

2.18　　與住宿及膳食服務有關的經濟活動是包括在住宿及膳食服務業的「經濟活動按年統計調查」之內。

2.19　　住宿服務包括酒店、賓館、旅舍及其他提供短期住宿服務的機構單位。住宿服務的生產總額主要以出租房間所得收入計算，然後再加上租金收入及其他服務收費。這行業的中間投產消耗，包括租金、業務上所耗用的物料和供應品、燃料、水電及其他服務，例如廣告、保險及管理等開支。

2.14 The major activity involved in import / export, wholesale and retail trades is the distribution of goods. Output in respect of sales of goods is measured by the gross margin realised on trading, i.e. the sales value *less* the cost of goods sold. The cost of goods sold is obtained by adjusting the value of purchases for changes in inventories net of price appreciation (or depreciation). To remove the effects of price appreciation (or depreciation) included in the book value of inventories collected in the economic survey, special price indices are applied to re-value the book values at the beginning and the end of the reference year at the average prices of the year. The difference between the re-valued figures then gives the value of physical changes in inventories for calculating the cost of goods sold.

2.15 Besides making a margin on resales of goods, firms in the import / export, wholesale and retail trades may also provide other kinds of services, such as agency services to their clients, thus receiving commissions, fees and other service charges. These forms of income, together with rentals, are added to the margin on resales of goods to give the value of gross output.

2.16 The intermediate consumption in respect of import / export, wholesale and retail trades comprises rentals, expenses on materials and supplies consumed in business operation and other services such as advertising, insurance and transportation. Expenditures on purchases of goods for sale are not included in intermediate consumption because they are not consumed by these firms. Instead, these outlays are deducted from the sales value in calculating the gross margin on resales of goods.

2.17 As the activity of street hawking has not been included in the survey for the wholesale and retail trades, the contribution of hawkers is separately compiled using data on the number of hawkers from the Food and Environmental Hygiene Department and their earnings collected from the General Household Survey.

Accommodation and food services

2.18 The economic activities relating to accommodation and food services are covered by the ASEA for Accommodation and Food Services Sector.

2.19 The accommodation services cover hotels, guesthouses, boarding houses and other establishments providing short term accommodation. The gross output of accommodation services is measured mainly by receipts from room sales. This is supplemented by rentals received and other service charges. The intermediate consumption comprises rentals, expenses on materials and supplies consumed in business operation, fuel, electricity and water, and other services such as advertising, insurance and management.

2.20 餐飲服務的生產總額，是根據已扣除食物及飲料成本的銷售額計算。食物、飲料及其他貨品（例如香煙等）的成本，是根據所購買物品的價值，以及存貨增減數字而計算出來。餐飲服務的生產總額還包括從提供其他服務所得的收入、租金收入、小賬及其他收入，例如各類收費及佣金等。

2.20 For the gross output of food and beverage services, it is measured by the value of sales receipts *less* food and beverage cost. The cost of food, beverages and other goods (e.g. cigarettes) sold is obtained by adjusting the value of purchases for changes in inventories. Receipts from other services rendered, rentals received, tips and other income such as fees and commissions are included to give the value of gross output of food and beverage services.

2.21 有關餐飲服務的中間投產消耗，包括租金、業務上所耗用的物料和供應品及其他服務，例如廣告及保險等開支。購買食物、飲料及其他供顧客享用的物品的開支並不包括在中間投產消耗內，而是直接從銷售額中扣除。

2.21 The intermediate consumption in respect of food and beverage services comprises rentals, expenses on materials and supplies consumed in business operation and other services such as advertising and insurance. Expenditures on purchases of food, beverages and other goods which are served to customers are not included as intermediate consumption, but are deducted directly from the sales receipts.

2.22 上述經濟統計調查包括中式酒樓、餐館、快餐店、酒吧及其他飲食場所，但不包括熟食檔。熟食檔行業對本地生產總值所作貢獻的數據，則以行政記錄和統計調查所示的熟食檔數目及其收益而編製的。

2.22 Chinese and other types of restaurants, fast food cafes, bars and other eating and drinking places are covered in the above economic survey. As the cooked food stalls are not included in the survey for food and beverage services, their contribution is compiled from administrative records as well as survey data on the number of stalls and their earnings.

運輸、倉庫、郵政及速遞服務

Transportation, storage, postal and courier services

2.23 這行業包括陸路、水上及航空運輸、貨運代理、倉庫、郵政及速遞，以及其他運輸服務，例如船隻經紀、包裝及裝箱服務等。編製這行業統計數字的相關數據是來自運輸、倉庫及速遞服務業的「經濟活動按年統計調查」。

2.23 This industry sector covers land, water and air transport, cargo forwarding agents, storage, postal and courier, and other transportation services such as ship brokers, packing and crating services. Relevant data for compiling statistics for this industry are obtained from the ASEA for Transportation, Storage and Courier Services Sector.

2.24 從事陸路、水上及航空運輸的公司提供客運及貨運服務。這些公司所提供的服務價值或產值是以其服務收費，即客運和貨運收入計算。把船隻租賃予其他營運者的船東的產值，是以船租收入計算。至於貨運代理公司從托運人所得的總收入，通常包括了支付予運輸公司的運費。在計算貨運代理公司的產值時，代付貨人支付的運費並不計算在內，因為運載服務實際上由運輸公司提供。故在編製貨運代理公司的產值時，須把運費從收入總額中扣除。至於船隻代理公司／經理人及從事其他運輸服務的公司，其所提供服務的總值是按服務收入或代理費來作計算。

2.24 Firms engaged in the land, water and air transport activities provide services in carrying passengers and goods. The value of services provided or output of these firms is measured by the service charges received, viz. passenger and freight revenue. The output of owners of vessels who charter their vessels to other operators is measured by the charter revenue. For cargo forwarding agents, their gross receipts from shippers often include freight charges to be paid to carriers. Freight charges which are paid on behalf of shippers are not included in measuring the output of cargo forwarding agents, as freight services are actually provided by the carriers. In compiling output of cargo forwarding agents, the freight charges are deducted from their gross receipts. For ship agents / managers and firms engaged in other transportation services, the value of the services provided is measured by the service receipts or agency fees.

2.25 運輸業亦包括海外航空公司及船務公司在港設立的駐港辦事處。這些辦事處為海外母公司所提供的服務總值，是以其所有投產資源成本的總和計算，其中包括僱員報酬及其他營運開支。

2.25 The representative offices set up in Hong Kong by foreign airlines and shipping companies are also covered in the transport industry. The value of the services they provide to their overseas parents is taken as the sum of all input costs, including compensation of employees and other operating expenses.

2.26 有關運輸業的中間投產消耗，包括租金、業務上所耗用的燃料、物料和供應品的開支、外判工作、維修保養，以及其他服務，例如廣告、法律服務及保險等開支。就貨運代理公司來說，中間投產消耗並不包括代顧客支付的運費。反之，計算生產總額時，這些代顧客支付的運費要從收入總額中扣除。至於計算海外航空公司和船務公司駐港辦事處的投產資源成本時，除維持辦事處所需的開支外，海外母公司在港的任何支出，無論是否在港支付，一概不包括在內。

2.26 The intermediate consumption in respect of the transport industry comprises rentals, expenses on fuel, materials and supplies consumed in business operation, contract work, repair and maintenance, and other services such as advertising, legal services and insurance. For cargo forwarding agents, expenditure on freight services incurred on behalf of clients is not included as intermediate consumption. Instead, such expenditure is subtracted from the value of gross receipts in calculating gross output. For local representative offices in Hong Kong of foreign airlines and shipping companies, any expenditure incurred by their overseas parents in Hong Kong other than those expenditures for maintaining the representative offices are excluded in calculating the input costs, irrespective of whether these payments are settled in Hong Kong.

