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Simultaneous compilation of current and constant prices in supply and use tables

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Remarks:
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SIMULTANEOUS COMPILATION OF CURRENT AND CONSTANT PRICES IN SUPPLY AND USE TABLES

Summary: Fifteen years ago, Statistics Netherlands started experimenting compiling simultaneously input/output tables in both current and constant prices. The first tables (of the industry by industry type) were rather limited of scale (200 x 100). In later years, the system developed into a full fledged set of supply and use tables describing 250 industries by 800 products.

This system has a maximum of transparency as it makes optimal use of the data available. The main advantages of a simultaneous compilation of current prices and volume data is the use that can be made of the interrelation between the two. During the entire statistical process - from the processing and analysis of the basic data up and including the balancing of the supply and use tables - data in current prices and deflated data are obtained simultaneously and in consistency with each other.

This paper focuses on the choices that have been made in the past to arrive at the current system and possible improvements.

Keywords: national accounts - simultaneous compilation - constant prices - supply and use tables

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1. Introduction

Volume changes of macro-economic indicators are by far the most important data that national accountants produce. GDP growth is the measure stick of the success of economic policy: one percent more or less growth of GDP normally makes the headlines of the national newspapers.

By contrast, this emphasis on the volume changes of the economy by main users of the national accounts is only partially reflected in the main sources statisticians use to compile their data. In most cases, *current* price information on business accounts, consumer and government spending and foreign trade are at the basis of the national accounts calculations. More extensive surveying by adding questions on *quantities* is not very popular as it raises the administrative burden of enterprises. So national accountants are faced with the challenge to make good estimates on the basis of incomplete and sometimes even poor source data.

Up until fifteen years ago, at Statistics Netherlands we followed the same procedures as most countries did at the time: the integration of national accounts data was performed in current prices with a rough deflating procedure afterwards to establish volume changes. But with so much emphasis from the outside world on volume changes, it seemed inevitable to develop ways to improve these estimates.

In the early ’eighties, Statistics Netherlands started to make simultaneously balanced Input/Output tables in both current prices and prices of the year before. The aim was to arrive at better estimates for volume as well as current price estimates. As the experiences with this change in procedure were positive, some five years later the system was upgraded by moving to a detailed set of supply and use tables as the main integration framework.

This paper gives an overview over our experiences during the past fifteen years. Its main purpose is to give an insight into the practical workings of the integration process of supply and use tables in both current and constant prices. The theoretical background of the type of indices and the use of chain indices can be found in other papers by Statistics Netherlands (see references).

The second paragraph of this paper gives a description of the Dutch experience in the implementation of supply and use tables integration framework in which current and constant prices are simultaneously integrated. Attention is paid to the system design and the main working procedures. A real life example of a simultaneously balanced set of data can be found in paragraph 3. Although we are confident of the quality of the current working procedures, some important improvements are still possible. These improvements relate to the differences between deflated values and actual volume information (paragraph 4). The last paragraph contains some concluding remarks.

2. The Dutch experience

Up until the early ’eighties, the integration of national accounts data at Statistics Netherlands was performed in current prices with a rough deflating procedure afterwards to establish volume changes. With the final estimate of the year 1981, Statistics Netherlands started experimenting compiling simultaneously Input/Output tables in both current and constant prices. The first tables (of the industry by industry type) were of a rather limited scale (200 x 100), but the method proved nevertheless to be an effective way to estimate good quality volume and current price changes.

One of the main problems in this compilation process was the lack of homogeneity in a detailed industry by industry I/O table. By implication this means that in principle each cell has to be broken down in its main products to calculate a set of correct deflators and thus correct volume measures. So, the second improvement swiftly followed the first: with the revision of 1987, the system developed into a full fledged set of supply and use tables describing 250 industries by 800 products. This set became the main integration framework with the traditional industry by industry Input/Output tables as an important side product.

In the development of the system and its current operations at least five important themes can be distinguished: the design of the system, the choice of index formulae, data collection, adjusting to national accounts standards, and balancing. In the next part of this paragraph these themes are amply discussed.

2.1 The system design

Probably the most difficult problem to be solved in implementing a supply and use framework is to find a balance between detail and overview. In other words, how to decide on an optimal number of columns (imports, output and use by domestic activities and final expenditure) and rows (product groups).

The choice of the number of products should be at least based on five important criteria:

- a good match with international product classifications (HN for data on international trade and CPA for European data dissemination);
- homogeneity of VAT and other taxes;
- availability of data of sufficient quality;
- sufficient “magnitude”; and
- homogeneity of price changes.

In some cases, a sixth criterion comes into play: the homogeneity in destination (intermediate consumption or final expenditure).

