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Mini-Presentation

**Developing SPPI
For Wholesale Trade
In Israel**

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Introduction

This paper deals with developing a price index for wholesale trade in Israel. This index is an additional step in the process of developing price indices for service and trade industries.

The structure of the paper is according to what is recommended by the Voorburg Group and forms the basis for its presentation at the 23rd Voorburg Group meeting in Aguascalientes, Mexico.

Development of specific service sector price indices began in Israel in 2003, as an extension of the existing PPI system for estimating price changes in the production sector. It was decided to focus initially on the primary industry of "Business Activities". During the years since 2003, price indices have been developed for legal, accounting and bookkeeping, architectural, investigation and security services and cleaning of buildings; and are in a process for developing an index for advertising.

Developing a price index for wholesale trade started in 2008 so we are only in our initial steps of developing the index. Wholesale trade is very important in the Israeli economy; in 2006 wholesale trade accounted for 17.7 percent of revenue in all industries - NIS 206.8 billion (about US\$ 46 billion).

The current methodology for adjusting revenues to price movements in wholesale trade, and for computing in constant prices, is by using different price indices; foreign trade indices for imports and exports, wage indices, price index excluding fruit and vegetables and a price index for private vehicles and their maintenance.

The main objective in developing a price index for wholesale trade at a 3-digit level is to provide a better alternative for deflation.

The coverage of the index is merchant wholesalers that take title to the goods they sell. The Israeli version of the ISIC Rev 3 does not make a distinction between wholesale on a fee or contract basis and merchant wholesale on own account. The share of agents and brokers is relatively small in Wholesale Trade in Israel

At the first stage we focused on Group 512 of the ISIC, Rev. 3 (Group 510 of the Israeli version).

Group 512 - Wholesale of agricultural raw materials, live animals, food, beverages and tobacco - which is the most important group in terms of revenues in wholesale trade.

1. Definition of the service being priced

“Wholesale trade” can be defined as the resale (without transformation) of goods from manufacturer to a local third party: retailers; industrial, commercial, institutional or professional users; or other wholesalers, or involves acting as an agent or broker in buying goods for, or selling goods to, such persons or companies. The principal types of businesses included are merchant wholesalers, i.e. wholesalers who take title to the goods they sell.

This industry comprises establishments primarily engaged in wholesaling merchandise and providing related logistics, marketing and support services. The wholesaling process is generally an intermediate step in the distribution of merchandise; many wholesalers are therefore organized to sell merchandise in large quantities to retailers, and business and institutional clients. However, some wholesalers, in particular those that supply non-consumer capital goods, sell merchandise in single units to final users. (NAICS: 41)

Wholesale trade includes domestic wholesale trade as well as international wholesale trade (import/export).

Merchant wholesalers generally take title to the goods that they sell; in other words, they buy and sell goods on their own account.

Merchant wholesale establishments also include the individual sales offices and sales branches (but not retail stores) of manufacturing and mining enterprises that are specifically set up to perform the sales and marketing of their own products.

Wholesalers perform one or more of the following functions:

Spotting - Looking for new suppliers of goods and new transaction at low prices

Assortment building – expanding the basket of goods and the variety of products

Quality control – investing in laboratory tests and ensuring local and international standards relating to distribution, warehousing and transporting

Bulk breaking and packaging –wholesalers buy big quantities and break them into small quantities. They also use various packaging, according to the type of customer – individual or institutional

Marketing – wholesale can give sale promotion, planning, advertising and media services to the supplier.

Warehousing – wholesalers hold inventory, thereby reducing the inventory costs and risks to suppliers and customers

Transportation – wholesalers often have a distribution logistic - they have their own trucks or work with independent transporters on a regular basis

The Israeli index is established on the basis of industries and includes only trade activity by firms classified in the wholesale trade. Trade activity by firms classified in other industries is not included. The sample frame is the sample for the Survey of Trade and Services and the business register. The sample of approximately 300 establishments was selected according to the principal activity and by stratifying the sample frame by 4- digit ISIC heading and then by size according to minimum size criteria (cut-off sampling).