2.27 若干參與商業活動的海事處組別，也歸入運輸業內。這包括客運碼頭組、貨物裝卸組和港口後勤組。編製估計數字的相關數據，由海事處提供。

2.27 Several sections of the Marine Department engaged in market activities are classified to the transport industry. These include the Ferry Terminals Section, the Cargo Handling Section and the Port Logistics Section. Relevant data for compiling the estimates are supplied by the Marine Department.

2.28 從事倉庫業的公司提供貯存服務，其產值以倉租計算。至於從事郵政及速遞服務的公司的產值，一般以郵政及速遞服務收費計算。香港郵政被視為一個參與商業活動的政府部門，故列入郵政及速遞業內。

2.28 Firms in the storage industry provide warehousing services and their output is measured by the warehousing rental. Output of firms engaged in postal and courier services is measured generally by the postal and courier service charges received. Hongkong Post is treated as a government unit engaged in market activities and is classified to the postal and courier industry.

2.29 有關倉庫、郵政及速遞業的中間投產消耗，包括租金、業務上所耗用的物料及供應品的開支、外判工作以及其他服務，例如廣告、運輸及保險等開支。至於由不同國家的經營者聯合組織的國際郵政及速遞服務，該等由本港公司支付予海外同業公司的費用會列入外判工作費用內。

2.29 The intermediate consumption in respect of storage, postal and courier services comprises rentals, expenses on materials and supplies consumed in business operation, payments for contract work and other services such as advertising, transportation and insurance. For postal and courier services which are jointly organised across international borders by operators from different countries, the payments made by Hong Kong companies to their overseas counterparts are included as payments for contract work.

資訊及通訊

2.30 資訊及通訊業包括出版活動；電影、錄像及電視節目製作、錄音及音樂出版活動；節目編製及廣播活動；電訊；資訊科技服務；及資訊服務活動。編製這行業統計數字的相關數據是來自資訊及通訊服務業的「經濟活動按年統計調查」。

2.31 資訊及通訊業的生產總額一般是以所收取的服務費計算，包括提供電訊服務，例如公共本地及長途電話服務、流動電話服務及互聯網接駁服務等；電腦及有關服務，例如裝置電腦硬件的顧問服務、軟件推行及數據處理服務等；提供其他服務而收取的費用和佣金，以及售賣通訊產品（例如流動電話）所獲取的毛利。這行業的中間投產消耗，包括租金、業務上所耗用的物料和供應品的開支、外判工作、維修保養及其他服務，例如廣告、運輸及保險等開支。至於由不同國家的經營者聯合組織所提供的電訊服務，該等由本港公司支付予於海外同業公司的費用會列入外判工作費用內。

金融及保險

2.32 金融、保險、銀行、接受存款公司及外地銀行代表辦事處的「經濟活動按年統計調查」，提供數據以編製這些活動的估計數字。

金融中介服務

2.33 銀行、接受存款公司，以及其他處理私人貸款、按揭、分期付款信貸、代理收帳及票據貼現公司等的主要活動是提供金融中介服務。這些金融中介機構對其所提供的服務並不會收取直接的服務費，而是間接地賺取存款與借貸的利息差額。它們付出較低的利率借入款項，及以較高的利率貸出款項。

Information and communications

2.30 The information and communications sector comprises publishing activities; motion picture, video and television programme production, sound recording and music publishing activities; programming and broadcasting activities; telecommunications; information technology services; and information service activities. Relevant data for compiling statistics for this sector are collected from the ASEA for the Information and Communications Services Sector.

2.31 The gross output of information and communications industries is measured generally by the service charges received, including provision of telecommunications services such as public local / long distance telephone services, mobile telephone services and internet access services, etc.; computer and related services such as consultancy services related to the installation of computer hardware, software implementation services and data processing services, etc.; and fees and commissions received for other services rendered as well as margins from sales of communications products (e.g. mobile telephones). The intermediate consumption comprises rentals, expenses on materials and supplies consumed in business operation, payments for contract work, repair and maintenance and other service charges such as advertising, transportation and insurance. For telecommunication services which are jointly organised across international borders by operators from different countries, the payments made by Hong Kong companies to their overseas counterparts are included as payments for contract work.

Financing and insurance

2.32 The ASEA covering the financing, insurance, banks, deposit-taking companies, and representative offices of foreign banks provides data for compiling estimates for these activities.

Financial intermediation services

2.33 The major activity of banks, deposit-taking companies and other firms dealing with personal loans, mortgages, instalment credit, factoring and bill discounting, etc. is to provide financial intermediation services. These financial intermediaries do not collect explicit charges for the financial intermediation services they provide. Instead, they charge indirectly by paying and charging different interest rates to lenders and borrowers. They pay lower interest rates to those who lend them money and charge higher interest rates to those who borrow from them.

2.34 這些服務的產值，稱為「非直接計算的金融中介服務」，是以參照利率方法來計算。「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。非直接計算的金融中介服務，連同其他明確地收取的服務費、租金收入、佣金及其他收費合共組成金融中介服務的生產總額。

2.34 The value of output of these services, namely "financial intermediation services indirectly measured (FISIM)" is measured using the reference rate method. 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. The value of FISIM, together with other explicit services charges, rentals, commissions and other fees received, constitute the gross output of financial intermediaries.

2.35 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：

(1) 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；

(2) 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。

2.35 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:

(1) 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;

(2) 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.

2.36 各經濟行業所使用的金融中介服務的價值，已被歸類為各有關行業的中間投產消耗，並從其生產總額中扣除，以計算各行業的增加價值。住戶在銀行存款及貸款（住宅貸款除外）時使用的金融中介服務的價值，以及本地銀行向非本地居民提供的金融中介服務的價值，已分別包括在按開支組成部分劃分的本地生產總值中的私人消費開支及服務輸出組成部分內。有關住宅貸款的金融中介服務已撥入按經濟活動劃分的本地生產總值中「樓宇業權」的中間投產消耗內。

2.36 The amounts of financial intermediation services consumed by various economic sectors are included in the intermediate consumption of the respective sectors, and subsequently deducted from their gross output in calculating the value added of the respective sectors. The amount of financial intermediation services consumed by households when they make deposits at banks and obtain loans from banks (other than dwelling loans) and the amount of financial intermediation services provided by resident banks to non-residents are included in private consumption expenditure and exports of services respectively in the GDP by expenditure component. Financial intermediation services relating to dwelling loans of households are included in the intermediate consumption of the item "Ownership of premises" in the GDP by economic activity.

2.37 至於私人貸款公司及當舖，任何劃銷的壞帳均從生產總額中扣除。由於私人貸款公司及當舖出現壞帳的情況頗為普遍，所以要採用上述方法處理。至於當舖方面，生產總額包括出售無人贖取貨品的收入，但須從中扣除所付出相應的貸款額。

2.37 For personal loan companies and pawnshops, any bad debts written off are deducted from their gross output. This treatment is adopted because bad debts are quite common in the business of personal loan companies and pawnshops. For pawnshops, the gross output also includes the receipts from sales of unclaimed goods *less* the corresponding loan granted.

2.38 至於由外地銀行駐港代表辦事處為海外母公司所提供的服務總值，則以所有投產資源成本的總和計算，其中包括僱員報酬及其他營運開支。

2.39 有關金融中介服務的中間投產消耗，包括租金、業務上耗用的物料及供應品、廣告、法律服務、會計、通訊、運輸及其他服務的開支。

其他金融服務

2.40 其他金融服務包括投資及控股公司、受託人及保管人、基金管理、證券經紀服務，以及商品期貨、外匯、金銀貿易經紀及交易商等。

2.41 投資及控股公司為其附屬公司在收費或無收費情況下，提供管理服務。這些公司亦從貸款和墊款、在附屬公司投資及作其他種類投資而賺取利息及股息。投資及控股公司所提供的服務總值，是以收得的管理費和其他種類的營業收入，例如租金收入、佣金及其他服務收費計算。

2.42 至於受託人及保管人、基金管理、證券經紀服務及從事其他金融資產買賣的經紀及交易商向顧客所提供的服務總值，是以他們收取的服務費、佣金、經紀費及其他收費計算。編製他們的生產總額時，租金收入亦計算在內，但不包括其本身帳目下的金融及其他資產買賣的盈虧數目。至於為顧客提供雜項金融服務的公司，其服務總值是以他們收取的服務費、佣金及收費計算。

2.43 有關其他金融服務的中間投產消耗，包括租金、業務上所耗用的物料、供應品及服務，以及廣告、保險、法律、會計及其他專業服務等開支。利息支出不包括在中間投產消耗內。

保險

2.44 提供這類服務者包括人壽及一般保險公司、保險代理人及專門提供專業保險服務的公司。除專門承保人壽保險的公司外，其餘承保其他各類保險的保險公司均稱為一般保險公司。

2.38 For representative offices of foreign banks in Hong Kong, the value of the services they provide to their overseas parents is taken as the sum of all input costs, including compensation of employees and other operating expenses.