The reasoning behind these six criteria is mostly self-evident. An important factor is the European. Not only is all data dissemination to the European Union standardised by European law (CPA), national accounts data has also become an important measuring stick for contributions from member states to the EU. This explains the importance of homogeneity with respect to VAT and other taxes. VAT calculations are used to determine the contribution according to the Third Resource of the financing of the European Union.

Although the criterion of availability of good quality data and the homogeneity with respect to the destination of the goods seem quite straightforward in its implementation, it is in fact rather more "subtle". In the Netherlands - as in most countries -, the information on supply and use is not evenly balanced. Data for foreign trade and domestic output are available in far more detail than most data on the use side of the economy. The item "other costs" on the profit and loss account of enterprises is a well known example of the lack in detail on the use side.

It seems thus the easiest choice to take the level of detail at the use side as the standard. This, however, will in many cases lead to a great loss of information. Let's take the example of construction and the manufacturing of construction materials. It has always been very difficult to obtain detailed data of good quality on the uses of construction (small enterprises, sub-contracting etc.). The output of the manufacturing of building material is far easier to measure in great detail. Most of its output is destined to construction; only a small fraction can be part of consumption of households. It is clear that the choice of detail in the products produced by the manufacturing of building material will influence the quality of the estimates of intermediate consumption by the construction industry. In fact, the composition of the intermediate consumption by construction is mainly derived from the composition of the output of the manufacturing of building material. Estimates on consumption of households both in current and constant prices are also improved, because in a detailed description most building material product groups can be safely assumed as to be only relevant to construction industry input.

Of course, no classification can completely satisfy all these features. This would imply a table of several thousands of products. So, a seventh criterion comes into play: overview. The integration process should be as efficient as possible: the number of product groups used in the integration process should not surpass "normal human capabilities". In the Dutch case several revisions of the product group classification have in all cases led to a number of around 800.

The classification of domestic activities and types of final expenditure is mostly limited by the availability of data and the impossibility to compile a consistent and detailed description of very small activities. As in the Dutch supply and use tables 1 million guilders is the smallest value accepted, it can easily be seen that uses like

for items being part of other business costs will either turn out to be zero or will "forever" be estimated as 1 or 2 million.

In the Dutch case this has led to a choice for 250 activities. As information on manufacturing industry is rather more detailed than data on most services industries, information on manufacturing in the supply and use tables is somewhat more specific. Another reason for this amount of detail lies in the fact that in manufacturing even closely related activities (according to official classifications) can produce very different products with very different input structures.

Last but not least, the automation of the system is essential. The computer plays a number of different roles. First, it should produce a quick and clear overview to detect the major integration problems. Secondly, it should allow to search efficiently in the deepest details to find the cause of these problems and possible solutions.

Moreover, many calculations involved in a rather detailed system have to be performed automatically; for example the calculation of trade and transport margins by user to calculate an industry by industry Input/Output table or VAT by product etc., etc..

As in the Netherlands, preliminary estimates are compiled in the same supply and use framework (though at the more at aggregated of 120 industries by 300 product groups) much of the data has to be automatically generated. Intermediate consumption by product groups is the classic example.

2.2 The choice of index formulae

Part of the design of the system is the choice of index formulae to be used in the integration framework. From a practical point of view, two requirements should be imposed on the index number formulae to be used in compiling constant price data:

- additive consistency
- value index = price index * volume index (factor reversal)

In an accounting framework like the supply and use table, additivety simplifies the balancing of the system. All consistency checks which are valid in current prices hold also at constant prices.

The factor reversal requirement means that the value index is completely split up in a volume part and price part. Nothing is lost.

The SNA'93 favours Fisher's Ideal Index, because of its close approximation of the theoretical superlative index formulae like the Tornqvist en Vartia. Disadvantage of the Fisher is that it is demanding in its data requirements, and that its results are not easy to be interpreted and, last but not least, not additively consistent. This means that the Fisher index is not applicable in an accounting framework where additivety

is an important issue. A way out is the use of a combination of Paasche price indices and Laspeyres volume indices. It can be easily proved that this combination of indices fulfils the requirements mentioned above.

Another issue in constant price estimation is the choice of the base year. The SNA'93 favours the use of a moving base year. In practice this means that t-1 will be the base year. The advantages are clear:

- an actual weighting scheme provides better estimates of growth rates;
- introduction of new goods will be simplified;
- disappearance of goods will be simplified;
- no burdensome rebasing of time series.

Applying several types of index number formulae using the detailed supply and use data of the Netherlands, shows that Paasche and Laspeyres chain volume indices in general provide a close approximation of Fisher's Ideal Index (see De Boer et al., 1998).

In case of a moving base year, the index formulae used, are:

$$\textit{Paasche price index:} \qquad PI_{t,t-1} = \frac{\Sigma P_t * Q_t}{\Sigma P_{t-1} * Q_t}$$

$$\textit{Laspeyres volume index:} \qquad VI_{t,t-1} = \frac{\Sigma P_{t-1} * Q_t}{\Sigma P_{t-1} * Q_{t-1}}$$

2.3 Data collection

Available data in the Netherlands does not basically differ from data in many other OECD countries.

