UNITED NATIONS
DEPARTMENT OF ECONOMIC AND SOCIAL AFFAIRS
STATISTICS DIVISION

INTERNATIONAL RECOMMENDATIONS ON DISTRIBUTIVE TRADE STATISTICS

Provisional Draft
(As of June 2007)

Foreword

[To be written after the second meeting of the EG on DTS]

Contents

Introduction

1. *Background.* The initial set of international recommendations on distributive trade was adopted by the United Nations Statistical Commission at its ninth session held in 1956. It was based on the report of the Expert Group on Distribution Statistics (E/CN.3/L36), the country comments on this report and the report of the second session of the Working Group on Distribution Statistics of the Conference for European Statisticians. Subsequently, these recommendations were revised and the *International Recommendations on Statistics of Distributive Trades and Services* (ST/ESA/STAT/Ser.M/57) were adopted in 1974 at the eighteenth session of the Commission. In 1977, at the request of the Commission, UNSD published a manual entitled *Organization and Conduct of Distributive-Trade Surveys* (ST/ESA/STAT/SER.F/19). Since 1974 the Commission has not had distributive trade statistics as a separate item on its agenda. However, issues relevant to wholesale and retail trade were considered in the context of the Commission's work, primarily, on service statistics and economic classifications. The present *International Recommendations on Distributive Trade Statistics* (IRDTS) continues the series of international statistical standards that have been issued by UNSD for providing guidance to countries in the collection and compilation of distributive trade data.

2. The recommendations provide concepts, definitions and key compilation practices consistent with other areas of economic statistics such as industrial statistics and other related domains such as structural and short-term statistics, index numbers compilations, performance indicators, and last but not least they are harmonized with the 1993 System of National Accounts, Rev.1 (1993 SNA, Rev.1). As such they can be used as a one-stop shop for measuring distributive trade.

3. Where appropriate, use has been made of the previous work and various methodological manuals of Eurostat, International Labour Organization (ILO), International Monetary Fund (IMF) and Organization for Economic Co-operation and Development (OECD) as well as a number of UNSD international statistical standards in the preparation of the present recommendations. In addition examples of recommended national practice were also widely used. Sources quoted extensively are presented in the list of references (see page […]). Detailed source information and references have been provided throughout the recommendations to enable the user to obtain further information and background information.

4. *Distributive trade as an economic activity.* Distributive trade is an important economic activity comprising wholesaling and retailing (i.e. sale without transformation) of any types of goods together with performing services incidental to sales such as repair, installation and delivery. Contribution of distributive trade to the total economy in terms of value added and employment is steadily increasing in most countries. It should be noted also that a significant part of this activity in developing countries is still carried out in the informal sector of economy. Increasingly, the distributive trade provides a link between producers and buyers of goods who are not only residents of a given economy, but also producers and buyers operating on the global markets as exporters and importers.

5. *Distributive trade statistics.* Distributive trade statistics (DTS) is a subject area of economic statistics concerned with provision of data on economic units whose main activity is wholesale or retail trade and provision of services incidental to the sale. These include data on main characteristics of those units (e.g., type of economic organization or type of operation) as well as data covering such key variables as employment, turnover, sales by product categories, inventories, output, value added etc. It should be noted that the fast evolution of the organizational forms of distributive trade coupled with such a phenomenon as outsourcing of production and other services activities blurs the boundary between manufacturing and other service activities including distributive trade, adding to complexity of the global economy and difficulty in compilation of the distributive trade statistics.

6. *Users and uses of distributive trade statistics.* Users and uses of DTS include:

(a) *Compilers of national accounts* make extensive use of distributive trade statistics including for (i) measuring the trade output[1] and valued added generated by this sector of the economy; (ii) compilation of supply and use tables and input-output tables using data on trade margins by commodity and by industry and combining and reconciling distributive trade statistics with data from household expenditure surveys and production statistics; (iii) estimation of households final consumption expenditures on the basis of retail trade sales by commodity groups; (iv) compilation of quarterly national accounts using short-term indicators of distributive trade for estimation or forecasting of both quarterly output and value added of distributive trade and quarterly final consumption expenditure of households; (v) compilation of monthly or quarterly index of services production.

(b) *Policy makers* use distributive trade statistics, including indices of wholesale and retail trade, for assessing short and long-term movements not only in distributive trade sector but in a country's economy as a whole and for rationalization of their economic policies, including monetary policy. Such detailed data are vital not only in the context of the total economy, but for the sub-national (regional/provincial) analysis and for international policy formulation.

(c) *Business community* is progressively more active user of the detailed distributive trade statistics. The industry analysts find such data indispensable for assessment and forecasting of the dynamics of the wholesale and retail markets as well as for evaluation of performance and competitiveness of various sub-sectors of distributive trade both nationally and internationally. Statistics of distributive trade over a period of time detailed by kind of activity and by various groups of products is used for identification of areas of expanding or contracting demands and for monitoring the broad patterns of changing consumer tastes.

[1] The output of wholesalers and retailers is measured by the total value of the trade margins realized on the goods they purchase for resale. For calculation of trade margin and trade output see Chapter III. Data items and their definitions, para. ……

(d) *Researchers* find distributive trade statistics useful for economic analysis and studies. This includes monitoring of economic trends and developing forecasts for distributive trade sector; conducting market research for the sales of particular group of products, studying methods of sales and distribution etc.

(e) *General public* benefit from the availability of timely distributive trade statistics to evaluate conditions of the economy, employment and income perspectives in order to make more informed decisions.

7. *Aims and objectives of international recommendations.* The ultimate objective of the international recommendations is to provide a common framework for the collection, compilation, analysis and dissemination of distributive trade statistics and to assist countries in producing timely, reliable, and internationally comparable data which meet the demands of user community. This includes identification of the underlying concepts, operational definitions, and classifications for use in distributive trade statistics as well as description of data sources, data compilation methods and dissemination policies. Through their adoption at the national level the recommendations are designed to promote consistency of conceptual frameworks, classifications and key compilation and data transformation practices with other sectoral statistics and other related domains such as structural and short-term statistics, index number compilations, indicators of globalization and productivity and national accounts.

8. *Practical application of recommendations*. It should be stressed that the recommendations contained in IRDTS provide a framework for the collection, compilation, analysis and dissemination of distributive trade statistics which is applicable for all countries irrespective of the level of development of their statistical systems. It is recognized that some items or compilation methods may not be relevant in all cases. It is the responsibility of national statistical offices to apply IRDTS in a way appropriate to their own circumstances. In implementing the recommendations compilers **are encouraged** to assess their applicability and practicality according to their own circumstances. Therefore, the recommendations are not intended to be prescriptive and are to be taken as a guide. **It is further recommended** to periodically review these decisions if those circumstances have changed. The degree of flexibility in the implementation of particular recommendations is discussed in the context of each chapter.

9. IRDTS is prepared in the context of *Fundamental Principles of Official Statistics* which call for official statistics that meet the test of practical utility, that are accessible for all and compiled in a cost effective way, i.e. sources and methods for data collection are appropriately chosen to ensure timeliness and other aspects of quality and to minimize the reporting burden for data providers[2]. *Principles Governing International Statistical Activities* call for high quality international statistics and coordination of

[2] See *Fundamental Principles of Official Statistics* (http://unstats.un.org/unsd/methods/statorg/FP-English.htm)

international statistical programmes in order to strengthen the quality, coherence and governance of international statistics, and to avoid duplication of work[3].

Box 1. ***Principles Governing International Statistical Activities***

- High quality international statistics, accessible for all, are a fundamental element of global information systems *(Principle 1)*
- To maintain the trust in international statistics, their production is to be impartial and strictly based on the highest professional standards *(Principle 2)*
- The public has a right to be informed about the mandates for the statistical work of the organisations *(Principle 3)*
- Concepts, definitions, classifications, sources, methods and procedures employed in the production of international statistics are chosen to meet professional scientific standards and are made transparent for the users *(Principle 4)*
- Sources and methods for data collection are appropriately chosen to ensure timeliness and other aspects of quality, to be cost-efficient and to minimize the reporting burden for data providers *(Principle 5)*
- Individual data collected about natural persons and legal entities, or about small aggregates that are subject to national confidentiality rules, are to be kept strictly confidential and are to be used exclusively for statistical purposes or for purposes mandated by legislation *(Principle 6)*
- Erroneous interpretation and misuse of statistics are to be immediately appropriately addressed *(Principle 7)*
- Standards for national and international statistics are to be developed on the basis of sound professional criteria, while also meeting the test of practical utility and feasibility *(Principle 8)*
- Coordination of international statistical programmes is essential to strengthen the quality, coherence and governance of international statistics, and avoiding duplication of work *(Principle 9)*
- Bilateral and multilateral cooperation in statistics contribute to the professional growth of the statisticians involved and to the improvement of statistics in the organizations and in countries *(Principle 10)*

[3] See more about *Principles Governing International Statistical Activities* on http://unstats.un.org/unsd/methods/statorg/Principles_stat_activities/principles_stat_activities.htm

10. IRDTS deals also with issues of dissemination including international reporting of distributive trade statistics and related metadata for purposes of establishing a worldwide database on distributive trade to provide an easy access to information on global markets.

11. The IRDTS is designed to provide the comprehensive methodological framework of the distributive trade statistics as well as policy guidance on a number of practical issues. More detailed advice to data compilers, including description of good practices, will be developed in near future and published in *Distributive Trade Statistics: Compilers Manual* and *Indices of Distributive Trade: A Handbook of Good Practices* and other technical reports **[a brief overview of the two manuals to be included after the second meeting of the EG on DTS, which will discuss their outlines]**.

12. *The current revision of the recommendations.* The international recommendations on distributive trade statistics were not reviewed as a whole since 1974 and had to be revised in order to:

(a) Take into account and provide recommendations on statistical treatment of the new economic developments in distributive trade sector such as integration of distribution chains, growing importance of groups of enterprises, success of such modes of association as franchising, growing role of shopping centers, expansion of electronic commerce, globalization and the persistent importance of the informal sector in less developed countries;

(b) Ensure implementation of integrated approach to compilation of basic economic statistics for various types of economic activities, in particular to achieve harmonization with the recommendations on industrial statistics. It is recognized that distinct advantages would be attained in practice by the standardization of concepts and definitions, methods and procedures utilized for the common features in economic inquiries. This includes harmonization of the recommendations on distributive trade statistics with the other recently updated statistical standards such as the *International Recommendations on Industrial Statistics (IRIS)* being updated in parallel with IRDTS and the *System of National Accounts, 1993, Rev.1 (1993 SNA Rev.1), ISIC, Rev.4, CPC, Ver.2, Compilation Manual for An Index of Services Production* as well as with recommendations on compilation of index numbers and data/metadata exchange;

(c) Provide guidance on the variables for compilation, data sources and data compilation methods and bring into the light new practices in data collection and data compilation resulting in improved quality and coverage of statistical information on distributive trade;

(d) Ensure uniformity in international reporting in order to create a worldwide database on distributive trade and provide an easy access to information on structure and dynamics of global markets as well as performance of distributive sector in different countries;

(e) Take account of the continued emergence of the remainder of the services sector in most economies around the globe and the increased volume and complexity of the interrelationships between distributive trade and other service activities both within and between enterprises.

13. *Summary of changes in the recommendations.* In brief, differences between the present recommendations and 1974 recommendations can be described as follows:

(a) *Scope*. The scope of present recommendations is limited to all statistical units primarily engaged in wholesale and retail trade activities and classified into section G of ISIC, Rev.4. The previous recommendations had a much broader scope as in addition to trade activities they also covered hotel and restaurants and some selected services such as real estate, advertising, radio and television broadcasting. Repair of personal and household goods is also excluded. According to the ISIC, Rev.4 they are classified now in Division 95 of Section S-Other service activities.

(b) *Harmonization of IRDTS with the 1993 SNA, Rev.1*. Changes relevant to distributive trade statistics include:

- *Valuation of trade output*. Basic prices are recommended for valuation of trade margin and trade output (see para. 4.123 and para. 4.127). This valuation principle is not only implemented by the 1993 SNA, Rev.1, but also practiced in business accounting based on which data are extracted for responding to statistical surveys;

- *Ancillary units*. When separate accounts on production cost of an ancillary unit are available, or it is in a geographically different location from the establishments it serves, this ancillary unit is to be recognized as a separate establishment (see para. 2.27) in order to facilitate the compilation of a regional value added for distributive trade activities;

- *Research and development.* Research and development expenditures of trade units, if any, are to be capitalized. Since much research and development is carried on own account a number of data items, including a separate assets category, are introduced to allow its valuation at cost;

- *Large databases.* Similar to research and development, the large databases created by trade units either on own account or those for sale are to be capitalized;

- *Employee stock options.* Additional instruments for compensation of employees in terms of employee stock options are introduced (see para. 4.48). This permits further harmonization not only with the

1993 SNA, but also with international business accounting standards;

- *Terminology and classification of non-financial assets* used in the IRDTS and the 1993 SNA, Rev.1 is identical.

(c) *Other changes* **[to be added after second EG meeting]**

14. *Organization of the IRDTS.* The IRDTS covers a wide range of topics starting from the discussion on needs of distributive trade and international recommendations for this area of statistics to recommendations on conceptual and practical issues that are intended to be applicable by all countries. It also covers some specific topics that have been identified as requiring additional guidance such as the treatment of informal sector units, compilation of indices of distributive trade, seasonal adjustment etc. The explicit recommendations are given throughout the text and are shown in bold.

15. The IRDTS consists of 10 chapters and **[…]** annexes. The chapters are:

I. SCOPE OF DISTRIBUTIVE TRADE STATISTICS
II. STATISTICAL AND REPORTING UNITS
III. MAIN CHARACTERISTICS OF STATISTICAL UNITS
IV. DATA ITEMS AND THEIR DEFINITIONS
V. PERFORMANCE INDICATORS
VI. DATA SOURCES AND DATA COMPILATION METHODS
VII. SEASONAL ADJUSTMENTS
VIII. INDICES OF DISTRIBUTIVE TRADE
IX. DATA QUALITY AND METADATA
X. DISSEMINATION

ANNEXES

I. List of data items for use in distributive trade statistics
II. List of activities excluded from the scope of the relevant distributive trade divisions and classes
III. Identifying the principal activity of a reporting unit using the top-down method within wholesale and retail trade
IV. Example of metadata on distributive trade statistics in SDDS format

[…]

CHAPTER I. SCOPE OF DISTRIBUTIVE TRADE STATISTICS

A. Distributive trade as an economic activity

1.1. *Economic activity*. In general the term "economic activity" is understood as a process, that is to say, as the combination of actions carried out by a certain entity and resulting in a specific type of products (goods and services). An activity is characterized by (i) an input of resources; (ii) a production process; and (iii) an output of products[4]. By convention, one single activity is understood as a process resulting in a homogeneous type of products. It is recognized that one activity may consist of one simple process or may cover a whole range of sub-processes, each of which might be classified in different activity categories **(see para xxx for details)**. For statistical purposes an entity engaged in a given activity may be treated as either simple or complex. A simple entity is not subdivided into parts to which activities are attributed while a complex entity is, by definition, composed of several sub-entities each of which is seen as performing a specific activity. The classification of a complex entity in activity classification is governed by specially developed classification rules **(see para xxx for details)**.

1.2. *Resale.* Taking into account the above conventions the characteristics which make distributive trade different from other types of economic activity are mostly in specificity of its production process which is hereinafter referred to as "resale". The resale includes a number of actions which might be undertaken to make goods available for buying including negotiating transactions between buyers and sellers or buying goods from the manufacturer on own account, transporting, storing, sorting, assembling, grading, packing, displaying a selection of goods in convenient locations **(see para xxx for details).** These actions can be organized or combined in different ways. Each combination of such actions resulting in the reselling of goods represents an activity falling within the scope of distributive trade. Some such combinations, typical to distributive trade, are called "type of operation" **(see para xxx for further details).**

1.3. *Sale without transformation.* By convention, resale of goods represents sale without transformation. In general, goods are transformed if they undergo a substantial change in form, appearance or nature such that the goods existing after the change are new and different from those existing before the change. The following actions are not considered as substantial transformations of goods by ISIC, Rev.4: sorting, grading and assembling of goods, mixing (blending) of goods (for example wine or sand), bottling (with or without preceding bottle cleaning), packing, breaking bulk and repacking for distribution in smaller lots, storage (whether or not frozen or chilled), cleaning and drying of agricultural products, cutting out of wood fiberboards or metal sheets as secondary activities.

[4] See *International Standard Industrial Classification of All Economic Activities, Revision 4* (ISIC, Rev.4), United Nations publication, Series M/No .., Rev.4, para […].

1.4. *The distributive trade as an activity* consists of (i) provision of a service to customers by storing and displaying a selection of goods in convenient locations and making them easily available for buying**;** and (ii) provision of other services incidental to the sale of goods or subordinated to the selling such as the delivery, after-sale repair and installation services.

B. Scope and structure of distributive trade in ISIC, Rev.4

1.5. *Scope.* A more precise definition of the scope of distributive trade as well as description of its structure can be given in terms of an activity classification. Following the decision of the United Nations Statistical Commission to adopt ISIC, Rev.4 as an international standard for activity classification, **it is recommended** that the scope of distributive trade is defined as the scope of section G - Wholesale and retail trade; repair of motor vehicles and motorcycles of ISIC, Rev.4. Countries which do not use ISIC, Rev.4 **are encouraged** to develop their national activity classifications in such a manner that the overall scope of distributive trade is the same in all national compilations for the purposes of international comparability. Failing this, countries should at the minimum develop clear and precise concordances between their own national classification and distributive trade.

1.6. *Structure of distributive trade.* **It is further recommended** that distributive trade is structured following the ISIC, Rev.4 classification scheme which splits it into three divisions. According to the scheme, Division 45 includes all activities related to the sale and repair of motor vehicles and motorcycles, while divisions 46 and 47 include all other sale activities. The distinction between division 46 (wholesale) and division 47 (retail sale) is based on the predominant type of customer. Within the divisions 46 and 47 the classification scheme considers two additional levels of distinction based on the type of operation of units involved in such a trade and kind of products sold.

1.7. *Wholesale trade* is defined as the resale (sale without transformation) of new and used goods to retailers (see para. 1.8), business-to-business trade, such as to industrial, commercial, institutional or professional users, or resale to other wholesalers, or involves acting as an agent or broker in buying merchandise for, or selling merchandise to, such persons or companies. The principal types of wholesale trade businesses are merchant wholesalers, i.e. wholesalers who take title to the goods they sell, such as wholesale merchants or jobbers, industrial distributors, exporters, importers, and cooperative buying associations, sales branches and sales offices (but not retail stores) that are maintained by manufacturing or mining units apart from their plants or mines for the purpose of marketing their products and that do not merely take orders to be filled by direct shipments from the plants or mines. Other types of wholesale trade businesses are merchandise and commodity brokers, commission merchants and agents and assemblers, buyers and cooperative associations engaged in the marketing of farm products. While by definition, wholesalers do not transform goods, they frequently physically assemble, sort and grade goods in large lots, break bulk, repack and redistribute in smaller lots, for example pharmaceuticals; store, refrigerate, deliver and install goods, engage in sales promotion for their customers and label design.

1.8. *Retail trade* is defined as the resale (sale without transformation) of new and used goods mainly to the general public for personal or household consumption or utilization, by shops, department stores, stalls, e-commerce retailers, mail-order houses, hawkers and peddlers, consumer cooperatives etc. The goods sold in this division are limited to goods usually referred to as consumer goods or retail goods. Therefore goods not usually entering the retail trade, such as cereal grains, ores, industrial machinery etc., are excluded. Retail trade also includes units engaged primarily in selling to the general public, from displayed merchandise, products such as personal computers and software, stationery, paint or timber, although these sales may not be for personal or household use. Some processing of goods may be involved, but only incidental to selling, e.g. sorting or repackaging of goods, installation of a domestic appliance etc. Retail trade also includes the retail sale by commission agents and activities of retail auctioning houses.

1.9. *Structure of divisions 45.* This division includes all activities (except manufacture and renting) related to motor vehicles and motorcycles, including lorries and trucks, such as the wholesale and retail sale of new and second-hand vehicles, the repair and maintenance of vehicles and the wholesale and retail sale of parts and accessories for motor vehicles and motorcycles. Also included are activities of commission agents involved in wholesale or retail sale of vehicles. This division also includes activities such as washing, polishing of vehicles etc. Activities are grouped into 4 groups each of which has one basic class.

1.10. *Structure of divisions 46*. The first distinction that is considered in this division is based on the type of operation, i.e. how the wholesale trade activity is organized. Two groups of activities are distinguished (i) commission trade consisting of group 461 "Wholesale on a fee or contract basis" only without any further detailing and (ii) wholesale trade on own account representing aggregation of groups 462-469 depending on categories of goods sold. The second distinction concerns the split of wholesale trade on own account into specialized and non-specialized trade. Twelve classes are used in ISIC, Rev. 4 to present the groups of products sold (see below). The wholesaling which cannot be defined as specialized (i.e. selling one of these particular groups of products) is classified into group 469 "Non-specialized wholesale trade".

1.11. *Structure of divisions 47*. The main structuring criterion used in division 47 is whether or not retail trade operations are organized as a store or not in store trade. The retail trade in stores includes groups 471-477. It is further subdivided by retail trade in specialized stores and non-specialized stores. The third criterion applied to retail trade in stores is category of goods sold. The not in stores retail trade consists of groups 478 and 479 which are further broken down into five classes depending whether they represent retail trade via stalls and markets or other retail trade not in stores such as mail order houses and internet.

1.12. *The ISIC, Rev. 4 divisions, groups and classes relevant to distributive trade statistics*. The entire structure of section G of ISIC, Rev.4 is presented below.

Section: G - Wholesale and retail trade; repair of motor vehicles and motorcycles

Division Group Class

45 - Wholesale and retail trade and repair of motor vehicles and motorcycles

451 – Sale of motor vehicles

4510 - Sale of motor vehicles

452 - Maintenance and repair of motor vehicles

4520 - Maintenance and repair of motor vehicles

453 – Sale of motor vehicle parts and accessories

4530 - Sale of motor vehicle parts and accessories

454 – Sale, maintenance and repair of motorcycles and related parts and accessories

4540 - Sale, maintenance and repair of motorcycles and related parts and accessories

46 - Wholesale trade, except of motor vehicles and motorcycles

461 - Wholesale on a fee or contract basis

4610 - Wholesale on a fee or contract basis

462 - Wholesale of agricultural raw materials and live animals

4620 - Wholesale of agricultural raw materials and live animals

463 - Wholesale of food, beverages and tobacco

4630 - Wholesale of food, beverages and tobacco

464 - Wholesale of household goods

4641 - Wholesale of textiles, clothing and footwear

4649 - Wholesale of other household goods

465 - Wholesale of machinery, equipment and supplies

4651 - Wholesale of computers, computer peripheral equipment and software

4652 - Wholesale of electronic and telecommunications equipment and parts

4653 - Wholesale of agricultural machinery, equipment and supplies

4659 - Wholesale of other machinery and equipment

466 - Other specialized wholesale

4661 - Wholesale of solid, liquid and gaseous fuels and related products

4662 - Wholesale of metals and metal ores

4663 - Wholesale of construction materials, hardware, plumbing and heating equipment and supplies

4669 - Wholesale of waste and scrap and other products n.e.c.

469 – Non-specialized wholesale trade

4690 - Non-specialized wholesale trade

47 - Retail trade, except of motor vehicles and motorcycles

471 - Retail sale in non-specialized stores

4711 - Retail sale in non-specialized stores with food, beverages or tobacco predominating

4719 - Other retail sale in non-specialized stores

472 - Retail sale of food, beverages and tobacco in specialized stores

4721 - Retail sale of food in specialized stores

4722 - Retail sale of beverages in specialized stores

4723 - Retail sale of tobacco products in specialized stores

473 - Retail sale of automotive fuel

4730 - Retail sale of automotive fuel

474 - Retail sale of ICT equipment in specialized stores

4741 - Retail sale of computers, peripheral units, software and telecommunications equipment

4742 - Retail sale of audio and video equipment

475 - Retail sale of other household equipment in specialized stores
4751 - Retail sale of textiles
4752 - Retail sale of hardware, paints and glass
4753 - Retail sale of carpets, rugs, wall and floor coverings
4759 - Retail sale of electrical household appliances, furniture, lighting equipment and other household articles

476 - Retail sale of cultural and recreation goods in specialized stores
4761 - Retail sale of books, newspapers and stationary
4762 - Retail sale of music and video recordings
4763 - Retail sale of sporting equipment
4764 - Retail sale of games and toys

477 - Retail sale of other goods in specialized stores
4771 - Retail sale of clothing, footwear and leather articles
4772 - Retail sale of pharmaceutical and medical goods, cosmetic and toilet articles
4773 - Other retail sale of new goods
4774 - Retail sale of second-hand goods

478 - Retail sale via stalls and markets
4781 - Retail sale via stalls and markets of food, beverages and tobacco products
4782 - Retail sale via stalls and markets of textiles, clothing and footwear
4789 - Retail sale via stalls and markets of other goods

479 - Retail trade not in stores, stalls or markets
4791 - Retail sale via mail order houses or via Internet
4799 - Other retail sale not in stores, stalls or markets

1.13. *Boundary of distributive trade.* The following activities are not considered to be transformation of goods and *are included* in distributive trade:

(i) physical assembly
(ii) packing
(iii) sorting and grading of goods in large lots
(iv) breaking bulk
(v) repacking for distribution in smaller lots (e.g., pharmaceuticals)
(vi) mixing (blending) of goods (for example wine or sand)
(vii) bottling (with or without preceding bottle cleaning)
(viii) storage (whether or not frozen or chilled)
(ix) refrigerating
(x) delivering
(xi) after-sale installation
(xii) cleaning and drying of agricultural products
(xiii) cutting out of wood fibreboards or metal sheets as secondary activities
(xiv) engaging in sales promotion for their customers including the label designing
(xv) washing, polishing of vehicles

1.14. The following are activities considered as either transformation of goods or as not being part of relevant distributive trade divisions and classes and *are excluded:*

(i) renting of motor vehicles or motorcycles

(ii) renting and leasing of goods
(iii) packing of solid goods and bottling of liquid or gaseous goods, including blending and filtering, for third parties
(iv) sale of farmers' products by farmers
(v) manufacture and sale of goods, which is generally classified as manufacturing in divisions 10-32
(vi) sale of food and drinks for consumption on the premises and sale of takeaway food
(vii) renting of personal and household goods to the general public

C. Scope and structure of distributive trade in terms of CPC, Ver. 2 and COICOP

1.15. *CPC*. The Central Product Classification, Version 2 (CPC, Ver.2) constitutes a comprehensive product classification covering all goods and services that can be objects of domestic or international transactions. It is a basic statistical tool for establishing distributive trade statistics by product. Distributive trade services are classified in divisions 61 and 62 of CPC on the basis of two criteria (i) type of provided service (i.e. type of operation as it is discussed in para. 1.10-1.11 above) and (ii) the type of traded goods. As a result the list of commodities that can be sold is set against any of the two wholesale (commission and own account) and five retail trade types of operation (store and not in store retail trade; specialized and non-specialized and commission retail trade services).

1.16. International and national versions of the CPC exist in the same way as they exist for ISIC (see section D of this chapter). Statistical Classification of products by Activities (CPA) for example is the European counterpart of CPC; ANZCS is the Australian and New Zealand Standard Commodity Classification. They differ significantly not only in details and coding systems but also in their structuring.[5]

1.17. *Scope of product groups used in Section 6 of CPC, Ver.2*. In order to enhance international comparability of data **it is recommended** that the correspondence table between CPC categories and activity classes of ISIC, Rev.4 that will be developed and included in the forthcoming *Distributive Trade Statistics: Compilers Manual* be used as a guide on scope of such product categories. **It is further recommended** that while classifying statistical units in various classes of divisions 45-47, the explanatory notes provided in ISIC, Rev.4 and CPC, Ver.2 are followed.

1.18. *COICOP*. Another option for classifying products of distributive trade is the Classification of Individual Consumption According to Purpose (COICOP). It relates to the purpose (or function) of the use of the commodities sold. Provision of retail trade data at detailed COICOP level facilitates the compilation of individual consumption

[5] More about the CPC and other product classifications such as SITS, HS etc. see at: http://unstats.un.org/unsd/cr/registry/regct.asp?Lg=1

expenditure of households in national accounts. Countries **are encouraged** to implement this classification and present the retail trade turnover by COICOP classes. **[…]**

1.19. For the purpose of achieving broad international and national comparability of distributive trade data by products **countries are encouraged** to present the 45 retail product classes (four digit level of CPC, Rev.2) grouped into the following eight product categories. Although, there is no one to one mapping between CPC and COICOP, the eight groupings are reconcilable at the division levels of both classifications.

Food, beverages and tobacco (COICOP 01+02; CPC)
Clothing, footwear and accessories (COICOP 03; CPC)
Furniture (COICOP; CPC)
Domestic appliances (COICOP; CPC)
Electronics (COICOP; CPC)
Of which: Information processing equipment
Personal and other goods (COICOP; CPC)
Building materials (COICOP; CPC)
Motor vehicles and associated goods (COICOP; CPC)

1.20. In order to satisfy the needs of a wide range of users, **it is recommended** that countries draw up their own lists for the reporting of distributive trade by type of products depending on the product classifications used in their trade surveys and the need to comply with the international standards. **It is also recommended** to prepare detailed lists for retail trade rather than for wholesale trade since the former is useful in describing the flow of goods to households. Whatever list or classification of product will be used it should be linked to the classification of household goods and services for national accounts purposes.

D. Distributive trade in other activity classifications

1.21. *ISIC.* Most of the countries implement either directly the *International Standard Industrial Classification* (ISIC) for classification of economic activities or develop their national industrial classifications based on ISIC. In the case of countries which do not use ISIC or their national classifications differ from ISIC, **it is recommended that** they develop their national industrial classifications in a manner allowing for international comparability and identification of the kind of activity in compliance with at least at the two-digit (division) level of ISIC. For a national industrial classification to be fully compatible with the section G of ISIC, Rev.4, the most detailed categories of classification in the national scheme should coincide with, or be aggregations or dissections of the individual classes of the ISIC.

1.22. *NACE.* Statistical Classification of Economic Activities, Revision 2 (NACE, Rev.2) is the classification of economic activities implemented by European Union countries, some of the transition economies and other countries seeking admission to the European Union. It is fully compatible with ISIC, Rev.4 as in some cases it provides a

subdivision of ISIC which is suited better to the structures of the European economies. Although, a single activity at the level of groups and classes may have a numerical code and disaggregation in NACE which differs from that in ISIC, the two classifications can always be aligned by aggregating the more detailed groups and classes of NACE into the groups and classes of ISIC. There is a full correspondence between the first two levels (sections and divisions) of these classifications. NACE, rev.2 has been revised in parallel with the fourth revision of ISIC. It will come in force in 2008 for short term statistics and 2009 for annual statistics. It is recommended that countries who use NACE continue to use NACE, Rev.2 as it is fully consistent with ISIC, Rev.4.

1.23. *NAICS*. The North American Industry Classification System (NAICS) is developed to provide common industry definitions for Canada, Mexico, and the United States that facilitate economic analyses of the economies of the three North American countries. NAICS is built on a production-oriented or supply-based conceptual framework and classifies industries rather than activities. This means that production units that use identical or similar production processes are grouped together in NAICS. The system strives for compatibility at the two-digit level of ISIC, however, there are major differences between the NAICS and ISIC classification structures. An easy conversion of data according to NAICS into ISIC/NACE is not possible. A detailed concordance between NAICS and ISIC, Rev.3.1 is published on the UNSD web site (http://unstats.un.org/unsd/cr/registry).

1.24. *ANZSIC*. The Australian and New Zealand Standard Industrial Classification (ANZSIC) was revised in 2006 and accounts for industries which are specific to Australia and New Zealand. As with ISIC, the conceptual framework for ANZSIC has been re-evaluated to have a stronger emphasis on the supply side approach. The ANZSIC structure broadly follows the ISIC structure and ANZSIC aligns with ISIC, Rev. 4 at the subdivision level (2-digits) as far as practicable. A correspondence between ANZSIC and ISIC is available from the Australian Bureau of Statistics website.

E. Selected boundary issues

Outsourcing – boundary between wholesaling and manufacturing

1.25. *Outsourcing*. The term “outsourcing” of production is used when the principal unit (i.e. principal) contracts another productive unit (i.e. the contractor) to carry out specific aspects of the production activity of the principal, in whole or in part in the production of a good or a service. While the activity classification of the contractor is straightforward and does not change with the outsourcing, that of the principal is very much affected by the nature and extent of the outsourcing and requires conventions for a consistent treatment. The classification of the principal units is a significant boundary issue, because the decisions made regarding their activity affect the scope of manufacturing, wholesale [and retail trade] divisions.

1.26. *Types of outsourcing.* There could be three cases of outsourcing, namely (i) outsourcing of support functions; (ii) outsourcing parts of the production process; and (iii) outsourcing of the complete production process. In each of these cases, the principal and the contractor may be located within the same economic territory or in different economic territories. The actual location does not affect the classification of either one of these unit.

1.27. *Outsourcing of support functions.* In this case, the principal (wholesaler or retailer) carries out the resale of goods and services, but outsources certain support functions, such as accounting or computer services, to the contractor. In such a case, **it is recommended** that the principal remains classified to the respective ISIC class of section G that represents the core production process (resale). The contractor is classified to the specific support activity it is carrying out, e.g. ISIC class 6920 (Accounting, bookkeeping and auditing activities; tax consultancy) or 6202 (Computer consultancy and computer facilities management).

1.28. *Outsourcing of parts of the production process.* The principal (manufacturer) outsources a part of the production process (of a good or a service), but not the whole process, to the contractor. The principal owns the (material) inputs to be transformed by the contractor and thereby has ownership over the final outputs. In such a case, **it is recommended** that the principal be classified in the appropriate manufacturing classes of ISIC as if it were carrying out the complete production process. The contractor is classified according to the portion of the production process that it is undertaking. In case of the transformation of a good, the contractor is classified in the same or separate ISIC category. Also in the case of outsourcing of a service, the activities of the principal and the contractor might not be classified in the same ISIC category.

1.29. *Outsourcing of the complete production process.* Two specific cases have to be considered when the principal outsources the complete production process to the contractor, namely:

(a) *Outsourcing of service producing activities, including construction* - in this case both the principal and the contractor are classified as if they were carrying out the complete service activity;

(b) *Outsourcing of manufacturing activities* to contractor – in this case the principal does not physically transform the goods at the location of its unit. The following activity classification rules **are recommended**:

(i) A principal that owns the material inputs and thereby has economic ownership of the outputs, but has the production done by others, is classified to *section C (manufacturing)* of ISIC, Rev.4, specifically to the classification category that corresponds to the complete (outsourced) manufacturing activity;

(ii) A principal that has the production done by others, but does not own the material inputs, should be classified to *section G (wholesale and retail*

trade; repair of motor vehicles and motorcycles) of ISIC, Rev.4, specifically to the classification category that corresponds to the activity characterized by the type of sale (e.g. wholesale or retail sale) and type of goods sold. In this case, it should also be evaluated if the principal carries out other activities, such as design or research and development. If indeed other production activities are undertaken by the principal, the usual rules for identifying the principal activity of the principal should be applied (see para. […] for the top-down method).