2.39 The intermediate consumption in respect of the financial intermediation services comprises rentals, expenses on materials and supplies consumed in business operation, advertising, legal, accounting, communications, transportation and other services.

Other financial services

2.40 Other financial services include investment and holding companies, trustees and custodians, fund management, securities brokerage, brokers and dealers in commodity futures, foreign exchange, gold bullion, etc.

2.41 Investment and holding companies provide management services to their subsidiaries, with or without making a charge. They also receive interest and dividends from loans and advances, investment in subsidiaries, and other types of investment. The value of services provided by investment and holding companies is measured by the amount of management fees received and other forms of business receipts such as rentals received, commissions and other service charges.

2.42 For trustees and custodians, fund management, securities brokerage and brokers and dealers in other financial assets, the value of the services they provide to their clients is measured by their service charges, commissions and brokerages, and other fees received. Rentals received are also included in compiling the gross output. However, any gain / loss from trading in financial and other assets on own account is excluded in compiling the gross output. For firms providing miscellaneous financial services to customers, the value of services they provide is also measured by their service charges, commissions and fees.

2.43 The intermediate consumption in respect of other financial services comprises rentals, expenses on materials and supplies and services consumed in business operation, advertising, insurance, legal, accounting and other professional services. Interest payments are not included in intermediate consumption.

Insurance

2.44 The producers of insurance services comprise life and general insurers, insurance agents, and specialist firms providing professional insurance services. Other than those companies specialising in life insurance policies, insurance companies underwriting all other types of policies are referred to as general insurance companies.

2.45　人壽保險公司為投保人提供一種財務保障，並把保險費中作為投保人儲蓄的部分加以投資。人壽保險公司從提供這些服務所產生的產值難以量計。根據國際建議，人壽保險公司的產值應相等於實際所收保費及追加保費的總和，*減去*到期應付保險金及人壽保險專門準備金的變動。生產總額亦包括從代理人及提供其他服務所得的收入，以及租金收入。

2.45 Life insurance companies provide some form of financial security for policy holders, and invest that part of policy holders' savings which are included in the premiums. The output which life insurance companies generate from these services is difficult to measure. According to international recommendation, the output of life insurance should be derived as the sum of premiums earned and premium supplements, *less* benefits due and change in life insurance technical reserves. Their receipts from agency and other services rendered as well as rentals received are also included in their gross output.

2.46　同樣地，要計算一般保險公司為投保人所提供的服務總值，方法是把扣去賠償淨額的保留備用保險費淨值和投資金融資產所得的收入相加。生產總額亦包括從代理人及提供其他服務（包括分保佣金）所得的收入，以及租金收入。

2.46 Similarly, for general insurance companies, the value of services rendered by general insurers to policy holders is measured by net retained premiums *less* net claims paid, *plus* income from investment in financial assets. Their receipts from agency and other services rendered (including reinsurance commission) as well as rentals received are also included in their gross output.

2.47　有關保險代理人、經紀及專為顧客提供專業保險服務的公司，其服務收入的總值，是以服務收益、收費及佣金計算。

2.47 The value of services provided by insurance agents, brokers, and other specialist firms rendering professional insurance services to clients is measured by their service receipts, fees and commissions.

2.48　有關保險服務的中間投產消耗，包括租金、業務上所耗用的物料和供應品、廣告、通訊及其他處理賠償事宜所需服務的開支。處理賠償服務指處理保險賠償申請時所涉及的調查等服務。若一般保險公司在保險業務方面有聘用代理人，其支付給代理人的佣金須從保險費總值中扣除，以得出保留備用保險費的淨值。因此，這些佣金不計算在其中間投產消耗的總值內。如保險公司聘用只為該公司服務的個別代理人，則保險公司支付給他們的費用是視作僱員報酬。

2.48 The intermediate consumption in respect of insurance services comprises rentals, expenses on materials and supplies consumed in business operation, advertising, communications and other claim-handling services. Claim-handling services refer to investigatory and surveying services, etc. in processing applications for insurance compensation. For general insurers appointing agents in their underwriting business, the commissions paid to agents are deducted from the value of gross premiums to obtain the value of net retained premium. Consequently these commissions are not included in the value of their intermediate consumption. The payments made by an insurance company to individual agents employed by the company and serving solely the company are treated as compensation of employees.

地產、專業及商用服務

Real estate, professional and business services

2.49　地產發展商、地產租賃、經紀及保養管理服務公司，以及與地產及建造活動相關的建築、測量及工程服務，是包括在地產發展業，建築、測量及工程服務業，以及地產租賃、經紀及代理、保養管理服務業的「經濟活動按年統計調查」之內。而其他專業及商用服務，則由專業及商用服務業的「經濟活動按年統計調查」提供數據以編製有關這些活動的估計數字。

2.49 The activities of real estate developers, real estate leasing, brokerage and maintenance management firms and architectural, surveying, engineering services related to real estate and construction are covered by the ASEA for Real Estate Development Sector; Architectural, Surveying and Engineering Services Sectors; and Real Estate Leasing, Brokerage and Agency, Maintenance Management Sectors. For other professional and business services, the ASEA for Professional and Business Services Sector provides the data for compiling estimates pertaining to these activities.

地產發展、地產租賃、經紀及管理服務

2.50 地產發展商所提供的服務，包括安排承建商、建築師、設計師等興建住宅和非住宅樓宇及為建造工程提供資金。進行這些業務所得的酬勞為地產發展商的毛利，並且是根據物業售價與工程開支的差額而作出估算。此外，地產發展商或會出租物業，或作為地產代理從促成物業轉讓的服務中收取佣金或費用，又或作為房地產管理人。然而，轉售現有物業所得的毛利，不應包括在生產總額內。轉售現有物業所得的毛利不算作經濟生產，在國民經濟核算中是視作資本收益的。

2.51 編製地產發展商在發展物業方面的毛利估計時，是會遇到實際困難的。如樓宇在一年內落成，並在同年內售出，那便沒有重大的問題。在此情況下，毛利相等於樓宇售價*減去*發展商在這項工程所支付的成本總值（不包括利息支出）。然而，如樓宇竣工與出售並非在同一年，便會出現問題。在工程興建期間，發展商須支付興建中的工程費用，但又因樓宇未建成或售出而沒有銷售收入。在概念上，這個難題（從商業會計上計算損益情況的角度而言）在國民經濟核算中是可以解決的，辦法是計算在興建中的工程價值（從地產發展商的角度計算），不論是否有實際收入或支出，這個辦法是相等於計算已完成的經濟活動的價值。不過，評估上述在興建中的工程價值時也有實際困難。在進行地產發展商的經濟統計調查時，受訪者須填報物業在統計期初及期末的實際價值或預期價值。如物業實際上已售出，實際出售價值便會記錄下來，否則便得記錄受訪者提供的價目表所列的售價或其他估價數字。當地產市道蓬勃時，物業暢銷，發展商很清楚其物業的價值。但當市道不利，物業滯銷時，發展商或許未能給予合理的答覆。如發展商未能提供有關數據，則會根據類似地區內相關種類和面積的樓宇銷售數據，設算物業的價值。物業在統計期初和期末的價值是以當時年中價格計算，以減少價格變動對物業價值的影響。最後，把以當時年中價格計算的物業價值乘以統計期間的物業完成率，以得出從地產發展商角度計算在統計期內的興建中的工程價值。興建中的工程價值扣除該年內所有工程支出（不包括利息支出），便是地產發展商的毛利。地產發展商的生產總額，包括物業發展毛利、服務收費，以及佣金和租金收入等。

Real estate development, real estate leasing, brokerage and management services

2.50 Real estate developers provide services in arranging for contractors, architects, designers, etc. to construct residential and non-residential buildings and in financing the projects. Their reward in these activities is regarded as real estate developers' margin (REDM) and is estimated by the difference between the selling prices of properties and the project outlays. In addition, real estate developers may lease out properties, act as estate agents and receive commissions or payments for the service of facilitating the transfer of properties, or act as property managers. Any margin received from resales of existing properties must be excluded from the gross output. The resale margin of existing properties is not reckoned as an economic output. It is treated as a capital gain in national accounts.