Main source for industry output estimates are annual production statistics. These give rather detailed information on the products sold. In manufacturing these data is even surveyed on a quarterly basis. The information on intermediate consumption differs very much between activities: data on manufacturing industry being far more detailed than most other industries. Most of this information is in current prices.

Some parts of the economy are not covered by annual statistics; these activities are estimated in an alternative way - for example by gathering data on employment, compensation of employees or data from professional associations. In these cases,

the use side of their accounts has to be estimated by using data from comparable activities.

A special example is agriculture. Here, the compilation process starts from volume data. As one of the consequences of European agricultural policy, measurement of volume data is far more developed than that of financial data.

Information on foreign trade of goods according to international regulation is abundant, but because of European unification less reliable than in the past. International trade of services is a terrain on which statistics are rapidly developing.

Data on gross fixed capital formation and consumption are in current prices mostly. Surveys on gross fixed capital formation give information by destined industries. Statistics on manufacturing industries are rather detailed and even give some information on the capital stock. Household budget surveys and retail sales statistics are important sources for the consumption estimate.

Available price data include consumer prices, producers' prices of goods and foreign trade unit values and prices. Price information on services is - like in most countries - currently part of discussion and research.

2.4 Adjusting to national accounts standards

Inside the National Accounts Department the source data is transformed to be usable in a supply and use framework. The main transformations in current prices are adjusting for incomplete surveys, for the black economy, for continuity, for definition differences between commercial and national accounts bookkeeping, and, finally, for the classifications of the supply and use table.

An important step in this transformation procedure is the estimation of data in prices of the previous year. These constant price estimates are in most cases based on the deflating the current price information.

Data on the production of goods can be fairly easily deflated by using the available information on producers' prices. Price data on services has been under discussion for some years now. Currently, Statistics Netherlands is undertaking a major operation to improve these data - partly in co-operation with Eurostat. The deflation of imports is also somewhat more hazardous; unit values that come with foreign trade statistics are only of limited use. In the Netherlands, use can be made of separate price on imports.

On the uses side of the economy, consumer price information is abundantly available. Constant price intermediate consumption is calculated by using weighted output prices. Deflation of formation of fixed capital formation, exports and government consumption is performed likewise.

At the end of this part of the estimation procedure, for every column of the supply and use table a complete picture is available. For every activity, output and intermediate use is described in terms of the 800 product groups of the integration

framework; not only in current prices but also in prices of the previous year. The same holds for imports and final expenditure.

For every entry in the supply and use table, the information can be presented in the following scheme:

Scheme 1. Available data

description		*data*	
t at current prices	price index	215	102.4
t at prices of t-1	volume index	210	105.0
t-1 at prices of t-1	value index	200	107.5

This set of data allows the national accountant to double-check the data on consistency: even if the results in current prices look plausible, analysis of the volume and price data can show big problems. E.g. by comparing changes in the volume of output by industry with that of its intermediate consumption and value added. It is quite evident that analysis in real terms is far superior when prices are changing rather rapidly. This value-price-volume analysis can lead to corrections on either of the estimated variables.

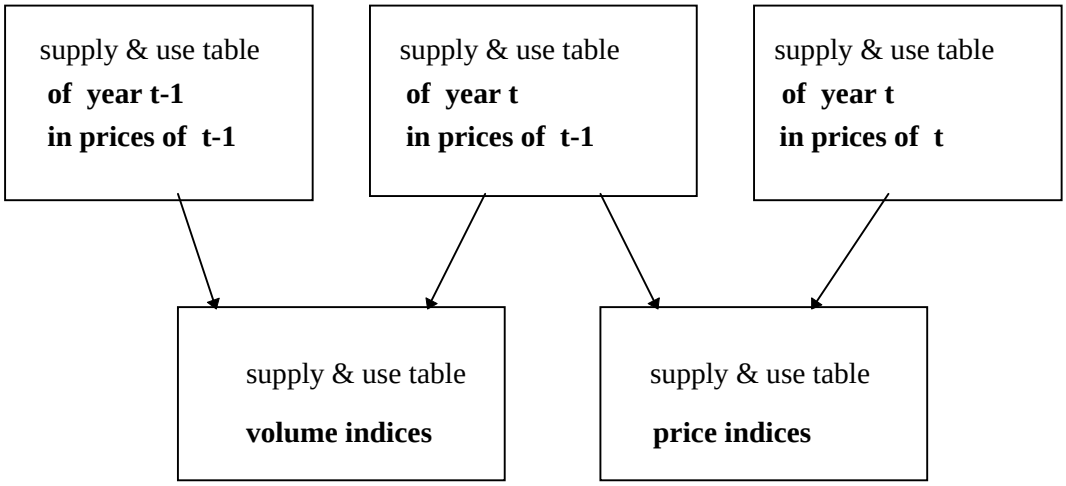
In some cases, these data can be checked with real volume data. For example, in the Netherlands, we can make use of abundant volume data on the supply and use of energy products and to some less extent of the volume of sales by product of manufacturing industry. Another example, already mentioned, is agriculture.

