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REPORT ON THE QUALITY OF THE GNI DATA 2022
STATISTICS NETHERLANDS, VERSION 1.1

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PART 1: GENERAL INFORMATION

1.0 Summary of the main changes in data and methods compared to the 2021 GNI transmission

For the period 2010-2020, all years have been revised. First of all routine/regular revisions have been made for reporting years 2019 and 2020. All four remaining GNI reservations are addressed for all open years in the time series. Revisions have been made for reinvested earnings on foreign direct investment(FDI), for sub sectoring of non-financial corporations and for globalization. For the GNI reservation on recording of daily allowances, no adjustments were proven to be necessary. No revisions caused by changes in methods and sources have been made. Table 1 provides an overview.

The reservation on FDI and sub sectoring of non-financial corporations led to a significant downward adjustment of outward reinvested earnings and hence a decrease in GNI for all years under this reservation. Results from dividing the sector non-financial corporations into among others foreign owned corporations showed a large inconsistency between the paid reinvested earnings on foreign direct investment and the transactions underlying these reinvested earnings. Reinvested earnings have been adjusted to achieve consistency. Annex B provides a detailed explanation of the used method for and results of estimating the reinvested earnings.

The reservation on globalization led to a material increase in GDP. It only led to a small increase in GNI as adjustments in output and intermediate consumption are mostly compensated by similar adjustments in the balance of primary income. These adjustments are based on an analysis of the micro data of individual multinationals and the comparison and exchange of these data with other European countries in the context of the GNI globalisation/MNE project.

Table 1
Revisions to the Netherlands' GNI (ESA95 based) for 2010-2013 and the
Netherlands' GNI (ESA2010 based) for 2014-2020
(as percentage of GNI from the 2021 Questionnaire)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Total revision to GNI	0.0	0.0	0.1	0.1	0.1	0.3	-1.0	-1.9	-1.5	-2.4	-2.0
<i>'of which':</i>											
Total revision caused by GNI reservations	0.0	0.0	0.1	0.1	0.1	0.3	-1.0	-1.9	-1.5	-2.0	-2.0
Total revision caused by changes in methods and sources (excl. ESA2010 implementation)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total revision caused by routine (current) revisions	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.4	0.0

In addition, table 2 provides an overview of the total impact of the implementation of ESA2010 methodology on the GNI estimate (transition from ESA 95 to ESA 2010). This is only relevant for the originally ESA95 based years 2010-2013.

Table 2
Total impact of ESA2010 Implementation on the Netherlands' GNI (ESA95 based) for 2010-2013
As percentage of GNI (ESA95 based) from the 2022 Questionnaire

	2010	2011	2012	2013
Total impact of ESA2010 implementation	1.5	1.6	1.7	2.3

The data presented in the 2022 GNI Questionnaire and in this Report on Quality differ from the official national accounts data as published by Statistics Netherlands on its website and as transmitted to Eurostat as part of the ESA transmission programme. The data in the 2022 GNI Questionnaire and in this Report on Quality include the revisions following from the reservations on margins on trading financial assets and on globalization. These revisions are not yet included in the official national accounts data, as this would lead to inconsistencies with among others the supply and use tables, quarterly accounts, regional accounts and the balance of payments. The data on these reservations will be included in the Dutch national accounts data at the next benchmark revision, which according to the European Harmonised Revision policy is planned to be published in 2024.

Furthermore, for the years 2010 to 2015 differences exist as a consequence of the reservation on sub sectoring of non-financial corporations. In the official national accounts, adjustments have been made for the entire time series. In the GNI Questionnaire adjustments have only been made for 2016 onwards, as the reservation only applies to these reporting years.

Table 3 shows for GNI the differences between the official national accounts and the data in de 2021 GNI questionnaire. Annex A shows the differences for all key aggregates in the national accounts.