2.51 Practical difficulties arise in estimating the REDM on property development. For a building which is completely built within a year and sold in the same year, no major problems occur. The margin in this case would be equal to the selling price of the building *less* the value of the total costs incurred by the developer in respect of the project (excluding interest payments incurred). However, problems would arise if the building is not completely built and sold within the same year. The developer will then have incurred costs on the work-in-progress over the construction period but no sales receipts have been received as the building is still not yet completed or sold. Conceptually, this ambiguity (in the commercial accounting profit / loss sense) can be overcome in national accounts by measuring the value of the work-in-progress to the real estate developer irrespective of whether payments have been made or received. This is a measure corresponding to the value of economic activity performed. However, there are practical difficulties in assessing the value of the work-in-progress to the real estate developer. In the economic survey for real estate developers, respondents are asked to give the actual or expected value of their properties at the beginning and the end of the reference period. If the properties have actually been sold, the actual sales values are recorded, otherwise the catalogued selling prices of properties or other values given by the respondents are recorded. When the real estate market is good and properties are selling quickly, developers are well aware of the value of their properties. However, when the market is unfavourable and transactions are few, developers may not be able to give reasonable replies. For a developer who fails to provide the data, the value of the property is imputed from data on sales in similar areas by type and size of building. The property values as at the beginning and the end of the reference period are then expressed at current mid-year prices to reduce the effects of changes in prices on such values. Finally the property value at current mid-year prices is multiplied by the percentage of the property completed during the reference period, to give the value of the work-in-progress to the real estate developer during the period. REDM is obtained as the value of the work-in-progress *less* all project outlays incurred during the year, excluding interest payments. The value of gross output of real estate developers comprises the REDM on property development, service charges, commissions and rentals received, etc.

2.52 從事地產租賃、經紀及管理服務的公司的生產總額，相等於其提供服務所得的收入，其中包括出租公司本身所擁有的物業的租金收入、從物業買賣中賺得的佣金，以及地產管理費及其他服務的收費。

2.52 For firms engaged in real estate leasing, brokerage and management services, the gross output corresponds to their service receipts which comprise rentals received from leased properties owned by these companies, commissions earned in respect of property transactions, real estate management fees and other service receipts.

2.53 有關地產發展商、地產租賃、經紀及管理服務公司的中間投產消耗，包括業務上所耗用的雜項物料的開支、租金，以及與地產業務有關的開支，例如產業管理開支、廣告、專業費用及其他開支等。

2.53 The intermediate consumption in respect of real estate developers and real estate leasing, brokerage and management firms comprises expenses on sundry supplies consumed in business, rentals and expenses in relation to real estate activities like estate management expenses, advertising, professional fees and other overhead expenses.

專業及商用服務

Professional and business services

2.54 專業及商用服務的範圍包括(1) 專業、科學及技術活動，例如法律、會計、核數、管理顧問、建築設計、測量、工程及相關顧問、廣告、市場研究；及(2) 行政及支援服務活動，例如機械及設備租賃、就業服務及旅行代理。

2.54 Professional and business services include (1) professional, scientific and technical activities such as legal, accounting, auditing, management consultancy, architectural design, surveying, engineering and related consultancy, advertising, market research; and (2) administrative and support service activities such as rental and leasing of machinery and equipment, employment activities, and travel agency.

2.55 由有關公司所提供的專業及商用服務的總值，一般是按所收費用、佣金及其他收費，包括出租樓宇和機械的收入計算。廣告商的廣告收入總額通常包括支付給傳播媒介的費用。這些代客戶支付的費用並不計算在他們的生產總額內，所以廣告商的生產總額，只包括淨收入，即收入總額扣除支付給第三者的款額。市場研究和公共關係公司的生產總額，亦採用類似方法計算。至於旅行代理、代訂及旅遊相關活動從顧客所得的總收入，通常包括票價在內。故在編製旅行代理的生產總額時，須把票價從收入總額中扣除。基於類似原因，在計算旅行團營運者在安排旅行團所提供的服務總值時，須把旅行團成本從營業總收入中扣除。

2.55 The value of professional and business services provided by firms engaged in these activities is generally measured by the fees, commissions and other charges received, including rentals from buildings and machinery. For advertising agents, their gross receipts from advertisements often include charges paid to the media. These charges which are paid on behalf of their clients are not included in measuring the gross output of advertising agents. Hence only the net receipt, i.e. gross receipts *less* any amounts paid to the third party, is included in the gross output of advertising agents. Similar treatment applies to market research and public relations firms. For travel agency, reservation and tourist-related activities, their gross receipts from clients often include the value of tickets. In compiling the gross output of travel agency, the value of tickets is deducted from their gross receipts. For similar reasons, the value of services provided by tour operators in organising a tour is measured by their total sales revenue *less* the cost of the tour.

2.56 有關專業及商用服務的中間投產消耗價值，包括業務上所耗用的物料和供應品的開支、租金、佣金、外判工作的開支，以及其他用於廣告、運輸和通訊等的營運開支。就旅行代理、代訂及旅遊相關活動來說，代客購票和旅行團成本並不包括在中間投產消耗內，而是從收入總額中扣除。

2.56 The value of intermediate consumption in respect of professional and business services comprises expenses on materials and supplies consumed in business operation, rentals, commissions, cost of contract work and other operating expenses such as advertising, transport and communications. For travel agency, reservation and tourist-related activities, expenditures on purchase of tickets and tour cost incurred on behalf of clients are not included as intermediate consumption, but are deducted from gross receipts.

公共行政、社會及個人服務

Public administration, social and personal services

2.57 社會及個人服務提供者包括向個別人士和住戶提供廣泛服務的組織，服務範圍包括教育；保健及住宿護理；藝術、娛樂及康樂；汽車及家庭用品維修；衣服洗燙、美容、理髮、體重控制及纖體服務等。公共行政包括一般行政、治安及保安服務，以及由非參與商業活動的政府部門所提供的其他服務。教育、保健及福利等服務，主要由政府及私人非牟利機構提供。編製這些服務統計數字的數據來源包括政府帳目及行政記錄、私人非牟利機構的帳目，以及透過抽選提供個人服務的商業機構進行統計調查而獲得的數據。

2.57 Producers of social and personal services comprise organisations providing a wide range of services to individuals and households such as education; health and residential care; arts, entertainment and recreation; repair of motor vehicles and household goods; laundry, beauty, hairdressing, weight control and slimming services. Public administration includes general administration, public order and safety services and other services provided by government departments which are not engaged in market activities. Services such as education, health and welfare are mainly provided by the government and private non-profit institutions. Data sources for these services include government accounts and administrative records, accounts of private non-profit institutions and survey data collected from a sample of commercial establishments rendering personal services.