2.5 Balancing

The end product of the transformation process that was described in the previous paragraph is a data set that can be balanced in a supply and use framework. Just as was the case in the preceding phases of the statistical process, the balancing takes place simultaneously for the data in current prices, the data in constant prices, volume indices and price indices (scheme 2).

Differences between the estimates of the supply and the use of a product group are eliminated by adjusting elements in either the use table or the supply table. If a figure in current prices is adjusted the consequences for the corresponding figures in prices of the previous year, the volume index and the price index are examined. If a figure in constant prices is adjusted, a similar procedure takes place. In this way the plausibility of an intended correction is checked.

Scheme 2. Simultaneous balancing of a supply and use table



Price indices that are found in the various columns of the use table and the supply table for one product group are a good starting point for the analysis of the differences. These were determined independently from each other in the previous phases of the statistical process. Now they are compared and their consistency is checked. The checks can point out where corrections should be made. Some corrections will mean also corrections on important aggregates like total output or total intermediate consumption of an industry. As a consequence, value added as determined in the stages before also will change.

Simultaneous corrections of data in current and constant prices make it possible to analyse the consequences for operating surplus and for the volume change of value added at the same time; the same holds for intended corrections on final demand. If, according to the statistical experts, intended corrections on value added or final demand in either current prices or volume turn out to improbable results, alternative ways should be found to eliminate a difference. It may be expected that simultaneously balancing in current and constant prices will result in a different allocation of corrections than the balancing in only current prices.

When the balancing phase has been completed, the user of the national accounts has at his disposal a system of tables containing consistent and detailed data on values, volume changes and price changes of goods and services. In addition, this system comprises detailed information on levels and trends in primary incomes and final demand in both nominal and real terms.

3. Simultaneous balancing in practice

The annex of this paper shows a real life example of the balancing procedure. The first table shows the data on the fertiliser industry in 1996. The set is taken from a preliminary estimate in which around 200 product groups and 100 activities are

distinguished - in stead of the 800 by 250 table when estimating final data. Rather extensive descriptions of the compilation process can be found in Bos and Gorter (1993) and Van Nunspeet and Takema (1998).

The first three columns contain the starting set (Cu-p = current prices; Cn-p = constant prices; and Cu-p T-1 = current prices in year T-1), the second three columns the balancing corrections, and the third three columns the balanced results. The last three columns contain index information on volume, price and value changes.

The second set of tables gives same full information on the product fertiliser in the Dutch economy.

In this case no spectacular corrections were necessary. Output of fertiliser by the fertiliser industry was corrected upwards with a bit over 1%; its intermediate use by around 3%.

The imbalance on the row of the product fertiliser (demand exceeding supply by 83 million guilders in current prices) is solved by augmenting supply by 41 million guilders and decreasing demand by 42 million. Data in prices of the previous year are corrected accordingly.

4. Possible improvements: deflated data, quantities and volume changes

Although simultaneous balancing of current and constant prices has many advantages, some attention has to paid to its possible weaknesses. The most important of these is the possible neglect of the difference between deflated data and actually measured volume data.

Most data that underlie the national accounts data are in current prices. These data are transformed into volume information by deflating the data with price indices. This procedure implies that the assumption that prices are representatively measured: a statistically correct sample of enterprises or persons have been surveyed to obtain information on the prices of a set of goods or services that experience the same price changes as the product group(s) in the supply and use tables. In some cases, sales and price fluctuation during the year make correct price measurement very difficult (high inflation, seasonal fluctuations, etc.). Without additional checks, these well known weaknesses in price measurement may easily enter the supply and use tables.

In cases not well measured prices have an enormous impact on the volume estimates, actual quantity information (even for not completely homogeneous products; even with only provisional repair work for quality changes) can be an good alternative or at least a valuable check. In the Dutch situation, there are two main examples: agriculture and energy. In the first case quantity estimates are mainly based on kilograms, litres and numbers sold; price and value information are calculated in conjunction. For energy products, balanced statistics exist that give an

overview of supply and use in terms of quantity measures (litres, kilograms) and energy contents (PJ). These data is checked with the supply and use set.

The importance of checking the data of the supply and use table with independent quantity data can also be illustrated by the following example. Table 1 shows what happens if the rules of simultaneous balancing are applied in a situation of price discrimination. Here, applying the correct deflators the equation supply is uses will not always hold consistently for both current and constant prices.