2. Unit of measure

The unit of measure depends on the product being wholesaled (product group or specific kind of product); the most common unit of measure is per item. The product characteristics are the main factors in the definition of the service, other important factors are: additional services, customer and supplier types, source country for imported goods and the size of the transaction.

3. Market condition and constraints

(i) Size of industry

Businesses involved in the wholesale trade industry are classified under Division 51 of the Israeli version of ISIC Rev. 3.

In 2007 wholesale trade accounted for 17.7 percent of revenue in all industries – NIS 225 billion (approximately US\$ 55 billion) and 22,733 dealers¹. This industry is currently growing

Table 1 summarizes Revenue, number of companies and output in millions of NIS. According to the 2005 Survey of Trade and Services, Group 510 “Wholesale of agricultural raw material, live animals, food, beverages and tobacco” is the biggest in terms of revenue and number of companies. In terms of output, Group 515 “Wholesale of machinery and equipment” is the most important.

¹ Dealers and revenues of economic industries, 2007 according to value added tax

Table 1: Revenues, Output and Number of Companies, ISIC Rev. 3 Division 51 “Wholesale Trade” in 2005²

NIS Million (average exchange rate from NIS to US Dollar in 2005 = 4.4878)

Code of Israeli ISIC	Code of ISIC Rev. 3	Description	Number Of Companies	Output	Revenue
510	512	Wholesale trade of agricultural raw materials, live animals, food, beverages and tobacco	5,571	10,285	52,019
511		Wholesale trade of textiles, clothing and footwear articles	2,279	2,077	5,671
512	513	Wholesale trade of household goods	4,855	8,724	32,105
513	514	Wholesale trade of raw and non-agricultural materials intermediate products	2,146	5,705	42,932
514		Wholesale trade of building, electric and plumbing materials	2,453	3,417	13,175
515	515	Wholesale trade of machinery, equipment and their parts	3,859	12,178	38,961
516, 518	519	Mixed Wholesale and Other wholesale trade	2,038	1,702	7,433
Total 51			23,201	44,087	192,296

Origin and destination of goods in Wholesale trade

As can be seen from Table 2, import of goods is very significant in wholesale trade. In 2005 imports amounted to NIS 48,240 million (approximately US\$ 10,741 million), approximately 25% of all revenues in that industry. Export of goods is relatively small

² Excl diamonds

in wholesale trade and amounted to approximately 7,766 NIS (approximately US\$ 1,730 million) only 4.0 percent of overall revenues in that industry. Values of import and export is taken from International trade in goods.

**Table 2: Import and Export of goods in ISIC Rev.
3. Division 51 “Wholesale Trade” in 2005³**

NIS Million (exchange rate to US Dollar = 4.4878)

Code of Israeli ISIC	Code of ISIC Rev. 3	Description	Import (C.I.F)	Export (F.O.B)
510	512	Wholesale trade of agricultural raw materials, live animals, food, beverages and tobacco	6,077	1,453
511		Wholesale trade of textiles, clothing and footwear articles	2,181	234
512	513	Wholesale trade of household goods	8,401	760
513	514	Wholesale trade of raw materials and non agricultural intermediate products	10,778	3,165
514		Wholesale trade of building, electric and plumbing materials	2,486	193
515	515	Wholesale trade of machinery, equipment and their parts	15,563	1,382
516, 518	519	Mixed Wholesale and Other wholesale trade	2,757	579
Division 51 Total -			48,249	7,766

This industry is relatively concentrated. According to data from “Dealers and revenue of economic industries 2006”, only 3.5 percent of dealers in wholesale trade have annual revenues of NIS 40 million or more, and they accounted for 69.8 percent of the entire revenue of the industry.

Another 3.5 percent of all dealers have annual revenues of NIS 20-40 million, and accounted for 9.0 percent of all revenues.

³ Excl. diamonds

At the other end of the scale 49.5 percent of dealers have annual revenues of up to NIS 1 million, which constitutes only 1.7 percent of the entire annual revenue of companies classified in wholesale trade.