Table 3
GNI Bridge table between GNI in the official national accounts and GNI in the 2022
GNI Questionnaire for 2010-2013 (ESA95 based) and 2014-2021 (ESA2010 based)
Data in million euros

	Official national accounts	Margins on trading financial assets	Sub sectoring non-financial corporations	Globalization	2021 GNI Questionnaire
2010	624 041	-369	7 040	0	630 712
2011	638 077	-34	11 145	0	649 188
2012	634 746	-274	18 917	0	653 389
2013	640 381	-196	14 398	0	654 583
2014	664 784	35	5 608	0	670 427
2015	682 978	-12	9 516	0	692 482
2016	691 147	-110	0	0	691 037
2017	729 662	-441	0	0	729 221
2018	771 070	-606	0	254	770 718
2019	796 516	-728	0	368	796 156
2020	770 495	1 271	0	261	772 027
2021	837 156	622	0	251	838 029

In 2021, GDP increased with 7.4%, while GNI increased with 8.5%. The increase in GDP is mainly the result from the economic rebound after the Covid-induced recession in 2020. In 2020 lockdowns and other restrictions aimed at preventing the spread of Covid led to a substantial decrease in GDP. In 2021 less lockdowns and restrictions were in place, leading to a growth in GDP of 4.9%. The remainder of the increase in GDP was caused by price increases. In 2021, the price increase of GDP was 2.4%.

The balance of primary income flows with the rest of the world increased with 8 billion euros in 2021, explaining why GNI increased more the GDP. The main reason for this increase is higher prices for oil and gas, leading to higher received property income from foreign daughters for Dutch oil and gas companies.

1.1 Major changes and improvements to sources and methods of national accounts

GNI reservations

In December 2020, six GNI reservations were in place for the Netherlands. Two of these reservations were addressed in the 2021 GNI Questionnaire and the 2021 Report on Quality. As a result of the provided data and explanations, these two reservations have been lifted.¹

¹ This was communicated in letter Ares(2022)5429337 of 28 July 2022 by the European Commission.

In the 2022 GNI Questionnaire and in this Report on Quality, the other four reservations are addressed. For the reservations for reinvested earnings on foreign direct investment, for sub sectoring of non-financial corporations and for globalization adjustments have been made to GNI. For the first two of these reservations, the changes are accompanied by a new method for estimating reinvested earnings on foreign direct investment for the final annual estimates. For received reinvested earnings, an additional data source is used to adjust reported reinvested earnings. For this purpose, data on non-capitalized R&D and exploration from annual reports of a number of large Dutch multinationals are used. For paid reinvested earnings, all current transactions of the sector non-financial corporations are subdivided into among others foreign owned corporations. This breakdown allows for a better calculation of reinvested earnings according to ESA 2010 rules which is consistent over the national accounts subsystems. It is therefore no longer necessary to use reported reinvested earnings. More information is provided in Annex B.

Although the reservation on globalization led to changes in GDP and smaller changes GNI, sources and methods have not changed. The adjustments are the result of additional validation of the data sources, not of using different sources or methods.

For daily allowances possible revisions were proven to be non-material. Therefore, no changes in sources and methods were necessary for this reservation.

Financial institutions

From the first quarter of 2022 onwards, a new survey, Macro Economic Statistics Report (MESRAP), has been introduced by the Dutch Central Bank for investment funds, pension funds, insurance companies, special purpose entities and other financial institutions. The survey replaces the existing Direct Reporting Scheme (DRA) for these sectors. This data source will be used for both preliminary and final GNI estimates from 2022 onwards.

MESRAP has been developed to address changes in expectations and requirements for statistics on financial institutions. These new expectations and requirements result from both the closer cooperation between the Dutch Central Bank and Statistics Netherlands and from changing requirements from (international) users. In practice this means for example that where possible definitions are more aligned with ESA 2010 and BPM6 and that more detailed data are required for output and intermediate consumption.

Although data are only available from 2022 onwards, the aim of Statistics Netherlands is to include as much information as possible from the MESRAP benchmark revision over the reporting year 2021.