Table 1. Deflated values and volumes

	Before balancing				**After balancing**		
	Output				**Output**		
	value	***average price***	***deflated value***	***quantity***	***value***	***deflated value***	***price index***
	(NLG 1000)	***(NLG)***	***(NLG 1000)***	***(1000's)***	***(NLG 1000)***	***(NLG 1000)***	
Year T-1	1000	10,0		100,0	1000		
Year T	1050	10,5	1000	100,0	1050	1000	
index T-1 = 100	*105,0*	*105,0*		*100,0*	*105,0*	*100,0*	*105,0*
	Domestic expenditure				**Domestic expenditure**		
	value	***average price***	***deflated value***	***quantity***	***value***	***deflated value***	***price index***
Year T-1	600	12,0		50,0	600		
Year T	650	12,2	639	53,3	650	631	
index T-1 = 100	*108,3*	*101,7*	*106,6*	*106,6*	*108,3*	*105,2*	*103,0*
	Exports				**Exports**		
	value	***average price***	***deflated value***	***quantity***	***value***	***deflated value***	***price index***
Year T-1	400	8,0		50,0	400		
Year T	400	8,6	374	46,7	400	369	
index T-1 = 100	*100,0*	*107,0*	*93,4*	*93,4*	*100,0*	*92,2*	*108,4*
	Total use				**Total use**		
	value	***average price***	***deflated value***	***quantity***	***value***	***deflated value***	***price index***
Year T-1	1000			100,0	1000		
Year T	1050		1013	100,0	1050	1000	
index T-1 = 100	*105,0*	*103,6*	*101,3*	*100,0*	*105,0*	*100,0*	*105,0*

In table 1 the value column contains information in current prices. Average prices can be found in the second column. The third column is calculated from the first two by correcting the value data for price changes. The data for total use are calculated by simple adding up domestic expenditure and exports. In the before balancing columns price indices and deflated values of domestic use and export are correctly calculated, but the resulting deflated value estimate for supply does not match the corresponding estimate for total use.

The fourth column contains quantity information on this (presumably) homogeneous good.

The three last columns give the result after balancing under the assumptions that current price data and all data on supply should not be changed and that the difference in the deflated value column should best be proportionally divided over domestic use and exports. Now, deflators give a correct picture of price changes in

this economy. Volume changes at the level of domestic use and exports are not an exact match of the real changes in volume; the last item being directly measured from the quantity information.

The main conclusion of this paragraph should be that collecting and using actual volume information can improve the quality of the compilation of the supply and use tables. Of course, in most cases changes in the quality of products make a direct use of quantity information impossible. But, with the master's eye, these data can be very valuable checking material.

4. Concluding remarks

The way the system of balancing supply and use tables is implemented in the Netherlands aimed at improving the transparency and the quality of its estimates of the main meso and macro economic data. It makes optimal use of the data available. In statistical surveys, most reporting units detail their production and intermediate uses in terms of products and in current prices. The transformation of these data at a low level of detail into set with both current and constant prices generates a solid and consistent starting set of the balancing process.

A major advantage of compiling price and volume measures within an accounting framework, such as provided by the supply and use tables, is that a check is provided on the numerical consistency and plausibility of the set of measures as a whole. Balancing of constant price supply and use tables can lead to the adjustment of current price data.

Another advantage is that price and volume measures for the important balancing items can be derived. In particular, gross value added can measured at constant prices by subtracting intermediate consumption at constant prices from output at constant prices, the so called "double deflation" method. Double deflation may be used at the level of an individual enterprise, industry or sector, or for the total economy as a whole by subtracting imports at constant prices from total final expenditure at constant prices.

Although the simultaneous compilation of current and constant prices in supply and use tables has many advantages, the procedure is not perfect. Attention should still be paid to possible differences between deflated data and real volume information. Here, quantity information can be very useful.

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Annex. Fertiliser industry and supply and use of fertilisers