(iii) The contractor in such a case is classified to section C (manufacturing) of ISIC, Rev.4, specifically to the classification category that corresponds to the manufacturing activity performed by the contractor.

Distinction between retail trade and financial services

1.30. *Units offering consumer credit lines.* Many retail stores and other economic entities involved in distributive trade offer their customers purchases on credit. For this purpose they may issue membership cards allowing customers to make purchases within a pre-arranged credit limit. Consumer credit is a form of a short-term loan extended to individuals for personal or household use, rather than to businesses. The consumer credit is offered also by finance companies which are active in the consumer credit industry, typically, the (i) a small loan company, which has contact with consumers as originators and makes loans to them directly and (ii) finance company, which does not deal directly with consumers, but purchases and holds consumer instalment debts related to the sale of durable goods on time.

1.31. The classification of financial institutions involved in consumer credit transactions is quite straightforward (classified in section K of ISIC, Rev.4 "Financial and insurance activities") and it is not dealt with in the present recommendations. Compilers of distributive trade statistics however, must pay attention to the cases, when the originator and holder of consumer credits is a retail trade unit that has a separate establishment (or ancillary activity, see para […]) dealing with consumer credits. Because the SNA, 1993, Rev.1[6] distinguishes separately non-financial and financial sectors, **it is recommended** to define two separate units in this case, one for the entity engaged in non-financial (trade) activity and the other one for financial activity (provision of consumer credits), as long as the necessary financial accounts are available for each of them, whenever possible, even if the two together have all the other attributes of an economic entity and consolidated accounts are compiled for them as a single unit. Both units will be classified in their own rights, as the second one will be a financial institution and not a distributive trade unit. However, if the unit providing consumer credits is not recognizable separately, **it is recommended** that it should be treated as part of the relevant statistical unit involved in an ancillary activity and will not affect classification of that unit in distributive trade.

[6] See System of National Accounts, 1993, Rev.1, Chapter […] for institutional sectors and institutional sector classification

F. Scope of distributive trade statistics

1.32. In general, distributive trade statistics are statistics reflecting characteristics and activities of the units belonging to distributive trade sector of an economy. Taking into account the role of ISIC, Rev.4 as the activity classification for use in all applicable areas of economic statistics, **it is recommended** that the distributive trade sector of an economy is defined as consisting of all resident entities recognized as statistical units and classifiable in Section G of ISIC, Rev.4 (see Chapter III for recommendations on statistical units). Distributive trade carried out by entities not classified in Section G of ISIC, Rev.4 is not covered by distributive trade statistics.

1.33. **It is further recommended** that the residency of economic entities is determined in accordance with the rules laid out in *1993 SNA, Rev.1*. By convention, the data items falling within the scope of distributive trade statistics are those reflecting (i) the characteristics of entities belonging to the distributive trade sector; (ii) receipts and other revenues and purchases of those entities which are recorded in their profit and loss statements and used for calculation of trade output and intermediate consumption and value added; (iii) investment of entities in non-financial assets and changes in inventories; and (iv) employment information which closely related to the most of previous groups of items (see Chapter V for detailed recommendations). Other data items such as, for example, data items on financial position of the entities are explicitly excluded. They are compiled as a part of financial or other relevant statistics.

CHAPTER II. STATISTICAL AND REPORTING UNITS

A. Observable, statistical and reporting units: an overview

2.1 *Economic entities.* The existence of an entity has to be recognized by law or by some other administrative and operational rules or regulations including rules and regulations internal to the already recognized entities to be of interest to statistics. Entities engaged in distributive trade vary in their legal, accounting, organizational and operating structures. To create statistics which is consistent and internationally comparable to the maximum extent possible, it is necessary to identify entities which are statistically observable and are of interest from statistical point of view.

2.2 *Statistically observable entities.* An economic entity is statistically observable if statistical procedures exist or can be developed to collect data on its characteristics and activity.

2.3 *Statistical units.* These are the entities for which information is sought and for which statistics are ultimately compiled. Statistical units are basically two categories - identifiable legal or physical entities or statistical constructs:

(a) *directly observable units* - entities having a clear legal/administrative existence which are able, actually or potentially, to report data about their activities;

(b) *analytical units* – represent units constructed by statisticians from parts of statistically observable units (or observation units), which are not able to report data themselves, but there exist indirect methods of statistical observation of such constructs. They are mostly created for the sake of enlarging the homogeneity for data collection.

2.4 *Collection units.* A collection unit is the unit *from which* data are obtained and by which statistical forms are completed. In fact, it is more a contact address or contact person than a unit. Any entity which possesses statistically relevant information about statistical units can, potentially, serve as a collection unit. For, example, if entities leave the form filling to a bookkeeping office, the latter is the collection unit.

2.5 *Reporting units.* A reporting unit is the unit *about which* data are reported. The typical case is when a given entity reports the required data about characteristics and activities of all of its locations, these locations are the reporting units. In such a case these entities are statistically observable and are both statistical and reporting unit.

2.6 It should be noted that in practice the statistical, reporting and collection units often coincide with each other, and do not coincide, for instance, if the statistical units are analytical. However, **it is recommended** to distinguish between them because they apply to different stages of data collection/compilation process. In the context of these recommendations statistical units are of primary interest as they are the basis of statistical

aggregates and to which all data items refer. Collection and reporting units are especially relevant in the sampling and data collection stage.

2.7 The following examples clarify the meaning of each type of unit:

Box 2. Examples on statistical units

[pending]

2.8 *Data collection from statistically complex units.* If an economic entity is engaged in several kinds of activity and if a separate statistical unit is associated with each of them, this entity is statistically complex. Provided that unit (or units) is (are) able to supply all the required data no additional data collection is necessary with respect to the entity as a whole. However, if the complete set of data cannot be obtain in this way, the data collection should target the entity as a whole as well and, if successful, apportion additional information to the statistical units in accordance with the accepted rules (see para. […]). While doing this it is important to ensure that the reported data does not contain double counting.

B. Statistical and reporting units for use in distributive trade statistics

2.9 Definitions of various kinds of statistical units are provided in the UNSD web-publication *Reference List of Statistical Units* ***(available at xxx)***. Countries **are encouraged** to use that list to ensure better comparability of national metadata. Definitions of statistical units relevant to distributive trade statistics are reproduced below.

2.10 *Enterprise Group.* An enterprise group is an association of enterprises (see para. 2.13) bound together by various types of links such as ownership, controlling interest and management. A group of enterprises can have more than one decision-making centre, especially for the policy on production, sales and profits. It may centralize certain aspects of financial management and taxation. It constitutes an economic entity which is empowered to make choices, particularly concerning the units which it comprises. An enterprise group is a set of enterprises controlled by the group head. The group head is a parent legal unit which is not controlled either directly or indirectly by any other legal unit. The subsidiary enterprises of a subsidiary enterprise are considered to be subsidiaries of the parent enterprise. However, there are some forms of cooperative or mutual associations where the parent enterprise is actually owned by the units of the group.

2.11 The enterprise group unit often corresponds to a conglomerate bound together by a network of complex relationships and frequently covers a very wide range of activities.

Subgroups can be identified within enterprise groups. There are some difficulties in the use of such a unit for statistical purposes, in particular because of the problems of identifying and keeping track of sometimes unstable links between different enterprises.

2.12 Statistics presented on an enterprise group basis are of importance in studying aspects of competition and concentration. The enterprise group unit is particularly useful for financial analyses and for studying company strategies, but it is too diverse in nature and unstable to be adopted as statistical unit in distributive trade statistics.

2.13 *Enterprise.* An economic entity in its capacity as a producer of goods and services is considered to be an enterprise if it is capable, in its own right, of owning assets, incurring liabilities and engaging in economic activities and in transactions with other economic entities. An enterprise is an economic transactor with autonomy in respect of financial and investment decision-making, as well as authority and responsibility for allocating resources for the production of goods and services. It may be engaged in one or more productive activities at one or more locations.

2.14 An enterprise involved in distributive trade may be a corporation or an unincorporated enterprise. Corporate enterprise is a complete economic entity which is capable of engaging in the full range of transactions while "unincorporated enterprise" refers to the economic entity of a household only in its capacity as a producer of distributive trade services.

2.15 The enterprise is the level of statistical unit at which all information necessary to compilation of distributive trade statistics is available. As such the enterprise can be the statistical and reporting unit with respect of all distributive trade data items.

2.16 *Establishment*[7]. The establishment is defined as an enterprise or part of an enterprise that is situated in a single location and in which only a single (non-ancillary) productive activity is carried out or in which the principal productive activity accounts for most of the value added. Although the definition of an establishment allows for the possibility that there may be one or more secondary activities carried out, they should be small in magnitude compared with the principal activity. If a secondary activity is as important, or nearly as important, as the principal activity, then the unit is more like a local unit, described below **(see para. xxx)**.

2.17 In the case of most small and medium-sized businesses, the enterprise and the establishment will be identical. In general, **it is recommended** that large enterprises engaged in many economic activities that belong to different industries be broken into one or more establishments, provided that smaller and more homogeneous production units can be identified for which production data can be meaningfully compiled.

[7] The establishment is also called a local kind-of-activity unit in the European System of Accounts, 1995 (ESA 1995), para. 2.106.

2.18 The establishment can be an appropriate statistical and reporting unit with respect to all or most of data items relevant to distributive trade statistics.

2.19 *Kind-of-activity unit.* Although by the way the enterprise unit is constructed and defined it may have already a certain degree of homogeneity with respect to its economic activities, some statistics, including distributive trade statistics, may require a higher degree of homogeneity. For this purpose kind-of-activity unit can be defined and used.

2.20 Kind-of-activity unit is an enterprise or part of an enterprise which engages in only one kind productive activity or in which the principal productive activity accounts for most of the value added. There is no restriction on the geographic area in which the activity is carried out. In order to obtain such homogeneous units, the enterprise must be partitioned into narrower, more homogeneous parts.

2.21 Although the aim is to meet, as much as possible, the homogeneity requirement, the other two requirements, data availability and organizational structure, should not be disregarded. Splitting enterprises into kind-of-activity units must be a trade-off between homogeneity of economic activities on the one hand and the data availability and organizational structure on the other. The three requirements in most cases are interrelated: the more homogeneous one defines the unit, the fewer data would be available, and less it will be perceived as a separate entity in the organization. It is up to national statistical offices to find the right balance. However, **it is recommended** that such splitting should have due regard to data availability and organizational structure. It should be noted that each enterprise must, by definition consist of one or more kind-of-activity units. In many cases it can exist only as analytical statistical unit.

2.22 While deciding on definition of kind-of-activity unit it should be noted that any given kind-of-activity unit falling within a particular heading of an activity classification can be engaged in the secondary activities which cannot be separately identified from available accounting documents. The kind-of-activity unit may or may not be a reporting unit depending on the organization of the enterprise accounts of which it is a part.

2.23 *Definition of term "location".* The term location can be interpreted in two different ways:

(a) First, there is the pure location in the narrow sense of the word, i.e. a specific site such as an individual address or even a room in a multi-storey office building. **It is recommended** that this dimension of location is made operational for statistical purposes because in some cases two or even more non-contiguous sites can be considered one location. This may happen when two stores of a trade enterprise are for example around the corner of the same block or just across the street and when no separate records are maintained for each store. In general, the distance between two sites has to be quite large in order to justify a separate location. However, the non-contiguous sites covered in the same location should at least be restricted to sites falling within the most detailed geographical area for which series of data are compiled.

(b) The other interpretation of the location is the combination of all locations belonging to an enterprise within the entire area covered by a smallest category of the regional classification used for the statistics in question. Such classification may distinguish between provinces, states, counties, municipalities, townships are even smaller entities like mesh blocks[8]. Therefore, if activities are exercised at two or more locations, e.g. in the same municipality, township or similar restricted geographic areas, covering all of these locations in one single local unit will usually not represent a significant departure from the concept of the local unit.

2.24 Which of the two interpretations is to be used depends on the statistics in question. If, for instance, they are counting the number of retail shops in a certain area, or if production processes are analyzed, the location as an individual site is the appropriate unit; if, on the other hand, employment is the subject of statistics, all locations of an enterprise within the smallest geographic area could as well be taken together in one local unit.

2.25 *The local unit.* Enterprises often engage in their productive activity at more than one location, and for the purposes of obtaining geographical distribution of the collected data it is necessary to partition such enterprises accordingly. Thus, a local unit is defined as an enterprise, or a part of an enterprise (for example, a workshop, factory, warehouse, office, mine or depot), which engages in productive activity at or from one location. The definition has only one dimension in that it does not refer to the kind-of-activity that is carried out.

2.26 Local unit is used as the statistical unit for compiling particular types of data, where no breakdown by activity is required and as such **is not recommended** for use in distributive trade statistics. However, if the criterion of kind-of-activity unit can be attributed to the local unit and this place is within the scope of Section G of ISIC, Rev. 4, the unit becomes an establishment and can be used in distributive trade statistics as both statistical and reporting unit.

2.27 *Ancillary establishments*. If an establishment undertaking purely ancillary activities (see para […]) is statistically observable, in the sense that separate accounts for the production it undertakes are readily available, or if it is in a geographically different location from the establishments it serves, it may be desirable and useful to consider it as a separate unit – an ancillary establishment, and allocate it to the industrial classification corresponding to its principal activity. However, **it is recommended** that separate establishments are created only if suitable basic data as the value of the intermediate consumption, compensation of employees, gross fixed capital formation and employment are available.

[8] The basic concept of geographically referenced statistics is that data are aggregated for the area in which an activity actually takes place. A mesh block is a micro-level geographical unit to which individual people or businesses can be coded and individual or unit record data can be aggregated.

2.28 *Ancillary corporations*. A trading corporation may find it advantageous for tax or other reasons to create a subsidiary purely in order to perform certain ancillary activities for its own benefit. For example, it may create a subsidiary to which ownership of its land, buildings or equipment is transferred and whose sole function is to lease them back again to the parent corporation; or it may create a subsidiary to keep its accounts and records on a separate computer installation etc. **It is recommended** that the ancillary corporations are not treated as separate statistical units because they can be regarded as artificial units created to avoid taxes, to minimize liabilities in the event of bankruptcy, or to secure other technical advantages under the tax or corporation legislation in force in a particular country.

C. Recommendation on statistical units

2.29 Two main types of data are required to describe the economic activity of distributive trade units - (i) production data, based on management and cost accounts of trade units[9]; and (ii) financial data, based on their accounting records[10]. These types of statistics are required for analysis of distributive trade sector as well as for compilation of national accounts. Two main statistical units **are recommended** for the purpose of distributive trade statistics:

(i) *the enterprise* - for the compilation of financial statistics;
(ii) *the establishment* (or local kind-of-activity unit) - for the compilation of production and employment statistics.

2.30 The enterprise has the advantages to be the most suitable statistical unit at which level all information necessary to compilation of distributive trade statistics is available. The establishment has also advantages as being more homogenous than the enterprise to which it belongs and allowing the compilation of distributive trade statistics on regional basis.

2.31 Typically, distributive trade activity is carried out by a large number of small and medium enterprises, most of them consisting of only one establishment. However, in case of multi-establishment enterprises countries **are encouraged** to make an attempt for collecting the data for all relevant establishments belonging to them within a country.

D. Mapping of selected entities specific to distributive trade to the statistical units

[9] In general, Production statistics include data on operating revenues earned from the sale of goods and services produced and the associated costs, wages and salaries, depreciation, and operating profits.

[10] Such records include consolidated profit and loss statements and balance sheets of assets and liabilities of trade units.

2.32 *Retail chains.* The retail trade sector in almost all countries has been undergoing significant changes in terms of types, size and structure of units in recent decades. The dominance of retail chain stores is one of the most important developments in the retail markets. Retail chains are organizational forms of retail trade units that apply mainly to retail trade but also to some other service oriented businesses. Retail chains are a range of retail outlets which share a brand and operate under the same ownership or central management. Such stores may be branches owned by one legal unit or franchises, owned by natural persons or companies and operated under contract with the parent corporation. In the first case when a retail chain operates under a single ownership there will be one trade enterprise with many establishments, corresponding to different locations. In the second case when a retail chain operates under franchise agreement there will be many enterprises, corresponding to the number of franchisees.

2.33 Retail chains have come to existence as a result of the vertical integration of retail trade businesses in one and the same retail trade activity class (i.e. they are selling the same type of merchandise – food, furniture, etc.). By type of operation (see para […]) retail chains are classified as retailing at stores. Many countries introduce the minimum number of retail locations operating by a retail chain as an additional criterion to distinguish them from other store retailing. Chain stores differ in many ways from the single location stores as an important difference is the difference in their size. Typically they offer low prices for the specific merchandise and derive their profits from high sales volume rather than high trade margin.

2.34 If a retail chain operates in more than one province or state **it is recommended** that it provide a list of all locations it has as well as totals on some of the important data items such as the number of employees, turnover, wages and salaries etc. about each location separately. Each store in this case will be treated as a separate establishment as its output and value added will be derived proportionally to the available data by locations thus allowing the allocation of the trade activity to the location it actually takes place and facilitating the estimation of regional trade output and compilation of regional GDP.

2.35 *Department stores /'shops-within-shops' trade.* A department store is a retail establishment which specializes in selling a wide range of products without a single predominant merchandise line (non-specialized stores). Certain department stores could be part of a retail chain while the others could be individual stores.

2.36 Department stores are organizational forms of retail trade which may complicate the implementation of rules for identifying the local units (see para […]). In principle, in almost all cases, the retail local units will be precisely equivalent to retail stores. One exception to this principle is the form of trade known as "shops-within-shops" trade when a department store is letting out part of its retail space to other retailers. Here, while to a casual customer there may appear to be only one shop, the definition of a local unit as a part of an enterprise implies that there are a number of local units and an equal number of shops. **It is recommended** that in the case of "shops-within-shops" trade the department store and all other shops on the same premises are treated as separate statistical units.

2.37 *Franchising.* The operation of a franchise network is a method of doing business that is popular in a number of service activities, especially retail trade. Franchisees are independent legal units which sign a contract with another legal unit, the franchiser, to engage in an activity making use of trademarks, trading styles and marketing support provided by the franchiser, usually in return for a fee or a share of the sales or profits. A franchise contract typically includes a number of restrictive clauses limiting the franchisee's freedom of choice, for instance imposing standards as to the goods and services to be produced, their quality and their price. The franchisee may be compelled to obtain supplies from the franchiser and must pay a contribution towards certain services organized by the franchiser that are common to the entire network. The franchiser, in turn, offers scale economies without completely taking away the autonomy of the franchisee, for example by taking care of collective marketing.

2.38 **It is recommended** that franchisees engaged in distributive trade activities are considered as separate enterprises because they consist of a complete combination of factors of production, and they run the full entrepreneurial risk. Franchisees also comply with the definition of the enterprise which requires autonomy but allows for this autonomy to be somewhat restricted ("a certain degree of autonomy" is required), and full accounts tend to be available only at the level of the separate franchisees.

2.39 *Market places, farmers markets, street markets.* These are outdoor locations where goods and services are exchanged. They are traditionally held in many countries and operate in a similar way irrespective of their location and name (on the street, at the market square or other specialized location). The traders (or producers) have stalls, but not entire stores. However, it is also possible to have associated shops. Often the markets are permanent, but it is also possible to have them temporary, with stalls only present for one or two days a week. Some of the market places are gradually being replaced by shopping centers with sizable area and specially organized premises like in the department stores.

2.40 Usually another unit is the owner and operates the location where the market is situated. The owner could be a municipality or a corporation and to be able to sell on these places, traders are required to obtain a license or pay a fee. In this case the **recommended treatment** for these units will be similar to the treatment of department stores (see para. […]) when they let out retail space to individual retailers – i.e. the individual retailers on the market place and its owner will be treated as separate statistical units. At the same time the market place will have as many local units as is the number of stalls.

E. Statistical units in informal sector

2.46. *Informal sector*. The informal sector[11] is characterised as consisting of units engaged in the production of goods or services with the primary objective of generating employment and incomes to the persons concerned. These units typically operate at a low level of organisation, with little or no division between labour and capital as factors of production and on a small scale. Labour relations – where they exist – are based mostly on casual employment, kinship or personal and social relations rather than contractual arrangements with formal guarantees. **It is recommended** that countries define the informal sector in terms of characteristics of production units in which the activities take place and not in terms of the characteristics of the persons involved or their jobs.

2.47. *Informal sector enterprises*. These are private unincorporated enterprises[12], i.e. enterprises owned by individuals or households that are not constituted as separate legal entities independently of their owners, and for which no complete accounts are available that would permit a financial separation of the production activities of the enterprise from the other activities of its owner(s).

2.48. *Additional criteria for defining the informal sector enterprises.* The following additional criteria should be used for defining the informal sector enterprises

(a) *Size.* The size of informal sector enterprises in terms of employment should be below a nationally determined threshold.

and/or

(b) *Non-registration of the enterprises or its employees*. Informal sector enterprises should not be registered under specific forms of national legislation (such as factories' or commercial acts, tax or social security laws, professional groups' regulatory acts, or similar acts, laws or regulations established by national legislative bodies. It should be noted that regulations enacted by local authorities for the purpose of obtaining a trade license or a permit to operate a business are excluded from this criterion.

2.49. *Types of informal sector enterprises.* The informal sector enterprises encompasses the following:

(a) *Informal own-account enterprises*. Depending on national circumstances, either all own-account enterprises should be considered informal, or only those that are not registered under specific forms of national legislation. Since majority of own-account enterprises are small, no size criterion is recommended for defining them. Informal own-account enterprises may employ contributing family workers and employees on an occasional basis, but do not employ employees on a continuous basis.

[11] For more details see the Resolution concerning statistics of employment in the informal sector, adopted by the Fifteenth International Conference of Labour Statisticians (January 1993)

[12] Private unincorporated enterprises include unincorporated enterprises owned and operated by individual household members or by several members of the same household, as well as unincorporated partnerships and cooperatives formed by members of different households, if they lack complete sets of accounts. See SNA, 1993, Rev.1 para. […]

(b) *Enterprises of informal employers*. These are household enterprises owned and operated by employers, either alone or in partnership with members of the same or other households, which employ one or more employees on a continuous basis.

2.50. *Informal sector enterprises engaged in distributive trade*. They refer to any production unit that is engaged in resale of new or used goods and services on the market and that has the characteristics described in para. 2.50 and 2.51. The activities may be undertaken inside or outside the enterprise owner's home, and they may be carried out in identifiable premises, unidentifiable premises or without fixed location. Mobile (without a fixed location) units in distributive trade sector such as street vendors and hawkers should be considered as separate enterprises if they constitute self-employed persons or as employees if they work for enterprises of informal employers.

[*pending, SNA, 1993 Rev.1, Chapter 24. The informal sector*]

CHAPTER III. CHARACTERISTICS OF STATISTICAL UNITS

3.1. Characteristics of statistical units are data items used for their unique identification, their classification within particular activity area of distributive trade and for description of various aspects of their structure, operation and relationship with other units. Availability of information on characteristics of the statistical units is a precondition for effective organization of the statistical sample surveys as well as for comparisons and links to be made between data from different data sources thus, significantly reducing the duplication in data collection and response burden.

3.2. The main characteristics of the statistical units are kind of activity, type of operation, size, location, type of economic organization, type of legal organization, type of ownership and demographic characteristics. They allow for four distinct types of analysis:

- *Activity analysis*, pertaining to the structure or business cycle of production of one activity or to the comparison of relative performance of several activities within or between reference periods;

- *Size class analysis*, showing the relationship between the various size classes of enterprises and their activity and performance, as well as the different size structures of the activities by providing an indication of the degree of concentration and competition. This type of analysis is particularly important for studying business demography;

- *Geographical analysis*, allowing for detailed analysis of performance between regions or sub-regions of an economic territory as compared to the national total;

- *Legal and ownership analysis*, allowing for comparison of performances across the various ownership and control like public, private and foreign-owned enterprises by economic activities and between economic activities.

A. Kind of activity

3.3. *Kind of activity.* The kind of activity is defined as the type of production in which a unit is engaged. The kind of activity characteristic is the principal variable which determines whether or not a given statistical unit is included in scope of distributive trade statistics and to what activity class of distributive trade it belongs. The United Nations Statistical Commission at its thirty-seventh session recognized ISIC, Revision 4 as the international standard for economic activity classification[13]**.** In accordance with this

[13] For the report of Statistical Commission see: http://unstats.un.org/unsd/statcom/sc2006.htm

decision **it is recommended that** the kind of activity of statistical units be determined in terms of ISIC, Rev.4 by application of classification rules laid out in its introduction.

3.4. *Principal activity*. The principal activity of a unit is the activity that contributes most to the value added of that unit, or the activity the value added of which exceeds that of any other activity of the unit. It is not necessary that the principal activity account for 50 per cent or more of the total value added of a unit.

3.5. *Secondary activity*. A secondary activity is each separate activity that produces goods or services and that is not a principal activity of the entity in question. Most units have at least some secondary activities.

3.6. *Ancillary activities*. Principal and secondary activities cannot be carried out without the support of a number of ancillary activities. A productive activity undertaken with the sole purpose of producing one or more common type of services for intermediate consumption within the same enterprise is defined as an ancillary activity. Examples of ancillary activities are bookkeeping, transportation, storage, purchasing, sales promotion, cleaning, repair and maintenance, security etc. At least some of these activities are found in every unit. Thus, ancillary activities are those that exist to support the main productive activities of a unit by providing non-durable goods or services entirely or primarily for the use of that unit.

3.7. *General principles for determining the kind of activity of statistical units in terms of ISIC, Rev.4.* The following principles **are recommended**:

(i) The kind of activity of a statistical unit is determined by the kind of its principle activity; secondary and ancillary activities are to be disregarded when classifying a unit;

(ii) If the unit is engaged in several types of independent activities, but the unit itself cannot be segregated into separate statistical units, its kind of activity should be determined according to the ISIC, Rev.4 class with the largest share of value added by using the "top-down" method. The "top-down" method means that first the appropriate highest classification level (one-digit) should be determined, then the lower (two- and three-digit) levels and finally the class (four-digit level);

(iii) If value added cannot be determined for the activities involved, classification has to be done by using substitute criteria, provided that they are applied consistently for all involved activities. Such criteria are:

a. Substitutes based on output - gross output of the unit that is attributable to the goods or services associated with each activity; and value of sales of those groups of products falling within each activity;

b. Substitutes based on input - wages and salaries attributable to the different activities; hours worked attributable to the different activities;

and employment in the activities according to the proportion of people engaged in the different activities of the unit.

3.8. Two cases below, where considerable proportions of the activities of a unit are included in more than one class of ISIC, Rev.4, are considered to ensure more uniformity of classification decisions.

3.9. *Classification in the case of vertical integration.* **It is recommended** that a unit with vertically integrated chain of activities, that is where the different stages of production are carried out in succession by the same unit and where the output of one process serves as input to the next, should generally be treated like any other form of multiple activities, i.e. a unit with a vertically integrated chain of activities should be classified to the class corresponding to the principal activity within this chain, i.e. the activity accounting for the largest share of value added, as determined by the top-down method. If value added or substitutes for the individual steps in a vertically integrated process cannot be determined directly from accounts maintained by the unit itself, comparisons with other units (e.g. based on market prices for intermediate and final products) could be used. If it is still impossible to determine the share of value added (or its substitutes) for the different stages in the chain of production activities, default assignments for typical forms of vertical integration can be applied.

3.10. *Classification in the case of horizontal integration.* **It is recommended** that a unit with a horizontal integration of activities, that is when activities are carried out simultaneously using the same factors of production, and it is not be possible to separate them statistically into different processes, assign them to different units or generally provide separate data for these activities, nor will rules relying on allocation of value added or similar measures be applicable, this unit should be generally classified by application of alternative indicators, such as gross output. However, it is recognized that there is no good general rule for identifying the single activity that best represents the mix included in this horizontal integration. Countries **are encouraged** to develop their own rules for such identification and include them in the metadata for national and international dissemination.

3.11. *Classification of enterprises.* An enterprise may be engaged in a number of activities which sometimes cover a great variety of ISIC groups or classes. The general rule when such a unit is to be classified at a lower level of the classification remains the top-down approach, as set out in para. […]. However, it may be appropriate for certain statistics to classify them at the division level only. **It is recommended** that the classification of a multi-activity enterprise is determined from the value added by its constituent units. Such a unit should be classified in the category of ISIC, Rev.4 that covers the kinds of activity of the constituent units that account for the principal share of value added.

3.12. *Specific principles*. **It is recommended** that the general principles are supplemented by the following classification criteria specific to distributive trade:

(i) Ideally, the principal activity of the unit should be determined by reference to the value added of the goods sold or the services rendered. In practice, however, it is often not possible to obtain the information on value added for individual products or services and it becomes necessary principal activity to be determined by using substitute criteria (see para. 3.3). **It is recommended** that for the purposes of distributive trade statistics output based substitutes should be preferred for determining the principal activity of trade units. Gross margin (difference between the trade turnover and purchases of goods for resale adjusted by changes in stocks) is conceptually the best output indicator for trade activities. However, it is not readily available in trade surveys and value of turnover **is recommended** as an alternative output indicator. It should be noted that problems with using the turnover criteria as an output substitute exist because in certain cases the proportionality of turnover and value added may vary within a single wholesale and retail trade and also between trade activities. For example, turnover of wholesale and retail trade on own account usually has a much lower share of value added than a commission trade. Inputs indicators such as wages and salaries attributable to the different activities and employment according to the proportion of people engaged in the different activities of the unit should be considered as other substitutes for determining the principal activity of units where no other output substitutes are available.

(ii) ISIC, Rev.4 is more explicit when the top-down method should be applied for classifying units in divisions 46 - Wholesale trade, except of motor vehicles and motorcycles and division 47 - Retail trade, except of motor vehicles and motorcycles. Due to the specific sub-structure of the divisions two additional levels of classification have to be considered. In case of wholesale trade the division is first subdivided into commission trade and wholesale trade on own account, then the latter is subdivided into specialized and non-specialized wholesale trade (see para. 1.10). Retail trade is presented in a similar manner - the division is first subdivided into one set of groups for retail sale in stores and another for retail sale not in stores and second, retail sale in stores is subdivided into groups for retail sale in specialized stores and retail sale in non-specialized stores. Retail trade not in stores is further subdivided into trade via stalls and markets and other trade. The groups for specialized stores are further subdivided into classes according to the range of products sold**.**

3.13. *Application of the top-down method.* **It is recommended** that for determining the proper classification code of a statistical unit with wholesale or retail trade as a principal activity the type of operation criteria as explained above is taken into account. On the basis of the listed activities carried out by the unit and corresponding to them value added or other relevant measures the following steps are carried out for the identification of the code:

- **Step 1.** Identify the section which has the highest share of the value added

- **Step 2.** Within this section identify the division which has the highest share of the value added within this section

- **Step 3.** Within this division identify the group which has the highest share of the valued added within this division

  Wholesale trade

  - **Step 3.a.** Distinguish between commission and own-account trade

  - **Step 3.b.** Distinguish between specialized and non-specialized trade

  Retail trade

  - **Step 3.a.** Distinguish between store and non-store retail trade

  - **Step 3.b.** Distinguish between specialized and non-specialized trade (for in-store retail trade activities)

  - **Step 3.c.** Distinguish between trade via stalls and markets and other trade (for non-store retail trade activities)

  - **Step 4.** Within this group identify the class which has the highest share of value added within this group

3.14. The figures below represents the decision tree to be used for the allocation of a unit within ISIC, Rev.4 division 46 - Wholesale trade, except of motor vehicles and motorcycles and division 47 - Retail trade, except of motor vehicles and motorcycles:

Figure 1

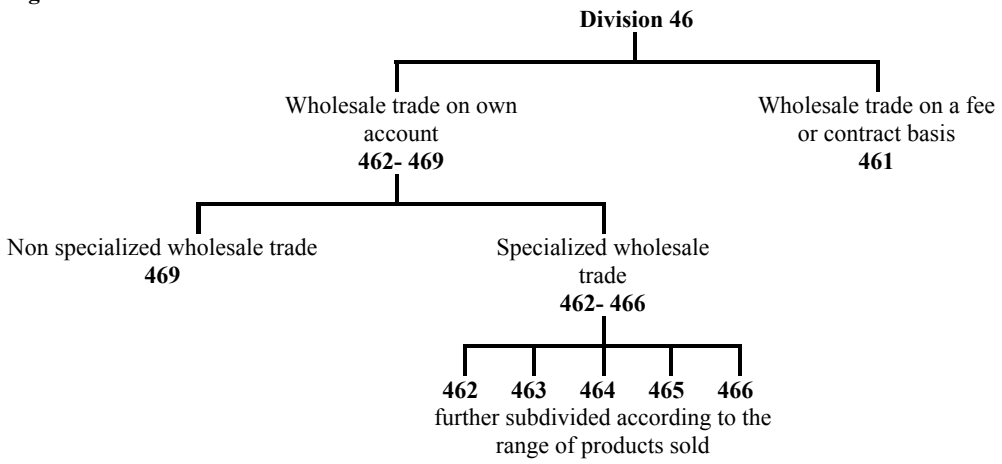
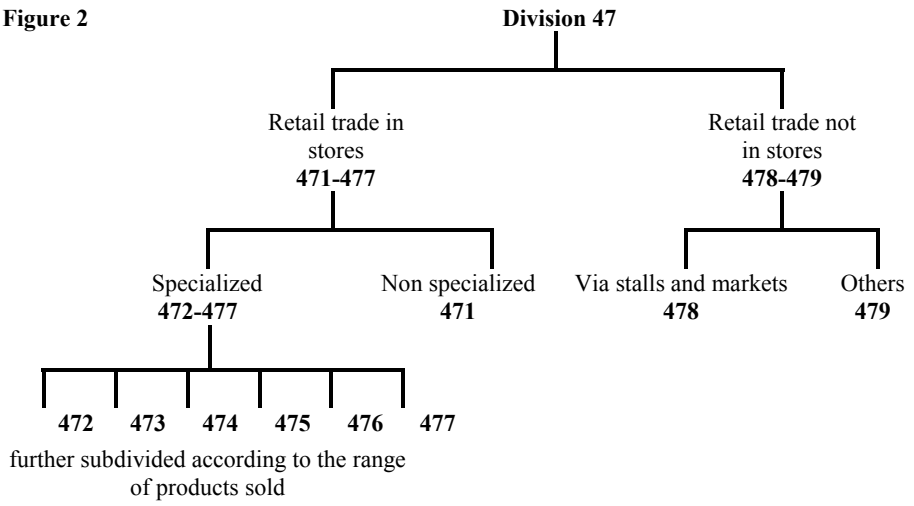


Figure 2



3.15. When choosing between specialized retail trade in ISIC groups 472 – 477 and non-specialized retail trade in ISIC, Rev.4 group 471, the outcome will depend on the number of ISIC, Rev.4 classes involved, irrespective of the group level importance. **It is recommended** that the following rules are applied to make that determination (similar considerations apply to specialized vs. non-specialized wholesale trade activities.):

(a) If the products sold comprise up to four classes in ISIC, Rev.4 groups 472 to 477, none of which accounts for a share of 50% or more in terms of value added, but each represents 5% or more of value added, a specialized trade is still involved. It is then necessary only to determine the focus of the activities on the basis of value added. Selecting first the main group and then the class within that group, will then determine the allocation of the principal activity.