1.2 Changes in the revision policy and timetable for finalising the estimates; (domestic) publication date of the submitted data

With reference to the 2021 GNI questionnaire, no changes were made in the normal revision policies or time tables. The data from the national accounts were published according to the regular release calendar of Statistics Netherlands. On 24 June 2022 the most recent data for the national accounts were released for the period 1995-2021. However, results for the reservations on reinvested earnings on foreign direct investment and for sub sectoring of non-financial corporations were not available in time for the publication on 24 June. Therefore on 23 September 2022 an update of the data for the period 1995-2021 has been published. In this update, data for the two reservations has been

included in the national accounts. This is a one-time deviation from the normal time tables for publication.

The next benchmark revision for the Dutch National Accounts is, in line with the Harmonised European Revision Policy, planned to be published in (June) 2024. The reporting year for this benchmark revision will be 2021.

1.3 Results of any investigations on the quality of GNI and its components

Revision analysis

For some time now, revisions of Dutch macro-economic estimates, from first to final estimates, are mapped systematically. This is done for (among others) GDP and GNI. Both revisions in size as well as any directional revisions are systematically reviewed. The aim of this exercise is to gain a better understanding of the main causes of the revisions as to improve future (semi-final) estimates. Although the analysis of revisions in GDP mainly relates to volume data such as economic growth, also current price estimates benefit from this research. The successive estimates of Dutch national accounts variables are presented on [a dedicated page](#) on the CBS website (in Dutch only).

The examination of sources and methods for parts of the economy with large revisions in the last years in order to improve short term estimates is a continuous process. Furthermore, in a research program various options are explored to compile quarterly data on a higher aggregation level. At present quarterly GDP estimates are calculated using fully integrated supply and use tables on a very detailed level. Part of the work to be done is to pursue a number of test-exercises based on the proposed taxonomy and compilation procedures to examine what the effect would be on the revisions between the different GDP vintages.

Comparing data sources

The supply and use tables and the sectoral accounts have different data sources for (among others) output, intermediate consumption and profits for non-financial corporations and households. For benchmark revisions, for profits differences between the data sources are investigated. This is for example the case for the SBS Statistics and the Statistics Finance of Corporations (SFO). For the supply and use tables, the SBS statistics are used as one of the main data sources, whereas the sectoral accounts use the SFO as main data source. Profits are analyzed on both micro-level and at an aggregated level. Large differences for individual companies are further looked into, which may lead to adjustments in either of the two data sources. From the next benchmark revision onwards, this comparison between SBS and SFO will be repeated for all final annual estimates.

Comparing and harmonizing registers

The collection of data sources is divided between Statistics Netherlands and the Dutch Central Bank. In principle, the Dutch Central Bank is responsible for data collection from the financial institutions, whereas Statistics Netherlands is responsible for the other institutional sectors. Until a few years ago, Statistics Netherlands and the Dutch Central Bank used separate registers for their data collection. Statistics Netherlands and the Dutch Central Bank are pursuing a project in which these registers are first compared and subsequently harmonized. This project has among others the aim of identifying the appropriate institutional sector of each (part of a) company and of eliminating any possible

double counting or missing observation of companies between Statistics Netherlands and the Dutch Central Bank. The long term aim of the project is to produce one fully harmonized business register which can be used as base for all statistics made by Statistics Netherlands and the Dutch Central bank.

1.4 Description of developments in major sources

Introduction of EBS-Regulation

As a result of the introduction of the Regulation on European Business Statistics (EBS), previously FRIBS, new source data will become available for some industries. Statistics Netherlands is currently exploring possibilities to use these new data sources for the national accounts estimations.