Balancing Supply and Use tables

Industry overview

Year: 96 **Type of year: preliminary** **Industry 24150 Fertiliser industry**

mln guilders	Startset			Corrections			T o t a l					
	Cu-p	**Cn-p**	**Cu-p T-1**	**Cu-p**	**Cn-p**	**Cu-p T-1**	**Cu-p**	**Cn-p**	**Cu-p T-1**	**Pi**	**Qi**	**Vi**
OUTPUT												
1400000 Mining and quarrying products	86	83	88	0	0	0	86	83	88	94,3	103,6	97,7
2413000 Inorganic basic chemicals	68	66	69	-1	0	0	67	66	69	95,7	101,5	97,1
2414000 Organic basic chemicals	257	272	264	0	0	0	257	272	264	103,5	94,3	97,7
2415000 Fertilisers	1995	1829	2036	26	24	0	2021	1853	2036	91,0	109,1	99,3
2419000 Other basic chemicals	89	88	91	0	0	0	89	88	91	96,7	101,1	97,8
4010000 Electricity production and distribution	14	14	14	0	0	0	14	14	14	100,0	100,0	100,0
4020000 Gas distribution	20	20	20	0	0	0	20	20	20	100,0	100,0	100,0
7023000 Rental services of non res. buildings	21	21	21	0	0	0	21	21	21	100,0	100,0	100,0
9991310 Own account cap. form. of mach.	11	11	11	0	0	0	11	11	11	100,0	100,0	100,0
TOTAL OUTPUT	**2561**	**2404**	**2614**	**25**	**24**	**0**	**2586**	**2428**	**2614**	**92,9**	**106,5**	**98,9**

Balancing Supply and Use tables

Industry overview

Year: 96 **Type of year: preliminary** **Industry: 24150 Fertiliser industry**

mln guilders		**Startset**			**Corrections**			**T o t a l**					
		Cu-p	**Cn-p**	**Cu-p T-1**	**Cu-p**	**Cn-p**	**Cu-p T-1**	**Cu-p**	**Cn-p**	**Cu-p T-1**	**Pi**	**Qi**	**Vi**
INTERMEDIATE CONSUMPTION													
112200	Flowers and ornamental plants	2	2	2	0	0	0	2	2	2	100,0	100,0	100,0
141200	Landscape gardening	2	2	2	0	0	0	2	2	2	100,0	100,0	100,0
1110200	Natural gas	581	530	590	26	29	0	607	559	590	94,7	108,6	102,9
1400000	Mining and quarrying products	135	130	145	0	1	0	135	131	145	90,3	103,1	93,1
1800000	Wearing apparel	1	1	1	0	0	0	1	1	1	100,0	100,0	100,0
2010000	Wood	21	22	24	0	0	0	21	22	24	91,7	95,5	87,5
2030000	Wood products	2	2	2	0	0	0	2	2	2	100,0	100,0	100,0
2110000	Paper and paperboard	1	1	1	0	0	0	1	1	1	100,0	100,0	100,0
2122000	Toilet paper and tissues	1	1	1	0	0	0	1	1	1	100,0	100,0	100,0
2129000	Other paper products	4	4	4	0	0	0	4	4	4	100,0	100,0	100,0
2212001	Subscriptions	1	1	1	0	0	0	1	1	1	100,0	100,0	100,0
2229000	Other printed matter	3	3	3	0	0	0	3	3	3	100,0	100,0	100,0
2320110	Gas oil	1	1	1	0	0	0	1	1	1	100,0	100,0	100,0
2320150	Diesel oil	1	1	1	0	1	0	1	2	1	200,0	50,0	100,0
2320190	Other oil products	3	3	3	0	0	0	3	3	3	100,0	100,0	100,0
2413000	Inorganic basic chemicals	191	191	213	1	0	0	192	191	213	89,7	100,5	90,1
2414000	Organic basic chemicals	32	33	37	0	0	0	32	33	37	89,2	97,0	86,5
2415000	Fertilisers	155	146	162	0	0	0	155	146	162	90,1	106,2	95,7
2416000	Plastics in primary form	11	12	13	0	0	0	11	12	13	92,3	91,7	84,6
2419000	Other basic chemicals	31	31	34	0	-1	0	31	30	34	88,2	103,3	91,2
2460000	Other chemical products	5	4	5	0	0	0	5	4	5	80,0	125,0	100,0
2520000	Plastic products	26	27	30	0	-1	0	26	26	30	86,7	100,0	86,7
2650000	Cement, lime, plaster	10	10	11	0	0	0	10	10	11	90,9	100,0	90,9
2690000	Other construction materials	1	1	1	0	0	0	1	1	1	100,0	100,0	100,0