(b) If the products sold comprise five or more classes in groups 472 to 477, each representing 5% or more of value added, but none of which accounts for a share of 50% or more, this should be classified as a non-specialized store and allocated to group 471. If food, beverages and tobacco represent at least 35% of value added, allocation will be made to ISIC, Rev.4 class 4711. In all other cases allocation should be to class 4712.

(c) The above allocation rules are always based on the retail activity of the unit. If, in addition to its retail trade, a unit has a secondary activity which also provides services or produces goods, the allocation of the unit to the appropriate class of division 47 is determined only by the composition of its retail activity, i.e. the 5% rule above applies to 5% of the value added of all retail sale activities, not 5% of value added of all activities of the unit

3.16. Illustration on how to adjust the top-down method to the specific substructure of divisions 46 and 47 of ISIC, Rev. 4 is presented in Annex **[…].**

3.17. *Changes in the classification of units.* Units can change their principal activity either at once or gradually over a period of time. The principal activity may change within the year from one statistical period to the next, either because of seasonal factors or because of a management decision to vary the pattern of output. In each case there will have been a fairly sudden change in the balance of activities. Also, a change in the pattern of output or sales may take place gradually over several years. While all these cases call for the classification of the unit to be changed, too frequent changes distort the statistics to the extent of making interpretation extremely difficult.

3.18. **It is recommended** that countries avoid frequent changes in the classification of units. Countries **are encouraged to** develop a stability rule. Without such a rule there would be apparent changes in the economic demography of the business population which would be no more than statistical artifacts. **The recommended** working rule is that the secondary activity should exceed the activity to which the unit is classified for two years before the classification is changed. Similarly, if a unit engages in a mix of activities that are almost balanced, raising the risk of changes for the principal activity, the ratio of activities over the past two to three years should be taken into account for determining the principal activity.

3.19. **It is recommended** that countries change the classification of units for the purpose of statistical inquiries not more than once a year, either at fixed dates or as the information becomes available. More frequent changes would result in inconsistency between short term (monthly and quarterly) and longer term statistics.

B. Type of operation

3.20. *Type of operation,* by convention, refers to different methods (ways) of organization of wholesale and retail trade and is used in definitions of Section G's groups and classes. The item is important from both national and international point of view and can be used to monitor dynamic of operational structure of wholesale and retail trade.

3.21. *Types of operation in wholesale trade*. Wholesale trade units can be classified into the following types of operation, which broadly conforms with the principles for classifying units between different groups of division 46 of ISIC, Rev.4:

(a) Wholesale trade on own account - Wholesalers who buy and sell goods on own account and who take legal title to them (groups 462-469):

   i. Specialized wholesale trade (groups 462-466);
   ii. Non-specialized wholesale trade (group 469).

(b) Commission trade - Agents and brokers, who buy and sell goods to others mainly on commission (group 461).

3.22. **It is recommended** that the wholesale units which, at the same time, buy and sell on own account and also act as agents or brokers on the account of others, be classified as wholesalers on own account (type a) whenever they derive a gross margin from wholesale trade greater than the receipts from commissions (agents' revenues). The same procedure (the greater gross margin) **is recommended** for the classification of units engaged in wholesaling and retailing by type of operation because the growth of new large-format retailers makes the current definition of wholesale or retail operations quite broad and difficult for implementation.

3.23. *Specialized and non-specialized wholesale trade*. Wholesales can be either commodity/product specific or general in nature, usually known as non-specialized wholesale traders..

3.24. *Types of retail trade operations.* Retail trade as defined by ISIC, Rev.4 division 47, includes units engaged in selling new or used goods in small quantities without transformation mainly to the final consumers. Two broad categories of retail trade organization can be distinguished - store and non-store retailing. The two categories are by and large internationally comparable and provide illustration on how the retail sector units operate in individual countries. **It is recommended** that the following types of retail trade operations are identified:

(b) Retail trade in stores (groups 471-477):
- i. Specialized stores (groups 472-477);
- ii. Non-specialized stores (group 471):
  - Food predominantly;
  - Others.

(c) Retail trade not in stores:
- i. Retail trade via stall or markets (group 478);
- ii. Others.

3.25. *Store retailers* operate their business from fixed-point-of-sale locations such as shops, department stores, supermarkets etc, located and designed to attract a high volume of walk-in customers. They have extensive displays of merchandise and often use mass-media advertising to attract customers.

3.26. *Non-store retailers* also serve general public, but their retailing methods differ. Such methods include sales from movable stalls either along a public road or at a fixed marketplace, where the customer does not enter the premises where the sale takes place. This group includes also sales through vending machines and the retail sale of any kind of product through paper and electronic catalogs, door-to-door solicitation, in-home demonstration, direct selling, i.e. direct delivery of fuel, newspapers, etc. to the customer premises.

3.27. *Units engaged in e-commerce.* Business units that sell goods and supply services exclusively through the Internet are creating a new mode of delivering products. Many

countries describe these transactions as e-commerce (see para. [..]). E-commerce is defined mainly through the electronic transactions, however, separate units that sell goods and supply services exclusively through the Internet are increasingly coming into existence. Though the e-commerce is equally applicable to all major economic activities, it has been expanding tremendously in wholesale and retail trade with the widespread use of computers and internet.

3.28. *Definition of e-commerce*. There are two definitions of e-commerce[14] – broad and narrow (see the box below). The only difference between the broad and narrow aspect of the definition is the modes of information flows included: the broad definition accepts in addition to Internet transfers also transfers made over other computer mediated networks like telephone systems, EDI and Minitel. **It is recommended** that for the purpose of the IRDTS the broad **[pending, to be confirmed by the EG]** definition of E-commerce is used.

Box 3. Definition of e-commerce

Broad definition - an electronic transaction is the sale or purchase of goods or services, whether between businesses, households, individuals, governments, and other public or private organizations, conducted over computer mediated networks. The goods and services are ordered over those networks, but the payment and the ultimate delivery of the good or service may be conducted on or off-line. E-commerce includes orders received or placed on any online application used in automated transactions such as Internet applications, EDI, Minitel or interactive telephone systems.

Narrow definition - an internet transaction is the sale or purchase of goods or services, whether between businesses, households, individuals, governments, and other public or private organizations, conducted over the Internet. The goods and services are ordered over those networks, but the payment and the ultimate delivery of the good or service may be conducted on or off-line. E-commerce include orders received or placed on any internet application used in automated transactions such as Web pages, Extranets and other applications that run over the Internet, such as EDI over the Internet, Minitel over the Internet, or over any other Web enable application regardless of how the Web is accessed (e.g. through a mobile or a V set, etc.). Excluded are orders received or placed by telephone, facsimile or conventional e-mail.

3.29. For many units, e-commerce is just one of the varieties of means by which sales are transacted. **It is recommended** that the rules for classifying such units by activities remain unchanged: they are classified to the industry of their principal activity by implementing top-down method. Units that supply services exclusively through the

[14] The definitions are endorsed by the OECD member countries. For more details see: www.oecd.org/sti/measuring-infoeconomy

Internet should also be classified to the industry of their principal activity. Units engaged in e-commerce will therefore be found in any industry of ISIC. It should be noted that the only exception to this rule are the retail trade units that undertake their sales exclusively or predominantly through the Internet. They are classified within industry group 479 "Retail trade not in stores" to class 4791. E-commerce in wholesale trade (mainly business to business e-commerce) is not reflected in the current structure of ISIC, Rev.4 because it is classified by product.

3.30. *Other units of distance selling – mail order.* Mail order is a form of distance selling in which the buyer places an order for the desired products with the merchant through some remote methods such as through a telephone call. Products could be advertised by mail order catalogs, radio or TV channels. They are delivered to the customer by mail. The products are typically delivered directly to an address supplied by the customer, such as a home address, but occasionally the orders may be delivered to a nearby retail location for the customer to pick up. Some merchants also allow the goods to be shipped directly to a third party consumer, which is an effective way to send a gift to an out-of-town recipient.

3.31. Nowadays however, most traditional mail order companies also sell over the internet. A company's website became the more usual way to order merchandise for delivery by mail which makes the e-commerce and mail order sales hard to distinguish. **It is recommended** that countries apply the top-down method for proper classification and recording of mail order transactions and units (see para …).

3.32. *Additional breakdowns of store retailing*. The implementation of a top-down method requires additional details for the two segments of the retail activity. Further breakdowns of store and non-store methods of retailing **are recommended**. In the category of store retailers, the **recommended** distinction is between specialized stores and non-specialized stores. It has to be made on the basis of the number of classes comprising the goods sold (see the example in the Annex […]). In addition to this, **it is recommended** that non-specialized retailers are distinguished as predominantly selling food products and others. For countries that are in a position to provide even more details **it is further recommended** that in category of store retailers a distinction is made between stores providing self service and others, or retailers being retail chains, department stores and others.

3.33. *Additional breakdowns of non-store retailing*. The types of non-store retailers' operation also vary because of the different methods of transaction and delivery of merchandise. Due to the expansion of e-commerce and other forms of mail in order trade in almost each country **it is recommended** their separate distinction whenever appropriate. It **is also recommended** the separate identification of one more form non-store retailing - the activity of retail sale commission agents.

C. Size

3.34. A size measure of a statistical unit is an important stratification characteristic, essential for sample design and grossing up techniques, providing an indication about the structure of an activity. In general, the size classes of statistical units can be defined in terms of employment, turnover or amount of net assets. Exposition area could be used as a specific criterion for the purpose of classifying retail trade unites by size.

3.35. A definition of size based on the total number of persons employed **is recommended** because of its simplicity, general applicability, usefulness and international comparability. These data are more readily available (including employment data for small units) in most of the countries and do not require additional statistical calculations and adjustments.

3.36. *Size based on employment*. The size of a statistical unit based on employment is defined as the total number of persons employed in that unit during the reference period. The following breakdown of size classes of units **is recommended**: 1, 2-4, 5-9, 10-19, 20-49, 50-99, 100-249, 250-499, 500-999, 1 000 and more. These classes can be further aggregated into the following four basic size groups:

Micro enterprises	- less than 10 persons employed
Small-size enterprises	- 10 – 49
Medium-size enterprises	- 50 – 249
Large-size enterprises	- 250 and more persons employed

3.37. In order to maintain the international comparability of data, **countries are encouraged** to follow the classifications outlined in the preceding paragraph to the extent possible. If necessary, in light of the national circumstances, both the large size classes might be combined or, inversely, more detailed classification should be developed within this framework. It is recognized however, that differences resulting from administrative, organizational or legal reasons may exist at national level. In addition, the wide variety of employment particularly in small retailing units of part-time and unpaid family workers may also complicate the classification of size based on employment.

3.38. The average number of persons employed or the employment in full-time equivalence (FTE) can also be used as criteria for classifying statistical units by size. Both measures provide more accurate measurement of employment, avoiding the problem with part-time workers. However, the concept of FTE does not make the data really comparable since it may vary significantly from country to country. It may also not be possible to calculate employment in FTE in some countries due to the necessity of fairly detailed data on hours worked.

3.39. *Size based on turnover*. For some types of surveys or analyses alternative means of measuring the size of the unit may be of national interest. The turnover of statistical units is such a means. Being an important accounting indicator, the turnover could be obtained either through statistical (surveys) or administrative (fiscal or tax records) sources. However, like any other size criterion involving monetary values it has limited application for international comparisons because of the problems associated with the

conversion to a common currency. The exact definition and coverage of the turnover may also pose problems especially for units in trade activities. For example the turnover of wholesale agents working on contractual basis will be entirely made up of commissions, whereas the turnover of the retailer will include the full value paid by the final consumer, including the value of goods bought for resale.

3.40. *Size based on sales space.* Sales space or/and the exposition area are also inferable for the size of retail trade units characteristics. Sale space could be used as a stratification variable for classifying retail trade units, most of which are identifiable with 'shops' or 'outlets'. However, due to non-uniformity of sales space classes and different country practices, the specific categories of sales space as mentioned in chapter III and IV of the present recommendations should be defined in the context of national circumstances.

D. Location

3.41. *Physical location of the enterprise, mailing address, contact person.* The location is defined as the place at which the unit is physically performing its activities not as where its mailing address is. This characteristic serves two important purposes. First, to identify the units and to classify them by geographical regions, preferably at the most detailed level. Second, if a unit operates in more than one location, to allocate its economic activity to the location in which it actually takes place. The latter is important for measuring regional output (regional GDP and other economic indicators) and making regional economic analyses. Since the classification of units by location is of particular national interest, any geographical classification should distinguish the major economic regions or administrative divisions of the country ranging from large areas (states or provinces) to intermediate areas to local areas (towns).

3.42. The details about mailing address, telephone and fax numbers, e-mail address and contact person are also important identification variables since these details are used for mailing the statistical questionnaires, written communication with the unit or making ad hoc queries about its activity. Up to date information about any changes in those variables is crucial for the efficient work of statistical authorities.

3.43. *Location in case of multi-establishment enterprises*. Where an enterprise has only one establishment, they may or may not have one location and address. Often, the enterprise address is used for administrative purposes and the establishment address for statistical purposes. **It is recommended** to work with caution when dealing with large complex enterprises. Depending on which is the reporting unit for a particular statistical survey, the multi establishment enterprise may be requested to provide location details about each establishment it has, or the establishment may be asked about the name and location of the enterprise that owns it as it was also stated in para. [xx]. In some cases, it may be necessary to correspond with both the establishment and the enterprise because in general, the unit supplying for example employment details is different from one providing financial details.

E. Type of economic organization

3.44. The enterprise and the establishment are the main statistical units used by countries for conducting the business surveys. The characteristic "type of economic organization" is intended to indicate whether the establishment is *the sole establishment* of the enterprise of immediate ownership or is part of a *multi-establishment enterprise*. If further details are required for the economic structure, **it is recommended that** the multi-establishment enterprises are divided into classes according to the number of entities that are most appropriate for each country.

3.45. *Links between various entities within an economic organization.* For the purpose of accurate measurement of production and all other flows of goods, services and capital in the economy, **it is recommended** to have the links between individual entities and any parent enterprise clearly defined. More importantly, these links are fundamental for the efficient sampling design because one survey might gather information on value added, employment and production statistics usually available at establishment level, while another may collect data from consolidated financial statements compiled mainly at the enterprise level.

3.46. *Business register and type of economic organization of trade units*. In case of existing business register, the assigned identification code may provide the necessary information for identifying the trade enterprise to which the establishment belongs and vice versa. In addition, the business register may also store the name of the enterprise of immediate ownership and the address of its central office and other entities. However, there may not be such information in some countries. In the absence of a business register, **it is recommended** that the link between the trade enterprise and entities belonging to it be ensured by matching their names and addresses. The central office of the legal entity, or the establishment itself, should be asked whether the firm is owned or controlled by another legal entity and, if so, the name and address of the central office of that legal entity. For practical purposes, **it is also recommended** to request a list of all subsidiary legal entities from the central offices.

F. Type of legal organization and type of ownership

3.47. *Legal organization*. The type of legal organization is another important characteristics and possible criterion for stratification of units in statistical surveys. The type of legal organization is the legal form of the economic entity which owns the unit (either the enterprise or the establishment). The **recommended minimum classification** of units by kind of legal organization distinguishes between two main types, namely *unincorporated* units and *incorporated* units. The *co-operative* form, as a specific form of legal organization, similar to that of the incorporated units and popular in a number of countries should be observed separately where this is important.

3.48. The classification of units by their legal forms has more national rather than international significance, therefore, **it is recommended** that it is developed in accordance with the legal forms or categories adopted by each country. Further

breakdowns of unincorporated units by sole proprietors and partnerships not recognized as independent legal entities and of incorporated units by limited liability partnerships, joint stock companies and corporations may also be of interest.

3.49. *Quasi-corporations.* Some countries may wish to distinguish those of unincorporated units that have characteristics of quasi-corporations. The concept of a quasi-corporation is intended to separate from their owners those unincorporated units that are engaged in commercial activities and are sufficiently self-contained and independent from their owners and which behave in the same way as corporations. In order to be recognized as a separate unit, the quasi-corporation must keep complete set of accounts, including balance sheet or must be in a position to construct such accounts. However, experience has shown that distinguishing the quasi-corporations owned by households in certain cases might be difficult.

3.50. *Type of ownership.* In addition to the kind of legal organization, **it is recommended** to consider the main types of ownership, i.e., the *private* ownership and the various forms of *public* ownership of units as useful optional characteristics. The criterion to distinguish between privately and publicly owned units should be based on whether the ownership of the enterprise to which the establishment belongs rests with public authorities or private parties. Public units are defined as those units that are owned or controlled by government units. By contrast, the privately owned units are those owned or controlled by private parties. The public authorities or private parties are considered to be the owners of a given enterprise if they own all, or a majority, of the unit's shares, or of its other forms of capital participation. The control over a unit means the ability to determine the unit's policy by choosing appropriate directors, if necessary.

3.51. *Disaggregation of public and private ownership.* **It is recommended** that the category of publicly owned units is further disaggregated into the main divisions of public ownership existing in each country, which would normally differentiate between central government ownership, ownership by state or provincial governments and ownership by local authorities. Within the group of privately owned units, a further classification of ownership, which differentiates between nationally owned and foreign controlled units, is recommended.

3.52. *Cross classification by type of ownership and kind of legal organization*. The following abbreviated version of the cross classification by type of ownership and kind of legal organization is recommended:

Publicly owned:
- By central government;
- By state government;
- By local government.

Privately owned:
- National:
  - Unincorporated (household) enterprises;
  - Incorporated, except limited liability partnerships and co-operatives;

Co-operatives and limited liability partnerships.
Foreign controlled.

G. The demographic characteristics

3.53. The demographic characteristics provide information about the period of economic activity of a given unit and include the date of commencement and cessation of its activity. The characteristics set out in paragraphs ***[xxx]*** above are not exhaustive but represent the most important ones from the viewpoint of international comparability, as well as those considered to be of significant national interest. Given the dynamics in creation/cessation of economic activities in trade sector nowadays, the demographic characteristics have their significance for identifying units as a target population for statistical surveys. Where the statistics about the demography of trade units exists on a regular basis, **it is recommended** that this statistics be used for calculation of the rate of new units creation and the chance of units survival, and for estimation of the differences in dynamics of units between ISIC classes.

3.54. *Dormant units*. In principle, the date of official recognition (the birth or other creation date) of the unit exists and it is stored in the business register. However, due to a slow administrative process of death registration or cessation of unit's activity or the intention of the unit to resume its activity after an indefinite period of time, it is more difficult to obtain information about the date (period) at which the unit actually ceases its activity. Therefore, between activity and death of the unit, there might be a period of inactivity, in which the unit will be considered as "dormant". **It is recommended** that countries try to obtain the information on births and deaths of units from administrative sources such as fiscal or juridical authorities, social security or similar sources. **It is further recommended** that for detecting the status of the unit, i.e. whether the unit is active or dormant (inactive), statistical surveys are used.

3.55. *Period of operation*. Closely linked to demographic characteristics of the unit is the period during which the unit has been in operation. Besides the information that this characteristic provides about the activity status of the unit (active or dormant (temporarily inactive)), it also helps in interpreting the returns of units which have not operated for a full reporting period (year, quarter) by reason of seasonal operation, different fiscal year, starting a new business or ceased operations. **It is recommended** that countries include a separate question in statistical surveys on trade units asking about the period of operation.

CHAPTER IV. DATA ITEMS AND THEIR DEFINITIONS

4.1. The present chapter provides summary definitions of data items of distributive trade statistics recommended for compilation and dissemination, together with additional items of data derived from the basic system. Some of the data items may not be existent or they may be of minor importance for some of the economies. Compilers **are encouraged** to implement the recommended list of data items in accordance with their own statistical circumstances and available resources. The list of data items is presented in Annex […]

1. Statistical unit

Classification variables (items xx to xx)

4.2. Statistical units engaged in distributive trade activities may be distinguished and classified following different criteria and variables[15]. In additional to the production and financial data each statistical survey aims at collecting detailed information associated with the statistical unit itself and asks for its kind of activity, type of operation, type of ownership and economic organization, location, period of operation etc.

4.3. Most of data items included in this heading are generally set forth for the purposes of cross tabulation of the data. It should be noted that in the case of multi-establishment enterprises, some of these items refer more appropriately to the trade enterprise, rather than to the establishment. Depending on how this problem is dealt with in the design of statistical surveys they may be collected at the enterprise level for subsequent allocation to the establishment(s) and vice versa.

x.x. Number of enterprises

4.4. This data item is defined as a count of the number of enterprises registered to the population concerned, either in the census list or in the business register corrected for errors, in particular frame errors[16]. Dormant (non-active) units should be excluded. This statistic should include all units active during at least a part of the reference period. ***The population of units for the present recommendations is defined as all units which are primarily engaged in the trade activities, i.e. those falling under Section G - Wholesale and retail trade; repair of motor vehicles and motorcycles of ISIC Rev.4.***

[15] See Chapter III. Characteristics of statistical units for more details.

[16] Frame errors cover (i) coverage errors – erroneous inclusions, omissions and duplications; (ii) classification errors – units not classified or misclassified by activity, geography or size; (iii) contact errors – units with incomplete or incorrect contact data (OECD Glossary at http://stats.oecd.org/glossary/)

4.5. Because of the variation in size and organizational structure of trade enterprises, this item is further subdivided into two broad categories of enterprises:

(a) *Complex enterprises*. A complex, called also a multi-establishment enterprise is one that is comprised of more than one establishment. In general, the individual establishments are engaged in different activities, belonging to different ISIC classes but they may be engaged in the same activity as well.

(b) *Single-establishment enterprises.* Conversely, a single-establishment enterprise is one with a single establishment.

x.x.x.x. Number of establishments

4.6. This data item is defined as a count of the number of establishments registered to the population concerned either in the census list or in the business register corrected for errors, in particular frame errors[3]. Establishments must be included even if they have no paid employees. This statistic should include all units active for at least a part of the reference period. In the case of most small and medium-sized businesses, the number of enterprises and the number of establishments is identical (data item x.x.x).

4.7. Where small and micro establishments are enumerated on a sample basis, data on the total population of such active establishments should be reported by grossing up (with the sampling fraction) the number of establishments included in the sample

2. Employment[17]

4.8. **It is recommended** that the employment data are collected for a number of categories of employed persons, as specified below, with a breakdown by gender in each category as resources permit. Countries **are also encouraged** to collect other characteristics that are of national interest such as a distinction between part-time, full-time and seasonal workers which are based on the laws and customs of the country. Some countries, more specifically those without surveys more-frequent-than-annual, are advised to capture the seasonal factors in trade by requesting employment data for each quarter or even each month of the reporting period.

x.x. Number of persons employed

4.9. The number of persons employed is defined as the total number of persons who work in or for the statistical unit, whether full-time or part time, including:

- working proprietors (salaried managers and salaried directors of incorporated enterprises);

[17] For status in employment see the Resolution concerning the International Classification of Status in Employment (ICSE), adopted by the Fifteenth International Conference of Labour Statisticians (January 1993), http://www.ilo.org/public/english/bureau/stat/res/index.htm

- unpaid business partners;
- unpaid family workers;
- persons working outside the unit who belong to it (e.g. sales representatives, delivery personnel, repair and maintenance teams) provided that they receive a regular salary from that unit;
- persons on short-term leave (sick leave, annual leave or vacation);
- persons on special paid leave (educational or training leave, maternity or parental leave);
- persons on strike;
- part-time workers on the payroll;
- seasonal workers on the payroll;
- apprentices on the payroll;
- home workers on the payroll, paid for the work done.

4.10. Total number of persons employed excludes:

- directors of incorporated enterprises and members of shareholders' committees who are paid solely for their attendance at meetings;
- labour made available to the unit by other units and charged for (contract workers, paid through contractor, persons carrying out repair and maintenance work in the unit on behalf of other units);
- persons on indefinite leave;
- persons on military leave;
- persons on pension;
- home workers paid by subcontractors.

x.x.x. Number of working proprietors

4.11. This data item is defined as all individual proprietors and partners who are actively engaged in the work of the statistical unit, excluding silent or inactive partners whose principal activity is outside of the unit. This category is not applicable to any incorporated or similar enterprise the ownership of which is represented by holding of equity shares.

x.x.x. Number of unpaid family workers

4.12. Unpaid family workers refer to persons who live with the proprietor of the unit and work regularly for the unit, irrespective of the number of hours worked during the reference period, but do not have a contract of service and do not receive a fixed sum for the work they perform. **Unpaid family workers who at the same time are in paid employment with another unit as their principal occupation should not be considered as employed in the concerned unit.** On the other hand, family workers who receive pay for the work performed and are not in paid employment with another unit as their principal occupation should be classified as employees.

4.13. It should be noted that countries which prefer for special reasons to set a minimum time criterion for the inclusion of unpaid family workers among the employed should identify and separately classify those who worked less than the prescribed time.

x.x.x. Number of employees

4.14. This category includes all persons who work in the statistical unit, who have a contract of employment with an employer and receive compensation in cash or in kind at regular intervals of time. Compensation could be in a form of wages, salaries, fees, gratuities, piecework pay or remuneration in kind (see data item x.x). It also includes persons working away from the unit when paid by and under the control of the concerned unit.

4.15. The relationship of employer to employee exists when there is an agreement, which may be formal or informal, between an enterprise and a person, normally entered into voluntarily by both parties, whereby the person works for the enterprise in return for remuneration in cash or in kind.

4.16. The category "employees" is intended to include all persons engaged other than working proprietors and unpaid family workers. Employees should be considered as all paid workers engaged in the selling of goods and related activities of the concerned unit. In particular the following are included in this category:

- paid working proprietors (salaried managers and directors of incorporated enterprises except when paid solely for their attendance at meetings);
- part-time workers;
- seasonal workers;
- students working for a trade unit;
- persons on strike;
- persons on short term or special leave.

4.17. Employees of a similar type engaged in activities ancillary to the main activity of the unit and persons engaged in truck driving, repair and maintenance and so on should also be included. Also included are students who have a formal commitment whereby they contribute to the unit's process of production in return for remuneration and/or education service.

Breakdown of number of employees[18]

[18] All items related to working time measurement such as full-time/part-time employment, employment in full time equivalence are subject to change based on the revised ICLS Resolution on Working Time measurement, which will include an updated version of working time arrangements. The current ICLS standard is available at: http://www.ilo.org/public/english/bureau/stat/res/index.htm. The new standard will be adopted at the next ICLS which is due to be held at the end of 2008. A draft version of the revised Resolution is expected to be available at the end of 2007

4.18. It is typical for distributive trade units to keep non-standard time of working hours (24 hours, 7/11 or the entire weekends). This may force them to hire employees either with full-time, or with part-time employment contracts. This phenomenon might be quite significant for the sector and will have implications for calculation of seasonally adjusted data.

4.19. **Countries are encouraged** to establish additional breakdowns for the various groups of employees that exist in their economies, and for which it is important and possible to produce separate statistics. **It is recommended** that one such breakdown be established in reference to the length of work as set in the existing *Working time arrangements*[19]. Working time arrangements relate to those arrangements as stipulated in laws and regulations, collective agreements, arbitral awards or employment contracts or as determined by rules or customs of establishments or community, or by the individual self-employed person on the basis of contractual obligations, work requirements or personal and household preferences.

4.20. In a given country the length of work may vary for different groups of paid employment jobs, depending on the different working time arrangements. Hours of work are the hours that persons in paid employment jobs spend during a reference period on work activities that contribute to the production of trade services. Individual working time arrangements of persons in paid employment jobs may differ ranging from shorter/longer daily or weekly hours of work, or fewer or more days per week, or part-year work etc.

4.21. Provision of separate statistics about employees with different working time arrangements such as full-time and part time employees is useful for certain types of employment analyses. Due to the conventionality in the definition of full-time and part-time work in terms of hours of work across countries it is impossible to establish an exact international distinction between part-time and full-time employees. However, **it is recommended**, as resources permit and there is a sufficient national interest, that the item "Total number of employees" be presented into the following three categories: full-time employees; part-time employees; and employees in fill-time equivalence. All three categories should be calculated by reference to the number of hours actually worked out (x.x).

x.x.x.x. Number of full-time employees

4.22. This is a division of the number of employees calculated by reference to the number of hours worked per day/week/month for which they are paid. This number of hours is considered in relation to the length of what is considered to be full-time working week/month in a country, in a particular sector of the unit or in the unit itself. Full-time

[19] See the Resolution concerning statistics of hours of work, adopted by the Tenth International Conference of Labour Statisticians (October 1962), http://www.ilo.org/public/english/bureau/stat/res/index.htm

employees are persons whose working time is equal to the full-time working hours per week/month.

x.x.x.x. Number of part-time employees

4.23. Part-time employees are persons whose working time hours are less than the full-time working hours. This category encompasses all forms of part-time work (half-day work, work for one, two or three days a week, etc.). **Part-time employees (duration of work less than the norm) and intermittent/seasonal employees (who may work full time but for a fixed short period, e.g. temporary workers, film crew, etc.) should not be confused.**

x.x.x.x. Employees in full-time equivalence

4.24. Based on the total number of hours worked by all part-time employees, their number could be converted into full-time equivalence. The conversion should be carried out with regard to the working time of a full-time employee in the unit by taking into account the number of hours, days, weeks or months worked. Full-time equivalence is defined as total hours worked in a unit is divided by average (annual, quarterly, monthly or weekly) hours worked by a full-time employee. That conversion will facilitate international comparisons with countries which can only estimate full-time equivalence employment. Due to the differences in the length of the full-time employment by activities, employees' categories etc. **it is recommended** calculating the conversion at the most detail level possible.

x.x.x. Total number of persons employed in research and development

4.25. The output of research and experimental development (R&D) is recognized as an asset in the 1993 SNA, Rev.1. Most of R&D is undertaken on own account, therefore the R&D output and capital formation should be estimated by summing up the cost of inputs, including labour inputs.

4.26. *Definition of Research and Development*. The present recommendations adopt the definition of R&D as given in the Frascati Manual[20] - "Research and experimental development comprise creative work undertaken on a systematic basis in order to increase the stock of knowledge, including knowledge of man, culture and society, and the use of this stock of knowledge to devise new applications".

4.27. This data item comprises all persons employed directly on R & D, as well as those providing direct services such as R & D managers, administrators and clerical staff. Those persons providing an indirect service, such as canteen and security staff, should be excluded, even though their wages and salaries are included as an overhead in the measurement of expenditure. R & D personnel must be distinguished from personnel for a wide range of related activities. The following are therefore excluded from R & D personnel:

[20] Frascati Manual, OECD, 2002, Para. 63

- personnel employed on education and training,
- personnel employed on other scientific and technological activities (e.g. information services, testing and standardization, feasibility studies, etc.),
- personnel employed on other industrial activities (e.g. industrial innovations n.e.s.),
- personnel employed on administration and other indirect supporting activities.

x.x.x. Total number of persons employed in development of software and databases

4.28. The development of software and databases is recognized as an asset in the 1993 SNA, Rev.1. When produced on own account by trade units it represents the cost of production and should be estimated by summing up the cost of inputs, including labour inputs. The item comprises the total number of persons employed working on development of software and databases with an expected working life of more than one year, as well as those providing direct services such as managers, administrators and clerical staff. Those persons providing an indirect service, such as canteen and security staff, should be excluded, even though their wages and salaries are included as an overhead in the measurement of expenditure.

x.x.x.x. Homeworkers on the pay-roll

4.29. Homeworkers are a subdivision of persons employed by the trade unit who carry out their professional activity from their own home. Only homeworkers who appear on the pay-roll of the unit should be included. This type of employment is believed to be of less importance for the units in trade, however, homeworkers may be engaged in some repacking of goods in smaller lots, assembling etc.

x.x. Total number of persons employed in informal sector

4.30. For countries that utilize the concept of informal sector in their statistical systems the total number of persons employed in the informal sector is defined as comprising all persons who, during a given reference period, were employed in at least one production unit of the informal sector which is classified in section G of ISIC, Rev.4 irrespective of their status in employment but only if this is their main job. The total number of persons employed in the informal sector must refer to the whole territory of the country. This item includes both employees formally employed (i.e. wage employment) and self-employed in informal sector such as street vendors, etc. ***[other examples]*** .

4.31. For the purpose of the present recommendations the distributive trade (production) units of the informal sector are defined according to the 15th ICLS[21] as a subset of unincorporated enterprises owned by households, i.e. as a subset of production

[21] International Labor Organization, *Resolution concerning statistics of employment in the informal sector*, adopted by the Fifteenth International Conference of Labour Statisticians (January 1993).

units which are not constituted as separate legal entities independently of the households or household members who own them, and for which no complete sets of accounts (including balance sheets of assets and liabilities) are available which would permit a clear distinction of the production activities of the enterprises from the other activities of their owners and the identification of any flows of income and capital between the enterprises and the owners.

4.32. The informal employment could be estimated directly through conduct of informal sector surveys or indirectly, through alternative approaches. One such approach is the residual method, where the informal employment is estimated as the difference between the total employment (based on the population census or labour force survey data) and the formal employment (based on economic census, establishment survey or administrative data sources).

x.x. Average number of persons employed

4.33. The item is defined as the average number of employees (data item x.x) plus the number of working proprietors and the number of unpaid family workers. This data item serves as the size criterion for the unit. If the average number of employees is not available, then **it is recommended** that the "total number of persons employed" (data item x.x) should serve as the size criterion.

x.x.x. Average number of employees

4.34. The average number of employees (and the corresponding averages for full-time and part-time employees) is the arithmetic average of the daily numbers of employees for each calendar day of the reference period incl. holidays and weekends, divided by the number of days in the reference period. The annual average number of employees is defined as an arithmetic average of monthly (or quarterly) average numbers of employees.

x.x.x. Number of leased employees

4.35. Leased employment entails the provision of human resources for trade units for a fee. Leasing companies operate in a co-employment relationship with client businesses and are specialized in providing wide range of human resource services. The provision of human resources is typically done on a short-term or on a long-term and permanent basis. Employment agencies do not supervise the employees who are under the control (direction and supervision) of the clients of employment agencies, but they are on the payroll of the employment agencies. Therefore, the information about leased employment is important for the meaningful labour and productivity analyses, however, the number of the leased employees is excluded from the total number of persons employed in the trade unit (data item x.x).