The most promising opportunities seem to exist for the estimations of ‘other services’: Creative, arts and entertainment activities (NACE division 90), Libraries, archives, museums and other cultural activities (91), Gambling and betting activities (92), Sports activities and amusement and recreation activities (93), Activities of membership organisations (94). Currently the estimations for these industries are mainly based on indicators such as compensation of employees, data from annual reports and trade associations. It is expected that new data sources provide more direct and adequate information on turnover, purchases, gross fixed capital formation, etc. Currently Statistics Netherlands is investigating the new source data. In case of (the expected) positive results, the use of these new data sources will be implemented in the upcoming benchmark revision (to be published in June 2024).

In addition, as a result of the EBS Regulation data collection for commercial services is also expanded. For several NACE activities quarterly revenue data will become available and more services prices will be collected. The expectation is that applying these new sources will be superior to the current methods. Yet it is unclear to what extent volume indicators that will become available when implementing the EBS can directly be used for the estimations.

Finally, the data that will become available on human health and social work activities (NACE division 86-88) in the framework of the EBS Regulation will probably enable Statistics Netherlands to further improve its estimates on these industries and the product allocation within these industries.

PART 2: CHANGES TO SOURCES AND METHODS FOR THE FINAL ESTIMATES

This section described changes in sources and methods for the final annual estimate compared to the methods used for the 2021 GNI Questionnaire. Since then, a new method has been developed to estimate both paid and received reinvested earnings on foreign direct investment, see section 3.2 and Annex B for details.

For the final annual estimates, two new data sources have become available. These data sources, described below, have been used in the final annual estimate for 2020. However,

a full benchmark and integration of the new sources will be conducted during the benchmark revision over reporting year 2021.

Other financial institutions

For financial institutions, a major data source is the Direct Reporting Scheme (DRA). From 2020 onwards, DRA has been extended to parts of other financial institutions (S125, S126 and S127) that were previously not included in the survey. Previously, a variety of data sources were used for these sectors. These data sources included direct data on subsidiaries of banks as part of bsi-reporting, data on securitization entities, annual reports, balance of payments and other counterpart information such as from banks, investments funds, insurers and pension funds. The new data from DRA have been used as source data for estimating paid to and received property income, as well as other non-GNI related transactions for the final annual estimate of 2020.

A number of issues arose when using these data. As an example, captive financial institutions (CFI's) did not report their received reinvested earning on foreign direct investment. Therefore the data had to be supplemented with data from annual reports in order to estimate the total balance of property income of CFI's with the rest of the world. This means effectively that while the new data source has been used for CFI's to estimate individual transactions, the method for the total impact on GNI is the same as for 2019.

As another example, the data for S125 showed large differences with data from other sources. Further research is required to explain these differences. In the balancing process these other data sources have been treated as more reliable and data from S125 have therefore been adjusted. Effectively the method for 2020 therefore mirrors the method for 2019.

These examples show that in practice the method for the final estimate for 2020 for other financial institutions is comparable to the method for the previous years. A full benchmark and integration of the new data in the national accounts is conducted at the next benchmark revision over the reporting year 2021.

Monthly securities reporting

From the third quarter of 2020 onwards, a new data source has become available for securities and for income on securities, the monthly securities reporting (MER). This data source is a survey by the Dutch National Bank (DNB) on stocks and transaction of securities and on income received on these securities. This data source has been used as an additional data source for cross border property income on securities during the balancing process of the sectoral accounts for the final estimate of the 3rd and 4th quarter of 2020. It is not yet used as the primary data source for these transactions.

In the next years, data from the MER will be added to the surveys on institutional sectors from DNB and Statistics Netherlands, so that these data can be used in a prior stage of the process of compiling sectoral accounts. A full benchmark and integration of the MER in

the sectoral accounts is conducted at the next benchmark revision over the reporting year 2021.

PART 3: REVISIONS TO YEARS 2010 TO 2020

Part 3 explains the main revisions to GNI for the “open” years, as given in table R1b – of the 2021 GNI Questionnaire. Revision items which significantly contribute to the overall revision of GNI are briefly explained.

Table 4 provides a breakdown of revisions to 2010-2020 estimates in millions of euros.