2890000	Metal products	28	28	31	1	1	0	29	29	31	93,5	100,0	93,5
2910000	Machinery	1	1	1	0	0	0	1	1	1	100,0	100,0	100,0
2950000	Parts and repair of machinery	36	36	40	0	0	0	36	36	40	90,0	100,0	90,0
3100000	Electric machinery and appliances	12	12	13	0	0	0	12	12	13	92,3	100,0	92,3
3690000	Other products n.e.c.	1	1	1	0	0	0	1	1	1	100,0	100,0	100,0
4010000	Electricity	59	58	65	1	0	0	60	58	65	89,2	103,4	92,3
4020000	Gas distribution	54	53	59	7	4	0	61	57	59	96,6	107,0	103,4
4100000	Water supply	6	5	6	0	0	0	6	5	6	83,3	120,0	100,0
4510022	Maintenance and repair of buildings	6	5	6	0	1	0	6	6	6	100,0	100,0	100,0
4510030	Civil engineering works	1	1	1	0	0	0	1	1	1	100,0	100,0	100,0
4530022	Installation work	22	22	24	0	-1	0	22	21	24	87,5	104,8	91,7
4590000	Other building activities	7	7	8	0	0	0	7	7	8	87,5	100,0	87,5
5000000	Repair of motor vehicles	2	2	2	0	0	0	2	2	2	100,0	100,0	100,0
5540000	Beverage serving servives	1	1	1	0	0	0	1	1	1	100,0	100,0	100,0
5590000	Other hotel and restaurant services	5	4	5	0	0	0	5	4	5	80,0	125,0	100,0
6010100	Railway transportation	1	1	1	0	0	0	1	1	1	100,0	100,0	100,0
6020100	Other passengers transportation	1	1	1	0	0	0	1	1	1	100,0	100,0	100,0
6200000	Air transportation	2	2	2	0	0	0	2	2	2	100,0	100,0	100,0
6400000	Communication services	7	6	7	0	0	0	7	6	7	85,7	116,7	100,0
6500000	Monetary intermediation services	1	1	1	0	0	0	1	1	1	100,0	100,0	100,0
6600000	Insurance services	6	6	7	0	0	0	6	6	7	85,7	100,0	85,7
7023000	Rental services of non-res buildings	12	12	13	0	0	0	12	12	13	92,3	100,0	92,3
7100000	Rental services of movables	8	8	9	-1	0	0	7	8	9	88,9	87,5	77,8
7200000	Computer services	18	18	20	2	1	0	20	19	20	95,0	105,3	100,0
7300000	Research and development	4	4	4	0	0	0	4	4	4	100,0	100,0	100,0
7415000	Holdings	61	61	68	6	5	0	67	66	68	97,1	101,5	98,5
7450000	Supply services of support personel	9	9	10	1	2	0	10	11	10	110,0	90,9	100,0
7480000	Other business services	44	43	48	0	0	0	44	43	48	89,6	102,3	91,7
8510000	Health services	1	1	1	0	0	0	1	1	1	100,0	100,0	100,0
9000000	Environmental services	22	22	24	2	2	0	24	24	24	100,0	100,0	100,0
9100000	Social work services	2	2	2	0	0	0	2	2	2	100,0	100,0	100,0
9992200	Imports of services n.e.c.	45	45	50	0	-1	0	45	44	50	87,2	102,4	89,4
TOTAL INTERMEDIATE CONSUMPTION		**1706**	**1637**	**1818**	**46**	**43**	**0**	**1752**	**1680**	**1818**	**92,4**	**104,3**	**96,4**
9997120	Motor vehicle tax	4	4	4	1	2	0	5	6	4	150,0	83,3	125,0
9997150	Waste disposal charge	3	3	3	0	0	0	3	3	3	100,0	100,0	100,0
9997250	Levy on water pollution	2	2	2	0	0	0	2	2	2	100,0	100,0	100,0
9997390	Other levies	8	8	9	1	1	0	9	9	9	85,7	100,0	85,7
9997410	Wage subsidies	-4	-4	-4	-4	-2	0	-8	-6	-4	150,0	133,3	200,0
9997420	Other subsidies	-4	-4	-5	-2	-2	0	-6	-6	-5	120,0	100,0	120,0
9998100	Wages and salaries	232	228	228	-2	-2	0	230	226	228	99,1	101,8	100,9
9998200	Employers social contributions	45	45	44	2	2	0	47	46	44	105,9	102,8	108,8
9999990	Operating surplus	569	486	515	-17	-18	0	552	468	515	90,9	117,9	107,2
TOTAL VALUE ADDED		**855**	**767**	**796**	**-21**	**-19**	**0**	**834**	**748**	**796**	**94,0**	**111,5**	**104,8**