4.36. The number of leased employees is defined as those persons who are supplied to the trade unit by the employment agencies and similar organizations. The following categories are excluded from the number of leased employees:

(a) Temporary staffing obtained from a staffing service;

(b) Contractors, subcontractors or independent contractors;

(c) Purchased or managed services, such as janitorial, guard, or landscape services;

(d) Professional or technical services purchased from another firm, such as software consulting, computer programming, engineering, or accounting services.

3. Hours worked[22]

x.x. Number of hours actually worked[23]

4.37. Number of hours actually worked, also known as *Volume of work* or *Labour input* is important data item used for labour analysis, conversion of part-time employees into full-time equivalence, study of productivity and calculation of a number of aggregates per hour worked. Number of hours worked by all persons in employment (paid and self-employed persons) is defined as the total number of hours actually worked by them on activities that contribute to the production of distributive trade services during the reference period. This indicator can be measured per week, per month, or per year. If total hours worked are estimated per year, the indicator will provide the average annual hours worked of all persons in an economy, or the volume of hours worked. **It is recommended** that it should be broken down similarly to the employment categories.

4.38. Some small units, particularly those with less formal records, may be unable to report hours worked. In this case **it is recommended** to impute hours worked from the responses to alternative questions such as the number of workers, average number of working days, length of the productive hours in an usual working day etc.

4.39. Hours worked should include ***[to be aligned with the relevant chapter of the SNA, 93 Rev.1 and the ICLS Resolution]***:

(e) *Productive hours.* Hours spent on activities related to persons' employment and intended for the production of trade services. These activities may be carried out within normal or contractual periods, or as overtime and may be paid or

[22] Subject to change based on the revised ICLS Resolution on Working Time measurement, which will include an updated version of working time arrangements. The current ICLS standard is available at http://www.ilo.org/public/english/bureau/stat/res/index.htm. The new standard will be adopted at the next ICLS which is due to be held at the end of 2008. A draft version of the revised Resolution is expected to be available at the end of 2007

[23] See draft ICLS Resolution on Working Time Measurement (http://www.insee.fr/en/nom_def_met/colloques/citygroup/2006_meeting.htm)

unpaid, regardless of the place where they are carried out, such as the establishment, the home, in the fields, on the street, and include work taken home from the place of work.

(f) *Hours spent on ancillary activities*. Hours spent on activities not directly intended for the production trade services but which are necessary to enable such production. This includes hours spent on:

(i) the design, preparation, cleaning of workplace or work instruments, repairs or maintenance of work processes;

(ii) professional training (for persons in paid employment) authorised and provided directly or indirectly by the employer ; travelling or itinerant activities required or paid for and inherent to the employment as in door-to-door vendors, seafarers, drivers, and persons travelling to attend a meeting outside their usual place of employment;

(iii) other job-related personal training or education activities paid (including in kind) by the employer, whether in or outside of the place of employment.

(g) *Unproductive hours spent in the course of work*. Hours spent between productive periods that are unavoidable yet inherent to work processes and during which persons in employment continue to be available for work. Included are hours spent:

(i) waiting for customers in an office, shop, street;

(ii) standing-by for technical or economic reasons such as lack of work supply, machinery breakdown, accident;

(iii) between productive periods during which no work is done but when payment is made under a guaranteed employment contract;

(iv) travel time, as a function of specific work assignments or customers, when the place of employment is variable.

(h) *Short periods of rest*. Periods of less than 30 minutes spent between productive periods on personal activities during which persons are not available to the employer or for other work. Such periods occur as a consequence of natural needs; may be authorised by contract or custom and may include tea, coffee or prayer breaks.

4.40. Hours actually worked should exclude:

(a) Hours paid for but not worked, such as paid annual leave, paid public holidays, paid sick leave, paid education leave, paid parental (maternity, paternity) leave, paid leave for family reasons, non-military civilian service;

(b) Meal breaks longer than 30 minutes;

(c) Time spent on commuter travel between home and employment that is not actually time spent working, even if paid by the employer.

4.41. Number of days worked **is recommended** as an alternative for measurement of labour inputs for countries that are unable to collect information on hours worked. The information is more easily obtainable from pay-roll records than the hours worked are. Days worked should refer to the total number of days spent at work and not to days paid for. Days spent on annual leave, casual or sick leave should be excluded. In addition, **it is recommended** to ascertain the usual number of working hours per day in the trade units for the full-time employees and to collect separately the days worked by part-time employees. Provision is made for the breakdown by employment status.

x.x. Breakdown of employment by gender and occupation

4.42. In general, separate figures for male and female employment should be sought. Each of the employment categories and corresponding labour input data, as resources permit, should distinguish between male and female. Important for constructing labour compensation price indices in distributive trade sector will be if those categories include breakdown by occupation preferably following the International Classification of Occupation (ISCO).

4. Compensation of employees

4.43. Compensation of employees is defined as the total remuneration, in cash or in kind, payable by an enterprise to all employees (e.g. permanent, temporary, full-time, part-time and seasonal workers) in return for work done by the latter during the accounting period. Compensation of employees consists of two main components (i) wages and salaries payable in cash or in kind, and (ii) social insurance contributions payable by the employers. Employees are those as defined in data item x.x above.

4.44. No compensation of employees is payable in respect of unpaid work undertaken voluntarily, including the work done by the non-paid family workers. Payments to working proprietors not in receipt of a regular salary should be excluded.

x.x. Wages and salaries of employees

4.45. Wages and salaries[24] are defined as all payments whether in cash or in kind, made by the employer during the reference period in connection with work done by all persons included in the count of employees regardless of whether they are paid on the basis of working time, output or piecework and whether it is paid regularly or not. The wages and salaries should be recorded gross before any deductions are made by the employer for

[24] See 1993 SNA, Rev.1 para xxxx for more details on the components of wages and salaries of employees

income taxes paid by employees, payments on loans, personal contributions to social security and pension schemes, life insurance, union dues and other obligations of employees. They are recorded on an accrual basis, in respect of entitlement arising out of work done during the accounting period whether paid in advance, simultaneously, or in arrears.

4.46. *Wages and salaries in cash* include the following kinds of remuneration:

(a) Wages or salaries payable at regular weekly, monthly or other intervals, including payments by results and piecework payments; enhanced payments or special allowances for working overtime, at nights, at weekends or other unsocial hours; allowances for working away from home or in disagreeable or hazardous circumstances; expatriation allowances for working abroad; etc.;

(b) Supplementary allowances payable regularly, such as housing allowances or allowances to cover the costs of travel to and from work, but excluding social benefits (see below);

(c) Wages or salaries payable to employees away from work for short periods, for example, on holiday or as a result of a temporary halt to production, except during absences due to sickness, injury, etc. (see below);

(d) Ad hoc bonuses or other exceptional payments linked to the overall performance of the enterprise made under incentive schemes;

(e) Commissions, gratuities and tips received by employees: these should be treated as payments for services rendered by the enterprise employing the worker, and so should also be included in the output and gross value added of the employing enterprise when they are paid directly to the employee by a third party.

4.47. Wages and salaries in cash do not include the reimbursement by employers of expenditures made by employees in order to enable them to take up their jobs or to carry out their work. For example:

(a) The reimbursement of travel, removal or related expenses made by employees when they take up new jobs or are required by their employers to move their homes to different parts of the country or to another country;

(b) The reimbursement of expenditures by employees on tools, equipment, special clothing or other items that are needed exclusively, or primarily, to enable them to carry out their work.

4.48. Wages and salaries in cash also do not include social insurance benefits paid by employers in the form of: (a) children's, spouse's, family, education or other allowances in respect of dependants; (b) payments made at full, or reduced, wage or salary rates to workers absent from work because of illness, accidental injury, maternity leave, etc.; and (c) severance payments to workers or their survivors who lose their jobs because of

redundancy, incapacity, accidental death, etc. In practice, it may be difficult to separate payments of wages or salaries during short periods of absence due to sickness, accidents, etc., from other payments of wages and salaries, in which case they have to be grouped with the latter.

4.49. *Wages and salaries in kind.* Wages and salaries in kind are defined as the net cost to the employer of those goods and services furnished to employees free of charge or at markedly reduced cost that are clearly and primarily of benefit to the employees as consumers. The most important payments in kind relevant to distributive trade units comprise meals and drinks; clothing (if it could be worn off-duty); housing services or accommodation provided free of charge or at markedly reduced prices; sports, recreational or holiday facilities for employees and their families, etc. However, expenditures by employers that are of benefit to them as well as their employees (for example, on the amenities of the place of work, medical examinations, sports and other recreational facilities, travelling, entertainment and similar outlays by employers in connection with the business) are not part of compensation of employees but are included in the employers intermediate consumption.

4.50. *Stock options* are another form of income in kind which should be included in the wages and salaries of employees. It results from the practice of some employers to give the employees the option to purchase a company's stocks (shares) at some future dates at a certain price and under some specific conditions. They provide employees the right, but not the obligation, to purchase stock options. Options are usually granted to encourage employees to stick around and help the company grow.

4.51. Typically an employer informs his/her employees of the decision to make a stock option available at a given price (the strike price or exercise price) after a certain time under certain conditions (for example, that the employee is still in the enterprise's employ, or conditional on the performance of the enterprise). The "grant date" is when the option is provided to the employee, the "vesting date" is the earliest date when the option can be exercised, the "exercise date" is when the option is actually exercised (or lapses). In some countries the permissible length of time between vesting and exercise date is quite long; in others it is very short.

4.52. **It is recommended** that the valuation of the options be estimated either by using a stock options pricing model or as the difference between the market price and strike price at the vesting date. If the market price is lower than the strike price, the option has zero value as it would not be exercised. The time of recording should be spread over the period between the grant date and vesting date, if possible. If this is not possible, the value of the option should be recorded at vesting date. Any change in value between the vesting date and exercise date is not treated as compensation of employees but as a holding gain or loss.

x.x.x. Breakdown of wages and salaries of employees

4.53. In order to ensure that the output of research and development and development of software and databases will be properly estimated, **it is recommended** wages and salaries data for these two particular categories of employees to be reported separately.

4.54. To provide a more precise measure of wage and salary levels, **it is also recommended** in infrequent **[…]** surveys to collect data on wages and salaries paid to full- and part-time employees, by occupation and for both status groups to obtain details by gender.

x.x. Employers' social insurance contributions

4.55. Employers' social contributions are social contributions payable by employers to social security funds or employment-related social insurance schemes to secure social benefits for their employees. These are payments made by the employer on behalf of his employees, which are normally considered in national accounting practice to form part of the employees' compensation but not of wages and salaries. The following items are included:

- compulsory employers' contributions to employment-related social insurance schemes for retirement pensions, sickness, maternity, disability, unemployment, occupational accidents and diseases, family allowances etc.,
- collectively agreed, contractual and voluntary employers' contributions to private pension and insurance schemes;
- employers contributions to health and other casualty insurance, life insurance and similar schemes.
- direct payments to employees in respect of absence from work owning to sickness, maternity leave or employment injuries, to compensate them for a loss of earnings; other direct payments comparable to social security benefits.

4.56. The sum of this item and of item x.x (that is, wages and salaries paid) represents the total compensation of employees as defined for national accounts purposes. Excluded are payments not made directly by the employer, travelling and other expenditure incurred for business purposes and reimbursed by the employer.

5. Turnover

x.x.x. Turnover

4.57. This item includes the totals invoiced by the observation unit during the reference period, and this corresponds to gross sales of goods or services of a trade unit supplied to third parties.

4.58. Part of the total turnover is also the value of goods traded in or bartered as well as all other invoiced charges for transport, packaging, etc. passed on to the customer, even if these charges are listed separately in the invoice. It also includes receipts from the rental

of vehicles, equipment, instruments, tools, and other merchandise; commissions from the arrangement of financing; payments for work in progress; and market value of compensation received in lieu of cash. Hire-purchase or instalment contracts should also be included in turnover when they are made.

4.59. The turnover should cover the goods sold by a unit on its own account and on that of others or withdrawn by the owners of a unit for their own use. Included in the turnover from services are commissions and fees received by the unit for the sales and purchases made by it on the account of others (commission wholesale and retail trade) but not the full transaction price. Goods withdrawn by the owners of the trade unit and services rendered to them should be valued at the appropriate market price (in other words, as if sold to a customer), and it may be advantageous to collect the value of these sales separately from the value of other sales. In practice, it may be necessary to value owners' withdrawals at cost to the unit.

4.60. The turnover should include all duties and taxes on the goods or services invoiced by the unit with the exception of VAT and other deductible taxes on products directly linked to the turnover which are collected from the customers and paid directly to government tax authorities. **It is recommended** to report taxes on products and duties invoiced separately and, in addition, to obtain separate figures on subsidies received from public authorities in connection with turnover ***[need further discussion].***

4.61. Price rebates, discounts and similar allowances granted on returned goods and the value of returned packaging should be deducted from the turnover. Excluded are also goods shipped for sale on consignment for display or similar purposes, or to other establishments of the same enterprise. Income classified in accounts of the unit as other operating income, financial and extraordinary income is excluded from turnover.

4.62. The terms turnover, sales, receipts, shipments etc. are used interchangeably in the economic statistics and business accounting to denote the revenues of statistical units. For the purpose of present recommendations the term turnover is used, however it is recognized that there is a wide variation between countries in the scope of different types of revenues. The relationship between the concepts of turnover, sales, revenue and receipts in terms of their component items are summarised in the table below[25]:

Table1. Comparison between turnover / sales, revenue and receipts concepts

Component item	Turnover/ Sales	Operating Revenue	Total Revenue	Total Receipts
Gross sales of goods	yes	yes	yes	yes
Provision of services	yes	yes	yes	yes
Shipping and handling	yes	yes	yes	yes
Installation	yes	yes	yes	yes
Maintenance and repair	yes	yes	yes	yes
Alteration	yes	yes	yes	yes

[25] Source: Compilation Manual for an Index of Service Production (OECD, 2007), http://www.oecd.org/findDocument/0,2350,en_2649_34257_1_119669_1_1_1,00.html

Storage	yes	yes	yes	yes
Receipts from the rental of vehicles, equipment, instruments, tools, and other merchandise	yes	yes	yes	yes
Commissions from the arrangement of financing	yes	yes	yes	yes
Payments for work in progress	yes	yes	yes	yes
Market value of compensation received in lieu of cash	yes	yes	yes	yes
Gross sales from departments, concessions, and amusement and vending machines operated by others	yes	no	no	yes
Units share of sales from departments, concessions, and amusement and vending machines operated by others	no	yes	yes	no
Amounts received from work subcontracted to others	yes	no	no	yes
Consumption, sales, and value added taxes	no	no	no	yes
Proceeds from the sale of real estate, investments, or other assets held for resale	no	no	no	yes
Income from interest and dividends	no	no	yes	yes
Rental of real estate	no	no	yes	yes
Contribution, gifts, loans and grants	no	no	yes	yes
Reduction in prices, rebate, discounts and returned packing	no	no	no	no
All duties and taxes on the goods or services invoiced by entity	no	no	no	no
Operating subsidies received from public authorities	no	no	no	no

x.x.x. Breakdown of turnover

4.63. Section G of ISIC Rev.4, includes statistical units involved in operating a very wide range of distributive trade activities. This breakdown is intended to present the structure of the section in details. At a detailed level the statistical units can be assumed to perform more homogeneous activities, therefore, the more detailed the breakdown is the more useful for national and international purposes the turnover data can be expected to be. Also, by distinguishing more activities, the contribution of each individual division or group to the total turnover (x.x.x) will be better estimated.

4.64. In practice, there is however a limit to what extent the turnover can be reliably broken down. Each classification makes considerable demands on respondents and requires detailed records to be available. Consequently, the turnover for which the detailed breakdowns are requested should be restricted to this for which the statistical unit is likely to have records. For the purpose of providing more in depth analysis of distributive trade sector as a whole and across the three divisions and achieving harmonization in the compilation and international comparability in data presentation, the following breakdowns of turnover **are recommended**:

i) by kind of activity;
ii) by product groups;

iii) by size classes of enterprises;
iv) by type of customer (presented under performance indicators chapter).

Turnover by kind of activity

4.65. The breakdown by kind of activity should be presented from two perspectives – one relevant to the more disaggregated level of ISIC, and the other one splitting the turnover according to any of the classification variables presented above (see para …). Whenever there will be a need for specific turnover variables at national level, **it is recommended** that the countries decide which are the most appropriate breakdowns meeting their own requirements. The recommended breakdowns provide possibility for cross-classification of turnover (i.e. the turnover of wholesale trade (46) for example, will be presented by both the ISIC groups and size classes of enterprises) thus enhancing further the analytical potential of data.

4.66. For the purpose of these recommendations, **the recommended** level of activity breakdown should be at least the three digit level of ISIC Rev.4 (groups' level). Countries **are encouraged** to collect this information more frequently than annual – monthly or quarterly.

4.67. The turnover could be further disaggregated into:

- turnover from principal activity (one of the ISIC Rev.4 G section classes);
- turnover from secondary activities, if any:
    - agriculture, forestry, fishing activities
    - industrial activities;
    - other service activities.

4.68. Most producer units in addition to their principal activity carry out at least some secondary activities. If the output from a secondary activity is significant and records permit its identification, it should be treated as an activity of a separate establishment (see para….). Otherwise, it may be useful to measure the secondary activities carried out by trade units. This breakdown is from second (low) priority; therefore the secondary activities are presented in three broad groups. **It is also recommended** that these data be collected annually.

4.69. The primary distinction of units between division 46 (wholesale) and division 47 (retail sale) is based on the predominant type of customer. Further breakdown of turnover by type of customer may be difficult if units do not keep detail records. A few data item breaking the turnover according to the type of customer are recommended under performance indicators chapter (see Chapter V. Performance indicators, para. …). If precise numbers are not available, trade units should be encouraged to provide their best estimates.

Turnover by product groups

4.70. The turnover of a distributive trade unit may be broken down according to the various products or product groups invoiced by the unit itself, whether on its own account or on that of others. **It is recommended** that the trade turnover is broken down by products, both for goods and services, according to the Central Product Classification (CPC Ver.2).

4.71. Provision of turnover at detailed COICOP level **is also recommended** as it will facilitate the compilation of individual consumption expenditure of households in national accounts.

4.72. The following aggregated breakdown of turnover by products is recommended (see also para. 1.19):

Food, beverages and tobacco (COICOP 01+02; CPC)
Clothing, footwear and accessories (COICOP 03; CPC
Furniture (COICOP; CPC)
Domestic appliances (COICOP; CPC)
Electronics (COICOP; CPC)
Of which: Information processing equipment
Personal and other goods (COICOP; CPC)
Building materials (COICOP; CPC)
Motor vehicles and associated goods (COICOP; CPC)

Turnover by size classes of enterprises

4.73. The size classes of enterprises are defined in terms of persons employed during the reference period rather than in terms of annual turnover, as the latter indicator may vary significantly from country to country. The **recommended** level of size class breakdown is the following - Number of persons employed: 1, 2—4, 5—9, 10—19, 20—49, 50—99, 100—249, 250—499, 500—999, 1 000 and more.

x.x.x. E-commerce sales

4.74. This item includes the sales value of all goods and services sold through a computer-mediated network (E-commerce). The revenues from e-commerce sales are included in the total turnover. Some countries have a separate ‘of which’ item for e-commerce sales in their retail and wholesale trade questionnaires. For those countries not recognizing yet e-commerce separately **it is recommended** either to launch a national survey on e-commerce or to update the existing economic surveys with additional questions about e-commerce sales.

4.75. E-commerce transactions involve buyers and sellers, but in general **it is recommended** that their measurement be made from the seller’s perspective. Measuring electronic commerce in distributive trade is difficult and often not straightforward for a number of reasons including defining what constitutes electronic commerce, involvement of a number of multiple internet transactions and parties, as well as the fact that in many cases units conduct both electronic commerce and traditional commerce simultaneously.

4.76. The following are examples relevant to distributive trade: a purchase/sale of a book or CD over the Internet; a person or a company calls a toll free number and orders a computer using the seller's interactive telephone system; an electronic marketplace selling parts to another business i.e. a business buys office supplies on-line or through an electronic auction; a retailer orders merchandise using an EDI network or a supplier's extranet. **It is recommended** that unpriced transactions such as downloading free software available on the Internet have to be excluded from e-commerce.

x.x.x. Gift cards sales

4.77. This data item comprises turnover from gift cards. The gift card is a pre-paid card that works similar to a gift certificate and can be used to purchase merchandise at a fixed shop. Following generally accepted accounting principles, sales from gift cards are included in the retail turnover of units at the time the gift card is redeemed.

x.x.x. Accounts receivable (Balances outstanding at the end of the year on instalment and charge account)

4.78. *Retail accounts receivable* are defined as the amounts of the credits, extended by retail stores to their customers for purchases made, outstanding as of the end of the reference period. Accounts receivable include amounts outstanding from consumer receivables such as (i) credit arising from retail sales of passenger cars and other vehicles; (ii) retail credit that is extended on a credit-line basis and that arises from the sale of consumer goods other than passenger cars and other vehicles; and (iii) other consumer receivables, i.e. all credit arising from retail sales of non-motor vehicle consumer goods that is not extended under a revolving credit line. The item excludes the amounts charged on credit cards issued by banks or other issuing credit cards organizations.

6. Purchases of goods and services

x.x.x. Total purchases of goods and services

4.79. Purchases of goods and services include the value of all goods and services purchased during the accounting period for resale or consumption in the production process for which the trade unit took title excluding capital goods the consumption of which is registered as consumption of fixed capital. The goods and services concerned may be either resold with or without further transformation, completely used up in the production process or, finally, be stocked.

4.80. Included in these purchases are the materials that enter directly into the goods produced (raw materials, intermediary products, components), plus non-capitalized small tools and equipment. Also included is the value of ancillary materials (lubricants, water, packaging, maintenance and repair materials, and office materials) as well as energy

products. Included in this variable are the purchases of materials made for the production of capital goods by the unit.

4.81. Services paid for during the reference period are also included regardless of whether they are industrial or non-industrial. In this figure are included payments for all work carried out by third parties on behalf of the trade unit including current repairs and maintenance, installation work and technical studies. Amounts paid for the installation of capital goods and the value of capitalized goods are excluded.

4.82. Also included are payments made for non-industrial services such as legal and accountancy fees, patents and license fees (where they are not capitalized), insurance premiums, costs of meetings of shareholders and governing bodies, contributions to business and professional associations, postal, telephone, electronic communication, telegraph and fax charges, transport services for goods and personnel, advertising costs, commissions (where they are not included in wages and salaries), rents, bank charges (excluding interest payments) and all other business services provided by third parties. Included are services which are transformed and capitalized by the unit as capitalized production.

4.83. Expenditure classified as financial expenditure or extraordinary expenditure in the accounts of the trade units are excluded from the total purchases of goods and services.

4.84. Purchases of goods and services are valued at the purchase price excluding deductible VAT and other deductible taxes linked directly to turnover. All other taxes and duties on the products are therefore not deducted from the valuation of the purchases of goods and services. The treatment of taxes on production is not relevant in the valuation of these purchases.

x.x.x. Purchases of goods and services for resale in the same conditions as received

4.85. This item includes the value of any goods and services, for which the trade unit took title during the accounting period, purchased for resale to third parties without further processing (transformation). Purchases of goods should be recorded net of returns, discounts, rebates, and other allowances received. The value of goods and services which are sold to third parties on a commission basis are excluded since these goods are neither bought nor sold by the agent receiving the commission. When services for resale are referred to here, the services concerned are the output from service activities, rights to use predetermined services, or physical supports for services.

4.86. Purchases of goods should be valued at purchasers' price that is the delivered value to trade unit, including delivery and similar charges involved in the purchase (e.g. transport charges, the costs of insurance, the value of packaging etc.) and all taxes and duties on the products, but excluding deductible VAT and other deductible taxes linked directly to turnover.

4.87. The purchase price by the unit should also include the value of goods traded in or bartered in payment for the purchase. Transfers from other establishments of the same trade enterprise should be valued as though purchased. When this is not possible in practice, transfers might be valued at cost to the enterprise on delivery to the establishment, that is, original purchase price, delivery and similar charges, labour and material directly used and possibly overhead.

4.88. Subject to the country practice of recording the purchases, their value should be adjusted for changes in inventories of goods for resale. Some countries record the purchases of goods for resale when they enter in the production process, other in opposite, record the purchases when acquire or invoice them. The purchases of the latter group of countries are expected to be adjusted for the changes in inventories of goods for resale and moreover, be corrected for the value of any holding gains or losses generated in the prices of purchased goods in order to estimate them in the prices prevailing when the resale takes place.

4.89. As an alternative to the classification of turnover (sales) according to individual commodities, a commodity breakdown of purchases **is also recommended**. In spite of the different mark-ups and rates of turnover, data on purchases by commodity may be easier to collect, particularly for retail establishments, for there are fewer purchases than sales invoices and the data might be obtained from accounting records rather than individual invoices.

4.90. The data items listed below are included within the total purchases of goods and services. The list provides a quite comprehensive and detailed disaggregation of total purchases. Some countries may have several data items available only in combination or a minor item may be grouped with one that is more significant. **It is recommended** that countries identify separately those data items from the list that are of importance to their economies as at the same time collect and compile purchases of goods and services as completely and accurately as possible. Collection of data on purchases at such a detailed level is recommended for infrequent surveys.

x.x.x. Purchases of energy products (gas, fuel and electricity)

4.91. This item includes the purchases of all energy products (incl. gasoline and other fuels for vehicles) during the reference period which are purchased to be used as fuel. Energy products purchased as a raw material or for resale without transformation should be excluded. The item includes also the total cost of all electricity purchased for lighting, air-conditioning, refrigeration and other uses by the establishment during the reference period.

x.x.x. Purchases of goods and materials

4.92. This item includes all purchases of raw materials, components, spare parts, office materials, packaging materials; any materials purchased and used in the installation, repair or maintenance.

x.x.x. Purchases of materials for own account fixed assets and major construction

4.93. This item includes raw materials and other materials purchased or received by the establishment for the production by the unit itself of capital goods for its own use (or for rental or lease) and construction on own account.**[…]**

x.x.x. Purchases of water

4.94. This item includes the total costs for water used for business purposes during the reference period.

x.x.x. Other purchases of goods and materials

4.95. This item includes the net costs of purchases of other goods and materials not included in the above categories made by the unit during the reference period.

x.x. Purchases of services for business use

x.x.x. Cost of repair and maintenance work

4.96. This item includes the total cost to the unit of repair and maintenance services on buildings and other fixed assets of the unit provided by others during the reference period. Included is the cost of repair and maintenance services carried out by an ancillary repair and maintenance unit, which has been treated as a separate establishment. Here current repairs and maintenance should be included and capital repairs excluded.

x.x.x. Postal and telecommunication services

4.97. This item includes the costs payable for postal and telecommunication services, including mobile phone services, fax, internet etc.

x.x.x. Transport services

4.98. This item includes the cost to the unit for a hired transport only. The transport carried out by the unit itself should not be included here since the costs are covered in other items.

x.x.x. Advertising and marketing services

4.99. This item includes all payments of the unit for advertising through television, newspapers and other media as well as payments for market research activities carried out by a third party. Market research undertaken by the unit itself should not be included.

x.x.x. Cost of contract and commission work

4.100. This item covers the cost of contract work done by others in the reference period on materials owned by the establishment and the amount of commissions paid for sales of goods to persons who do not receive a regular salary and work exclusively or mainly on a commission basis. Part of this item is the fees paid for the leased employment (data item x.x.x). Sales commissions should not be included.

x.x.x. Rental payments

4.101. This item includes all costs to the unit for hiring, leasing or renting buildings, vehicles, machinery etc. Financial leasing payments are excluded. Rental payments should be subdivided into:

(i) Rental payments for machinery and equipments (data item x.x.x);
(ii) Rental payments for dwellings and structures (data item x.x.x).

x.x.x. Non-life insurance premiums payable on establishment property

4.102. This item includes non-life insurance premiums payable by the unit during the reference period on the unit property (e.g. fire, motor vehicle, losses etc.).

x.x.x. Computer services

4.103. This item covers all expenses related to the installation and maintenance of computer software and hardware by a third party.

x.x.x. Other operating costs

4.104. This item includes payments for:
- accounting and bookkeeping services;
- consultancy;
- legal services to the unit
- payments for financial services (excluding interest payments);
- staff travel (in the country and abroad);
- contributions to business and professional associations;
- newspapers and periodical subscriptions, etc.

x.x. Cost of selling

4.105. Cost of selling, which forms part of 'Purchases of goods and services' consists of advertising expenses, transport of goods, travelling expenses, hotel accommodation, entertaining expenses and other expenses related to the selling of goods (payments for agency workers included). Cost of selling may not be isolated in company accounts. It is a part of *Raw materials and consumables, other external charges* and *other operating charges.*

7. Inventories

x.x. Total inventories

4.106. Inventories cover all goods and services on hand for sale or processing that the unit owns title to, if it is part of a single-unit enterprise, or that are controlled by the unit and owned by its parent enterprise. The inventories could be held either at unit's own premises or elsewhere. Inventories held at ancillary units, in bonded stores or warehouses, on consignment, in transit and materials being manufactured, processed or assembled on commission by others should be included. Goods owned by the others but held by the unit for processing should be excluded. Inventories held overseas or in transit abroad should be included if the economic ownership rests with the unit holding the inventories.

x.x.x. Change in inventories of goods and services

4.107. This item comprises the difference (positive or negative) between the value of inventories at the end and the beginning of reference period. It may also be measured by the value of entries into inventories less the value of withdrawals and the value of any recurrent losses of goods held in inventories.

4.108. Changes in inventories should include all types of stocks such as:

(i) Raw materials and consumables;
(ii) Goods and services purchased for resale in the same condition as received;
(iii) Work in progress – all products in the intermediate stages of completion, which require further processing in order to be sold;
(iv) Stocks of finished goods.

4.109. The types (ii) and (iv) of inventories have significant implication for trade units as the most important one is the inventories of goods and services purchased for resale which participates in the calculation of trade margin and other aggregates and balances. The inventories of raw materials and consumables are referred to the goods intended to be used by units for their intermediate consumption.

x.x.x. Change in stocks of materials and supplies

4.110. This item is define as the change in stocks of all materials, components, fuels, office and other supplies that trade units held and intend to use for the purpose of their intermediate consumption, repair and maintenance. The value of any inventories of materials and supplies for use in own-account fixed asset work should be also included.

x.x.x. Change in stocks of goods and services purchased for resale in the same conditions as received

4.111. Change in stocks of goods and services acquired by the unit for the purpose of reselling them in the same condition as received to their customers is the difference between the value of stocks at the end and at the beginning of the reference period (month, quarter or year). Changes in stocks should be valued at replacement costs, based on purchasers' or producers' prices, exclusive of VAT.

4.112. Changes in stocks may also be measured by the value of entries into stocks of products purchased for resale less the value of withdrawals and the value of any recurrent losses of goods held in stocks. Goods for resale entering the stocks should be valued at purchasers' prices. Those goods withdrawn from stocks should be valued at the purchasers' prices at which they can be replaced at the time they are withdrawn as distinct from the purchasers' prices that may have been paid for them when they were acquired.

4.113. Stocks of goods and services purchased for resale do not include stocks of those goods and services which are provided to third parties on a commission basis.

x.x.x. Change in stocks of finished products and work in progress

4.114. This item is defined as the change in the value of the stocks of finished products or in the course of production, which have been produced by the unit and which have not been sold, between the first and the last days of the reference period. These products include work in progress belonging to the unit, even if the products in question are in the possession of third parties. Equally, products held by the unit which belong to third parties are excluded.

x.x.x. Inventory valuation method

4.115. Stocks should be recorded at purchaser's prices exclusive of VAT if they are purchased from another unit, otherwise at production cost if they are produced by the unit itself. In principle, the book values of stocks, as maintained in the accounting records of units, are used to estimate their physical changes (and any holding gains, caused by the changes in their prices). When goods are valued at book values, it is necessary to know, or assume, the order in which the goods are withdrawn since the withdrawals from stocks should be valued at the purchasers' prices at which the goods can be replaced at the time they are withdrawn as distinct from the purchasers' prices that may have been paid for them when they were acquired. The common methods of reporting withdrawals from stocks by units in their business accounting practices are:

(i) FIFO (first-in-first-out) – the cost of items sold or consumed during the reference period is calculated as though there were sold or consumed in the order of their acquisition.
(ii) LIFO (last-in-first-out) – the cost of items sold or consumed during the reference period is deemed to be the most recent acquisitions or production. This implies that withdrawals are valued approximately at current prices.
(iii) Average cost – the cost of an item is determined by applying a weighted average of the cost of all similar items available for sale over a period of time.

(iv) Specific item cost - a method of tracking inventory when the actual cost of each item can be identified separately. Method, usually used for large, easily traceable items, such as vehicles or furniture.

4.116. Methods of valuation of inventories may vary according to the accounting practices of each unit, but for many companies, inventory represents a large portion of assets and, as such, makes up an important part of the balance sheet. **It is therefore recommended** that statisticians who are compiling data on distributive trade examine the units' practices with respect to the reported values of inventories in the beginning and the end of the reporting period as well as the stock turnover period (data item x.x.x).

4.117. If inflation were nonexistent, then all four of the inventory valuation methods would produce the exact same results. Unfortunately, over the long term, prices tend to rise, which means the choice of accounting method can significantly affect valuation. In order to estimate properly the changes in stocks which participate in the calculation of trade margin and other aggregates and balances, **it is recommended** that the method of valuation be requested on survey forms.

8. Taxes and subsidies

x.x. Taxes

4.118. Taxes are compulsory unrequited payments, in cash or in kind, made by trade units to the government. Two main groups of taxes are identifiable - taxes on products and other taxes on production. This section recommends to collect only other taxes on production as these payments are recorded in the business accounts of units. **It is recommended** that in statistical questionnaires countries refer to the specific names or descriptions of taxes as they exist in their national fiscal systems.

x.x.x. Other taxes on production

4.119. Other taxes on production are taxes that units incur as a result of engaging in production. As such they represent a part of production costs and should be included in the value of output. Units pay them irrespective of profitability of production. These taxes consist mainly of taxes on the ownership or use of land, buildings or other assets used in production, or on the labour employed or compensation of employees paid. Examples are motor road vehicle taxes, duties and registration fees, business licenses, payroll taxes, taxes on non-life insurance on assets, levies on the use of fixed assets. Also included are official fees and charges for the testing of standards of weights and measures, provision from official registers etc.

4.120. It may not be possible to collect data about all these taxes at establishment level; therefore, in such cases the design of statistical questionnaires and subsequent data compilation should clearly indicate the type of taxes that have been reported.

x.x. Subsidies

4.121. This item covers payments that government units make to resident producing units on the basis of their production activities or the quantities or values of the goods or services they produce, sell or import. Classification of subsidies follows closely the classification of taxes.

4.122. Subsidies on products correspond to subsidies payable per unit of a good or service produced, either as a specific amount of money per unit of quantity of a good or service, or as a specified percentage of the price per unit; it may also be calculated as the difference between a specified target price and the market price actually paid by a buyer.