Table 4A
Breakdown of Revisions to The Netherlands GNI for 2010-2013 (ESA1995 based)
and 2014-2015 (ESA2010 based)
(Million euros and as percentage of GNIQ 2021)

		2010	2011	2012	2013	2014	2015
GNIQ 2021		630912	649234	653010	653951	669966	690555
Total revision to GNI	(a)+(b)+(c)-(d)	-200	-46	379	632	461	1927
(as percentage of GNIQ2021)		(0.0)	(0.0)	(0.1)	(0.1)	(0.1)	(0.3)
'of which':							
(a) Total revision caused by GNI reservations		-534	-161	428	710	461	1927
(b) Total revision caused by changes in methods and sources (excl. ESA2010 implementation)		0	0	0	0	0	0
(c) Total revision caused by routine (current) revisions		0	0	0	0	0	0
'of which':							
GDP		0	0	0	0	0	0
Balance of primary income		0	0	0	0	0	0
(d) ESA2010 to ESA95 Transition items		-334	-115	49	78		
GNIQ 2022		630712	649188	653389	654583	670427	692482

Table 4B
Breakdown of Revisions to The Netherlands GNI for 2015-2020 (ESA2010 based)
(Million euros and as percentage of GNIQ 2020)

		2016	2017	2018	2019	2020
GNIQ 2021		697791	743312	782246	815719	787452
Total revision to GNI	(a)+(b)+(c)-(d)	-6754	-14091	-11577	-19563	-15425
(as percentage of GNIQ2021)		(-1.0)	(-1.9)	(-1.5)	(-2.4)	(-2.0)
'of which':						
(a) Total revision caused by GNI reservations		-6754	-14091	-11528	-16515	-15646
(b) Total revision caused by changes in methods and sources (excl. ESA2010 implementation)		0	0	0	0	0
(c) Total revision caused by routine (current) revisions		0	0	0	-3048	221
'of which':						
GDP		0	0	0	0	-3565
Balance of primary income		0	0	0	-3048	3786
(d) ESA2010 to ESA95 Transition items						
GNIQ 2022		691037	729221	770718	796156	772027

3.1 Routine (current) revisions

The 2019 GNI figure was 3.0 billion euro (0.4) per cent op GNI) lower than reported in the 2021 Questionnaire. Research on the reservation on sub sectoring non-financial corporation revealed an error in dividends paid to the rest of the world for one multinational in 2019. The error itself was not related to the reservation, as the aim of the reservation was to improve reinvested earnings. Therefore, the adjustment is recorded under routine revisions.

The 2020 GDP figure in current prices was 3.6 billion euros (0.5 per cent of GNI) lower than reported in the 2021 Questionnaire. For coke and refined petroleum products (-1.2 billion euros, -0.2 per cent of GNI) and wholesale trade (-1.5 billion euros, -0.2 per cent of GNI) SBS statistics showed lower price increases than previously estimated. For rental and leasing services (-2.2 billion euros, -0.3 per cent of GNI) SBS statistics showed that the value added of companies involved in the production of royalties and licenses was much lower than previously estimated. For computer programming, consultancy and related services (+1.9 billion euro, +0.2 per cent of GNI) SBS data showed higher turnover and lower intermediate consumption than previously estimated.

The balance of primary income with the rest of the world was 3.8 billion euros (0.5 per cent of GNI) higher than reported in the 2021 Questionnaire. This was mainly caused by higher property income received from the rest of the world. Further analysis on the data used for the previous Questionnaire showed that part of the reported decrease in received property income was caused by non-operational losses. These losses have been removed from the reinvested earnings on foreign direct investment.

3.2 Revisions related to the work on reservations

Statistic Netherlands has finished the work on the four outstanding reservations. For daily allowances adjustments prove to be non-material. Therefore, no revisions have been made for this reservation.