Table 3: Size Group of Annual Revenues of Dealers, ISIC Rev. 3, Division 51 Wholesale trade, 2007

Percentages

Size group	40+	20-40	10-20	5-10	1-5	Up to 1
Revenue	69.8	9.0	7.4	5.0	7.1	1.7
Dealers	3.5	3.5	5.6	7.4	30.5	49.5

(ii) Special conditions or restrictions

In reference to Code 512 - Wholesale of agricultural raw materials, live animals, food, beverages and tobacco:

Israel is a tiny market and as such, is influenced by fluctuations in prices of goods in the global market of the product group (Board of Trade).

Most companies in the Israeli market import goods in foreign currencies and sell them in the local currency, so margin prices can be affected just from changes in exchange rates, but according to the companies and the experience of collecting prices, companies make adjustments to significant changes in exchange rates so that gross margin is not affected. For example in times of Revaluation of the local currency against the U.S Dollar (increase in the value of the local currency) they increase the discounts for customers for those products.

Competition is intense and there is an increase in the number of wholesale companies and importers of goods, due to low import barriers and less restrictions on the import of food. As a result, profit margins are becoming tighter.

There is an ongoing process of mergers between companies. There are 4 huge companies in the Israeli food market that are manufacturers of food and also import food products, operating both as manufacturers and wholesalers through the business they own. Those companies have great market power to bargain with suppliers and reduce prices.

On most agricultural and food products there are taxes and restrictions on imports. Also, in recent years there has been a tendency to reduce the rates of duties on products that are not manufactured locally.

Companies must have a license to import, subject to laboratory tests and international quality standards.

Import of food products to Israel is under the supervision of various institutions, which assure they conform to the standards and regulations of Jewish law.

(iii) Record-keeping practices

Data needed for SPPI for the wholesale trade are prices of both kinds:

- 1) Price of acquisition from the supplier
- 2) Selling price to the buyer

Both are average prices that are the results of dividing revenues and quantities for various kinds of definitions.

Usually companies have data on revenues and quantities of specific types of products, or product groups, for a particular customer or customer group. There are some cases where acquisition prices are less available than selling prices, but measuring only selling prices requires making the assumption that selling and buying prices have similar behavior.

Prices on a transaction level are an alternative to average prices.

But there are some issues that need further attention:

Selling prices should correspond to buying prices in order to reflect the actual gross margin. But in practice, selling can be delayed; companies can hold stocks, buy products and sell them after some time. Sometimes they can make a profit just from holding stocks. That is especially true for agricultural raw materials where the prices of goods rise over long periods of time (for example: wheat, corn, iron, etc.). Sometimes wholesalers have long-term agreements in constant prices, when selling to customers in the institutional market, manufacturers or chain stores. In these cases they buy big quantities of the product at the time of order, and supply them during the period of agreement at constant prices.

4. Standard classification structure and detail

The various classifications give detailed information and descriptions of wholesale trade services and the products being traded

Both the ISIC and CPC classifications make a clear distinction between wholesale trade on a fee or contract basis, and wholesale trade based on taking title of the products.

According to **ISIC Rev 3.1, Division 51 Wholesale trade and commission trade, except of motor vehicles and motorcycles** includes resale (sale without transformation) of new and used goods to retailers, to industrial, commercial, institutional or professional users, or to other wholesalers; or acting as agent in buying merchandise for, or selling merchandise to, such persons or companies; activities of wholesale merchants, jobbers, industrial distributors, exporters,

importers, co-operative buying associations, merchandise and commodity brokers, commission merchants and agents and assemblers, buyers and cooperative associations engaged in the marketing of farm products.

This division also includes: assembling, sorting and grading of goods in large lots, breaking bulk, repacking and bottling, redistribution in smaller lots, e.g. pharmaceuticals; storage, refrigeration, delivery and installation of goods on own account. Also includes packing of solid goods and bottling of liquid or gaseous goods, including blending and filtering on own account.

This Division is divided into the following Groups:

511 - Wholesale on a fee or contract basis

512 - Wholesale of agricultural raw materials, live animals, food, beverages and tobacco

513 - Wholesale of household goods

514 - Wholesale of non-agricultural intermediate products, waste and scrap

515 - Wholesale of machinery, equipment and supplies

519 - Other wholesale

The classification provides details on each 4 digit sub-group and explanatory note; for example, for Class 5122 - Wholesale of food, beverages and tobacco.