4.123. Other subsidies on production consist of subsidies, except subsidies on products, which resident enterprises may receive as a consequence of engaging in production (e.g., subsidies on payroll or workforce, or subsidies to reduce pollution).

9. Output

4.124. This item measures the overall production activity of trade units. Output (production) does not exist directly in accounting records of units. It should be obtained through calculations on the basis of available data on turnover (item x.x), purchases (item x.x) and changes in inventories (item x.x). Output of trade units is calculated in a specific way. Trade margin (item x.x) accounts for a most significant part of total trade output. Calculation of trade output should be considered from first priority due to its direct link with the compilation of national accounts.

4.125. The value of trade output corresponds to the sum of the value of all goods or services that are actually produced within a trade unit and become available for use outside that unit plus any goods and services produced for own final use. The value of trade output is equal to:

+ The value of turnover or other uses of goods or services produced as outputs
+/- Changes in stocks of finished products and work in progress
+/- Changes in stocks of goods and services purchased for resale in the same conditions as received
- The purchases of goods and services for resale
+ Capitalized production (value of fixed assets produced by the unit for its own use)
+ Other revenue

4.126. The item “Other revenue” covers revenue of trade units from activities other than the resale of goods and services, which is not always ascertainable at the establishment level. This data item includes the revenue from the rental or lease of equipment; rental or lease of buildings; revenue for storage of goods, warehousing and the like, including cold

storage; etc. Income and expenditure classified as financial (dividends received and interests received) or extraordinary in company accounts is excluded from trade output.

4.127. Capitalized production includes the own-account production of all goods that are retained by their producers as investment. The latter includes the production of fixed tangible assets (buildings etc.) as well as intangible assets (development of software etc.). Capitalized production is unsold production and is valued at production cost. Note that these capital goods are also to be included in gross fixed capital formation (data item x.x.x).

4.128. In order to maintain consistency with valuation concepts for output (production) of other international recommendations on business statistics and national accounts **it is recommended** that countries value the trade output at basic prices. However, according to the treatment applied to taxes (item x.x) and subsidies on production (item x.x), countries may adopt also one of the following two valuations - factor costs and producers' prices. Countries **are requested** to state clearly the adopted by them method of valuation.

4.129. For better understanding of different valuation methods the following relationships are important:

Value of Output and Value Added at factor costs

+ Other taxes *on production (1)*
- Other subsidies *on production (1)*

= Value of Output and Value Added at basic prices

+ Taxes *on products (*excluding *imports and* any *VAT* or similar deductible tax, invoiced to the purchaser*) (2)*
- Subsidies *on products (2)*

= Value of Output and Value Added at producers' prices

10. Gross margin

4.130. Gross margin is defined as the difference between the actual or imputed price realized on a good purchased for resale (either wholesale or retail) and the price that would have to be paid by the distributor to replace the good at the time it is sold or otherwise disposed of. Gross margin includes both gross margins on goods sold on own account and commissions received on sales on account of others ***[to be further discussed]***. The value of Gross margin is derived through the following identity:

Gross margin =

+ the value of turnover[26], incl. sales at reduced prices
+ the value of other uses of goods purchased for resale[27] (used as remuneration in kind or withdrawn for own final consumption)
- the value of goods purchased for resale in the same condition as received
+ the value of opening stock of inventories of goods for resale
- the value of closing stock of inventories of goods for resale
- the value of recurrent losses due to normal rates of wastage

4.131. Gross margin on goods for resale is also called trade margin in the system of national accounts (SNA 1993, Rev.1). The valuation of gross margin, in principle, should be at basic prices. However, some countries may use the producers' prices (see valuation principles para. 4.129).

4.132. As a general **recommendation**, changes in stocks of goods for resale should be valued exclusive of holding gains and losses. Holding gains and losses are excluded from gross margin/output by valuing all entries to, or withdrawals from, inventories at the prices prevailing at the times the entries or withdrawals take place.

11. Intermediate consumption

4.133. Intermediate consumption is compiled on the basis of data items listed in group **[…]** (para xx to xx). Intermediate consumption during a given accounting period can be derived by subtracting the value of changes in inventories of materials and supplies (item xx) from the value of purchases of goods and services made (other than those purchased for resale in the same conditions as received).

4.134. Intermediate consumption is a national accounts category recorded at the time when the good or service enters the process of production, as distinct from the time it was purchased/acquired by the producer. The two times coincide for services, but not for goods. In practice, units keep records of purchases of goods and services intended to be used as inputs and also of any changes in the amounts of such goods held in inventories. This calls for an adjustment of purchases of goods for changes in inventories.

12. Value added

4.135. Value-added is calculated as the difference between the output (item x.x.x) and the intermediate consumption (item x.x.x)). It represents the value added by the various factor inputs in the operating activities of the unit concerned. The calculation of value added can be expressed with the following accounting convention:

[26] Only that part of turnover related to trading activities of purchase and resale of goods and services.

[27] Other uses of goods and services purchased for resale include those goods and services provided to employees as remuneration in kind and those withdrawn by the owners of unincorporated enterprises for their own final consumption.

Turnover or other uses of goods or services produced as outputs
+/- Changes in stocks of finished products and work in progress
+/- Changes in stocks of goods and services purchased for resale in the same conditions as received
- The purchases of goods and services for resale
+ Capitalized production (value of fixed assets produced by the unit for its own use)
+ Other operating income (excluding subsidies)
= Output **(at basic prices)**
- Purchases of goods and services (other than purchases of goods and services for resale in the same condition as received)
= **Value added (at basic prices)**

4.136. The valuation of value added closely corresponds to the valuation of output. If the output is valued at basic prices then the value added valuation is also at basic prices (the valuation of intermediate consumption is always at purchasers' prices). Alternative valuation modes depending on the treatment of taxes and subsidies on production are factor costs and purchasers' prices.

4.137. Value added can be expressed in gross or net terms depending on the inclusion/exclusion of the consumption of fixed capital (depreciation).

13. Operating surplus

4.138. Gross operating surplus is defined as the surplus generated by the units in the process of production after the labour factor input (compensation of employees) has been recompensed. It can be calculated either from the value added at factor cost as the compensation of labour is subtracted, or from value added at basic prices as both the compensation of labour and other taxes less subsidies on production are deducted. For unincorporated enterprises owned by members of households either individually or in partnership with others in which the owners, or other members of their households, may work without receiving a wage or salary the item is called mixed income, because it contains an element of surplus and an element of remuneration for the work done by the self-employed. This item can be measured gross or net depending on whether value added is measured gross or net, i.e. whether consumption of fixed capital is included or excluded.

4.139. Operating surplus represents the balance available to the unit which allows it to recompense the providers of own funds and debt, to pay taxes and eventually to finance all or a part of its investment. Income and expenditure classified as financial or extraordinary in company accounts is excluded from operating surplus.

4.140. Operating surplus can be calculated from the following accounting headings:

Turnover or other uses of goods or services produced as outputs
+/- Changes in stocks of finished products and work in progress
+/- Changes in stocks of goods and services purchased for resale in the same conditions as received
- The purchases of goods and services for resale
+ Capitalized production (value of fixed assets produced by the unit for its own use)
+ Other operating income (excluding subsidies)
= **Output**
- Purchases of goods and services (other than purchases of goods and services for resale)
= **Value added (at basic prices)**
- Labour inputs
- *Other taxes less subsidies on production*[28] *(1)*
= **Operating surplus (at basic prices)**

14. Gross fixed Capital Formation

4.141. Gross fixed capital formation is measured by the total value of a trade unit's acquisitions, less disposals, of fixed assets during the accounting period plus certain specified expenditure on services that adds to the value of non-produced assets.

x.x. Gross value of fixed assets

4.142. This item is defined as the value of units' acquisitions of all fixed assets during the reference period. Fixed assets include new or existing capital goods (buildings, machinery, equipment, vehicles and land) whether bought from third parties, acquired through barter, received as capital transfers in kind or produced by the units own labour for its own use, that are themselves used repeatedly in the process of production for more than one year. Included are also all major additions, alterations and improvements to existing fixed assets that extend their normal economic life or increase their productive capacity. While capital repair is included, expenditures for current repair and maintenance and expenditures on capital goods under rental and (operational) lease contracts are excluded. The acquisitions of financial and non-financial non-produced assets are excluded.

4.143. Distinction between new and existing fixed assets could be of significant national interest.

[28] This item determines the valuation of value added and thus operating surplus. If it is not taken into account the valuation is at factor costs. By implementing the above formula, value added and operating surplus are derived at basic prices

- New fixed assets include all those assets that have not been previously used in the country. Imported fixed assets are considered new whether or not they were used before they were imported. New fixed assets cover not only the acquisition of complete assets but also any renovations, reconstruction or enlargements that significantly increase the productive capacity or extend the service life of an existing asset.

- An existing fixed asset is one that has already been acquired by at least one user or produced on own account, and whose value has already been included in the gross fixed capital formation.

4.144. Some fixed assets can be acquired through financial leasing. Under a financial lease the lessee acquires the right to use a durable good in exchange for rental payments over a predetermined and protracted term. If all risks and rewards of ownership are *de facto* though not *dejure,* transferred from lessor to lessee, the lease is a financial one. In financial leasing, the leasing period covers all, or most of, the economic lifetime of the durable good. At the end of the leasing period the lessee often has the option to buy the good at a nominal price. The lessor's role is purely financial.

Valuation

4.145. Fixed assets acquired by purchase from third parties should be valued at purchasers' prices that include transport and installation charges and all costs incurred in the transfer of ownership in the form of fees and any taxes payable on the transfers. Fixed assets acquired through barter or capital transfer in kind are valued in a similar way. Fixed assets produced by the unit for its own use should be valued at their estimated basic prices or by their costs of production when the valuation at basic prices can not be made. Fixed assets produced by one establishment of a multi-establishment enterprise for the use of another establishment of the same enterprise should be valued by the receiving establishment as though purchased from outside the enterprise.

4.146. Assets acquired through financial leasing should be valued at corresponding market value of the good if it had been purchased. This value is in principle known in the contract or can be estimated by summing-up the part of the instalments that cover the capital reimbursement. The part of instalments corresponding to the interest payments are to be excluded. Annual payments for assets used under financial leasing should be excluded. The value of goods used under leases other than financial ones should also be excluded.

Time of recording

4.147. The general principles governing the time of recording of acquisitions of fixed assets should be when the ownership of the fixed assets is transferred to the unit that intends to use them in production. Fixed assets produced on own account are recorded when produced. Those assets acquired under financial lease should be recorded at the time when the good is delivered to the lessee.

4.148. An exception to this rule is the recording assets where the invoicing, delivery, payment and first use of the good may take place in different reference periods such as construction of buildings, structures, roads and other projects. .When the construction takes place under a contract of sale agreed in advance, the ownership of the structure is effectively transferred in stages as the work proceeds. When there is no contract of sale agreed in advance, the construction work produced by the (construction) unit must be recorded as part of its changes in stocks of either work-in-progress or additions to finished goods, depending on whether the construction is completed.

4.149. The definition outlined above treats progress payments for construction work and for other fixed assets differently. For construction work, progress payments should be included in expenditure on fixed assets; for other fixed assets, progress payments should be excluded from expenditure on fixed assets and recorded as a financial claim. In some countries, this treatment may not be feasible and all progress payments may have to be recorded as expenditure on fixed assets.

x.x.x. Types of fixed assets

4.150. The fixed assets are sub-divided into the following categories:

(i) Dwellings and other buildings and structures

4.151. This item includes all buildings used as principal residences and any associated structures such as garages. Also included are other buildings, such as office buildings, warehouses, stores, shops and structures such as roads, streets, car-parking facilities and the like. Within this category of assets, a separate item is added for land improvements such as land clearance, land contouring, creation of walls and watering holes which are integral to the land, reclamation of land from sea, prevention of flooding etc., if such activities are undertaken by the trade units.

4.152. Concerning land improvements, the value of natural land before improvement is not included. However the costs of ownership transfer on land improvements are included.

4.153. Where land is purchased with existing buildings and the value of the two components is not separable, the total is recorded under this heading if it is estimated that the value of the existing buildings exceeds the value of the land. Otherwise, if the land is estimated to be of greater value than the existing buildings, the total is recorded under gross investment in land.

4.154. The major additions, alterations and improvements of buildings and structures (i.e. their renovation, reconstruction or enlargement) which prolong their service life or increase their productive capacity should be classified together with the acquisitions of new fixed assets of the same kind.

(ii) Machinery and equipment

4.155. This category of assets includes the acquired new or second hand assets during the reference period from the following three sub-categories transport equipment; ICT equipment and other machinery and equipment.

- Transport equipment includes different types of motor vehicles, aircraft, ships, railway and tramway rolling stock, tractors for road haulage, carts and wagons and major alterations and improvements of existing transport equipment.
- ICT equipment covers hardware (computers, laptops) and peripherals, different presentation devices etc. and major upgrades and alterations to this type of equipment.
- Other machinery and equipment (power-generating machinery; store and office machinery, equipment and furniture; furnishings such as counters, shelves and storage bins; cold-storage equipment; cranes, fork-lift equipment and the like; durable containers; and any other machinery and equipment and major renovations and alterations to these types of machinery and equipment);

(iii) Intellectual property products

4.156. This item consists of former 'intangible fixed assets' group. The word "products" is included to make clear it is not third party rights. The category includes:

- Mineral exploration and evaluation, covering the costs of drilling and related activities.
- Computer software and databases, covering purchase or development on own account of software or databases which will be used in the process of production for more than one year. It is recommended that units keep separate records for software and databases.
- Research and development. The output of R&D is recognized as an asset so patented entities no longer appear as non-produced assets.
- Entertainment, literary and artistic originals includes original films, sound recordings, manuscripts, tapes etc.
- Other intellectual property category replaces "other intangible fixed assets". Assets such as architectural drawings or engineering plans might qualify to be included under this item.

x.x.x. Sales of fixed assets

4.157. Sales of fixed assets include the value of all existing fixed assets sold, bartered or transferred to third parties. The time of recording of sales is when the ownership right is transferred to the new owner. Sales of fixed assets are valued at the price actually received (excluding VAT), and not at book value, after deducting any associated costs of ownership transfer incurred by the seller. Any decreases in stocks of fixed assets due to

reasons other than from sales (obsolescence, fire, loss etc.) should not be deducted. Sales price of structures, in principle, should exclude the values of land.

15. Investment in land

4.158. This data item covers the value of land in its natural state including underground deposits, forests and inland waters such as lakes and waterways. In principle, the value of land should relate to the value of inbuilt land only. Where land is purchased with existing buildings and structures and the value of the two components is not separable, the total should be recorded under this heading if it is estimated that the value of the land exceeds the value of the existing buildings. If the existing buildings are estimated to be of greater value than the land, the total should be recorded as acquisition of buildings and structures. Also included here is land merely improved by levelling, the laying of pipes or by the provision of paths or roads.

16. Depreciation

4.159. Depreciation in business accounting is mostly calculated on the basis of historic costs of fixed assets. The item is useful to collect as it is the internal funds that can be used for investment. Depreciation is not consumption of fixed capital, used by national accountants and economists. The classification of depreciation may follow the same classification that of the fixed assets as in data item x.x.x.

4.160. Consumption of fixed capital is defined in general terms as that part of the gross product that is required to replace fixed capital used up in the process of production during the reference period. It is based on the concept of the expected economic lifetime of the individual assets, and it is designed to cover the loss in value owing to foreseen obsolescence and the normal amount of accidental damage that is not reparable, as well as normal wear and tear. Unforeseen obsolescence is treated as a capital loss at the time at which it actually occurs, rather than as fixed capital consumption. In principle, the scope of the capital equipment for which consumption should be recorded is given by the definition of fixed capital formation. Consumption of fixed capital will be calculated by national accountants for analytical purposes later, not at the stage of data collection.

CHAPTER V. PERFORMANCE INDICATORS

5.1. *Need for performance indicators.* The increasing demand for information to asses businesses' status in distributive trade sector in the areas of profitability, productivity and efficiency have led to intense interest in wholesale and retail trade performance measures. Performance indicators make it possible either to evaluate performance of individual retailers and wholesalers or to see how well the distributive trade is performing in relation to other industries in national economy or internationally.

5.2. Data items recommended in the previous chapter for use in the wholesale and retail trade surveys are important as such, but there is a clear need for another set of variables for use in industry analysis and policy or management decision making process. The latter set of variables is referred to as performance indicators.

5.3. It is recognized that given the diversity of users' needs and the fact that they may change over time, a comprehensive list of performance indicators that can be applied in all countries and in all circumstances cannot be created. This chapter deals with a more limited set of indicators that provide a standard and manageable way of measuring the overall performance of distributive trade sector as a whole, the performance of some of its divisions or individual units.

5.4. This chapter describes the objectives of performance indicators, the key principles on how they can be developed and best used and interpreted in distributive trade and to suggest a list with most commonly used performance indicators that will allow meaningful national and international comparability. The suggested list is a practical set of performance indicators and their definitions applicable to a broad range of units/activities which is largely based on the current practice of countries and international organizations

A. Objectives of performance indicators

5.5. In general, a performance indicator is a policy relevant variable, a number or quantitative description, reflecting the conditions and functioning of any sector, including the distributive trade sector or its units. In practice, a performance indicator can be any ratio that summarizes two or more important measurements and that is tied directly to the performance rather than to the activity of a unit or a sector.

5.6. Performance indicators are a powerful instrument to present complex information in a synthesized way. They are simplified means of summarizing and communicating the information to decision makers and to the public. As a tool for measuring the overall performance of distributive trade sector or tracking the performance of individual units, the performance indicators help policy makers and economic planners to evaluate how

effectively trade activity is organized, to identify potential areas of improvement and to make more informed strategic decisions regarding future strategy of development.

5.7. Compilation and wide dissemination of performance indicators is intended also to help business community. By using them the businesses can quickly assess the business environment where they operate. Performance indicators allow retailers and wholesalers to develop their own performance measurement programmes, to identify and set their long term trends in performance and to measure their progress. Managing and reporting performance can lead to significant business benefits such as increased efficiency through reducing and managing the resources, increased sales, improved reputation among costumers.

5.8. Performance indicators are also a suitable tool for academicians and researchers who use them for making comparisons across countries and industries and over time and for identifying factors that lead to better performance.

B. Types of performance indicators

5.9. The present international recommendations have adopted the thematic approach in addressing the performance measurement issues by distinguishing indicators into three main headings: (i) Common core performance indicators, which are applicable to any economic activity; (ii) Specific to distributive trade core performance indicators, which are recommended as a minimum set of indicators for compilation that will facilitate the international comparisons; and (iii) Additional performance indicators of distributive trade, which compliment the core ones and provide further details on the organization of distributive trade. The advantage of such an approach is that it will enable countries and wide range of users to target those headings, or those indicators, which are most appropriate for their (policy) needs by at the same time taking into consideration the data required for their calculation.

5.10. **It is recommended** that the core performance indicators are compiled at the division level of ISIC, Rev.4 [for discussion] with annual and quarterly periodicity. **It is further recommended** that their compilation should be considered as minimum programme for all countries. The indicators selected in these two headings are those that are considered to be relatively easy to obtain.

5.11. Most of the information necessary for calculation of performance indicators is generated in the accounting records of enterprises, cash register tapes, payroll records, supplier records, etc. and it is included in the statistical surveys on distributive trade. In order to make use of some particular measures, however, it may be necessary to generate new information.

5.12. Most of the performance indicators have a comparative dimension or a reference point that permits time series evaluation. Depending on the importance and data availability businesses can compile and track some of the indicators daily (for example

turnover), while other users may study them monthly (inventories to sales ratios), quarterly or annually.

C. Common core performance indicators

5.13. Historically, the importance of any economic activity, including distributive trade, in total economy is measured by means of two indicators – generated value added and employment and their respective proportions or growth rates. The System of National Accounts, 1993 Rev.1, provides the methodological standard and guidelines for the calculation of value added, while the International Labour Organization (ILO) defines the employment in the "Resolution concerning statistics of economically active population, employment, unemployment and underemployment" also fully adopted in the SNA 1993, Rev.1. Since the collected survey data on distributive trade are used as inputs for the compilation of national accounts, the principles of measurement and definitions of these two data items, as presented in para. x.xx and x.xx above are consistent with SNA 1993, Rev.1 recommendations. The same principle should also apply to output of distributive trade and corresponding performance indicators based on it.

5.14. For international comparability, the following common core performance indicators **are recommended:**

x.x.x. Value added growth

5.15. Value added growth rate is the percentage change of distributive trade value added at constant prices. The indicator **is recommended** for compilation with annual and quarterly frequency. Annual (quarterly) chain indices **are highly recommended**, although other options may also be used for purpose of economic analysis and modelling (see para. 8.5 – 8.7).

x.x.x. Output per person employed

5.16. Output per person employed is derived as the output, as defined in (xx), is divided by a number of persons employed (xx). Given that the output of trade activities is measured by the total value of the trade margins realized on the goods purchased for resale this performance indicator tends to be more meaningful for industrial activities. Relating gross output with labour measures (and capital and intermediate inputs) at the level of individual units or activities underlies different aspects of productivity measurement.

x.x.x. Value added per person employed

5.17. This performance indicator is derived as the total value added (xx) is divided by a total number of persons employed (xx). The value added per person employed, if estimated in real terms (constant prices for national or Purchasing Power Standards (PPS)

for international comparisons), is the popular method for estimating the trends in labour productivity for total economy and by activity.

x.x.x. Value added per hour worked

5.18. The performance indicator is similar to value added per person employed, however in order to provide accurate results it requires good quality data on hours worked. It is derived as the total value added (xx) is divided by a number of total hours worked (xx). Depending on data availability the indicator can be calculated with monthly, quarterly and annual periodicity. The indicator shows the changes from period to period in the amount of goods and services produced per hour.

x.x.x. Share of Distributive Trade in GDP/total Gross value added (GVA)

5.19. This performance indicator refers to the proportion of value added generated in distributive trade to Gross Domestic Product (GDP) of the total economy. It is an indication of the structure of an economy and of contribution of individual economic activities to GDP.

x.x.x. Share of Distributive Trade Sector (DTS) employment in the total employment of the economy

5.20. This performance indicator serves as a useful tool for assessing the segmentation and trends in labour market. It is calculated as ratio between the total number of persons employed in distributive trade to total number of persons employed in total economy.

x.x.x. DTS employment growth

5.21. Distributive trade employment growth is the annual (monthly or quarterly) percentage change in the total number of persons employed in distributive trade sector. The indicator can be compiled by employment categories, by gender or by occupation.

x.x.x. Profitability ratio

5.22. This performance indicator is defined as the ratio of gross operating surplus (xx) to the value of total turnover (xx). It shows the proportion of operating receipts that is converted to profits. [other options such as gross operating surplus to total output to be discussed]

D. Specific to distributive trade core performance indicators

5.23. The common core performance indicators are more suitable for the analysis of overall performance of the distributive trade sector as a whole and its position against other sectors in the economy. However, they require a lot of additional and complex estimation and balancing procedures. Easy and more readily available from the company

records as well as from distributive trade surveys are the performance indicators in this section. Most of them are meaningful only for distributive trade sector and its three sub-sectors.

5.24. For international and national purposes the following specific to distributive trade core performance indicators **are recommended:**

x.x.x. Turnover at constant prices

5.25. Retail/Wholesale turnover at constant prices is obtained as the turnover (xx) at current prices is deflated by using the relevant price indices. The deflators of retail trade sales can be corresponding CPI indices while deflators of wholesale trade should have a similar methodology to that of the PPI adapted to the particularities of wholesale trade and reflecting price changes in the goods traded rather than the trade service provided. If wholesale price indices are not compiled, the appropriate PPI are accepted as a reasonable proxy for wholesale prices. Deflation in general is the preferred method for obtaining the turnover at constant prices, however direct volume indicators will be the alternative when price indices are missing. **It is recommended that** this performance indicator be calculated quarterly and annually. Subject to data availability and if consider feasible countries may compile it monthly as well. .

x.x.x. Retail Trade/Wholesale Trade Turnover Index

5.26. This index is a business cycle indicator which shows the monthly activity of distributive trade sector in nominal and real terms. The indicator describes exclusively the development and not the level of turnover.

5.27. In real terms the index is calculated as the price effect on turnover is eliminated (see para. 5.25). It is preferable to have the data adjusted for calendar and seasonal variations by applying the appropriate seasonal adjustments methods. The rate of change (or growth) is determined as percentage change of turnover over corresponding month of the preceding (if chain linked) or a base year. Alternatively in lieu of retail trade/wholesale trade turnover index, the volume of turnover may be used.

5.28. The nominal monthly turnover index is calculated as monthly turnover data are related to a turnover of preceding or a base year. The base year (preceding year is also a base year) value is the arithmetic mean of the twelve monthly turnover results for the base year.

5.29. Following the approach of monthly index numbers calculation, quarterly and annual indices could be compiled.

x.x.x. Turnover per person employed

5.30. This performance indicator is derived as the total turnover (xx) is divided by a total number of persons employed (xx). To demonstrate the trend, it can also be measured

in real terms, i.e. as turnover at constant prices is divided by total number of persons employed. The indicator is useful for interpreting the development in individual distributive trade sub-sectors, because the turnover in some distributive activities could be relatively high (turnover of wholesalers and retailers on own account) comparing to turnover of others (wholesaling on a commission basis). **It is recommended** that the indicator is calculated at the same level of details (breakdown by kind of activity, size classes of enterprises etc.) as the turnover (xx).

x.x.x. Share of e-commerce sales in total turnover

5.31. This performance indicator is calculated as the share of total turnover (xx) accounted for the e-commerce sales (xx). The importance of this indicator has increased in recent years with the tremendous expansion of transaction completed over a computer-mediated network.

x.x.x. Gross margin as a percentage of turnover

5.32. This performance indicator is obtained as the gross margin on goods for resale (xx) is divided by the turnover from trading activities of purchase and resale only (part of total turnover xx). The ratio is a good indication of trade units' performance and provides a basis for comparison between different types of trade.

x.x.x. Inventories to turnover ratio

5.33. The inventories to turnover ratio is the relationship of the end-of-month values of inventories to the monthly turnover. Inventories typically represent a large share in traders' total assets therefore the improvement in inventory management can have a significant impact on their profitability. The ratio is more important for short term trade statistics, although it may be calculated for any time period. For example, a ratio of 2.5 would indicate that the retailer or wholesaler have enough merchandise on hand to cover two and a half months of sales.

E. Additional performance indicators of distributive trade

5.34. The indicators under this heading are designed to help businesses and other users to monitor some specific aspects of trade activity performance. Many of them can be applied to an individual store, an entire enterprise or a class of section G of ISIC, Rev.4 on a monthly, quarterly or annual basis.

5.35. The suggested performance indicators supplement and broaden the list of most commonly used performance indicators listed in the sections above. However, it should be noted that their compilation require collection of additional data, thus increasing significantly the burden on respondents. Countries **are advised** to collect this information only if their own circumstances warranted the collection of such data.

x.x.x. Percentage share of turnover to retail traders

5.36. The share of wholesale enterprises' turnover (Division 46 of ISIC Rev. 4) accounted for by retail traders. This share corresponds to the traditional scheme producer → wholesaler → retailer → consumer. For this particular indicator the share shall be calculated on the basis of turnover from trading activities of purchase and resale (part of total turnover xx). This performance indicator forms together with (xx), professional users and (xx) final consumers an exhaustive breakdown of wholesale turnover from trading activities of purchase and resale (part of total turnover xx).

x.x.x. Percentage share of turnover to professional users (wholesalers, others)

5.37. The share of wholesale enterprise' turnover (Division 46 of ISIC Rev. 4) accounted for by professional users (businesses, institutions, government bodies, etc.) and wholesalers. Sales to retailers and final consumers are excluded. The wholesalers may form a complex distribution network involving several wholesalers prior to the final user. For this particular indicator the share shall be calculated on the basis of turnover from trading activities of purchase and resale (part of total turnover xx).

x.x.x. Percentage share of turnover to final consumers

5.38. The share of wholesale enterprises' turnover (Division 46 of ISIC Rev. 4) accounted for by final consumers. This corresponds to a secondary activity of the wholesalers, acting in a retail capacity. For this particular indicator the share shall be calculated on the basis of turnover from trading activities of purchase and resale (part of total turnover xx).

x.x.x. Percentage share of purchases from wholesalers and purchasing groups

5.39. This performance indicator, describing the supply network of retail trade, is an approximation made by the retailer to assess the share of direct purchases from wholesalers and through purchasing groups. The share of purchases shall be calculated on the basis of purchases of goods and services purchased for resale in the same condition as received (xx). Percentage share of purchases from wholesalers and purchasing groups may not be isolated in company accounts. The shares of purchases from wholesalers and purchasing groups (xx) and producers (xx) may not correspond to the total purchases for resale (xx). The first two performance indicators do not include e.g. purchases from retailers and purchases of used goods from professional/private users.

x.x.x. Percentage share of purchases from producers

5.40. This performance indicator, as well as (xx), describes the supply network of retail trade. It is an approximation made by the retailer to assess the share of direct purchases from producers. The share of purchases shall be calculated on the basis of purchases of goods and services purchased for resale in the same condition as received (xx).

x.x.x. Sales per retail sales space

5.41. The sales per sales space ratio is derived as turnover (xx) is divided by the sales space, i.e. the estimated floor area of that part of the premises devoted to selling and display. The sales space includes the total space to which the customers have access, including fitting rooms; counter space and window space; and the space behind the counters used by shop assistants. Sales space does not include offices, storage and preparation rooms, workshops, staircases, cloakrooms and other amenity rooms. The specific categories of sales space should be defined in the context of national circumstances. Due to non-uniformity of sales space classes and different country practices in this area is not possible to establish international breakdown of sales space.

x.x.x. Number of retail stores

5.42. This is the total number of retail stores operated by an enterprise, either owned or rented. Stores are defined as fixed sales premises which the customers enter to make their purchases.

x.x.x. Number of fixed market stands and/or stalls

5.43. This performance indicator covers the total number of fixed market stands and/or permanent stalls operated by an enterprise, either owned or rented. Contrary to stores, the customers do not usually enter the sales premises of the stands/stalls to make their purchases.

x.x.x. Average sales space per one retail store

5.44. This performance indicator is derived as the total sales space of retail stores is divided by the number of retail stores (xx).

F. How to interpret the indicators

5.45. Performance indicators are not absolute numbers, they acquire meaning in the context of comparison and analysis. Comparison with other measurement indicators puts the performance of a unit, or a sector, into perspective; analysis leads to an understanding of the factors for a given level of performance.

5.46. In using the performance indicators for comparisons, care should be taken to ensure that the units or phenomena are alike enough to compare, or at least that the differences are made explicit. There is no point, in the extreme case, in trying to compare performance of a small specialized shop with that of a large department store. However, there might be less extreme cases where comparison will still not be meaningful.

5.47. Another consideration should be given in cases when performance indicators are expressed as ratios between two or more data items from those listed in the previous chapter, they should have consistent definitions and coverage.

5.48. The performance indicators are best used to gauge the overall performance of distributive trade sector (or any other sector of the economy), its structure or ongoing processes, therefore, it is recommended not to sacrifice this goal for the sake of a very detailed analysis and compilation of performance indicators of minor importance but requiring a lot of additional data. The purpose of performance indicators is to arrive at an understanding of the broad performance and trends of the trade business in a harmonized and internationally comparable manner.

CHAPTER VI. DATA SOURCES AND DATA COMPILATION METHODS

6.1. This chapter contains general recommendations on data sources and data compilation methods for use in distributive trade statistics. More detailed guidance on the relevant good practices will be provided in *Distributive Trade Statistics: Compilers Manual*, which is to be issued as a follow-up publication to the current recommendations.

A. Data sources

6.2. *Data sources for compilation of distributive trades statistics*. The production of distributive trade statistics is based on the compilation of data from numerous sources describing productive activity and selected balance sheet items of units engaged in distributive trade as classified in Section G of ISIC, Rev.4. Two basic categories of data sources can be distinguished according to their purpose or the provider of the statistical information. In either category, however, the original sources of the data are the same, namely the records kept by the trade units. These two data sources are:

(i) Statistical data sources that provide data collected specifically for statistical purposes, such as census and survey data;
(ii) Administrative data sources that provide data created originally for purposes other than the production of statistical data.

1. Statistical data sources

6.3. *Statistical surveys*. Statistical surveys of units concerned are traditionally the main source of information for compiling distributive trade statistics. The surveys are done either by enumerating all the units in the population (census) or by eliciting response only from few representative units scientifically selected from the population (sample survey).

6.4. The main advantages of statistical surveys as compared to the administrative data sources are that the planning, execution of the surveys, data collection and the processing procedures are under the control of the statistical office itself. In principle, respondents have less reason to deliberately misreport the data as the statistical office guarantees that the data it collects are strictly confidential and that they will not be used for other than statistical purposes. The survey approach, however, has certain disadvantages such as the resource intensity (both financial and manpower), additional respondent burden, higher non-response rates and sampling errors.

6.5. *Economic census*. In general, an economic census[29] is a statistical survey that is conducted at infrequent intervals of time (usually every five or ten years) aiming at collecting comprehensive and detailed statistics about the operating characteristics and structure of units engaged in all (or some) of the economic activities. Some of the main objectives of an economic census are to provide (i) a sampling frame for more frequent statistical surveys; and (ii) information needed to establish and/or to maintain the business register.

6.6. *Census of trade units.* The census of trade units can be conducted either as a part of an economy-wide census, including all economic activities, or as an independent census for distributive trade sector/activities only. It should be noted that the census planning and organization and the subsequent transformation of census's basic data into distributive trade statistics data items is a time consuming and resource intensive exercise. Conduct of a complete census of trade units **is recommended** in the following cases:

(i) Countries initially developing a system of distributive trade statistics;

(ii) Countries that do not maintain an up-to-date business register;

(iii) Countries maintaining up-to-date business registers that need reliable frames for their short-term surveys or need to collect information about links between trade establishments on the register and trade enterprises to which they belong.

6.7. Censuses of trade units tend to provide a complete enumeration of units engaged with trade activity (including the small units of informal sector) at a particular point of time and are an appropriate approach for generation of trade statistics required at longer intervals of time ***[examples to be provided]***. Censuses, however, are limited in terms of data content. For countries implementing censuses of distributive trade units as part of their data collection strategy **it is recommended** that the censuses are followed as closely as possible by periodic (annual, quarterly or monthly) sample surveys, providing a continuous measure of trade activity and collecting more detailed sector specific data.

6.8. In some countries, enterprise survey frames are derived from lists created during economic censuses or from a specially maintained area frame. This is not a recommended practice. At the very least **it is recommended** that countries establish a permanent business register (see para. […]) containing the very large trade enterprises.