2.58 政府和私人非牟利機構向公眾提供的服務，通常是免費的，或是收費較投產資源成本為低。上述機構提供的服務總值，是以投產資源成本估算的，即營運開支、僱員報酬及固定資本消耗的總和。這些機構的營運開支被視作中間投產消耗，而僱員報酬及固定資本消耗的總和則屬該類服務的增加價值。

2.58 Government services and services provided by private non-profit institutions are usually provided to the public free or at prices below their input costs of production. The value of services rendered by these organisations is estimated as the sum of the input costs, i.e. operating expenses, compensation of employees and consumption of fixed capital. The operating expenses are treated as intermediate consumption, and the total of compensation of employees and consumption of fixed capital as value added for such kind of services.

2.59 至於政府服務方面，是把其詳細開支帳目按用途重新分類，用以編製其估計產值。

2.59 For government services, detailed expenditure accounts reclassified by purpose are used for compiling the output estimates.

2.60 私人非牟利機構所提供的服務總值，則根據兩個數據來源計算。獲政府津貼的機構，有關其所提供服務的數據可從負責監管津貼用途的政府部門（如負責監管學校津貼用途的教育局）所提供的行政記錄中獲得。至於其他沒有獲政府津貼的機構所提供的服務總值，則主要以勞工成本估算。

2.60 Compilation of the value of services rendered by private non-profit institutions is based on two sources of data. For government-subvented organisations, data on services rendered are obtained based on administrative records provided by government departments overseeing these subventions, e.g. Education Bureau overseeing subventions to schools. For other private non-profit institutions not receiving government subventions, the value of services is mainly estimated based on labour cost.

2.61 商業機構的統計數字是根據社會及個人服務業的「經濟活動按年統計調查」的結果而編製，並輔以其他來源所得的數據，包括就業及薪酬統計數字以及稅收統計數字。政府統計處不斷致力搜集有關個人服務更詳盡及可靠的數據。這些機構的生產總額主要包括所提供服務而收取的費用、佣金及其他服務收費，以及轉售貨品所得的毛利和租金收入。

2.62 正如其他行業的情況一樣，有關這些服務的中間投產消耗總值，包括業務上耗用的物料和供應品的開支、租金、維修保養，以及其他用於廣告、運輸及通訊方面的營運開支。

樓宇業權

2.63 在國民經濟核算中，樓宇業權被視為一項經濟活動。租金支出是代表住戶的一項開支或商業機構的中間投產消耗，租金收入透過擁有樓宇業權而來，屬一項商品類服務的銷售或產值。把本身擁有的樓宇出租的公司，其所提供的服務是以租金收入計算，並已包括在這些公司所屬經濟活動的生產總額內。不過，樓宇業主以個人身分向租客提供的租賃服務，並未計算在上述任何一類經濟活動內，因此要另設一項稱為樓宇業權的經濟活動。除業主以個人身分向租客所提供的租賃服務外，這項經濟活動亦包括住宅自住業主假定向本身提供的租賃服務。這些物業的設算租金會加入國民收入內計算，以反映所提供的服務價值。嚴格來說，這些物業的保養維修費用以及住戶在住宅貸款時使用的金融中介服務的總額應視作成本，而設算租金和這些成本的差額則當作經營盈餘。這樣，自住業主的設算租金開支便按開支方式記錄，而設算的經營盈餘則按生產方式記錄。由於沒有業主自住物業的保養維修費用的數據，所以要在以生產面編製的數字中酌留特定的百分比作為這項開支。至於住戶在住宅貸款時使用的金融中介服務的價值，是運用參照利率方法間接地量度。詳情請參閱第 2.34-2.36 段。

2.61 Statistics for commercial establishments are based on results of the ASEA for Social and Personal Services, supplemented by data from other sources, including employment and earnings statistics and tax statistics. Continuous effort has been made to collect more comprehensive and reliable data for personal services. Gross output of these establishments comprises mainly receipts from services rendered in the form of fees, commissions and other service charges, margin on resale of goods and rentals received.

2.62 As in the case of other industries, the value of intermediate consumption in respect of these services comprises expenses on materials and supplies consumed in business operation, rentals, repair and maintenance, and other operating expenses such as advertising, transport and communications.

Ownership of premises

2.63 Ownership of premises is treated as an economic activity in national accounts. The rentals paid represent an expenditure for households or intermediate consumption for business firms, while the rentals received represent a sale of a commodity-type service or output derived from ownership of premises. For business firms letting out premises which they own, the services they provide are measured by the rentals received, and are captured in the gross output of the respective activities to which the firms belong. However, the leasing services provided to tenants by owners of premises in individual capacity have not been accounted for in any of the activities described so far. Hence, a separate activity, viz. ownership of premises, is introduced for this purpose. Besides leasing services provided to tenants by owners of premises in individual capacity, this activity also covers leasing services assumed to be provided by residential owner-occupiers to themselves. An imputed figure on rentals for such properties is added to the national income calculations to reflect the value of the services rendered. Strictly speaking, any expenses spent on maintenance and repair of such properties as well as the value of financial intermediation services relating to dwelling loans of households should be treated as a cost and the balance of imputed rentals over these amounts should be taken to represent the operating surplus. In this way, the imputed expenditure on rentals by owner-occupiers is recorded in the expenditure approach and the imputed operating surplus in the production approach. Since data for compiling the cost of maintenance and repair of owner-occupied properties are not available, a specific percentage of allowance has been made for such expenditure in the figures compiled from the production approach. For the value of the financial intermediation services relating to dwelling loans of households, it is indirectly measured using the reference rate method. Please see paragraphs 2.34-2.36 for details.

2.64　私人住宅樓宇業權的估計，包括住戶出租私人住宅樓宇的租金收入及住戶自住樓宇的設算租金。這是根據差餉物業估價署所提供的所有私人住宅樓宇的應課差餉租值，在扣除公司從住戶收取的有關租金後估算出來的。

2.64　The estimate of ownership of private domestic premises includes both the rentals of private domestic premises received by households and the imputed rentals of households occupying their own premises. It is estimated based on the rateable value of all private domestic premises supplied by the Rating and Valuation Department, after discounting the related rentals received by companies from households.

2.65　至於由業主自用的非住宅物業，例如寫字樓、工廠及商舖，是沒有設算租金的，因為任何設算租金，同時會是業主公司的一項開支（中間投產消耗）及收入（生產總額）而互相抵銷。雖然沒有作出設算，但對增加價值數字並無影響。

2.65　For owner-occupiers of non-residential properties e.g. offices, factories and shops, no imputation of rentals has been made. This is because any imputed rentals will simultaneously be an expense (intermediate consumption) and a receipt (gross output) of the owner-occupier firm, and the two will offset each other. The omission will not in consequence affect the value added figures.

以環比物量計算按經濟活動劃分的本地生產總值

Chain volume measures of GDP by economic activity

2.66　隨着政府統計處過去多年不斷發展和加強按月及按季經濟統計調查，更多經濟數據得以齊備，包括短期經濟指標（如服務業的按季業務收益）和為某些選定服務行業編製生產者價格指數。生產者價格指數旨在量度本地生產者就其產品及服務所收取價格的平均變動。生產者價格是指生產者對其產品及服務所收取的實際交易價格，即已扣除任何退回給買家的折扣、回佣或津貼，但包括生產者收取的附加費用。有了這些齊備的數據，使編製以物量計算按經濟活動劃分的按季本地生產總值得以實行。

2.66　With the continuous development and enhancement of monthly and quarterly economic surveys conducted by the Census and Statistics Department over the past years, more economic data are available, including the availability of short-term economic indicators (e.g. quarterly business receipts of service industries) and producer price indices (PPIs) for selected service industries. PPI is a measure of the average change in prices of goods and services received by local producers. Producer prices are transacted prices of their goods and services, net of any discounts, rebates or allowances given to buyers but including surcharges received by producers. The availability of such data enables the compilation of quarterly volume measures of GDP by economic activity.

2.67　以物量計算按經濟活動劃分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。技術詳情請參閱附件一。

2.67　In compiling the volume measures of GDP by economic activity, the annually re-weighted chain linking approach is adopted. For technical details, please refer to Annex 1.