This class includes: Wholesale of fruit and vegetables, wholesale of dairy products, wholesale of eggs and egg products, wholesale of edible oils and fats of animal or vegetable origin, wholesale of meat and meat products, wholesale of fishery products, wholesale of sugar, chocolate and sugar confectionery, wholesale of bakery products, wholesale of beverages, wholesale of coffee, tea, cocoa and spices, wholesale of tobacco products. This class also includes: buying of wine in bulk and bottling without transformation, wholesale of feed for pet animals.

According to the Israeli version of the ISIC Rev 3. There is no distinction made between wholesale on a fee or contract basis and merchant wholesale that take title to the goods.

ISIC Rev. 4, Division 46 “Wholesale trade, except of motor vehicles and motorcycles includes wholesale trade on own account, or on a fee or contract basis (commission trade).

This classification takes additional steps. It relates to (a) the distinction between commission and own-account trade, and (b) the distinction between specialized and non-specialized trade.

Division 46 “Wholesale trade, except of motor vehicles and motorcycles” divides into:

Group 461 Class 4610 Wholesale on a fee or contract basis

Group 462 Class 4620 Wholesale of agricultural raw materials and live animals

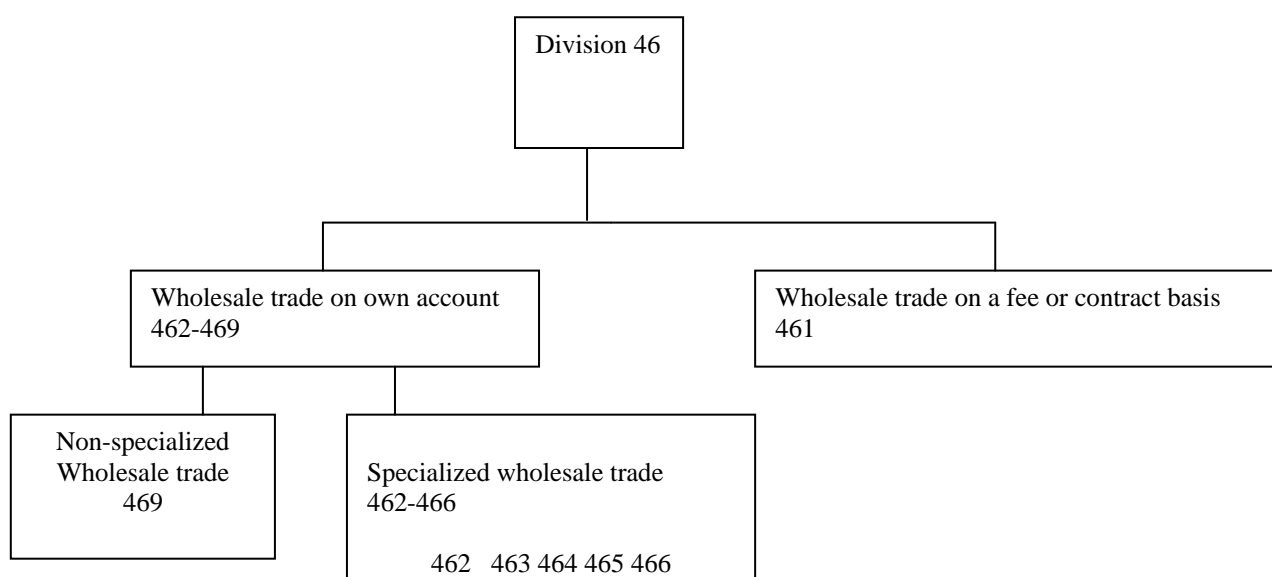
Group 463 Class 4630 Wholesale of food, beverages and tobacco

Group 464 Wholesale of household goods Class 4641 Wholesale of textiles, clothing and footwear and Class 4649 Wholesale of other household goods

Group 465 Wholesale of machinery, equipment and supplies Class 4651 Wholesale of computers, computer peripheral equipment and software, Class 4652 Wholesale of electronic and telecommunications equipment and parts, Class 4653 Wholesale of agricultural machinery, equipment and supplies and Class 4659 Wholesale of other machinery and equipment

Group 466 Other specialized wholesale Class 4661 Wholesale of solid, liquid and gaseous fuels and related products, Class 4662 Wholesale of metals and metal ores, Class 4663 Wholesale of construction materials, hardware, plumbing and heating equipment and supplies and Class 4669 Wholesale of waste and scrap and other products n.e.c.