6.9. *Sample surveys*. Statisticians often use a sample survey technique to obtain data about a large population of statistical units by selecting and measuring a sample from that population. Due to the variability of characteristics among units in the population, scientific sample designs in the sample selection process are applied in order to reduce

[29] There is no an internationally agreed definition of economic census. Countries may have different names and understandings for one and same statistical survey type. Some of the known variations of this term are "census of economic units", "establishment census" and "establishment and enterprise census".

the risk of a distorted view of the population. Conclusions about the total population of units are made on the basis of the obtained from the sample survey data. The sample survey technique is less costly way of data collection as comparing to the economic census. It may be used in conjunction with a cut-off point or not.

6.10. *Sample surveys for distributive trade*. In most of the national statistical offices, the wholesale and retail trade sample surveys are rarely restricted to one standard form, but tend to be a combination of forms, differentiated by periodicity and major characteristics, namely:

(i) the activity, size, legal form, type of operation and the type of variables asked (turnover, expenditures, employment, other specialized variables);

(ii) occasionally an extra characteristic, such as the geographical location of the unit, may influence the contents of a survey.

6.11. *Size threshold to determine the target population*. When considering the trade surveys size thresholds play an important role in determining the target population and, where relevant, the sample population of units. Most of the sample surveys are conducted for units above a certain size threshold. The reasons for this are diverse and include the desire to limit the size of the survey, to limit the response burden on businesses and also to take account of the problems of maintaining registers for smaller units. There is no an international recommendation for an appropriate size threshold. The decision is left to the judgment of each national statistical office and may vary between surveys for different trade activities and periodicity. However**, it is recommended** that description of such thresholds be included in country's metadata and be made available to users.

6.12. *Types of surveys for collecting data about trade units*. In general, three types of sample surveys are appropriate for collecting data about trade units depending on the units sampled and/or contacted, namely *enterprise survey, household surveys,* and *mixed household-enterprise surveys*. Choice of the type of survey to be conducted depends upon the statistical system of a country and the resources available to its statistical office.

6.13. *Enterprise surveys* are those in which the sampling units comprise enterprises (or statistical units belonging to these enterprises) in their capacity as the reporting and observation units from/about which data are obtained. In the *household surveys* on the other hand the households are the sampled, reporting and observation units. In *mixed household-enterprise surveys*, a sample of households is selected and each household is asked whether any of its members own and operate an unincorporated enterprise (also called informal sector enterprise in developing countries). The list of enterprises thus compiled is used as the basis for selecting the enterprises from which desired data are finally collected. Mixed household-enterprise surveys are useful to cover only unincorporated (or household) enterprises which are numerous and cannot be easily registered.

6.14. *Sampling frame*. Availability of a sampling frame of the statistical units is a prerequisite for conducting given survey as it provides a basis for selection of sample units. Depending upon the source of the sampling frame surveys may also be classified as either *list based* or *area based.* In a list based survey, the initial sample is selected from a pre-existing list of enterprises or households, in an area based survey, the initial sampling units are a set of geographical areas. After one or more stages of selection, a sample of areas is identified within which enterprises or households are listed. From this list, the sample is selected and data collected.

6.15. *Enterprise surveys.* Enterprise surveys assume the availability of a sampling frame of trade enterprises. The sampling frame is made available from the business register, if such a register is maintained by the statistical office to support a range of surveys (see para. […]). For countries not maintaining a current up-to-date business register, the list of enterprises drawn from the latest economic census **is recommended** to be used as a sampling frame. In an area based enterprise survey, a sample of areas is selected first, and then selected areas are enumerated for compiling the list of enterprises operating in the area which serves as the sampling frame for selection of the enterprise in the sample and to collect the required information. **It is recommended** that for surveys of distributive trade enterprises the list based enterprise surveys be generally preferred to area based surveys for the following reasons:

(i) A list-based survey is more efficient from a sampling perspective in terms of sample size. The area based approach involves cluster sampling which require a larger than in the case of list based survey sample in order to achieve a given level of accuracy.

(ii) Maintenance of a list of enterprises via a general purpose statistical business register is cheaper than maintenance of an area based list.

(iii) Area based sampling is inappropriate for large or medium sized enterprises that operate in several areas because of the difficulty of collecting data from just those parts of the enterprises that lie within the areas actually selected. Furthermore, in order to avoid inadvertently missing parts of the enterprise, it is usually considered preferable to collect data from the whole of an enterprise not just a part of it

6.16. **It is recommended** that countries use area based enterprise survey approach for collection of data from small trade enterprises generally operating in informal or unorganized segment of the economy. For such enterprises satisfactory register or list is normally not available.

6.17. *Household surveys.* Household enterprises which are unincorporated producer units are not recognized as a legal entity separate from their owners (see para. ...). Fixed and other assets used in the production by these enterprises do not belong to the enterprises but to their owners. Compiling a satisfactory list of such enterprises is either not feasible or is a very resource intensive exercise. Household surveys **are recommended** in providing coverage of production of such enterprises.

6.18. As household surveys exist for the purposes of collecting labour force and household expenditure data, additional questions related to production activities can be added at relatively little extra cost. This makes the use of a household survey generally cheaper than conducting an area based enterprise survey for the same purpose. It should be noted however, that the responding unit is a person in a household, not an enterprise and the data that can be collected about trade activities of the enterprise may be correspondingly more limited. Some statistical offices maintain, or can access, population or household registers, at least for urban areas, and thus can conduct list-based household surveys. However, there are few such registers, so most household surveys are area-based.

6.19. *Disadvantages of household surveys*. The main disadvantage of the use of household surveys for collecting data from the unincorporated trade enterprise is that the sample of such surveys is not designed to provide a representative coverage of trade activities, but on the distribution of households. Although, it is possible that the retail trade which by definition sales goods and provides services to final consumers (households) may be spread across areas in a similar way as the population, in many cases the two distributions are different, as trade activities tend to be concentrated in commercial and market zones.

6.20. *Mixed household-enterprise surveys*. In the mixed household-enterprise surveys, a sample of households is selected and each household is asked whether any of its members is an *entrepreneur, i.e.,* the sole proprietor of, or a partner in, an unincorporated enterprise engaged with economic (including trade) activity. Data for all the enterprises thereby identified (or for a sub-sample of them) are then collected – either immediately from the respondent reporting on behalf of the enterprise or in a subsequent stage of data collection. Thus the feature of a mixed household-enterprise survey that distinguishes it from a household survey is that it collects information about enterprises *per se*, whereas a household survey collects information about the persons in a household, including possibly their personal contributions to enterprises.

6.21. Mixed household-enterprise surveys **are also recommended** for providing data on small and micro trade enterprises (see para. […]) that are not included in list-based enterprise surveys. Countries should be aware that they suffer from similar to area based enterprise surveys disadvantages, namely the inefficiency of the sample design and the difficulty of handling enterprises with production units in more than one location. In general, the mixed household-enterprise surveys **are recommended** as the preferred to household surveys or area based enterprise surveys approach for collecting the data and estimating the output of small trade units that are excluded from list-based enterprise surveys.

6.22. *Modified mixed household-enterprise surveys approach.* To avoid the limitations of the mixed household-enterprise survey approach (see para. 6.20), some countries[30] adopt a modified version of the approach, which involves a dual, mutually exclusive, listing of (i) households and household-based business operators; and (ii) establishments

[30] For example India and Philippines

in the sample areas. At the listing stage, each structure of the selected area units is visited to identify and prepare a complete list of all establishments falling in the domain of the survey. Modified mixed household-enterprise surveys approach **is recommended** as preferred to an area-based enterprise survey as it improves the quality of data of micro and small units specially the mobile units as compared with those with fixed location.

6.23. *Respondent burden*. Minimizing the respondent burden should be an important objective for the national statistical offices when distributive trade surveys are designed and conducted.

6.24. Special attention should be made to the issue of the respondent burden. As a way of reducing the respondent burden **it is recommended** that countries co-ordinate data collection both internally at the statistical office, by central supervision of the delimitation of sampling frames and selection of the samples drawn, and externally by using existing sources of information, such as administrative registers, to the largest possible extent.

2. Administrative data sources

6.25. *Administrative data sources* are set up in response to legislation and/or regulation. Each regulation (or related group of regulations) results in a register of the units – enterprises, persons, etc. – bound by that regulation and in data resulting from application of the regulation. The register and data are referred to collectively by the statistical offices as an *administrative source*. The administrative authorities keep records of the units in response to legislated administrative requirements or simply for internal purposes to assist the units in managing their operations. The data emanating from the administrative source can be used by the statistical offices. **It is recommended** when countries use administrative data sources for statistical purposes they pay special attention of their limitations and describe them in their metadata.

6.26. *Privately controlled administrative data sources*. Besides from the administrative data sources set up in response to legislation and/or regulation, statistical offices may obtain certain data from a private sector data supplier. Private sector data suppliers[31] operate on a commercial basis so the transfer of data from them to the statistical offices takes the form of a contract with a payment of a fee.

6.27. *Main advantages of the administrative data sources.* The following is the list of the most important advantages of administrative data sources:

(i) Complete coverage of the population to which the administrative process applies and perceived as low non-response;

(ii) Avoidance of response bu*r*den. The responding units make available the information as part of the administrative procedure;

[31] An example of a private sector data supplier is Dun and Bradstreet in the United Kingdom

(iii) Cheaper for the statistical office to acquire data from an administrative source than to conduct a survey;

(iv) Smaller than a survey sampling errors;

(v) Some data may be more accurate because of intense data checks by administrative authorities

6.28. *Main disadvantages of the administrative source* include the following:

(i) Discrepancy between administrative concepts and statistical concepts. As the administrative processes are not under statistical office control concepts regarding variables and units in respect of data coverage, content, quality and consistency comply to the administrative objectives. This limits the use of administrative data for statistical estimation and analysis purposes.

(ii) Poor integration with other data of the statistical systems. This is in particular a problem when administrative units do not correspond to statistical units either because of difference in the concept or because of deviating identification numbers. Even if the variables existing in the administrative register perfectly fit to the needs of the statistical office, matching problem can prevent from using them.

(iii) Risks with respect to stability. Administrative processes are subject to change in response to new legislation without much (or any) regard for the impact on the statistical series. This may cause systematic bias.

(iv) Data may become available with unacceptable delay.

(v) Legal constraints with respect to access and confidentiality.

6.29. Compilers of distributive trade statistics **are encouraged** to identify and review the available administrative data source in their countries and use the most appropriate of them for compilation of distributive trade statistics. This can be of a great help in reducing significantly the response burden and the surveying costs. The relative advantages and disadvantages mentioned above have no absolute value. It depends on the specific situation whether they apply and to what extent. Therefore, the review has to be seen as a checklist which can be used in the process of decision making. Examples of the most appropriate administrative sources are the tax authorities (any fiscal or VAT information on units), customs authorities, social security registers etc.

3. Business register as a frame for statistical surveys

6.30. *Need for a business register.* The organization and conduct of any enterprise survey of distributive trade units assumes availability of an adequate sampling frame, i.e., the set of units subject to sampling together with the details about them that will be used

for stratification, sampling and contact purposes. In principle, the sampling frame should contain all the units that are in the survey target population, without duplication or redundancy. A business register, maintained by the countries for statistical purposes **is recommended** as the most appropriate source for deriving the sampling frame for distributive trade surveys.

6.31. *Statistical business register*. In general, statistical business register means a comprehensive list of all enterprises and other units together with their characteristics that are active in a national economy. It is a tool for the conduct of statistical surveys as well as a source for statistics in its own right. The establishment and maintenance of a statistical business register in most of the cases is based on legal provisions as its scope and coverage is determined by country specific factors. As the best option **it is recommended** that the frame for every list-based enterprise survey for distributive trade is derived from a single general purpose, statistical business register maintained by the statistical office, rather than the option of using stand-alone registers for each individual survey. There are two basic reasons for using a single statistical business register. First, and most importantly, the statistical business register operationalises the selected model of statistical units and facilitates classification of units according to the agreed conceptual standards for all surveys. Second, it is more efficient for a single organizational unit within the national statistical office to be responsible for frame maintenance than to create units responsible for the frames of each survey separately.

6.32. *Establishment of a statistical business register*. The starting point for the establishment of a statistical business register should be the available administrative registers that are registers of enterprises created and maintained to support the administration of certain legislation or regulations. If only one administrative register is used, the resulting statistical business register would likely to be deficient in terms of coverage and content and would not provide an adequate sampling frame for subsequent statistical surveys. Countries **are encouraged** to work towards improvement of the coverage and content of their statistical business registers by incorporating data from several administrative sources. It should be mentioned that combining the data would be possible only if a single business number for all enterprises is introduced.

6.33. *Maintenance of the register*. To be a central sampling and weighting frame for all statistical surveys, including distributive trade surveys, the statistical business register should be up-to-date and with satisfactory quality. In practice, however, the enterprises in it do not remain the same over time - the legal units that own them may merge or split up or go out of business; they may change production activities or move the location; or new enterprises may be created (births) and existing enterprises may cease to exist (deaths). For these reasons **it is recommended** that the statistical business registers be regularly maintained and updated.

6.34. *Sources for the establishment and maintenance of a statistical business register*. The sources that are recommended for establishing a statistical business register usually are used also for its maintenance. They include the following:

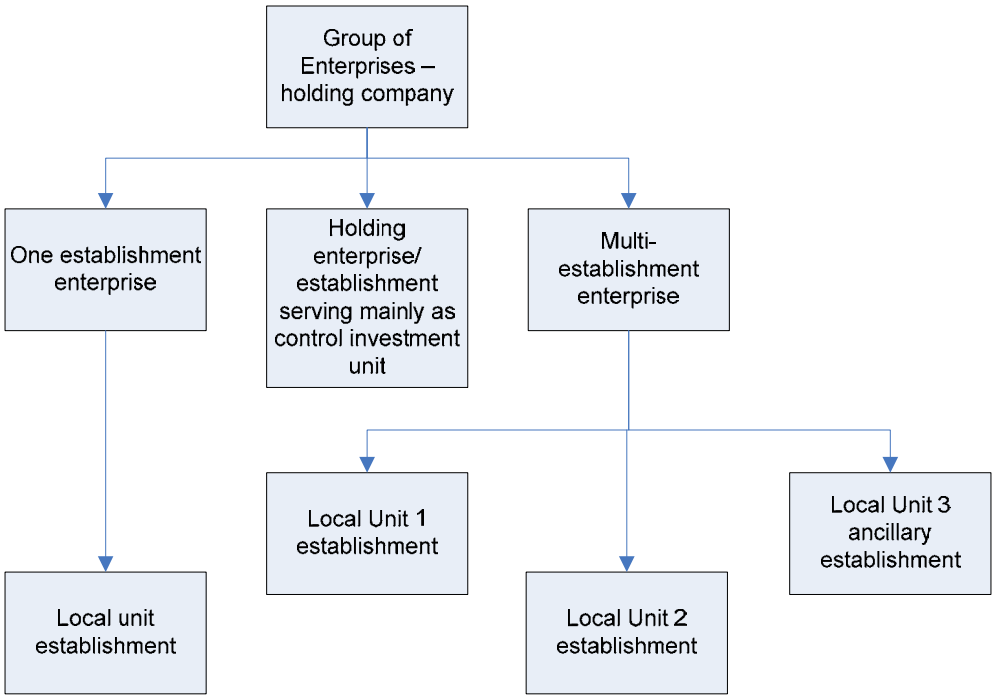
(i) *Economic census.* Economic censuses (see para. 6.5) provide in practice the most comprehensive list of units and links between them in a given country on which basis a statistical business register can be established and maintained. Economic census **is recommended** for use in the cases explained in para. 6.6.

(ii) *Administrative data sources.* Administrative data sources are one of the most important sources for establishing a statistical business register (see para. 6.33), however, there are also a number of problems associated with their use for its maintenance. These sources are known to contain inactive units; they may also be deficient in terms of activity classification of units, of contact information, and of the ability to track an unincorporated enterprise through a change of owners.

(iii) *Feedback from enterprise surveys.* Feedback from enterprise surveys is a vital source for establishing and updating the statistical business register as it provides new information on contact address changes, closure of business, change in the economic activity of the unit, etc.

(iv) *Business register surveys*. Register updating information that cannot be obtained from the administrative source on which the register is based, or from survey feedback, has to be obtained by *business register surveys* (sometimes termed *nature of business surveys*) and profiling operations conducted by business register staff.

6.35. In general, the statistical business register is set up using one record for each establishment and one record for each enterprise with the link identifiable between each establishment and its parent enterprise. For multi-establishment enterprises, this means that there will also be a record for the central office, and each establishment should be cross-referenced to the central office. **It is recommended** that countries assign proper coding to the enterprises and establishments as to establish hierarchical link between them as shown in the graph below. The coding of relationship would allow for the allocation of the operating surplus of the main establishment to its supporting ancillary units and the imputation of the outputs of ancillary units as intermediate consumption to consuming establishments.



6.36. As a minimum, the statistical business register should include the following information about trade units:

(i) name and physical location of each enterprise;

(ii) mailing address, which may be different from its physical location;

(iii) name and address of the central office or the headquarter of the enterprise and establishments that are part of multi-establishment enterprise;

(iv) kind of economic activity, description or code;

(v) legal organisation - incorporated and unincorporated;

(vi) type of ownership: public (by central, state and local governments); national private and foreign controlled;

(vii) number of persons employed;

(viii) volume of sales or value of output;

(ix) source and date of information.

6.37. *Uses of statistical business register for distributive trade statistics purposes*. **It is recommended** that the statistical business register be used for the purpose of distributive trade statistics in the following ways:

(i) For detection and construction of statistical units engaged with trade activity;
(ii) As a tool for the preparation and co-ordination of distributive trade surveys and for grossing up surveys results;
(iii) As a source of information for statistical analysis of the population of trade units and its demography;
(iv) As a tool for the utilization of administrative data;
(v) As a dissemination tool

B. Data compilation methods

6.38. Data as they have been received from the respondents to the statistical surveys is the starting point for the compilation of distributive trade statistics. The process of data compilation comprises more than just aggregating the questionnaire items. Statistical offices perform a number of checks, validation and statistical procedures on collected data with the aim to bring them to the level of the intended statistical output. The most important of these procedures are explained in the paragraphs below.

6.39. *Data validation and editing.* Like any other survey respondent, a trade statistics respondent is prone to commit errors while completing a statistical questionnaire. Editing is the examination of data from respondents for the purpose of identifying and eventually correcting errors. It is an essential process for assuring quality of the collected information. Micro editing (also called input editing) focuses on the individual record or questionnaire, as opposed to macro editing where checks are performed on aggregated data.

6.40. *Selective (significance) editing*[32]. Selective editing is an approach for prioritizing and further reducing costs of editing, which is one of the most resource-consuming processes in the production of official statistics. It is a procedure which targets only those of the micro data items or records that would have a significant impact on the distributive trade surveys results. **It is recommended** that while deciding on allocation of resources on various stages of statistical process countries give priority to the use of selective editing as a more efficient method of editing of distributive trade data**. [to be further extended]**

6.41. The data editing may take place during (input editing) or after the data entry phase (output editing). The following edit checks **are recommended** as useful for detecting errors in distributive trade data:

(i) *Routine checks* - used to test whether all questions which should have been answered in fact do have been answered;

[32] For more details see OECD STES Timeliness Framework: Selective (or Significance) Editing at: http://www.oecd.org/document/21/0,2340,en_2649_34257_30214485_1_1_1_1,00.html

(ii) *Validation checks* - used to test whether answers are permissible. Response to a particular data item in the questionnaire is checked against a valid value range specified for the purpose. Any observation lying outside the valid value range should be reviewed by the compilers of data and corrective actions taken.

(iii) *Rational checks* - set of checks based on the statistical analysis of respondent data. Many checks take form of a ratio between two variables, which should be within specified limits. Another type of rational check is the arithmetic check, for instance specifying that a sum of variables should equal a total.

6.42. Large random errors by respondents can usually be picked up through plausibility checks on the data, for example by comparing the data reported with previous values, or the ratios of data reported with reasonable bounds for the types of enterprise. Not all errors committed by respondents can be traced by the statistical office and therefore even exhaustive data editing will never result in error-free data file. For example, sustained systematic errors, such as under reporting of turnover and over reporting of expenditures by trade units can hardly be detected.

6.43. *Influential observations.* Some particular data item responses have most significant impact upon the main estimates. These are often termed as *influential observations.* **It is recommended** that countries spend more editing efforts on such data item responses. In particular, very large enterprises are usually a source of influential observations and their data should be individually checked.

6.44. *Imputations.* Missing data is often encountered in most of the trade surveys which creates problems for the data editing. The data may either be missing for a particular data item of the questionnaire (item non-response) or the selected unit may not return the filled-in questionnaire at all (unit non-response). The technique of imputation is used for estimating the missing data in case of item non-response. The problem of unit non-response is dealt with by re-weighting.

6.45. *Item non-response*. Item non-response or partial non-response occurs when the sampled unit has not answered all relevant questions, but did respond to only part of them. Cases may arise wherein a respondent has reported on all questions but either some of the answers may not be logically correct or there may be inconsistencies between some of the answers provided by a respondent. Resolving such a problem relates to performing an editing of data (see para. …).

6.46. *Unit non-response*. Though the units selected in the sample are legally required to provide response to the survey conducted by the statistical offices and are liable to be penalized in case of a non-response this does not efface the problem of non-response. The non-response remains a problem which may occur for one reason or the other, namely, non existence of the unit included in the survey, lack of appreciation of the importance of the data on part of the respondents, refusal, not knowing how to respond, lack of resources and non-availability of the desired information.

6.47. There are ways to minimize the non-response including the awareness of the importance of the data to be collected and appeal to the respondents to cooperate with the statistical authorities through the print and electronic media at the launch of the survey, reminders to the non-respondents and resorting to the enforcement measures laid down in the national legislation.

6.48. *Approaches for dealing with item non-response*. The following approaches **are recommended** for reducing the effect of item non-response on the estimates.

(i) All forms with missing values are ignored and confined to analysis of the fully completed forms; or

(ii) Missing data are imputed so that the data matrix is complete. Statistical analysis techniques are applied on the full data set completed with the help of imputation.

6.49. In general, the second approach for dealing with the item non response **is recommended** as the preferred one. The values of individual data items that are missing from the original response or believed to be in error should not be automatically interpreted as zeroes; rather appropriate methods for imputation should be applied. The choice of those methods depends on the objective of the analysis and on the type of missing data. Some of the recommended imputation methods include:

(i) *Subjective treatment* - impute on the basis of values which appear reasonable. For example, one might deduce the labour costs if the number of employees are known;

(ii) *Mean/modal value imputation* - impute the mean value of a variable for missing data. For categorical data impute the modal value. An improvement may be to impute the median in order to eliminate the effect of the extreme values;

(iii) *Post stratification* - more precision will be achieved in keeping the imputed value closer to the true value if the mean/mode/median are imputed using the observations from those units which are homogeneous with the one with missing data. For this purpose, post stratification is used, i.e. the sample is divided into strata and then stratum mean/mode/median is imputed.

(iv) Carry forward the value for the enterprise from the same survey occasion in the previous year, adjusted to reflect the average increase (decrease) of the data item in the stratum;

(v) Regression imputation: regression technique is used to impute the missing data for defining the predictor variable suitably.

6.50. *Approaches for dealing with unit non-response.* In the case where no response to a statistical questionnaire is received from the respondent unit, referred to as unit non-

response, **it is recommended** that re-weighting the sample to include only the responding sample units be applied. It is common practice for the statistical offices to attach weights to the elements in the sample. These weights are used, amongst other attributes, to expand the sample information to the level of target population.

6.51. *Grossing up procedures, aggregation.* The data after it has been treated through editing for the non-response etc. is used to estimate the level of the variable. The grossing up comprises raising the sample value with a factor based on the sampling fraction (or the factor using returned data) for each cell in the stratified sample for obtaining the levels of data for the frame population. The grossing up will use edited data to calculate a value representative of all units. In case information on auxiliary variable related to the variable under study are available for units in the sample as well as in the sampling frame, more sophisticated statistical techniques can be used for using this information for grossing up.

6.52. *Outlier values*. Outliers are a particular category of influential observations which are correct but are unusual in the sense that they do not represent the sampled population and hence will tend to distort the estimates. Therefore, **it is recommended** that outlier values be identified and handled carefully as it may affect the estimates significantly. If the grossing up factor is large and outlier value is included in the sample, the final estimate will be substantially large and unrepresentative as it is driven by one extreme value. The simplest way to deal with the outlier is to reduce its weight in the sample so that it represents itself only. Alternatively, statistical techniques can be used to calculate more appropriate weight for the outlier unit.

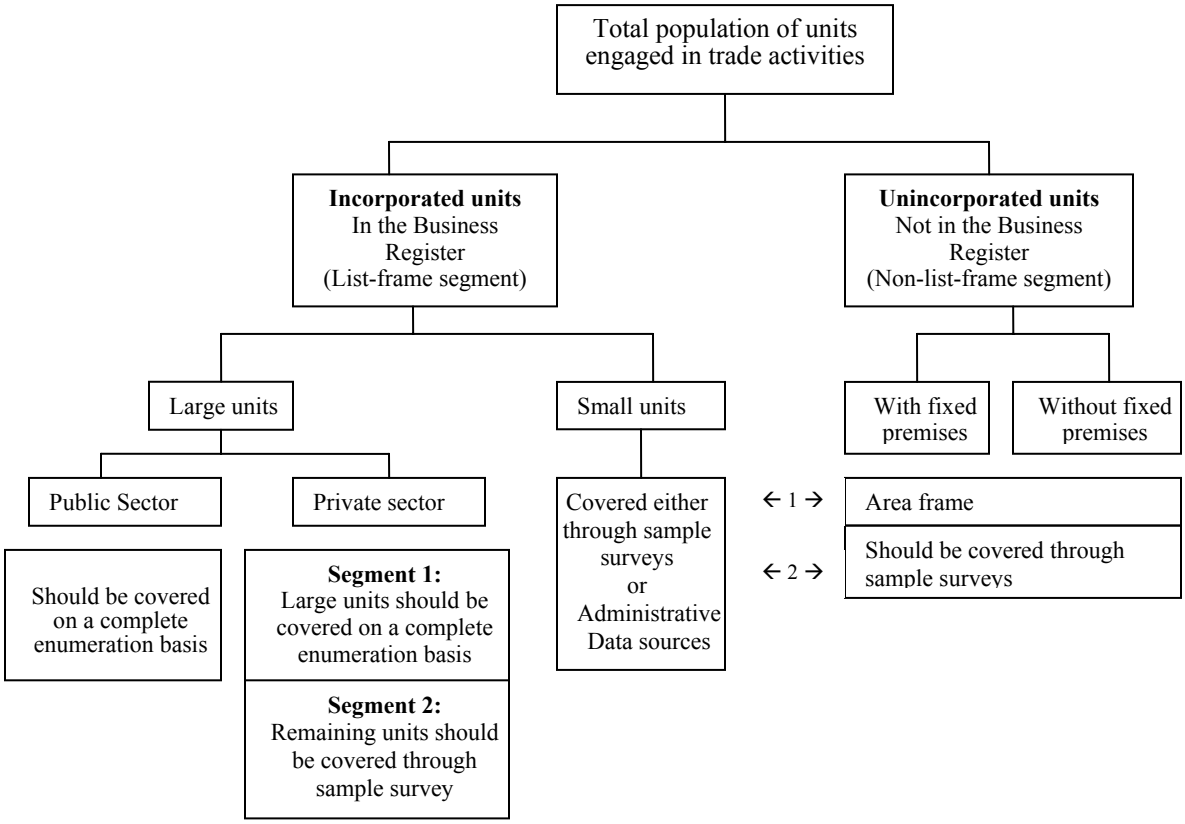
C. Data collection strategy

6.53. All units in the economy engaged in economic activities within the scope of the distributive trade sector (Section G of ISIC, Rev.4) should be covered by the statistical surveys and/or administrative data sources for the purpose of collection and compilation of distributive trade statistics. This embraces units of all sizes and types including corporations and unincorporated (household) units. The household units include micro and small trade enterprises that are household-based, operate outside the household at a separate location (i.e. fixed stall at a market place), or have no fixed location (i.e. a movable stall along a public road or a street vendor). An unincorporated household unit (called also an informal sector unit) is a term utilized in developing countries. In most of the developed countries, a household unit generally takes a more formal form of small enterprise and is incorporated. Some micro and small household units, however, may still remain unincorporated.

6.54. In order to ensure a complete coverage of distributive trade activity, **it is recommended** that countries developed their own data collection strategy based on an integrated approach covering in principle all trade units across all class sizes including micro and small enterprises, commensurate with their specific statistical and organizational circumstances. The legal organisation (incorporated or unincorporated), size (from large to small and micro enterprises) and the ownership pattern (public sector,

privately owned and foreign controlled) of units within the scope of distributive trade statistics differ significantly. An illustration of a general data collection strategy for different segments of the economy is presented in the diagram below. At one end of the spectrum are the corporate trade units which are incorporated under the statute of a country and are comparatively large, while at the other end are the unincorporated trade enterprises characterised by a low level of organisation.

Data collection strategy for different segments of the economy



1. All units on the business register are excluded from the area frame (i.e. non-list frame segment).

2. All units in the sample that are part of a list frame segment and included therein are excluded from the sample of non-list frame segment.

D. Survey method

6.55. Countries **are encouraged** to review the Fully Integrated Rational Survey Technique (FIRST)[33] as an option for a survey programme that efficiently capture comprehensive statistical information from all enterprises, including distributive trade enterprises, of all sizes operating in an economy. Application of this survey technique requires two basic statistical sets of information, namely: (i) some census enumeration, preferably an economic census, to establish the complete statistical population of units for construction of sampling frame and sample selection. In the absence of an economic census, a population census will generally be also sufficient; and (ii) good supporting documentation on sample areas/enumeration blocks for the benchmark enumeration. Once these two basic requirements are met, the field conditions should determine the selection of the most appropriate design for any particular distributive trade survey.

6.56. The FIRST methodology requires the statistical universe to be divided into two parts:

(a) A list-frame of a relatively small number of large units (hereinafter called the *'list-frame segment'*) that are clearly distinguished by their legal status from the rest of the units. For this segment either a complete enumeration or a uni-stage (most often stratified) sampling scheme is adopted; and

(b) The rest of the units (hereinafter called the '*non-list-frame segment'*) for which drawing an exhaustive list is not feasible and thus can be covered only by an (geographical) area frame approach. A two-stage (in specific cases may be multi-stage) sample design is adopted for this segment.

6.57. The FIRST methodology allows for covering all economic activities of the economy in an integrated manner and has a distinct advantage over conducting a set of separate activity surveys (each carried out independently on a single group of economic activities) to cover the same domain. Reducing survey costs is one of the main advantages of FIRST. Besides it, an integrated survey ensures a non-overlapping coverage of groups of establishments by kind of economic activity. Each establishment is classified in one and only one sector. The FIRST methodology provides comprehensive information collected in a short time-span with relatively modest means. If properly implemented, FIRST obviates the need for trade-offs between survey contents and the timeliness of release of results that often plays an important role in survey designing.

6.58. *List-frame based survey of the 'list-frame segment'*. In the surveys conducted using FIRST, the list frame is usually drawn from a business register or a directory of units that consists of all the units of the '*list-frame segment'* using the criterion of the legal and/or administrative status that distinguishes the 'large' units from the rest. This list is used for carrying out a FIRST survey preferably by mailed questionnaire with follow-up visits where required. The definition of large-scale used here is based on practical considerations and differs from country to country. The ease of maintaining the

[33] *Strategies for Measuring Industrial Structure and Growth*, United Nations, 1994, Studies in Methods, Series F, No.65 (United Nations Publication, Sales No. E.94.XVII.11).

list frame forms the single most important criterion for the definition of the large-scale sub-sector. The list frame is usually made up of the following groups which are easily identifiable:

(i) publicly traded companies (i.e. companies listed on a stock exchange);
(ii) non-traded companies (i.e. companies registered with a government agency such as the Justice Department, Ministry of Industry or the like);
(iii) Government-owned enterprises (public enterprises which may also have been included under (a) or (b) above.

6.59. All units *not* covered in the *'list-frame segment'* fall within the part of the universe described as the *'non-list-frame segment'*. Data collection for this sub-sector requires sampling of area units from an area frame formed from the data collected in the latest economic or population census.

6.60. *Area-frame based survey of the 'non-list frame segment'*. The FIRST methodology of integrated surveys for the *'list-frame segment'* and *'non-list-frame segment'* captures complete data of all industrial activities for an economy as a whole in a consistent manner. This requires devising an operational rule to ensure that the units on the business register are excluded from the area frame for *'non-list-frame segment'*. Those establishments whose activities are consolidated in a parent company's accounts have to be deleted from the area sample. This refers, for example, to warehouses or depots operated by trade companies in different parts of the country.

6.61. The FIRST is an establishment-type survey in principle, but, for the *'non-list-frame segment'* uses area sampling techniques. In an area sampling technique of surveying households and establishments, a sample of area units is selected at the first stage. Next, in each of the selected first stage unit, it is required to identify and list all establishments operating in the selected area that are neither included nor linked to any enterprise appearing in the list frame used for the survey of the *'list frame segment'*. The establishments thus identified and falling in the coverage of the survey are then classified by kind-of-activity and a sample of units is drawn from the listed establishments for each kind of activity.

6.62. The group of activities that are given special treatment in this approach is that of the mobile units such as those in trade and some other services activities, which form an important group in most developing countries. This approach permits covering of the enterprises/establishments that are run by the households, even those without fixed premises.

6.63. In this approach, all identifiable establishments outside the owners' home located in the selected area unit as well as household-based enterprises located within home are listed by a house-to-house (structure-to-structure) visit. In addition, the units without any fixed premises of operation like hawkers, street vendors and service providing free-lancers (mobile units) are identified through additional questions put to the households at the listing stage and are listed against the household where the proprietor (or a partner of

a partnership concern) resides. This way it is ensured that all establishments in the selected areas that are within the scope of the survey are included in the list which is then used for selection of sample of establishments.

E. Scope and coverage of distributive trade surveys

6.64. *Annual surveys*. All countries, regardless of the development of their statistical system, conduct annual distributive trade surveys. **It is recommended** that through annual surveys countries endeavour to provide estimates that cover all wholesale and retail trade establishments. This recommendation does not imply that a comprehensive survey is always necessary. Countries may apply one of the following options: (i) the survey may cover all establishments above a given size (see para. [...] for the size of trade units) and a sample of others; (ii) all units may receive a survey form, but an abbreviated version may be used for the small establishments; and (iii) estimates for the small establishments may be made from administrative data or from other statistical inquiries such as mixed household-enterprise surveys.