2.68　就香港而言，以物量計算按經濟活動劃分的本地生產總值一般用 4 種方法編製：(1) 以前一年增加價值單一外推編算方法，所用的外推指標是經平減的生產總額（例如經生產者價格指數平減的業務收益）；(2) 以前一年增加價值單一外推編算方法，所用的外推指標是物量／數量數據（例如貿易量和產品的實質數量）；(3) 以前一年增加價值單一外推編算方法，所用的外推指標是投入指標（例如工作時數）；及(4) 雙指標編算方法。一些統計先進的經濟體編製以物量計算的按季增加價值時普遍採用首兩個方法，香港也較多採用這兩個方法。

2.68　The volume estimates of GDP by economic activity in Hong Kong are generally compiled using four methods: (1) single extrapolation of previous year value added by deflated gross output measures (e.g. business receipts deflated by PPI); (2) single extrapolation of previous year value added by volume / quantity measures such as volume of trade and physical units of outputs; (3) single extrapolation of previous year value added by input indicators such as hours worked; and (4) double indicators method. The first two methods are most frequently applied in Hong Kong for compiling quarterly volume estimates of value added, as in some statistically advanced economies.

使用經平減的生產總額進行單一外推編算方法

2.69 計算經平減的生產總額須運用相關的平減物價指數。就建造業而言，所採用的平減物價指數包括以類別劃分的建造工程完成量平減物價指數（例如非住宅樓宇、住宅樓宇、土木工程）、土木工程指數、屋宇設備投標價格指數和其他物價指數。就住宿服務以及海陸空運輸業而言，會使用相關的生產者價格指數。

使用物量／數量指標進行單一外推編算方法

2.70 使用物量／數量指標進行的單一外推編算方法通常在兩種情況下採用。第一種情況是有關經濟活動的服務價格在理論上和實際上均難以量度，如進出口貿易、批發及零售業所提供的服務，以及非直接計算的金融中介服務。

2.71 進出口貿易、批發及零售業商所提供的服務是在對顧客方便的地點和時間提供貨品。這些服務的價值可從貿易毛利（售出貨品價值*減去*貨品成本）估算出來，但這些服務的價格並不明顯易見。為估算這些服務的物量，國際貨幣基金組織和歐盟統計局建議使用經分銷渠道出售的貨量作為物量指標。同樣地，非直接計算的金融中介服務價格亦不明顯易見，因為銀行提供金融中介服務時沒有直接向顧客收費。國際貨幣基金組織和經濟合作與發展組織建議的做法，是把經平減的銀行資產及負債數額用作物量指標。

2.72 第二種情況是數量指標與產量的相關性十分高，因而適合用作估算以物量計算的增加價值（例如香港撥出對外固定電話通訊量的統計數字是用作外推國際電話服務以物量計算的增加價值的指標）。

Single extrapolation by deflated gross output measures

2.69 In calculating deflated gross output, relevant price deflators are needed. For construction, price deflators employed include type-specific construction output deflators (e.g. non-residential buildings, residential buildings, civil engineering works), the Civil Engineering Works Index, Building Services Tender Price Index and other price indices. For accommodation services and air, land and water transport services, the respective PPIs are used.

Single extrapolation by volume / quantity indicators

2.70 The method of single extrapolation by volume / quantity indicators is commonly applied under two circumstances. The first circumstance is where the service prices of economic activities are both theoretically and practically very difficult to measure, as in the case of services provided by import / export, wholesale and retail trades and financial intermediation services indirectly measured (FISIM).

2.71 The services provided by import / export, wholesale and retail traders are to make available goods at a location and time convenient to their customers. While the value of the services can be estimated by trade margin (which is calculated as sales of goods *minus* cost of goods sold), the prices of the services provided are not readily observable. To estimate the volume of the services, the recommended approach by the International Monetary Fund and Eurostat is to construct a volume indicator by using the volume of goods passing through the distributive channels. Likewise, the prices of FISIM are not readily observable. This is because in providing financial intermediation services, banks do not charge their customers explicitly. The recommended approach by the International Monetary Fund and Organisation for Economic Co-operation and Development is to use deflated stock of assets and liabilities of banks as volume indicator.

2.72 The second circumstance is where quantity indicators are highly correlated with the volume of output and hence provide good proxies for estimating value added in volume terms (e.g. statistics on outward external telephone traffic volume is used as an indicator to extrapolate the value added of international telephone services in volume terms).

使用投入指標進行單一外推編算方法

2.73 使用投入指標進行外推編算方法，常用的指標是經平減的工資和工作時數。經平減的工資指標應用於以成本估計產值的經濟活動上，如香港政府和私人非牟利團體的產出，而工作時數指標現時應用於一些選定的商用服務和資訊及通訊服務行業。

Single extrapolation by input indicators

2.73 In extrapolation by input indicators, the commonly used indicators are deflated wages and hours worked. Deflated wages indicators are applied to economic activities of which the output is estimated by cost approach, e.g. the output of government and private non-profit bodies in Hong Kong. For indicators of hours worked, they are at present applied to selected business service industries and information and communications industries.

雙指標編算方法

2.74 根據雙指標方法，以物量計算的增加價值是把生產總額的物量估計減去中間投產消耗的物量估計而得出。中間投產消耗和生產總額的物量估計，可透過平減當時價格的數字或用適當指標進行外推方法計算。因此，運用雙指標編算方法所需的數據是有關經濟活動的產值和投入值以及其價格的詳細數據。統計先進的經濟體，由於沒有足夠數據，通常都不使用這個方法編製以物量計算的按季增加價值。在香港，雙指標編算方法應用於電力及燃氣供應和餐飲服務。

Double indicators method

2.74 In applying the double indicators method, volume estimates of value added are calculated by subtracting volume estimates of intermediate consumption from volume estimates of gross output. Volume estimates of intermediate consumption and gross output can be obtained by either deflation of current price figures or extrapolation by relevant indicators. Thus, the double indicators method requires detailed data on the outputs and inputs of respective economic activities and their prices. Owing to data availability problems, this method is not commonly used by statistically advanced economies in deriving quarterly value added in volume terms. In Hong Kong, double indicators method is applied to electricity and gas supply, and food and beverage services.

2.75 下表列出編製各項經濟活動以物量計算的按季增加價值的方法及數據來源：

2.75 The methods and data sources for compiling the quarterly value added of individual economic activities in volume terms are summarised below:

經濟活動 *Economic activity*	*編製方法／數據來源* *Methods / Data sources*
農業、漁業、採礦及採石 **Agriculture, fishing, mining and quarrying**	
農業及漁業 Agriculture and fishing	使用物量／數量指標進行單一外推。 所用的物量指標是由漁農自然護理署提供的魚類、蔬菜、豬隻及家禽的本地產量。 Single extrapolation by volume / quantity indicators. The quantities of local production of fish, vegetables, swine and poultry provided by the Agriculture, Fisheries and Conservation Department are used as the volume indicators.
採礦及採石 Mining and quarrying	使用物量／數量指標進行單一外推。 所用的物量指標是由土木工程拓展署提供的石礦產量。 Single extrapolation by volume / quantity indicator. The quantity of quarry production supplied by the Civil Engineering and Development Department is used as the volume indicator.

經濟活動 *Economic activity*	*編製方法／數據來源* *Methods / Data sources*

製造
Manufacturing

製造 Manufacturing	使用物量／數量指標進行單一外推。 使用能反映本地製造業生產量實質變動的工業生產按季指數作為物量指標。相關統計數字來自「工業生產按季統計調查」。 Single extrapolation by volume / quantity indicator. The Quarterly Index of Industrial Production which reflects changes of local manufacturing output in real terms is used as the volume indicator. Statistics of the Quarterly Index of Industrial Production are compiled from the Quarterly Survey of Industrial Production.