Group 469 Class 4690 Non-specialized wholesale trade



According to **CPC Version 1. 611 “Wholesale trade services, except on a fee or contract basis”**

6111- Wholesale trade services except on a fee or contract basis, of agricultural raw materials and live animals

6112 - Wholesale trade services, except on a fee or contract basis, of food, beverages and tobacco

6113 - Wholesale trade services, except on a fee or contract basis, of textiles, clothing and footwear

6114 - Wholesale trade services, except on a fee or contract basis, of household appliances, articles and equipment

6115 - Wholesale trade services, except on a fee or contract basis, of miscellaneous consumer goods

6116 - Wholesale trade services, except on a fee or contract basis, of construction materials and hardware

6117 - Wholesale trade services, except on a fee or contract basis, of chemical and pharmaceutical products

6118 - Wholesale trade services, except on a fee or contract basis, of machinery, equipment and supplies

6119 - Wholesale trade services, except on a fee or contract basis, of other products

This classification gives more details on the 5-digit level; for example: for the subgroup 6112 - Wholesale trade services, except on a fee or contract basis, of food, beverages and tobacco

61122 - Wholesale trade services, except on a fee or contract basis, of dairy products, eggs and edible oils and fats

61123 - Wholesale trade services, except on a fee or contract basis, of meat, poultry and game

61124 - Wholesale trade services, except on a fee or contract basis, of fish and other seafood

61125 - Wholesale trade services, except on a fee or contract basis, of sugar confectionery and bakery products

61126 - Wholesale trade services, except on a fee or contract basis, of beverages

61127 - Wholesale trade services, except on a fee or contract basis, of coffee, tea, cocoa and spices

61128 - Wholesale trade services, except on a fee or contract basis, of tobacco products

61129 - Wholesale trade services, except on a fee or contract basis, of food products

5. Evaluation of standard vs. definition and market condition

In addition to the definition given by the various classifications to the product being traded, it is important to define the additional services that are given by the wholesale trade company, such as marketing and sales promotion, packaging and labeling, warehousing and others. Those services affect the selling price and the gross margin. It is also important to make the distinction between resale of imported goods and resale of domestic goods; usually there are more services required for imported goods, because of the distance from the customers.

6. National accounts concepts and measurement issues

The use of margin prices is consistent with the national accounts conventions that define the output of wholesale trade in terms of margins on commodities traded. The output of the wholesale trade industry is defined as the difference between the value of the goods sold that are own by the business and the value of goods purchased for purpose of sale (in addition of commission fees received for good sold in the case of wholesale trade on a fee basis). The commodities themselves are not considered wholesale output. The output also include income from other commercial activities and services.

According to SNA recommendations output also covers services that an establishment provides to other units of the same enterprise. These transactions are

reflected in turnover data, but with regard to prices this becomes a question, because in this case prices do not always reflect market conditions and they are potentially transfer prices. Transfer prices are defined in the 1993 SNA as "affiliated enterprises may set prices of transactions among themselves artificially high or low, in order to effect an unspecified income payment or capital transfer.

For example, a unit that is classified in "wholesale trade" buys products from import and sells them to another unit of the same enterprise, that engages in manufacturing for further processing. Prices in this case do not fully reflect the true value of the goods being transacted, and the difference between the selling price and the buying price does not fully reflect the real gross margin.

In most cases there are outside transactions, in addition to those internal transactions where market prices can be measured.