6.65. *Infra-annual surveys*. The coverage of the infra-annual distributive trade surveys (quarterly or monthly) is necessarily more restricted than that of the annual surveys. Even in countries with a highly developed statistical system, coverage of small establishments with monthly or quarterly surveys for the production of short-term distributive trade statistics is not feasible. If small establishments are significant in a particularly important distributive trade activity class and there is no reliable administrative data source to cover them, then **it is recommended** that these units are included in the coverage of infra-annual surveys, by using the appropriate sampling techniques. ***[to be further discussed]***

6.66. *Infrequent surveys*. In addition to annual and infra-annual surveys some countries may conduct infrequent surveys of distributive trade units. These surveys are used for collection of data items on specialised topics or in greater details. The use of infrequent benchmark surveys, usually conducted at 5 to 10 year interval, **is not recommended** for the purpose of collection and compilation of structural type distributive trade statistics ***[to be further discussed]***.

E. Reference period

6.67. *Reference period for annual surveys*. In general, the calendar year cycle beginning with 1 of January and ending with 31 December **is recommended** as the reference period in the present recommendations concerning the annual surveys of distributive trade units. However, where data are more readily available for particular establishments on a different fiscal-year basis, it may be necessary to accept data on that basis. In such instances, **it is recommended** that some items of data, such as wages and salaries are collected on both a fiscal-year and calendar-year basis to facilitate building up calendar year aggregates. If a fiscal year different from the calendar year is the normal accounting period for most establishments, the data may be compiled uniformly on a fiscal year rather than a calendar year basis. There are advantages if all establishments

can submit returns covering an identical 12-month period, particularly in integrating the annual data with monthly or quarterly data. In many countries, the closing dates of the financial years of companies are spread widely over the year, and statistical offices find it difficult to obtain returns from establishments for a consistent 12-month period. If reporting periods differ in this way, **it is recommended** that a supplementary table is prepared in the published report showing the distribution of end-year dates by months, which will help users of the figures to estimate the period over which they are centred.

6.68. *Reference period for infra-annual surveys* Corresponding calendar month/quarter **is recommended** as the reference period for infra-annual surveys. However, some establishments work in quarterly periods of four, four and five weeks, and in such cases **it is recommended** that statistical offices make every efforts to standardize the information provided in the monthly returns by some estimation procedures.

CHAPTER VII. SEASONAL ADJUSTMENTS

A. Need for seasonally adjusted distributive trade statistics

7.1. Monthly and quarterly data on distributive trade statistics are an important tool for economic policy making, business cycle analysis, modelling and forecasting. However, they are often characterised by seasonal fluctuations and other calendar/trading-day effects, which are obstacles in the clear identification of important features of time series such as their short and long-term movements, turning points and consistency with other economic indicators. Seasonal adjustment is a process by which changes that are due to seasonal or calendar influences are removed from time series in order to achieve a better knowledge of the underlying behaviour. This chapter contains a brief overview of the basic concepts and recommendations for compilation of seasonally adjusted time series. The more detailed guidance on this issue will be provided in the forthcoming *Compilers Manual.* Seasonal adjustment issues of particular interest for distributive trade statistics like trading day and moving holidays effects are presented in section D. Calendar effects.

B. Basic concepts for use in compilation of seasonally adjusted data

7.2. *Time series.* When statistical data are collected at regular intervals of time they form a time series. Turnover of retail trade for each sub-period (week, month, quarter) of the year, in a given country is a good example of a time series. In contrast, data collected irregularly or only once do not represent a time series. There are two types of time series - stock and flow. Stock series are measures of activity *at a point* in time while the flow series measure the level of activity *over* a time interval.

7.3. *Components of time series.* A time series is generally considered to be made up of the following components:

(i) *The trend component* (T_t) which reflects long term movements lasting many years. It is generally associated with structural causes, for example, institutional events, demographic and technological changes, new ways of organization, general economic development, etc. In many series such as wholesale and retail sales, or production of goods and services, this may be termed the growth element.

(ii) *The cycle component* (C_t) indicates the longer term irregular fluctuations, usually referred to as business cycle. In much analytical work, the trend and the cycle are combined because, for series covering a short period of time, the long-term trend cannot be estimated adequately. As such, the trend-cycle component is the underlying path or general direction reflected in the data, that is, the combined long-term trend and the business-cycle movements in the data.

(iii) *The seasonal component* (S_t) is a movement within the year with a characteristic shape for each time series which represents the effect of climatic and institutional events that repeat more or less regularly each year. This component includes seasonal effects narrowly defined and calendar related systematic effects that are not stable in annual timing, such as trading day effects and moving holiday effects (see para. 7.17-7.24). The seasonal effect narrowly defined is an effect that is reasonably stable in terms of magnitude. Possible causes for this effect are natural factors, administrative or legal measures, social/cultural traditions, and calendar-related effects that are stable in annual timing (e.g., public holidays such as Christmas).

(iv) *The irregular component* (I_t) represents unforeseeable movements related to events of all kinds. It is the residual variations due to developments or to momentous occurrences such as wars or national catastrophes, which affect a number of series simultaneously. In general, the irregular component has a stable random appearance and it captures effects that are unpredictable unless additional information is available, in terms of timing, impact, and duration. The irregular component includes the following: i) irregular effects narrowly defined; ii) outlier effects; iii) other regular effects such as the effects of unseasonable weather, natural disasters, strikes, irregular sales campaigns, etc. However, it should be noted that these effects can be estimated separately to the irregular component and that it is important to do this in order to ensure that the best quality seasonal adjustment is achieved.

7.4. *Seasonal adjustment*. The process of estimating and removing the seasonal component from a time series is known as seasonal adjustment. It removes all variations that are systematic (seasonal effects) and calendar related (institutional events which repeat more or less regularly every year).

C. Main principles and models of seasonal adjustment

7.5. **It is recommended** that the seasonal adjustment process is performed at the end of a survey cycle when the survey has been designed and conducted; data has been collected, processed and edited; and estimates are produced. The seasonal adjustment process starts once the original estimates are available and the original time series of data are formed.

7.6. *Basic concepts of seasonal adjustment.* In order to remove the seasonal component from a time series it should first be decomposed into its constituting components - the trend-cycle, the seasonal component and the irregular component; each of which may be made up of several subcomponents. The seasonal variations can be distinguished from the trend by their oscillatory character, from business cycle by having annual periodicity and from irregulars by being systematic. The four above-mentioned components can be combined in a number of ways. The most commonly found are two

types of decomposition models: the additive decomposition model and the multiplicative decomposition model.

7.7. *Additive decomposition model.* The additive model assumes that the components of the time series behave independently of the other. In particular, the size of the seasonal oscillations is independent of the level of the series. For example, an increase in the trend-cycle will not cause an increase in the seasonal component. This model is used if the irregular and the seasonal effects are independent of the trend behaviour, i.e. if the seasonal effects are the same from year to year.

$$X_t = T_t + C_t + S_t + I_t$$

7.8. *Multiplicative decomposition model.* The multiplicative model is generally taken as the default model in seasonal adjustment software packages. This model assumes that the components of the series are interdependent and thus the seasonal variation's size increases and decreases with the level of series, a characteristic of most seasonal macroeconomic series. For example, an increase in the trend will cause an increase in the magnitude of the seasonal component.

$$X_t = T_t.C_t.S_t.I_t$$

7.9. *Quality of seasonal adjustment*. The most fundamental requirement of seasonal adjustment quality is that there is no estimable seasonal effect still present in the seasonally adjusted series. The presence of estimable seasonal effects in either the seasonally adjusted series or the de-trended seasonally adjusted series (i.e. the irregular component) is generally what is referred to as *residual seasonality*. To detect whether the seasonally adjusted time series contains residual seasonality and trading day effects a special "spectral diagnostic" should be carried out, for monthly data or for sufficiently long quarterly series. Depending upon the package used for seasonal adjustment there are other diagnostics that can be used to assess the presence of residual seasonality.

7.10. Other important requirements of a good seasonal adjustment are lack of bias in the level of the series and the stability of the estimates. A lack of bias in the level means, that the level of the series will be similar for both the original series and the seasonally adjusted series. Stability of the estimates means that as new data become available and are incorporated into the estimation procedure, the revisions to the past estimates are small. Large revisions can indicate that the estimates are misleading or even meaningless.

7.11. *Concept of direct and indirect seasonal adjustments*. Many of distributive trade data represent aggregates or residual items. For instance, the trade margin or value added is calculated as a difference between two components. In the first case these are values of turnover and goods bought for resale; and in the second case these are the output and intermediate consumption. A seasonally adjusted estimate of value added can be derived either as seasonally adjusting value added directly, or as a difference between the seasonally adjusted output and intermediate consumption.

7.12. Under most circumstances, the direct and indirect adjustments for an aggregate series are not identical. There are some very limited situations in which the two types of adjustment coincide, particularly if the adjustments are additive. For a multiplicative decomposition, the conditions required for identical adjustments are even more restrictive.

7.13. Whether direct or indirect adjustment is more appropriate for a given set of series depends on the set of series in question. Whether it is more appropriate to use direct or indirect seasonal adjustment is still an open question. Neither theoretical nor empirical evidence uniformly favours one approach over the other. However, **it is advised** that when the component series that make up the aggregate series have quite distinctively different seasonal patterns and have adjustments of good quality to apply indirect seasonal adjustment which is of better quality than the direct adjustment. On the other hand, when the component series have similar seasonal patterns and summing the series may result in noise cancellation **it is advised** that the direct seasonal adjustment is applied as it is of better quality than the indirect adjustment.

7.14. *Outliers in seasonal adjustment.* Outliers are abnormal values in the time series, usually caused by one-off economic or social event. Their detection and correction prior to implementation of the adjustment process is an important precondition for the quality of seasonal adjustment. It is essential to distinguish between different types of outliers because their treatment differs. Outliers are divided into two groups (i) errors in the data; and (ii) the "true" special events. The first step of any outlier analysis should be the detection and correction of plain data errors and after that, the detection and correction of "true" outliers. The correction of outliers aims at preventing the trend path from distortion. The trend path is intended to measure the long-term growth of time series and it is not desirable for it to respond to a one-off irregular movement. It should be noted that all seasonal adjustment packages have built-in option for the detection and the treatment of outliers, at least for the historical part of the series. For the most recent values, however, a sophisticated automatic correction is not possible.

7.15. Seasonally adjusted data should be adjusted for all seasonal variations, not only for the seasonal effect narrowly defined. Leaving parts of the overall seasonal component in the adjusted series can be misleading and seriously reduce the usefulness of the seasonally adjusted data. Partly seasonally adjusted series, where the remaining identifiable calendar-related effects have not been removed, can give false signals of what is happening in the economy. For instance, such series may indicate that the trade activity declined in a particular month (or quarter) when it actually increased. Both the seasonal effects narrowly defined and the other calendar-related effects represent systematic, persistent, predictable, and identifiable seasonal effects and all should be removed when compiling the seasonally adjusted data.

7.16. *Concurrent versus extrapolated seasonal factors*. For the current year seasonally adjusted data can be computed either by running every month/quarter the seasonal adjustment procedure or by using extrapolated coefficients computed once a year. In the first case, data are revised every month/quarter. In the second one, data are not revised

within the year but only once a year. In terms of accuracy the concurrent approach is the preferred one, but the extrapolated approach is often preferred by users which do not like that data are continuously revised. The use of extrapolated seasonal factors can lead to biased results especially when unexpected events occur during the year. **It is recommended** that the revisions are scheduled in a regular way and possibly according to the release calendar.

D. Calendar effects

7.17. *Calendar effects.* Variations associated with the composition of the calendar play an important role in the analysis of distributive trade statistics. *Calendar effects* are regular effects that do not necessarily occur in the same month or quarter each year but can be identified and removed from the series. The most important of them are the moving holidays' effects and the "trading-day" variations which represent the "within-month effects". These variations are usually treated as seasonal in character and should be removed together with the other seasonal variations when producing a seasonally adjusted series.

7.18. *Moving holidays.* Moving holidays are holidays that occur at the same time each year based on the different calendars other than Gregorian calendar which is widely used as a world standard for statistical time series. Therefore, their exact timing shifts systematically each Gregorian calendar year. The influence of these moving holidays in economic and social behaviour can usually be country specific, making it difficult to build them into standards routines and practices. Examples of moving holidays include Easter, Chinese New year, Korean Thanksgiving day and Ramadan.

7.19. Two types of effects are generally associated with the moving holidays – (i) an immediate effect associated with the fact that some retail stores are closed during the holidays; and (ii) gradual effect associated with the fact that the level of trade activity is affected during several days preceding the holidays.

7.20. *Easter* generally falls in April but can also fall in late March and can affect a variety of types of series, for example industrial production or retail trade sales especially in the western hemisphere. Easter effect is the variation due to the displacement from April to March of the volume of activity when Easter falls in March instead of the usual April occurrence.

7.21. *Chinese New Year* affects in a similar way trade activities. It mostly occurs in February but can also occur in January. As for Easter, Chinese New Year's effects have a predictable magnitude and direction.

7.22. *Trading day.* Trading day is a common calendar related effect that is often found in economic time series, especially in distributive trade time series. This effect is due to the number of times each day of the week occurs in a given month/quarter and the length of the month/quarter. The number of trading days is also affected by the number of holidays in the in the given time period, that do not fall on weekends. The number of

trading days may differ not only from period to period, but it may also vary between the same time periods in different years.

7.23. Trading day effect is present when the level of activity varies with the days of the week. Trading day variations imply the existence of an underlying daily pattern of activity defined over the week. This daily pattern states the relative importance of the days in the week. For example, five Sundays in a month impacts retail trade series because Sunday is not a business day and marks a low point in the economic activity. Also, for these series, the number of Fridays and Saturdays has a significant impact, as these days are those when people do much of their shopping activities. Trading day variations are associated also with the accounting and reporting practices of trade units. Stores that do their bookkeeping activities on Friday tend to report higher sales in months with five Fridays than in months with four Fridays. Trading day effects need to be accounted for because they lead to apparent changes in level of activity when the underlying level is in fact unchanged**.**

7.24. *Length of month effect.* Because different months of the year have different lengths - 28, 29, 30 or 31 days, one way to think of the trading day effect is to consider each month of the year as a block of 28 days (four days in each type of weekday) plus one, containing zero, two or three extra days. If the level of activity for each type of weekday is to be constant through the years, the only difference between the months in a given year will be due to the number of extra days (0, 1, 2, or 3). Hence, if June and July have the same levels of activity on the respective days of the week, the total level of activity for July may still be greater that that for June purely because July has an extra day. This effect is called a *length of month effect.* If a series does not have a trading day correction, then the length of month effect will be accounted for automatically in the seasonal factors. If the series have a trading day correction, the length of month can still be accounted for in the seasonal factors or alternatively in the trading day factors.

7.25. *Methods for trading day adjustment***.** Trading day adjustment can be carried out in either the proportional or regression methods for adjustment. Under the first approach, the effects of trading days is estimated by counting the proportion of them in the month/quarter while under the second the effects of trading days is estimated in a regression framework. **It is recommended** that the regression based approach be preferred by countries as a method of trading day adjustment. As for the other moving holidays effects, statistical packages have built-in options for the detection and treatment of trading day effects. They offer default calendars, however, **it is recommended** that in trading day adjustment countries use country-specific calendars as they ensure more accurate results.

E. Seasonal adjustments software packages

7.26. The most commonly used seasonal adjustment packages can be grouped into two main categories: (i) based on univariate time series decomposition, namely moving average techniques; and (ii) based on explicit models with a small number of parameters for each component. Choice of the countries between the two packages should be done

on the basis of the thorough analysis of the time series subject to seasonal adjustment and/or on the past experience.

7.27. *Seasonal adjustment packages based on moving average methods*. The majority of seasonal adjustments methods used by statistical offices belong to the class of moving averages. The seasonal adjustment methods that belong to this category are mainly descriptive, non-parametric procedures in the sense that they lack explicit parametric models for each unobserved component. Major computational differences between the various approaches of this class are usually due to different techniques used at the ends of the time series. Some methods use asymmetric filters at the ends while others extend the series using ARIMA models and apply symmetric filters to the extended series. The general procedure in the class of moving average models follows an iterative estimation procedure, the core of which is based on a series of moving averages. Census X-11/X-12 and ARIMA belong to the seasonal adjustment techniques based on moving average methods.

7.28. *Seasonal adjustment packages based on model methods*. The model based approach requires the components of the original time series, such as the trend, seasonal and irregular to be modelled separately. This approach, assumes the irregular component is "white noise". Major computational differences between various methods in the model based approach are usually due to model specification. In some cases, the components are modelled directly. In other cases, the original series is modelled and the component models are derived from that model. TRAMO-SEATS is the most popular software package in the model based approach. Model based seasonal adjustment programs include, among others, TRAMO-SEATS, STAMP, and BV4.

7.29. A new tendency in development of seasonal adjustment packages is the combination of the two approaches in one common package. One example for such a package is DEMETRA, developed by Eurostat that uses statistical algorithms included in X-12-ARIMA and TRAMO-SEATS. This package is applicable to large-scale sets of time series; it automatically checks the quality of the results; improves the stability of the models; automatically improves the rejected adjustments and assists the users during the whole adjustment process. Similar package, combining both approaches (X-13A-SEATS) is under preparation by the US Census Bureau.

7.30. Some packages such as X-12-ARIMA have options for supplying user-defined regressors that make it possible for users to construct custom-made moving holiday adjustment procedures. This option makes it easier to take into account holidays particular to each country or region, or country-specific effects of common holidays. The most typical examples of such regional specific effects are explained at the beginning of this chapter.

7.31. *Seasonal Adjustment Diagnostics.* A set of diagnostics to assess the outcome, both from the modelling and the seasonal adjustment parts of the programs should be used. These diagnostics range from advanced tests targeted for the experts attempting to fine-tune the treatment of complex series to simple tests that as a minimum should be looked

at by all users of the programs. While the programs sometimes are used as a black box without the diagnostics, they should not be used that way, because many tests can be readily understood.

7.32. *Minimum Length of the Time Series for Seasonal Adjustment.* Five years of data and relatively stable seasonality are required in general as minimum length to obtain properly seasonally adjusted estimates. For series that show particularly strong and stable seasonal movements, it may be possible to obtain seasonally adjusted estimates based on only three years of data. A longer time series, however, is required to identify more precisely the seasonal pattern and to adjust the series for calendar variations (i.e. trading days and moving holidays), breaks in the series, outliers, and particular events that may have affected the series and may cause difficulties in properly identifying the seasonal pattern of the series. If a country has gone through severe structural changes resulting in radical changes in the seasonal patterns, it may not be possible to seasonally adjust its data until several years after the break in the series. In such cases, it may be necessary to seasonally adjust the pre-break and post-break part of the series separately.

7.33. *Seasonal adjustment and consistency with annual data.* Annual totals based on the seasonally adjusted data will not automatically (and conceptually) be equal to the corresponding annual totals based on the original unadjusted data. The number of working days, the impact of moving holidays, and other calendar-related effects vary from year to year. Similarly, moving seasonality implies that the impact of the seasonal effect narrowly defined will vary from year to year. Thus, conceptually, for series with significant calendar-related effects or moving seasonality effects, the annual totals of a seasonally adjusted series *should differ* from the unadjusted series. X-11-ARIMA and X-12-ARIMA provide options for forcing the annual totals from the seasonally adjusted data to be equal to the original totals. In general, **it is recommended** not using the forcing option if the series show significant seasonality. In such cases, consistency with the annual series would be achieved at the expense of the quality of the seasonal adjustment and would be conceptually wrong.

7.34. *Revision policy and re-estimation of ARIMA models*. An important issue associated with model-based methods refers to how often the ARIMA models should be re-identified and re-estimated as new data become available. The stability of the models and their associated parameters depends on the nature of the series. In principle, the ARIMA models change slowly in time while their associated parameters are more sensible to new data. In such cases **it is recommended** that countries re-identify the models once per year and re-estimate the parameters every time seasonal adjustment is performed.

7.35. *Data dissemination and seasonal adjustment.* After removing seasonality and all calendar effects distributive trade data can be presented either in seasonally adjusted or trend-cycle form. The difference between them is the irregular component. In general, **it is recommended** that countries make available to users all types of data - raw data, seasonally adjusted and trend-cycle series. Seasonally adjusted data are often considered more informative for univariate and multivariate purposes. Trend-cycle data are in

principle recommended for graphical representations and for series characterised by a high degree of volatility.

F. Recommendation

7.36. **It is recommended** that countries consider producing seasonally adjusted series as an integral part of their long term programme of quality enhancement of their distributive trade statistics. Countries **are encouraged** to begin production of seasonally adjusted series of data items […] as a matter of priority. The seasonal adjustment method chosen once should not be changed often. If the changes are necessary, they should be thoroughly justified.

7.37. *Partially adjusted data*. Some countries publish as "non-seasonally adjusted data" data that have been adjusted for some seasonal effects, particularly the number of working days. It should be noted that partially adjusted data can be misleading and are of limited analytical usefulness. First, data presented as non-seasonally adjusted data should be fully unadjusted, showing what actually has happened, not partially adjusted for some seasonal effects. Working/trading-day effects are part of the overall seasonal variation in the series, and adjustment for these effects should be treated as an integral part of the seasonal adjustment process, not as a separate process. Second, working-day adjustments made outside the seasonal adjustment context are often conducted by simple methods such as using fixed coefficients based on the ratio of the number of working days in the month or quarter to the number of working days in a standard month or quarter which is not an appropriate procedure.

7.38. **It is recommended** that countries discontinue such practice. While still publishing the partially adjusted data, the appropriated explanatory note should be provided to warn users about limitations of such data. It is important that seasonally adjusted data are appropriately documented by using a standard template format, possibly in line with SDDS structure presented in Annex […].

CHAPTER VIII. INDICES OF DISTRIBUTIVE TRADE

A. Indices of distributive trade: An overview

8.1. *Kinds of distributive trade indices.* To analyze various aspects of distributive trade dynamics a number of indices can be constructed ranging from a rather simple index of turnover changes in nominal terms (value index) to a more detailed and complex index of turnover volume and indices reflecting volume of production of retail and wholesale trade services (indices of output). To obtain distributive trade volume indices, the indices of retail and wholesale prices or appropriate volume indicators should be available. The development of international recommendations on compilation of such price indices is not considered to be a part of IRDTS project, however some relevant guidance on this topic can be found in para. […] below.

8.2. *Purpose.* One of the main purposes of compilation of distributive trade indices is the description of the short-term changes in value and volume of turnover of wholesale and retail trade as well as in the output of distributive trade sector as a whole and of its components. If available on a monthly/quarterly basis, indices of volume of turnover complement indices of other economic activities in the short-term analysis of entire economy including the identification of the turning points in economic cycles. Indices of output of distributive trade sector, in addition to their importance for short-term analysis, provide a key input in the compilation of quarterly national accounts.

8.3. *Periodicity.* **It is recommended** that indices of turnover and output are compiled on a monthly basis as this better reveals the short-term fluctuations. Monthly indices are even more meaningful if produced without significant time lag, i.e. within the month immediately following the reference period. However, it is recognized that national statistical offices may suffer from a lack of capacity to produce reliable monthly indices. In such cases, compilation of quarterly indices might be preferable, as it gives sufficient flexibility in terms of time and resources. It should be noted, however that the effects of current market conditions, seasonal changes and other factors related to short term production will be diluted.

8.4. *The choice of index formula and base year.* The detailed discussion of index types, their theoretical properties and comparative advantages and drawback is provided in various international sources[34] and is not reproduced in this publication. **It is recommended** that compilers of distributive trade indices use those manuals while developing their country's distributive trade indices. Although, some policy guidelines in this respect are provided in this chapter, a more detailed discussion of good practices in this area is beyond the scope of these recommendations. That will be provided in

[34] See SNA 93, Rev.1, Chapter XVI; Compilation Manual for an Index of Service Production, OECD, 2007, Section 5; Handbook on price and volume measurement in national accounts, Eurostat, 2001; Manuals on Consumer and Producer Price Indices etc.

Distributive Trade Indices: A Handbook of Country practices, which is to be issued as a follow-up publication to the current recommendations.

8.5. *General recommendations for the compilation of distributive trade indices*. As a general guideline the chained Laspeyres volume index with the weights being revised at an appropriate frequency **is recommended** as a preferred approach for the compilation of wholesale trade and retail trade volume indices. This index satisfies most of the criteria that have to be met when choosing the index formulae such as the monotony, homogeneity, up-to-date weighting structure, real comparison of volumes, cost efficiency and timeliness etc. It takes account of modifications to the relative weights of the different categories of services over the whole historical series. In addition, rebasing revisions occur to a much lesser extent than for fixed weight indices which should be avoided. However, it is recognized that this approach is difficult to implement and loses additivity, but it is more reflective of structural changes over time.

8.6. *Other approaches*. Chained Fisher volume index where the current and the base period weights are used in its Laspeyres and Paasche components is the most preferable from the theoretical point of view approach as it uses weights of both compared periods, which reduces the so-called substitution bias. This approach however is the most difficult one to implement and interpret.

8.7. Laspeyres volume index with fixed weights is another approach for compilation of distributive trade indices. It is relatively easy to implement and therefore used by countries with limited resources and persistent problems with obtaining updated weights. This approach has an advantageous property of producing data at constant prices which are additive (sum of components is equal to the total value) and, therefore, has a clear economic interpretation and is convenient for use. However, as the time gap between the base year and current period increases the quality of such an index deteriorates as it does not reflect dynamics of distributive trade. If a country uses Laspeyres volume index with fixed weights **it is recommended** that the weights are updated at least every five years. **It is further recommended** that together with the update of weights a country considers and makes every effort to chain-link the series with these new weights.

8.8. **It is recommended** that while choosing the index type, countries take into account the purpose of the index and practical considerations such as general policy of a given national statistical office in the area of price statistics, the availability and quality of data, resource constrains etc.. **It is also recommended** that while compiling distributive trade indices countries use seasonally adjusted series when appropriate and available. Sections B below provide some additional recommendations with respect to the indices of turnover and the output of distributive trade services.

B. Indices of wholesale and retail trade turnover

8.9. *Turnover value index.* The turnover value index is a direct index that compares the value of turnover in the current period (at current prices) with the value of turnover in

the base year (at base year prices). This index can be calculated for both retail and wholesale trade and its components.

8.10. *Turnover volume index.* The turnover volume index, especially the volume of retail trade turnover, is one of the most closely monitored series. In order to eliminate the price effect on turnover, it has to be deflated. In principle, the deflator of turnover should be a price index representative of the particular distributive trade activity class and reflecting price changes in the goods sold rather than the trade services provided. As proxies for such deflators **it is recommended** to use the retail price indices (RPI) and wholesale price indices (WPI) or consumer price indices (CPI) and producer price indices (PPI). The price deflator for a given activity should be calculated as a weighted average of the price indices for the relevant category of goods sold by that activity in the current period.

8.11. In order to compile the turnover volume indices at the higher levels of section G of ISIC, Rev.4, the indices at the lowest level have to be aggregated. This aggregation is done by using weights based on turnover share of each activity in the base year. For example, the index for Group 471 "Retail sale in non-specialized stores" is derived from all the indices of the lower level (i.e. classes included in 471). The index of Section G will be calculated by taking a weighted average of all the component divisions in the section.

8.12. *Alternative methods for measuring of turnover volume*. If appropriate price indices are not available to deflate turnover due to the difficulties in measurement of price changes or the complexity of data sources, its volume might be estimated using output volume indicators or input indicators.

(i) *Output volume indicators.* The output variables (e.g., physical quantity of goods sold) are accepted as the second best option if they represent well-defined products and are applied in sufficient level of details.

(ii) *Input indicators.* Employment is considered as one of the main input indicators, which can be used as a proxy measure of production. Although, **not recommended**, there are many situations where information on input measures is the only readily available source. In this case, it is assumed that the changes in input and output are proportional to each other. Compilers should be very cautious regarding use of estimates based on input variables.

8.13. *Turnover volume index and index of output of wholesale and retail trade.* The objective of the turnover index is to show the evolution of the market for goods and services. It should be noted, in this connection, that there are significant conceptual differences between this index and the index of output of wholesale and retail trade activities (also called 'index of production of wholesale and retail services'). The main differences are:

(i) Turnover includes sales of goods bought for resale in the same condition as received which is not considered in the indices of output of wholesale and retail trade service;

(ii) Goods produced (or purchased) and stocked before sale are included in both output and turnover, but are considered at different moments in time;

(iii) Index of output of wholesale and retail trade services takes account of changes in the quality of the trade *service* supplied.

8.14. Both indices are important in their own rights. While the volume of turnover **is recommended** for compilation within the framework of short-term statistics, the indices of output of wholesale and retail trade services are meaningfully compiled only within the framework of national accounts, preferably within the framework of supply and use tables.

8.15. The indices of output measure changes in production of services by various distributive trade activities. One of the major reasons for compilation of these indices is their use as inputs in the quarterly national accounts compilation as an appropriate estimate of short-term changes in gross value added for the wholesale and retail trade services. Therefore, in principle, they should be calculated as weighted averages of the outputs of these activities using value added weights with the assumption that the ratio of value added to output is constant in the short-run. In practice, however, the required value added data might not be available at such a detailed level for the required periods. **It is recommended**, therefore, in absence of value added, to use alternative measures for producing these indices such as volume of turnover.

CHAPTER IX. DATA QUALITY AND METADATA

A. Enhancing Data Quality of Distributive Trade

9.1. *Quality measurement of distributive trade statistics*. Data on distributive trade statistics are the end product of a complex process comprising many stages from the collection and processing of data to compilation and dissemination of statistics. Quality measurement of distributive trade statistics is concerned with providing the user with sufficient information to judge whether or not the data are of adequate quality for their intended use, i.e. to judge their "fitness for use". For example, data users must be able to verify that the conceptual framework and definitions that would satisfy their particular data needs are the same as, or sufficiently close to those employed in collecting and processing the data. Users need also to be able to assess the degree to which the accuracy of the data is consistent with their intended use or interpretation. All the measures that a statistical office takes to assure quality of statistical information constitute a quality management.

9.2. *Dimensions of quality.* **It is recommended** that the following seven dimensions of quality[35] are taken into account: relevance, accuracy, credibility, timeliness, accessibility, interpretability, and coherence. They form a broad view of quality, which focuses on whether statistical outputs meet user needs and are adapted for the purpose of the present recommendations. **It is further recommended** that national statistical offices use them when measuring and reporting the quality of distributive trade statistics:

(i) *Relevance.* The relevance of distributive trade statistics reflects the degree to which it meets the real needs of users. Therefore, measuring relevance requires identification of user groups and their needs.. The statistical office's challenge is to weigh and balance the differing needs of current and potential users to produce a program that goes as far as possible in satisfying the most important needs within given resource constraints. The indicators of relevance are the rate of available statistics and the identified gaps between key user needs and compiled distributive trade statistics in terms of coverage and details.

(ii) *Accuracy*: The accuracy of distributive trade statistics is the degree to which the data correctly estimate or describe the quantities or characteristics they are designed to measure. It has many attributes and in practice there is no a single aggregate or overall measure of accuracy. In general, it is characterized in terms of errors in statistical estimates and is traditionally decomposed into bias (systematic error) and variance (random error) components. In the case of sample surveys-based distributive trade estimates, the accuracy can be measured using the indicators: coverage, sampling errors, non-response errors, response errors, processing errors, measuring and model errors.

[35] The list and descriptions of quality dimensions are based on the OECD quality measurement framework […]

(iii) *Credibility*. The credibility of distributive trade statistics refers to the confidence that users place in those data based on the image of the statistical office or agency that produces the data. Confidence by users is built over time. One important aspect is trust in the objectivity of the data. This implies that the data are perceived to be produced professionally in accordance with appropriate statistical standards, and that policies and practices are transparent. For example, data should not be manipulated, nor their release should be timed in response to political pressure (see Box 1, Principle 2).

(iv) *Timeliness*. The timeliness of distributive trade statistics refers to the delay between the end of the reference period to which the data pertain, and the date on which the data are released. The concept of timeliness applies equally to short-term and structural data as the only difference is the timeframe. Timeliness is closely related to the existence of a publication schedule. A publication schedule may comprise a set of target release dates or may involve a commitment to release distributive trade data within prescribed time period from their receipt. This dimension is usually involved in a trade-off against accuracy. The timeliness of information also influences its relevance.

(v) *Accessibility.* The accessibility of distributive trade statistics refers to the ease with which they can be obtained from the statistical office. This includes the ease with which the existence of information can be ascertained, as well as the suitability of the form or the media of dissemination through which the information can be accessed. The aspects of accessibility are also the availability of metadata and the existence of user support services. Accessibility requires development of an advance released calendar (see para […]) so the users will be informed well in advance on when the data will be available, where and how to access them.

(vi) *Interpretability*. The interpretability of distributive trade statistics reflects the ease with which the user may understand and properly use and analyze the data. The adequacy of the definitions of concepts, target populations, variables and terminology, underlying the data, and information describing the limitations of the data, if any, largely determines the degree of interpretability. The metadata provided along with distributive trade statistics play a crucial role for improving interpretability of data. They should inform the users on how close to the target variable (for example any of the data items) the input variables used for their estimation are. When there is a significant difference, it should be explained to what extent this may cause a bias in the estimation of data items.

(vii) *Coherence.* The coherence of distributive trade statistics reflects the degree to which the data are logically connected and mutually consistent, i.e. they can be successfully brought together with other statistical information within a broad analytical framework and over time. The use of standard concepts, classifications and target populations promotes coherence, as does the use of common methodology across surveys. Coherence does not necessarily imply full numerical consistency. Coherence has four important sub-dimensions:

(a) *Coherence within a dataset* implies that the elementary data items are based on compatible concepts, definitions, and classifications and can be meaningfully combined;

(b) *Coherence across datasets* implies that the data are based on common concepts, definitions and classifications, or that any differences are explained and can be allowed for;

(c) *Coherence over time* implies that the data are based on common concepts, definitions, and methodology over time, or that any differences are explained and can be allowed for;

(d) *Coherence across countries* implies that the data are based on common concepts, definitions, and methodology over time, or that any differences are explained and can be allowed for.

9.3. These dimensions of quality are overlapping and interrelated and as such form a complex relationship. An action taken to address or modify one aspect of quality will tend to affect other elements of quality. For example, there may be a trade-off between aiming for the most accurate estimation of the total annual turnover of trade units, and providing it in a timely manner when this information is still of interest to the users. **It is recommended** that countries handle this particular trade-off by producing a provisional estimate which is available soon after the end of the reference period but which is based on less comprehensive data content. This estimate is supplemented at a later date with information that is based on more comprehensive data content but which is less timely than its provisional version.

9.4. The measurement of distributive trade statistics data quality is not a simple task. The problems arise from the difficulties in quantifying the level of individual dimensions and in aggregating the levels of all dimensions. By reason of these deriving a single quantitative measure of quality for distributive trade statistics is not possible. In the absence of such a single measure countries **are encouraged** to use a system of quality indicators (see the section B below) and develop their own distributive trade statistics quality framework based on the above mentioned dimensions and the specific circumstances in their economies and to regularly issue quality reports as part of their metadata. The quality framework allows for a practical approach to providing data that meet different users' needs, while the provision of quality information will allow users to judge for themselves whether a dataset meets their particular quality requirements. **It is recommended** that a quality review of distributive trade statistics be undertaken every four to five years or more frequently if significant methodological changes or changes in the data sources occur.