電力、燃氣和自來水供應及廢棄物管理
Electricity, gas and water supply, and waste management

電力及燃氣供應 Electricity and gas supply	雙指標編算方法。 使用由電力公司／氣體公司提供的電力／燃氣耗用量作為生產總額的物量指標。中間投產消耗的物量估計則透過直接平減方法計算，所用的平減指數包括相關原料的價格指數、相關的租金指數和綜合消費物價指數內的相關組成部分指數。 Double indicators method. The quantities of electricity / gas consumption supplied by the electricity companies / gas companies are used as the volume indicators for gross output. Volume estimates of intermediate consumption are obtained by direct deflation. Deflators used include price indices of related raw materials, relevant rental index and relevant component indices in Composite Consumer Price Index (CCPI).
自來水供應 Water supply	使用物量／數量指標進行單一外推。 所用的物量指標是由水務署提供的耗水量。 Single extrapolation by volume / quantity indicator. The quantity of water consumption supplied by the Water Supplies Department is used as the volume indicator.
廢棄物管理 Waste management	使用物量／數量指標進行單一外推。 使用工業生產按季指數作為物量指標。 Single extrapolation by volume / quantity indicator. The Quarterly Index of Industrial Production is used as the volume indicator.

經濟活動 *Economic activity*	*編製方法／數據來源* *Methods / Data sources*

建造
Construction

建造 Construction	使用經平減的建造工程總值進行單一外推。 平減建造工程總值的統計數字來自以開支面編製的本地生產總值數字。 Single extrapolation by deflated gross value of construction work. Statistics of deflated gross value of construction work are obtained from the GDP by expenditure approach.

進出口貿易、批發及零售
Import / export, wholesale and retail trades

進出口貿易、批發及零售 Import / export, wholesale and retail trades	使用經平減的業務收益／物量指標進行單一外推。 所用的物量指標包括平減批發業銷售額及零售業銷售額、對外貨品貿易的貨量，以及商貿服務及其他與貿易相關的服務輸出（主要是商貿服務的毛利和商品服務的佣金）的物量估計。有關批發業銷售額的數據來自「服務行業按季統計調查」，而零售業銷售額的數據來自「零售業銷貨額按月統計調查」。對外貨品貿易統計數字是來自每月的對外貿易統計數字。商貿服務及其他與貿易相關的服務輸出統計數字來自以開支面編製的本地生產總值。所用的平減指數是綜合消費物價指數內的相關組成部分指數與對外貿易的單位價格指數。 Single extrapolation by deflated business receipts / volume indicators. Deflated wholesale and retail sales, volume of external trade in goods and volume estimates of exports of merchanting and other trade-related services (mainly gross margin of merchanting and commissions from merchandising) are used as the volume indicators. Wholesale sales are obtained from the Quarterly Survey of Service Industries (QSSI), while retail sales from the Monthly Survey of Retail Sales. Statistics of external trade in goods are obtained from monthly external trade statistics. Statistics of exports of merchanting and other trade-related services are obtained from the GDP by expenditure approach. Deflators are relevant component indices in CCPI and external trade unit value indices.

住宿及膳食服務
Accommodation and food services

住宿服務 Accommodation services	使用經平減的業務收益進行單一外推。 所用的物量指標是經相關的生產者價格指數平減的業務收益。所需數據來自「服務行業按季統計調查」。 Single extrapolation by deflated business receipts. Value of business receipts deflated by the relevant PPI is used as the volume indicator. The required data are obtained from the QSSI.

經濟活動 *Economic activity*	*編製方法／數據來源* *Methods / Data sources*
餐飲服務 Food and beverage services	雙指標編算方法。 生產總額和中間投產消耗的物量估計是透過直接平減法計算得來。食肆的收入及購貨額數據來自「食肆的收入及購貨額按季統計調查」。生產總額是以綜合消費物價指數內的相關組成部分指數為平減指數。中間投產消耗是以租金指數及電力、燃氣和水等的綜合消費物價指數內的組成部分指數為平減指數。 Double indicators method. Volume estimates of gross output and intermediate consumption are obtained by direct deflation. Data on restaurant receipts and purchases are obtained from the Quarterly Survey of Restaurant Receipts and Purchases. Deflators used for deflating gross output are relevant component indices in CCPI. Deflators used for deflating intermediate consumption include rental indices and component indices of electricity, fuels and water, etc. in CCPI.

運輸、倉庫、郵政及速遞服務
Transportation, storage, postal and courier services

運輸、倉庫、郵政及速遞服務 Transportation, storage, postal and courier services	使用經平減的業務收益進行單一外推。 所用的物量指標是經生產者價格指數平減的業務收益。所需數據來自「服務行業按季統計調查」。 Single extrapolation by deflated business receipts. Business receipts deflated by PPIs are used as the volume indicators. The required data are obtained from the QSSI.

資訊及通訊
Information and communications

電訊 Telecommunications	使用物量／數量指標進行單一外推。 所用的物量指標包括香港撥出對外電話通訊量和其他相關行業經平減的業務收益。香港撥出對外電話通訊量的數據來自通訊事務管理局辦公室。相關行業的業務收益及其生產者價格指數的統計數字來自「服務行業按季統計調查」。 Single extrapolation by volume / quantity indicators. Outward external telephone traffic volume and deflated business receipts of relevant industries are used as the volume indicators. Outward external telephone traffic volume is available from the Office of the Communications Authority. Statistics of business receipts of the relevant industries and the corresponding PPIs are obtained from the QSSI.

經濟活動 *Economic activity*	*編製方法／數據來源* *Methods / Data sources*
其他資訊及通訊服務 Other information and communications services	使用投入指標進行單一外推。 使用工作時數進行單一外推。編製工作時數的有關數據是從「僱傭及職位空缺按季統計調查」和「綜合住戶統計調查」搜集得來。 Single extrapolation by input indicator. The number of hours worked is used for single extrapolation. The number of hours worked is compiled based on data collected from the Quarterly Survey of Employment and Vacancies and the General Household Survey.
金融及保險 **Financing and insurance**	
金融 Financing	使用經平減的業務收益／物量指標進行單一外推。 銀行服務所用的物量指標包括經平減的銀行各類金融資產及負債總額、外匯頭寸及銀行業的佣金和其他收費收入。銀行業的金融資產及負債總額和收入的統計數字由香港金融管理局及國際收支平衡統計系統提供。所用的平減指數有股票市場指數、本地生產總值內含平減物價指數及金融服務輸出內含平減物價指數。其他金融服務所用的物量指標包括經平減的業務收益。其他金融服務的業務收益及相關的生產者價格指數的統計數字來自「服務行業按季統計調查」。 Single extrapolation by deflated business receipts / volume indicators. For banking, deflated banks' stock of various types of financial assets and liabilities, deflated foreign currency positions and deflated income from commissions and other fees are used as the volume indicators. Statistics of banks' financial assets and liabilities and income are obtained from the Hong Kong Monetary Authority and the Balance of Payments statistics system. The deflators used are the stock market indices, implicit price deflators of GDP and exports of financial services. For other financing services, the deflated business receipts are used as the volume indicators. Statistics of business receipts and relevant PPIs are obtained from the QSSI.
保險 Insurance	使用物量／數量指標進行單一外推。 所用的物量指標包括由保險業監管局提供的有效保單數目及經平減的淨保費。本地生產總值內含平減物價指數是用以平減淨保費。 Single extrapolation by volume / quantity indicators. Number of insurance policies and deflated net premiums obtained from the Insurance Authority are used as the volume indicators. The implicit price deflator of GDP is used to deflate net premiums.