Balancing Supply and Use tables

Product overview

Year: 96 **Type of year: preliminary** **Product: 2415000 Fertilisers**

mln guilders	Start set			Corrections			Total					
	Cu-p	**Cn-p**	**Cu-p T-1**	**Cu-p**	**Cn-p**	**Cu-p T-1**	**Cu-p**	**Cn-p**	**Cu-p T-1**	**Pi**	**Qi**	**Vi**
SALES												
1100 Agriculture	21	26	27	5	0	0	26	26	27	100,0	96,3	96,3
15700 Feeding stuff	5	5	5	0	0	0	5	5	5	100,0	100,0	100,0
24140 Petrochemicals	85	80	83	0	0	0	85	80	83	106,2	96,4	102,4
24150 Fertilisers	1995	1829	2036	26	24	0	2021	1853	2036	109,1	91,0	99,3
51000 Whole sale trade	92	87	88	0	0	0	92	87	88	105,7	98,9	104,5
1 Domestic sales	2198	2027	2239	31	24	0	2229	2051	2239	108,7	91,6	99,6
411000 Imports of goods (cif)	442	436	440	0	0	0	442	436	440	101,4	99,1	100,5
2 Imports of goods and services	442	436	440	0	0	0	442	436	440	101,4	99,1	100,5
360061 Wholesale trade margins	272	256	278	6	6	0	278	262	278	106,1	94,2	100,0
360062 Retail trade margins	61	61	59	0	0	0	61	61	59	100,0	103,4	103,4
360063 Transport margins	184	174	189	4	4	0	188	178	189	105,6	94,2	99,5
3 Margins	517	491	526	10	10	0	527	501	526	105,2	95,2	100,2
360100 Import duties	3	3	4	0	0	0	3	3	4	100,0	75,0	75,0
4 Taxes and subsidies	3	3	4	0	0	0	3	3	4	100,0	75,0	75,0
TOTAL SALES	**3160**	**2957**	**3209**	**41**	**34**	**0**	**3201**	**2991**	**3209**	**107,0**	**93,2**	**99,8**
PURCHASES												
1100 Agriculture	636	599	597	-2	0	0	634	599	597	105,8	100,3	106,2
1400 Agriculture services	10	9	9	0	0	0	10	9	9	111,1	100,0	111,1
7 Agriculture, forestry, fishing	646	608	606	-2	0	0	644	608	606	105,9	100,3	106,3
24100 Basic chemicals	16	15	16	0	0	0	16	15	16	106,7	93,7	100,0
24140 Petrochemicals	42	40	41	0	0	0	42	40	41	105,0	97,6	102,4
24150 Fertilisers	155	146	162	0	0	0	155	146	162	106,2	90,1	95,7
15 Basic chemicals	213	201	219	0	0	0	213	201	219	106,0	91,8	97,3
24200 Chemicals products	1	1	1	0	0	0	1	1	1	100,0	100,0	100,0
16 Chemical products	1	1	1	0	0	0	1	1	1	100,0	100,0	100,0
33000 Medical and optical equipment	1	1	1	0	0	0	1	1	1	100,0	100,0	100,0
36219 Manufacturing n.e.c.	31	29	31	0	0	0	31	29	31	106,9	93,5	100,0
22 Med. , opt. and other manufacturing	32	30	32	0	0	0	32	30	32	106,7	93,7	100,0
50100 Wholesale trade of motor vehicles	2	2	2	0	0	0	2	2	2	100,0	100,0	100,0
51000 Wholesale trade	39	36	35	-1	0	0	38	36	35	105,6	102,9	108,6
52000 Retail trade	10	9	9	-1	0	0	9	9	9	100,0	100,0	100,0
25 Trade, repair, hotels and restaurants	51	47	46	-2	0	0	49	47	46	104,3	102,2	106,5
65000 Banking	5	5	5	0	0	0	5	5	5	100,0	100,0	100,0
67000 Act. aux. to financial intermediation	1	1	1	0	0	0	1	1	1	100,0	100,0	100,0
27 Banking and business activities	6	6	6	0	0	0	6	6	6	100,0	100,0	100,0
75100 Public administration	1	1	1	0	0	0	1	1	1	100,0	100,0	100,0
28 Public administration and social security	1	1	1	0	0	0	1	1	1	100,0	100,0	100,0
80000 Subsidized education	23	22	22	0	0	0	23	22	22	104,5	100,0	104,5
29 Education	23	22	22	0	0	0	23	22	22	104,5	100,0	104,5
73000 Research and development	15	15	14	0	0	0	15	15	14	100,0	107,1	107,1
32 Research and development	15	15	14	0		0	15	15	14	100,0	107,1	107,1
311000 Exports of goods (fob)	2060	1888	2070	-38	-18	0	2022	1870	2070	108,1	90,3	97,7
311501 Re-exports	33	30	33	0	0	0	33	30	33	110,0	90,9	100,0
35 Exports of goods and services	2093	1918	2103	-38	-18	0	2055	1900	2103	108,2	90,3	97,7
321000 Final consumption of households	136	136	133	0	0	0	136	136	133	100,0	102,3	102,3
36 Final consumption of households	136	136	133	0	0	0	136	136	133	100,0	102,3	102,3
330000 Final consumption of government	26	24	26	0	0	0	26	24	26	108,3	92,3	100,0
37 Final consumption of government	26	24	26	0	0	0	26	24	26	108,3	92,3	100,0
354000 Changes in inventories	0	0	0	0	0	0	0	0	0	0,0	0,0	0,0
40 Changes in inventories	0	0	0	0	0	0	0	0	0	0,0	0,0	0,0
TOTAL PURCHASES	**3243**	**3009**	**3209**	**-42**	**-18**	**0**	**3201**	**2991**	**3209**	**107,0**	**93,2**	**99,8**