For the needs of National account PPI for wholesale trade should include export transaction, but it is difficult to estimate export services in that industry and to separate them from the export of goods. According to Balance of Payments and national accounts statistics, merchant and other related services covers commission on goods and service transaction between resident merchants (agents and brokers, dealers) and nonresidents and also payments to subsidiaries units of a nonresident enterprise that provide wholesale trade service to the parent enterprise abroad. Distributive services by merchant wholesalers that take title to the goods they sell are included in the values of international trade in goods, not in services.

7. Pricing methods

The prices of services provided by merchant wholesalers are measured by gross margins. The gross margin is a combination of two different parts: one is the acquisition price from the supplier (local manufacturer or international supplier) and the other is the selling price to the next buyer. The gross margin is the difference between them. Following are some cases:

- (i) The average gross margin per unit for a particular customer class and/or supplier class for all sales within a product group.
- (ii) The average gross margin per unit for a particular customer class or supplier class for a specific kind of product.
- (iii) The average gross margin for all customers and/or suppliers for all sales of a particular product
- (iv) The average gross margin for all customer and/or suppliers for all sales of a product group

8. Quality adjustment methodology

Quality adjustment methodologies are needed when the quality of the products being traded change, the composition of additional services change or transaction variables change.

Price-determining components include:

Product information –

The type of product purchased and sold, because the cost of the product is the main variable for the acquisition price and selling price.

Additional services that are added to the product are important variables, the margin will be lower if only distribution services is given and will be higher if a bundle of services is accompanying such as marketing, commerce and others.

In distribution and warehousing services the physical size and weight of the product is important, because the cost of those services is higher if the product hold more place.

Transaction information-

The type of customer and the type of supplier

The source country for imported goods

The size of the transaction in terms of volume

By pricing average margins, constant quality is maintained and no further adjustments are necessary.

9. Evaluation of comparability with turnover/output measures

Data on turnover are based on reports to VAT authorities. Monthly Revenue indices for trade are based on reports to the Vat authority and the Annual Survey of Trade And Services for estimating outputs and the distribution of inputs is based on the annual financial reports submitted to the income tax authorities. The classification of the surveys is the same as for the PPI (ISIC Rev 3.) Units are classified according to the primary activity at the 4-digit level. The unit of measure is the establishment. This is important because companies in wholesale trade can be composed of several businesses engaged in different activities and operate in different industries (manufacturing, trade etc').

The frame for both turnover data and SPPI is the Business Register. The SPPI is a sub-sample of the sample of the Survey of Trade and Services.

Summarized turnover data are available at the 4-digit class level. To determine revenue data below the class level (for weighting purposes), data obtained from companies in the sample of the PPI during the visits was used.

Timing – revenue indices for trade and services are published monthly and the survey of trade and services is annual. The periodicity of PPI for services and trade is quarterly.

10. Summary

Wholesale Trade is very important in the Israeli economy. Developing SPPI for that industry will provide a suitable deflator for revenues in that industry and improve the presentation of national account in constant prices. Developing a price index for wholesale trade started in Israel in 2008, an additional step in the expansion of PPI to the services and trade industries. At the first stage we focused on Group 512 (ISIC Rev. 3) “- Wholesale of agricultural raw materials, live animals, food, beverages and tobacco”.

Wholesale trade on own account is defined as the resale (without transformation) of goods from manufacturer to a third party: retailer; industrial, commercial, institutional or professional users; or to other wholesalers. Wholesale trade related to domestic wholesale trade as well as international wholesale trade (import/export). Companies engaged in wholesale merchandise provide related logistics, marketing and support services.

The various classifications give detailed information on wholesale trade services and the products being traded.

The prices of services provided by merchant wholesalers are measured by gross margin. Gross margin is a combination of two different parts: one is the acquisition price from the supplier (local manufacturer or international supplier) and the other is the selling price to the next buyer. The gross margin is the difference between them. Both are average prices that are the outcome of dividing revenues and quantities for different kinds of definition:

Prices on a transaction level are an alternative to average prices.

Price-determining components include product information, such as the type of product purchased and sold, and additional services that are added to the product, as well as transaction information, such as the type of customer and the type of supplier, and the size of the transaction in terms of volume.

By pricing average margins, constant quality is maintained and no further adjustments are necessary.