經濟活動 *Economic activity*	*編製方法／數據來源* *Methods / Data sources*

地產、專業及商用服務
Real estate, professional and business services

地產 Real estate	使用物量／數量指標進行單一外推。 所用的物量指標包括以物量計算的地產發展商毛利、私人寫字樓和商業樓宇的樓面佔用面積、樓宇買賣合約的數目、經平減的地產服務的業務收益和香港房屋委員會經平減的租金收入。以物量計算的地產發展商毛利來自以開支面編製的本地生產總值數字。樓宇買賣合約由土地註冊處提供，至於樓面佔用面積的總存量和空置量數據則由差餉物業估價署提供。地產服務的業務收益及相關的生產者價格指數的統計數字來自「服務行業按季統計調查」。 Single extrapolation by volume / quantity indicators. Real estate developers' margin (REDM) in volume terms, occupied floor area of private offices and commercial buildings, number of agreements for sale and purchase of building units, deflated business receipts and deflated rental income of Housing Authority are used as the volume indicators. REDM in volume terms is obtained from the GDP by expenditure approach. Sale and purchase agreements are obtained from the Land Registry, and data on stock and vacancy in floor area are obtained from the Rating and Valuation Department. Statistics of business receipts and relevant PPIs are obtained from the QSSI.
專業及商用服務 Professional and business services	使用經平減的業務收益／投入指標進行單一外推。 如某類專業及商用服務具備業務收益及生產者價格指數，經平減的業務收益會用作進行單一外推。其他專業及商用服務則使用工作時數進行單一外推。編製工作時數的有關數據是從「僱傭及職位空缺按季統計調查」和「綜合住戶統計調查」搜集得來。 Single extrapolation by deflated business receipts / input indicator. Deflated business receipts are used for single extrapolation when business receipts and PPIs are available. For other professional and business services, number of hours worked is used for single extrapolation. The number of hours worked is compiled based on data collected from the Quarterly Survey of Employment and Vacancies and the General Household Survey.

公共行政、社會及個人服務
Public administration, social and personal services

公共行政 Public administration	使用投入指標進行單一外推。 投入指標是來自庫務署的工資數據。所用的平減指數是政府僱員的薪金率指數。 Single extrapolation by input indicators. The input indicators are based on wages data supplied by the Treasury. The deflator used is the salary rate index for government employees.

經濟活動 *Economic activity*	*編製方法／數據來源* *Methods / Data sources*
社會及個人服務 Social and personal services	使用經平減的政府津貼金額／經平減的有關服務的私人消費開支進行單一外推。 由非牟利機構提供的服務，其政府津貼金額的數據來自庫務署。所用的平減指數是政府僱員的薪金率指數。 由商業機構提供的服務，有關用於個人護理、保健、娛樂及消遣和僱用家庭傭工的私人消費開支統計數字是由政府統計處進行的統計調查，以及醫院管理局、衞生署及香港賽馬會所提供的行政記錄數據編製而成的。而所用的平減指數是綜合消費物價指數內的相關組成部分指數。 Single extrapolation by deflated value of government subventions / private consumption expenditure on various services. For services provided by private non-profit institutions, the value of government subventions is provided by the Treasury. The salary rate index for government employees is used as the deflator. For services provided by commercial establishments, statistics of private consumption expenditure on personal care, health, recreation and entertainment and domestic help are compiled based on results of the surveys conducted by the Census and Statistics Department, administrative data provided by the Hospital Authority, the Department of Health and the Hong Kong Jockey Club. The deflators used are the relevant component indices in CCPI.

樓宇業權
Ownership of premises

樓宇業權 Ownership of premises	使用物量／數量指標進行單一外推。 所用的物量指標是經平減的私人住宅樓宇應課差餉租值。相關的數據來自差餉物業估價署。 Single extrapolation by volume / quantity indicator. Deflated ratable value of private domestic premises is used as the volume indicator. The data are mainly supplied by the Rating and Valuation Department.

產品稅
Taxes on products

產品稅 Taxes on products	直接平減法。 產品稅的數據來自庫務署。所用的平減指標包括有關的稅率及物業價格指數等。 Direct deflation. Data pertaining to taxes on products are obtained from the Treasury. The deflators used include indices of relevant tax rates and property price index, etc.

編製系統的局限

2.76 按經濟活動劃分的本地生產總值的主要數據來源是「經濟活動按年統計調查」。這項統計調查所搜集得的數據可能不是按曆年記錄，因為許多受訪機構所提供的數據是以財政年度或其他期間為基礎，而以當時價格計算的按年本地生產總值則是按曆年編製的。從「經濟活動按年統計調查」所得的國民經濟核算總體數據，可能會因為不是採用以曆年為統計基礎而變得不精確。在某些情況下，倘在「經濟活動按年統計調查」中，按曆年填報與不按曆年填報的數據的偏差幅度太大，則必須以國民經濟核算程序去調整統計調查的結果。

2.77 鑑於從事社會及個人服務的商業機構所提供的服務範圍非常廣泛，「經濟活動按年統計調查」的涵蓋範圍是有遺漏的。其他有關的數據來源，例如就業、工資及利得稅的統計數字，會用以覆核統計調查所得的數據，並在有需要時加以調整。

2.78 編製以物量計算的按經濟活動劃分的本地生產總值數字時，使用經平減的生產總額進行單一外推及使用物量／數量指標進行單一外推是香港及一些統計先進的經濟體較普遍採用的方法。這兩個方法假設中間投產消耗與生產總額的比例在兩年間相對保持穩定。在正常情況下，這個假設大致可靠。但是，當經濟週期經歷重大的突發變動時（如 2019 冠狀病毒病大流行），則應細心評估有關假設。若有需要，我們會在選定行業採用其他數據來源，把生產總額及中間投產消耗可能出現的不同實質按年變動納入計算。

Limitations of the compilation system

2.76 The ASEA is the main source of data for compiling GDP by economic activity. The data collected may not be recorded on a calendar year basis, as quite a large number of responded establishments reported data on a fiscal year basis or for some other period, whilst annual GDP at current prices are compiled on a calendar year basis. Data on national accounts aggregates from the ASEA are therefore subject to imprecision arising from deviations from the calendar year basis of reporting. Under certain circumstances when deviations between data reported on calendar year basis and non-calendar year basis in the ASEA are considered to be significant, national accounting compilation procedures are needed to adjust the results of the survey.

2.77 In view of the diversity in the range of services provided by commercial establishments engaged in social and personal services, the survey coverage of the ASEA is incomplete. Other related sources of data such as employment and earnings statistics and profits tax statistics are used to cross-check the survey data and adjustments are made where necessary.

2.78 In compiling the volume estimates of GDP by economic activity, single extrapolation by deflated gross output measures and single extrapolation by volume / quantity indicators are the most frequently applied methods in Hong Kong and some other statistically advanced economies. These two methods assume that the intermediate consumption expenditure to gross output ratio remains relatively stable between two years. This assumption is generally reliable under normal situation. However, such an assumption should be assessed more carefully when the economic cycle experiences some material sudden shocks (such as the COVID-19 pandemic). Alternative data sources will be used for selected industries where necessary to take into account the potential divergences in year-on-year changes in real terms between gross output and intermediate consumption.

附件一－以按年重訂權數及環比連接法編製本地生產總值數字

1. 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. 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。

3. 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。

4. *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，基年原則上是對上一年。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。

Annex 1 − Annually re-weighted chain linking approach in compiling the volume measures of GDP

1. 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 consumed, and (2) changes in their volumes. In order to measure the volume growth of GDP by economic activity, 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. To compile the volume measures of GDP by economic activity, 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.

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

4. *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.

5. *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。

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

6. 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。

6. 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 , 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.

7. 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。

7. 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.

8. 由於在編製以環比物量計算的數列時，本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。

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

9. 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。

10. 詳細有關以環比物量計算的本地生產總值，請參閱在 2007 年 10 月出版的《本地生產總值統計特刊－以環比物量計算的本地生產總值》(https://www.censtatd.gov.hk/en/data/stat_report/product/B1030003/att/B10300032007XXXXB0200.pdf)。

9. 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.

10. For more details on the chain volume measures of GDP, please refer to the *Special Report on Gross Domestic Product – Chain Volume Measures of Gross Domestic Product* published in October 2007 (https://www.censtatd.gov.hk/en/data/stat_report/product/B1030003/att/B10300032007XXXXB0200.pdf).