B. Quality indicators versus direct quality measures

9.5. *Quality measures.* Quality measures are defined as those items that directly measure a particular aspect of quality. For example, the time lag from the reference date to the release of particular distributive trade statistics is a direct quality measure. However, in practice many quality measures can be difficult or costly to calculate. Instead quality indicators can be used in quality measurement.

9.6. *Quality indicators*. Quality indicators are summarized quantitative data that provide evidence about the quality or standard of the data produced by national and international statistical agencies. They are linked to the achievement of particular goals or objectives. Unlike ordinary raw statistics, quality indicators are generally conceptualized as having some reference point and as such, can assist with making a range of different types of comparisons.

9.7. Quality indicators usually consist of information that is a by-product of the statistical process. They do not measure quality directly but can provide enough information for the assessment of a quality. For example, in the case of accuracy it is almost impossible to measure non-response bias as the characteristics of non-responders can be difficult and costly, to ascertain. In this instance, response rate is often used as a proxy quality indicator which provides a measure of the possible extent of non-response bias.

9.8. *Defining quality indicators.* When countries define the quality indicators for distributive trade statistics **it is recommended** that they satisfy the following criteria: (i) cover part or all of the dimensions of quality as defined previously; (ii) the methodology for their compilation is well established; and (iii) the indicators are easy to interpret.

9.9. *Types of quality indicators*. According to their importance the quality indicators can be classified as:

(a) *Key indicators* that ought to fulfil the criteria in para. 9.8. Examples of key quality indicators are the coefficient of variation, measuring the accuracy of distributive trade statistics obtained through sample surveys and the time lag between the end of the reference period and the date of first release of data, measuring the timeliness of distributive trade statistics;

(b) *Supportive indicators* that fulfil the criteria in para. 9.8. in the sense that they are considered important as indirect measures of the data quality. Such an indicator, for example, is the average size of revisions between provisional and final estimates of particular data set which measures the accuracy of distributive trade statistics;

(c) *Indicators for further analysis* which are subject to further examination and discussion of statistical offices. After a careful analysis of statistical office capabilities and available resources, for example, some countries may decide to conduct a user satisfaction survey and calculate a user satisfaction index for measuring the relevance of distributive trade statistics.

9.10. **It is recommended** that careful attention is paid by the countries to maintain a correct balance between different dimensions of quality and use of a minimum number of indicators. The objective of quality measurement is to have a limited set of indicators that can be used to measure and follow over time the quality of the distributive trade data produced by the statistical office and that the users are provided with a useful summary of overall quality, while not overburdening respondents with demands for unrealistic amounts of quality metadata.

9.11. *Minimum set of quality measures/indicators*. The table below provides a limited set of key indicators to be used on a regular basis for measuring quality of distributive trade statistics. They are easy to be implemented and give users a clear and up to date overview of the overall quality of distributive trade statistics. .

Quality dimension	Quality measures/indicators
Relevance	R1. Identification of known gaps between key user needs, in terms of coverage and detail, and current data
Accuracy	A1. Coefficient of variation A2. Unit response rate A3. Item response rate
Credibility	**[to be developed, if there are any appropriate indicators]**
Timeliness	T1. Time lag between the end of the reference period and the date of their first release/release of final results
Accessibility	AC1. Number of publications disseminated and/or sold AC2. Number of accesses to databases
Interpretability	I1. Rates of compliance of concepts and measurement procedures used with the relevant international statistical standards
Coherence	CO1. Comparison of estimates with information from other data sources for the same data item

C. Metadata on distributive trade statistics

9.12. *Content of statistical data*. Generally, statistical data consists of the following:

(a) *Microdata* - data on the characteristics of units of a population, such as establishments, collected by a census or a survey;

(b) *Macrodata* - data derived from micro data by grouping or aggregating them, such as total number of establishments or total value added;

(c) *Metadata* - data which describe the micro data, macro data or other metadata.

9.13. *Metadata*. The term metadata defines all information used to describe other data. A very short definition of metadata then is "data about data". Metadata descriptions go beyond the pure form and contents of data. They are used to describe administrative facts about data (who creates them, and when), how data were collected and processed before they were disseminated or stored in a database. In addition, metadata facilitate efficient searching and locating of data.

9.14. *Statistical metadata*. Statistical metadata describe or document statistical data, i.e. microdata, macrodata or other metadata. They facilitate sharing, querying, and understanding of statistical data over the lifetime of the data. They also refer to any methodological descriptions on how data are collected and manipulated. For distributive trade statistics data items for example, metadata include the name of the data item, the unit from which the information is collected, data sources, information about classifications used and series breaks, definitions and methodologies used in their compilation. Metadata are essential for the interpretation of statistical data. Without appropriate metadata, it would not be possible to fully understand statistical data.

9.15. *Metadata and quality.* There is a bidirectional relationship between metadata and quality. On the one hand, metadata describe the quality of statistics. On the other hand, metadata are themselves a quality component, which improves the availability and accessibility of statistical data.

9.16. *Users and uses of metadata.* There are many types of user and uses for any given set of data. The wide range of possible users and uses means that a broad spectrum of metadata requirements has to be addressed. In particular the statistical offices as data suppliers must make sufficient metadata available to enable the least and the most sophisticated users to assess data and their quality readily. **It is recommended** that segmentation of users into groups and a layered approach to metadata presentation be accepted by countries, in which each successive layer provides more detail. As a minimum segmentation, the following two levels of metadata **are recommended**:

(i) *Structural metadata* presented as an integral part of the data tables;

(ii) *Reference metadata* providing details on the content and quality of data that may accompany the tables or be presented separately via the Internet or in occasional publications.

9.17. *Use of metadata to promote international comparability of data*. Metadata provide a mechanism for comparing national practices in the compilation of statistics. This may help and encourage countries to implement international standards and to adopt best practices in the compilation of particular area of statistics. Better harmonization of approaches adopted by different countries will improve general quality and coverage of key statistical indicators.

9.18. *Purposes of distributive trade statistics metadata*. The most fundamental purpose of metadata is to help users of distributive trade statistics to interpret, understand, and analyze the data, even if they have not themselves participated in the process of production of these data. In other words, distributive trade statistics metadata should help users to transform statistical data into information. Distributive trade statistics metadata help also producers of statistics. The new knowledge gained from interpreting the data may also lead to both production (lower the costs and improving the data quality) and dissemination (dissemination of comprehensive, timely, accessible, and reliable data) enhancements.

9.19. *Dimensions of metadata*. In view of disseminating comprehensive distributive trade statistics their corresponding metadata should include the following six main dimensions – (i) data coverage, periodicity, and timeliness; (ii) access by the public; (iii) integrity of the disseminated data; (iv) quality of the disseminated data; (v) summary methodology; and (vi) dissemination format. Each of these dimensions is characterized with a few monitorable elements that can be observed, or monitored, by the users of statistics.

9.20. Countries **are encouraged** to accord development of metadata a high priority and to consider their dissemination an integral part of dissemination of distributive trade statistics. Moreover, **it is recommended** that in consideration of the integrated approach to compilation of economic statistics development of a coherent system and a structured approach to metadata across all areas of economic statistics be adopted, focusing on improving their quantity and coverage ***[pending, reference to SDMX Content-oriented guidelines]***.

9.21. Various international organizations such as the IMF, Eurostat and the OECD have developed metadata standards and collected metadata for different areas of statistics. By using the dimensions of the IMF Special Data Dissemination Standard (SDDS) as a basis, an example of a metadata in SDDS format to be used for the purpose of distributive trade statistics will be elaborated and presented in the future *Distributive Trade Statistics: Compilers Manual*.

CHAPTER X. DISSEMINATION

A. National reporting

10.1. *Data dissemination*. Data dissemination is one of the key activities in which the national statistical offices are involved. It is a way of providing the policy makers, business community and other users with high quality statistical information and also, it is a way of motivating respondents to participate in statistical surveys. If national statistical offices have the legal power to collect and disseminate statistical information, they also have the obligation to protect confidentiality of respondents.

10.2. *Statistical confidentiality*. Most of the information about individual statistical units classified in section G of ISIC, Rev.4 which is directly collected by statistical offices or obtained from other sources, such as administrative sources, is considered to be confidential. Statistical confidentiality is necessary in order to gain and keep the trust of both - those required to respond to statistical surveys and those using the statistical information.

10.3. The sixth United Nations Fundamental Principle of Official Statistics (see Box 1) provides the basis for managing the statistical confidentiality.

> "Individual data collected by statistical agencies for statistical compilation, whether or not they refer to natural or legal persons, are to be strictly confidential and used exclusively for statistical purposes."

10.4. Legal provisions governing statistical confidentiality at national level are set out in the countries Statistical Laws or other supplementary government regulations. National definitions of confidentiality and rules for microdata access may differ, but they should be consistent with this fundamental principle. This is especially relevant for countries where the distinction between statistical and non-statistical use of microdata does not have a long tradition, or are not laid down in any legislation. **It is recommended** that the protection of confidentiality be mandatory for all surveys and dissemination of distributive trade data.

10.5. *Confidential data*. Distributive trade data that are disseminated by the national statistical offices are considered confidential when they allow statistical units to be identified either directly or indirectly and thereby disclosing individual information. To determine whether a statistical unit is identifiable, account shall be taken of all means that might reasonably be used by a third party to identify it.

10.6. *Forms of confidentiality*. There are two forms of confidentiality of distributive trade data – primary and secondary:

(i) *Primary confidentiality*. Distributive trade data are primary confidential if their dissemination would permit the identification of the data for a particular statistical unit.

(ii) *Secondary confidentiality.* It concerns distributive trade data which are not primary confidential, but whose dissemination, when combined with other data permits the identification of a unit.

10.7. *Methods of protecting confidentiality*. The most common practices to protect the disclosure of primary confidential data include:

(i) *Aggregation*. Primary confidential heading is aggregated with another heading and then the information is disseminated for the aggregate and not for the two individual headings. This, for example, often results in grouping of distributive trade data which are confidential at the class level of ISIC with another class and present and disseminate them at the group level of ISIC.

(ii) *Suppression*. Suppression means removing records from a database that contains confidential data. Suppressing one class of ISIC for example means that the calculation of totals for the higher levels of ISIC to which that class belongs cannot be calculated.

10.8. In cases when countries prefer suppression as a method for protecting confidentiality of distributive trade data, **it is recommended** that any data deemed confidential be reported in full detail at the next higher level of classification that adequately protect confidentiality, if data are presented by activities, or higher level of aggregation for any other characteristics.

10.9. *Confidentiality of complex enterprises.* **It is recommended** that countries take careful measures to respect the confidentiality in case of large trade enterprises. In general, large units are more easily identifiable than small ones and have higher probability for being selected in trade surveys. When the contribution of such a unit dominates the total of certain activity class or data item, even if the rules for primary confidentiality are respected, its data are possible to be deduced due to a secondary confidentiality.

10.10. **It is recommended** that in respecting confidentiality of trade data, countries adopt the following commonly accepted rules – (i) a tabulation cell should comprise at least 3 units; and (ii) for cells with large numbers, the three units with the largest values should not together dominate the cell value, i.e. should not account for more than 70 per cent of it. In individual cases this rule may be relaxed by requesting the permission of the dominating respondent(s) to authorize the statistical office to disclose the data.

10.11. *Statistical Disclosure Control*. Statistical disclosure control techniques are defined as the set of methods to reduce the risk of disclosing information on individual trade units. Such methods are only related to the dissemination step and are usually based

on restricting the amount of or modifying the data release. Disclosure control methods attempt to find an optimal balance between the improvement in confidentiality protection and the reduction in data quality. Different types of data pose different types of confidentiality problems and inevitably require different solutions. On the basis of available international guidelines[36] in this area, countries **are encouraged** to develop their own statistical disclosure methods suiting best their specific circumstances.

10.12. *Internationalization of confidentiality.* The issue of confidentiality has not only a national dimension. It is also becoming an international issue, for the following reasons – (i) increase of data dissemination over the internet; (ii) internationalization of users of statistical data (including international organization); and (iii) high interest in cross-country comparisons. As a result, there is a growing demand for countries data at very detailed level, even in some cases – demand of countries microdata.

10.13. Data collected and disseminated by international organizations depend to a large degree on the quality and completeness of the data supplied by the countries. This flow of data can be impeded by the national confidentiality rules that made it impossible for countries to transmit some of the data requested. **It is recommended** that countries do not impose the confidentiality rules more strict than the rules indicated in para. 10.10 above.

10.14. *Data dissemination timetable.* In producing statistical information there is usually a trade-off between the timeliness with which the information is prepared and the accuracy and level of detail of the published data. A crucial moment, therefore, for the well established relations between national statistical offices as producers of distributive trade statistics and the user community is devising an appropriate compilation and release schedule. Countries **are encouraged** to develop and announce in advance the precise dates at which distributive trade statistics will be released. The advance release calendar should be posted in beginning of each year at the country's statistical office website.

10.15. The most important elements that should be taken into account in determining the compilation and release schedule of distributive trade statistics include:

(a) Timing of collection of initial data from major distributive trade surveys;
(b) To what extent data derived from the major data sources are subject to revisions;
(c) Timing of preparation of important national economic policy documents that need distributive trade data as inputs;
(d) Modes of data dissemination (press release, electronic or hard copy).

10.16. Timeliness of release of initial monthly, quarterly and annual distributive trade data varies greatly from country to country, mainly reflecting different perspectives on the timeliness-reliability-accuracy trade-off. In keeping with sound statistical practices, countries **are encouraged** to release their initial monthly data by the end of the following

[36] Principles and Guidelines for Managing Statistical Confidentiality and Microdata Access, Statistical Commission, 38th session (http://unstats.un.org/unsd/statcom/sc2007.htm)

month, quarterly data - three months after the end of the quarter, and their annual data – nine months after the end of the year. **It is recommended** that monthly and quarterly data refer to a discrete month or quarter. Most countries use a separate system for compilation of annual distributive trade statistics. In this case the data for the fourth quarter (respectively twelfth month) need to be published in their own right, and not derived as a difference between the annual totals and the sum of the first three quarters (or eleven months).

10.17. *Data revisions.* Revisions are an essential part of countries practices on compilation of distributive trade statistics. They occur as a consequence from the trade-off between the timeliness of published data and their reliability, accuracy and comprehensiveness. To solve these issues statistical offices compile provisional data that later are revised when new and more accurate information become available. Although, in general, repeated revisions may be perceived as reflecting negatively on the reliability of official distributive trade data, the attempt to avoid them by producing accurate but very untimely data will result in failing to satisfy the users' needs. It is important to emphasize that the revisions of distributive trade data are conducted for the benefit of users, namely, to provide them with data that are as timely and accurate as possible. The revisions affect both annual and short-term distributive trade statistics but they are more significant for the short-term data.

10.18. *Reasons for revisions of data.* In general, there are two reasons for revisions - (i) revisions due to "normal" statistical procedures (for instance new information available, change in the methodology, change of base year); and (ii) revisions due to the correction of errors. For normal statistical data revisions (the so called current revisions) countries should developed revision policy. At any moment of time statistical offices may decide to carry out a special revision in addition to the normal statistical data revisions for reasons of re-assessing the data or investigating in depth some new economic structures. Such revisions are carried out at longer, irregular intervals of time. Often they may require changes in the time series to be taken back as far as the beginning of the series to keep the methodological consistency. **It is recommended** that these revisions are subject to prior information from the countries statistical offices to users that covers the reasons and the information on the impact of the revisions on the data.

10.19. *Revision policy*. To deal with the issues surrounding revisions of distributive trade data countries **are encouraged** to develop a well-designed, carefully managed and coordinated with other areas of statistics revision policy. The development of a revision policy should not aim at impeding revisions but rather it should aim at providing users with the necessary information to cope with revisions in a more systematic manner. The absence of coordination and planning of revisions is considered a quality problem by users. Essential features of a well-established revision policy are its predetermine schedule, reasonable stability from year to year; openness; advance notice of reasons and effects; easy access of users to sufficiently long time series of revised data as well as adequate documentation of revisions included in the statistical publications and databases.

10.20. The OECD Handbook on Data and Metadata Reporting and Presentation[37] provides description of good practices for data revisions which are broadly consistent with the Fundamental Principles of Official Statistics[38]. They include:

(i) Consultations with users elicit views about revisions practices;

(ii) A clear, short summary statement of when to expect revisions and why is readily accessible to users;

(iii) The current revision cycle is relatively stable from year to year;

(iv) Major conceptual and methodological revisions are usually introduced every four to six years, balancing need for change and users' concern;

(v) Revisions are carried back several years to give consistent time series;

(vi) Documentation on revisions is readily available to users;

(vii) Users are reminded of the size of the likely revisions based on past history;

(viii) When a mistake in reporting or processing is made, the revision is made in a transparent and timely manner.

10.21. *Dissemination formats.* A key to the usefulness of distributive trade statistics is the availability of data and hence its extensive dissemination. Data can be disseminated both electronically (on-line or on CD-ROMs) and in paper publications. **It is recommended** that countries choose the dissemination format that suits their users' needs best. For example, press releases of distributive trade statistics have to be disseminated in ways that facilitate re-dissemination by mass media; more comprehensive or detailed statistics have to be disseminated in paper and/or electronic formats. If resources permit, current statistics and longer time series can be organized and accessed (free of charge or for a fee) through the electronic databases maintained by the statistical office. In addition to statistics routinely disseminated, statistical offices can make available to users distributive trade data upon request. For some specific purposes customized tabulations of data (non-standard activity classification, specific types of units etc.) can be provided. **It is recommended** that countries make well known to users the availability of additional statistics and the procedures for obtaining them.

10.22. *Dissemination of metadata*. Provision of an adequate metadata and quality assessment of distributive trade statistics is as important to users as provision of data. Countries **are encouraged** to follow the recommendations provided in chapter *IX. Data quality and metadata on distributive trade statistics* and develop and disseminate

[37] Data and Metadata Reporting and Presentation Handbook, OECD, 2007, Chapter 7.

[38] See *Fundamental Principles of Official Statistics* (http://unstats.un.org/unsd/methods/statorg/FP-English.htm) [other]

metadata comprising the following components: (i) coverage, periodicity and timeliness of data; (ii) access by the public; (iii) integrity; (iv) data quality; (v) summary methodology; and (vi) dissemination formats (see Annex […]. **It is recommended** that countries indicate in the metadata all deviations from internationally accepted statistical standards and guidelines. **It is also recommended** that distributive trade statistics metadata are made readily accessible through statistical offices websites and/or publications. Countries may consider development of different levels of metadata detail so to meet the requirements and needs of specialized users[39].

10.23. The following table provides the minimum list of data items on distributive trade statistics recommended for national dissemination with annual periodicity.

Data item	Level of details	Form (minimum requirements)	Deadlines
Number of enterprises	[to be discussed by the EG on DTS] Example: Broken down by activity, legal status, size class	[to be discussed by the EG on DTS] Example: Three-digit level of ISIC, Rev. 4	[to be discussed by the EG on DTS] Example: 9 months after the end of the reference period
Number of establishments			
Output			
Turnover			
Gross margin			
Value added (at basic prices)			
Total purchases of goods and services			
Purchases of goods and services for resale in the same conditions as received			
Gross fixed capital formation			
Changes in stocks of goods and services			
Changes in stocks of goods and services purchased for resale in the same			

[39] For more details on data and metadata reporting see *"Data and Metadata reporting and presentation Handbook", OECD, 2007*

condition as received			
Total number of persons employed			
Total number of employees			
Hours worked			
Compensation of employees			
Wages and salaries			
Employers' Social insurance contributions			

10.24. The following table provides the minimum list of data items on distributive trade statistics recommended for national dissemination with quarterly periodicity.

Data item	Level of details	Form (minimum requirements)	Deadlines
Output	[to be discussed by the EG on DTS] Example: Broken down by activity	[to be discussed by the EG on DTS] Example: Two-digit level of ISIC, Rev.4	[to be discussed by the EG on DTS] Example: 3 months after the reference quarter
Turnover			
Value added (at basic prices)			
Investment			
Total number of persons employed			
Total number of employees			
Wages and salaries			
Hours worked			
Volume of sales			

10.25. The following table provides the minimum list of data items on distributive trade statistics recommended for national dissemination with monthly periodicity.

Data item	Level of details	Form (minimum	Deadlines

		requirements)	
Wholesale and retail trade turnover indices (value and volume)	Broken down by activity	[to be discussed by the EG on DTS] Example: Three-digit level of ISIC, Rev.4	[to be discussed by the EG on DTS] Example: 1 month after the reference period

B. International reporting

10.26. Countries **are encouraged** to make available on their websites or disseminate to international users all distributive trade statistics data disseminated nationally with monthly, quarterly and annual periodicity.

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ANNEXES

ANNEX I. List of data items for use in distributive trade statistics

Code[40]	Data items
1	**Statistical units**
1.1	Identification code
1.2	Location
1.3	Period of operation
1.4	Type of economic organization
1.4.1	Single-establishment enterprise
1.4.2	Multi-establishment enterprise
1.5	Type of ownership and legal organization
1.5.1	Publicly owned
1.5.1.1	By central government
1.5.1.2	By state government
1.5.1.3	By local government
1.5.2	Privately owned
1.5.2.1	National
1.5.2.1.1	Unincorporated (household) enterprises
1.5.2.1.1.1	Informal sector enterprises
1.5.2.1.2	Incorporated except limited liability partnerships and co-operatives
1.5.2.1.3	Co-operatives and limited liability partnerships
1.5.2.2	Foreign controlled
1.6	Size
1.7	Kind of activity
1.8	Type of operation
1.8.1	Wholesale trade
1.8.1.1	Wholesale trade on own account
1.8.1.1.1	Specialized wholesale trade
1.8.1.1.2	Non-specialized wholesale trade
1.8.1.2	Commission trade
1.8.2	Retail trade
1.8.2.1	Retail trade in stores
1.8.2.1.1	Specialized stores
1.8.2.1.2	Non-specialized stores
1.8.2.2	Retail trade not-in stores
1.8.2.2.1	Retail trade via stall or markets
1.8.2.2.2	Others

[40] Preliminary coding only for the purpose of this draft and for making easy reference throughout the text.

1.9	Number of enterprises
1.9.1	Multi-establishment enterprises
1.9.1.1	Number of establishments
1.9.2	Single establishment enterprises
2	**Employment**
2.1	Total number of persons employed
2.1.1	Working proprietors
2.1.2	Unpaid family workers
2.1.3	Employees
2.1.3.1	Employees engaged in research and development
2.1.3.2	Employees engaged in development of software and databases
2.1.4	Homeworkers on the pay-roll
2.1.5	Total number of persons employed in informal sector
2.1.5.1	Employees in the informal sector
2.1.5.2	Other persons employed in the informal sector
2.2	Average number of persons employed
2.2.1	Average number of employees
2.3	Number of leased employees
3	**Hours worked**
3.1	Number of hours worked
4	**Compensation of employees**
4.1	Wages and salaries of employees
4.1.1	Employees engaged in research and development
4.1.2	Employees engaged in development of software and databases
4.2	Employers' social insurance contributions
5	**Turnover, sales, shipments, receipts or other revenues (excluding property income)**
5.1	Turnover
5.1.1	E-commerce sales
5.1.2	Gift cards sales
5.2	Accounts receivable
6	**Purchases of goods and services**

6.1	Purchases of energy, goods and materials for business use
6.1.1	Energy products (gas, fuel and electricity)
6.1.2	Goods and materials
6.1.3	Materials for own-account fixed assets and major construction
6.1.4	Water
6.1.5	Other purchases of goods and materials
6.2	Purchases of services for business use
6.2.1	Repair and maintenance
6.2.2	Postal and telecommunication services
6.2.3	Transport services
6.2.4	Advertising and marketing services
6.2.5	Contract and commission work
6.2.5.1	Fees paid for the leased employment
6.2.6	Rental payments
6.2.6.1	Rental payments for machinery and equipments
6.2.6.2	Rental payments for dwellings and structures
6.2.7	Non-life insurance premiums payable on establishment property
6.2.8	Computer services
6.2.9	Other operating costs
6.2.9.1	Accounting and bookkeeping services
6.2.9.2	Managing and consulting services
6.2.9.3	Legal services
6.2.9.4	Financial services (excluding interest payments)
6.2.9.5	Staff travel (in the country and abroad)
6.2.9.6	Contributions to business and professional associations
6.2.9.7	Newspaper and periodical subscriptions
6.2.9.8	Other
6.2.10	Cost of selling
6.3	Purchases of goods and services for resale in the same conditions as received
6.3.1	Fuels bought for resale without further processing
6.3.2	Purchases of motor vehicle and motor cycle parts used solely in repair and servicing activities
6.3.3	All other goods bought for resale without further processing
6.3.4	Services purchased for resale without further processing

7	**Inventories**
7.1	Total inventories
7.1.1	Change in stocks of materials and supplies
7.1.2	Change in stocks of goods and services purchased for resale in the same condition as received
7.1.3	Change in stocks of work in progress
7.1.4	Change in stocks of finished products
7.2	Method of inventories valuation
8	**Taxes and subsidies**
8.1	Taxes
8.1.1	Other taxes on production
8.2	Subsidies received
8.2.1	Subsidies on products
8.2.2	Other subsidies on production
9	**Output**
10	**Gross margin**
11	**Intermediate consumption**
12	**Value added**
13	**Operating surplus**
14	**Gross Fixed Capital Formation**
14.1	Gross value of fixed assets (at acquisition costs) at the beginning of the period
14.1.1	Dwellings
14.1.2	Other buildings and structures
14.1.3	Machinery and equipment
14.1.3.1	Transport equipment
14.1.3.2	ICT equipment
14.1.3.3	Other machinery and equipment
14.1.4	Intellectual property products
14.1.4.1	Mineral exploration and evaluation
14.1.4.2	Computer software and databases
14.1.4.3	Research and development
14.1.4.4	Entertainment, literary and artistic originals
14.1.4.5	Other

14.2	Capital expenditure on new and used fixed assets (acquisitions) during the period (by type of asset 14.1.1 to 14.1.4)
14.3	Gross value of fixed assets sold, retired and scrapped (disposal) during the period (by type of asset 14.1.1 to 14.1.4)
15	**Investment in land**
16	**Depreciation**
17	**Performance indicators**
17.1	Common core performance indicators
17.1.1	Value added growth
17.1.2	Output per person employed
17.1.3	Value added per person employed
17.1.4	Value added per hour worked
17.1.5	Share of distributive trade in GDP/total GVA
17.1.6	Share of DTS employment in the total employment of the economy
17.1.7	DTS employment growth
17.1.8	Profitability ratio
17.2	Specific to distributive trade core performance indicators
17.2.1	Turnover at constant prices
17.2.2	Retail Trade /Wholesale Trade Turnover Index
17.2.3	Turnover per person employed
17.2.4	Share of e-commerce sales in total turnover
17.2.5	Gross margin as a percent of turnover
17.2.6	Inventories-to-turnover ratio
17.3	Additional performance indicators of distributive trade
17.3.1	Percentage chare of turnover to retail traders
17.3.2	Percentage chare of turnover to professional users (wholesalers, others)
17.3.3	Percentage chare of turnover to final consumers
17.3.4	Percentage chare of purchases from wholesalers and purchasing groups
17.3.5	Percentage chare of purchases from producers
17.3.6	Sales per retail sales space
17.3.7	Number of retail stores
17.3.8	Number of fixed marked stands and/or stalls
17.3.9	Average sales space per one retail store

ANNEX II. List of activities excluded from the scope of the relevant distributive trade divisions and classes

The following activities are considered as either transformation of goods or as not being part of the relevant distributive trade divisions and classes and *are excluded*:

1. Division 45 – Wholesale and retail trade; repair of motor vehicles and motorcycles:

- retail sale of automotive fuel and lubricating or cooling products
- renting of motor vehicles or motorcycles

ISIC, Rev.4 class	Excluded activities
4510	• *wholesale and retail sale of parts and accessories for motor vehicles, see 4530* • *renting of motor vehicles with driver, see 4922* • *renting of trucks with driver, see 4923* • *renting of motor vehicles and trucks without driver, see 7710*
4520	• *retreading and rebuilding of tyres, see 2211*
4530	• *retail sale of automotive fuel, see 4730*
4540	• *wholesale of bicycles and related parts and accessories, see 4649* • *retail sale of bicycles and related parts and accessories, see 4763* • *renting of motorcycles, see 7730* • *repair and maintenance of bicycles, see 9529*

2. Division 46 – Wholesale trade, except of motor vehicles and motorcycles:

- wholesale of motor vehicles, caravans and motorcycles, as well as motor vehicle accessories (see division 45)
- renting and leasing of goods (see division 77)
- packing of solid goods and bottling of liquid or gaseous goods, including blending and filtering, for third parties (see class 8292)

ISIC, Rev.4 class	Excluded activities
4610	• *wholesale trade in own name, see groups 462 to 469* • *activities of commission agents for motor vehicles, see 4510* • *auctions of motor vehicles, see 4510* • *retail sale by non-store commission agents, see 4799* • *activities of insurance agents, see 6622* • *activities of real estate agents, see 6820*
4620	• *wholesale of textile fibres, see 4669*

4630	• *blending of wine or distilled spirits, see 1101, 1102*
4641	• *wholesale of jewellery and leather goods, see 4649* • *wholesale of textile fibres, see 4669*
4649	• *wholesale of blank audio and video tapes, CDs, DVDs, see 4652* • *wholesale of radio and TV broadcasting equipment, see 4652* • *wholesale of office furniture, see 4659*
4651	• *wholesale of electronic parts, see 4652* • *wholesale of office machinery and equipment, (except computers and peripheral equipment), see 4659* • *wholesale of computer-controlled machinery, see 4659*
4652	• *wholesale of recorded audio and video tapes, CDs, DVDs, see 4649* • *wholesale of consumer electronics, see 4649* • *wholesale of computers and computer peripheral equipment, see 4651*
4659	• *wholesale of motor vehicles, trailers and caravans, see 4510* • *wholesale of motor vehicle parts, see 4530* • *wholesale of motorcycles, see 4540* • *wholesale of bicycles, see 4649* • *wholesale of computers and peripheral equipment, see 4651* • *wholesale of electronic parts and telephone and communications equipment, see 4652*
4662	• *wholesale of metal scrap, see 4669*
4663	• *collection of household and industrial waste, see group 381* • *treatment of waste, not for a further use in an industrial manufacturing process, but with the aim of disposal, see group 382* • *processing of waste and scrap and other articles into secondary raw material when a real transformation process is required (the resulting secondary raw material is fit for direct use in an industrial manufacturing process, but is not a final product), see 3830* • *dismantling of automobiles, computers, televisions and other equipment for materials recovery, see 3830* • *shredding of cars by means of a mechanical process, see 3830* • *ship-breaking, see 3830* • *retail sale of second-hand goods, see 4774*

3. Division 47 – Retail trade, except of motor vehicles and motorcycles:

(i) sale of farmers' products by farmers (see division 01)
(ii) manufacture and sale of goods, which is generally classified as manufacturing in divisions 10-32
(iii) sale of motor vehicles, motorcycles and their parts (see division 45)
(iv) trade in cereal grains, ores, crude petroleum, industrial chemicals, iron and steel and industrial machinery and equipment (see division 46)
(v) sale of food and drinks for consumption on the premises and sale of takeaway food (see division 56)
(vi) renting of personal and household goods to the general public (see group 772)

ISIC,	Excluded activities

Rev.4 class	
4711	• *retail sale of fuel in combination with food, beverages etc., with fuel sales dominating, see 4730*
4721	• *manufacturing of bakery products, i.e. baking on premises, see 1071*
4730	• *wholesale of fuels, see 4661* • *retail sale of fuel in combination with food, beverages etc., with food and beverage sales dominating, see 4711* • *retail sale of liquefied petroleum gas for cooking or heating, see 4773*
4741	• *retail sale of blank tapes and disks, see 4762*
4751	• *retail sale of clothing, see 4771*
4753	• *retail sale of cork floor tiles, see 4752*
4759	• *retail sale of antiques, see 4774*
4761	• *retail sale of second-hand or antique books, see 4774*
4764	• *retail sale of video game consoles, see 4741* • *retail sale of non-customized software, including video games, see 4741*
4771	• *retail sale of textiles, see 4751*
4774	• *retail sale of second-hand motor vehicles, see 4510* • *activities of Internet auctions and other non-store auctions (retail), see 4791, 4799* • *activities of pawn shops, see 6492*
4781	• *retail sale of prepared food for immediate consumption (mobile food vendors), see 5610*
4799	• *delivery of products by stores, see groups 471-477*

ANNEX III. Identifying the principal activity of a reporting unit using the top-down method within wholesale and retail trade

EXAMPLE

A reporting unit may carry out the following activities:

Section	Division	Group	Class	Description of the class	Share of value added (percentage)
G	46	465	4651	Wholesale of computers, computer peripheral equipment and software	10
	47	474	4741	Retail sale of computers, peripheral units, software and telecommunications equipment in specialized stores	8
			4742	Retail sale of audio and video equipment in specialized stores	15
		475	4759	Retail sale of electrical household appliances, furniture, lighting equipment and other household articles in specialized stores	4
		476	4761	Retail sale of books, newspapers and stationary in specialized stores	3
			4762	Retail sale of music and video recordings in specialized stores	12
		479	4791	Retail sale via mail order houses or via Internet	35
N	77	772	7722	Renting of video tapes and disks	13

The principal activity is then determined as follows:

Step 1. Identify the section

Section G	Wholesale and retail trade; repair of motor vehicles and motorcycles	**87**
Section N	Administrative and support service activities	13

Step 2. Identify the division (within section G)

Division 46	Wholesale trade, except of motor vehicles and	10

	motorcycles	
Division 47	Retail trade, except of motor vehicles and motorcycles	**77**

Step 3. Identify the group (within division 47)

Step 3a. Identify store or non-store trade (within division 47)

Groups 471-477	Retail trade in stores	**42**
Groups 478-479	Retail trade not in stores	35

Step 3b. Identify specialized or non-specialized trade (within groups 471-477)

Recalculate shares of value added relative to total retail trade:

4741	= 8% / 77%	10
4742	= 15% / 77%	19
4759	= 4% / 77%	5
4761	= 3% / 77%	4
4762	= 12% / 77%	16

Only four classes account for a share of 5% or more. Therefore the unit is classified to specialized retail sale.

Step 3c. Identify the group (within specialized retail trade)

Group 474	Retail sale of information and communications equipment in specialized stores	**23**
Group 475	Retail sale of other household equipment in specialized stores	4
Group 476	Retail sale of cultural and recreation goods in specialized stores	15

Note: To identify the largest share, it does not matter if the original or recalculated figures for value added are being used.

Step 4. Identify the class (within group 474)

Class 4741	Retail sale of computers, peripheral units, software and	8

	telecommunications equipment in specialized stores	
Class 4742	Retail sale of audio and video equipment in specialized stores	15

The principal activity is therefore **4742: Retail sale of audio and video equipment in specialized stores**.