For reinvested earnings on foreign direct investment and for sub sectoring on non-financial corporations, new methods have been implemented. These two reservations are closely related, as both of them deal with the calculation of the reinvested earnings on foreign direct investment. The underlying method for reinvested earnings on foreign direct investment is in fact included in the method for the sub sectoring on non-financial corporations. For transparency, the results of these two reservations are presented separately in table 5 and 6. For both reservations, there is no impact on GDP.

Table 5
Impact of reservation on sub sectoring non-financial corporations on GNI

	Paid property income to the rest of the world	GNI
2016	7294	-7294
2017	14318	-14318
2018	12123	-12123
2019	17443	-17443
2020	16140	-16140

Table 6
Impact of reservation on reinvested earnings on foreign direct investment on GNI

	Paid property income to the rest of the world	Received property income to the rest of the world	GNI ESA 2010	Impact transition ESA 2010 to 1995 on GNI	GNI ESA 1995
2010	199	-335	-534	-334	-200
2011	267	106	-161	-115	-46
2012	295	723	428	49	379
2013	392	1102	710	78	632
2014	506	967	461		
2015	-164	1763	1927		
2016	-287	253	540		
2017	-176	51	227		
2018	-240	101	341		
2019	70	630	560		
2020	45	278	233		

The method for these two reservations is described extensively in Annex B. The basic principle for the paid reinvested earnings is to make a breakdown of all current transactions of the non-financial corporations into sub sectors, among which foreign owned corporations. This allows to directly and better calculate paid reinvested earnings, using the restriction: net income of FDI companies in the Netherlands is zero. The method starts with a the source data at a micro-level. Next, every adjustment on the source data is assigned to individual corporations. This is done for all types of adjustment: data validation, conceptual adjustments and balancing adjustment. For this purpose a variety of data sources are used. As for each individual corporation it is known to which sub sector it belongs, this way the entire non-financial account is subdivided into sub sectors. As a final step, the reinvested earnings can be calculated for the FCI companies.

Adjustments on received reinvested earnings are only made for the transversal reservation. Adjustments are made for domestic multinationals and based on annual reports. In these reports, information on the spending on R&D and exploration that is not capitalized can be found. These data are used to calculate adjustments for GFCF and consumption of fixed capital. For the latter, the Perpetual Inventory Model is simulated. For software, no information on non-capitalized spending can be gathered from the annual reports. Therefore, some assumptions on the relation between R&D spending and software spending are made to arrive at an estimate.

For globalization, adjustments have been made for all open years (from 2018 onwards). These adjustments are the result of extensive analysis of the micro data of individual multinationals and the comparison of these data with data from other European countries. In the process, Statistics Netherlands was the lead investigator for 3 multinationals and was a partner for a total of 23 multinationals. Results of the extensive work done on this reservation have been presented to Eurostat in a confidential report. Table 7 shows the impact of this reservation on the main aggregates of national accounts.

Table 7
Impact of reservation on globalization on foreign direct investment on GNI

	2018	2019	2020
Production approach			
Output	11526	15622	10137
Intermediate consumption	9950	11626	6686
Value added	1576	3995	3450
Expenditure approach			
Exports	8073	12999	9531
Imports	6497	9003	6080
Income Approach			
Gross operating surplus	1576	3995	3450
GDP	1576	3995	3450
Property income received from the rest of the world	899	841	405
Property income paid to the rest of the world	2222	4468	3594
GNI	254	368	261

3.3 Other revisions due to changes in methods and sources

No revisions due to changes in methods and sources other than reservations have been made.

3.4 Revisions due to the transition from ESA 95 to ESA 2010

For the transversal reservation on reinvested earnings on foreign direct investment adjustments are made for capitalizing intangible assets. One of these assets is R&D. As

R&D should not be capitalized according to ESA 1995, the adjustments made for R&D for this reservation are removed in the transition between ESA 2010 and ESA 1995.

Annex A – Bridge table between the official national accounts and the data in the 2022 Report on Quality

This annex provides the bridge table between the official national accounts as published by Statistics Netherlands on their website and transmitted to Eurostat as part of the ESA transmission programme and between the data as shown in the 2021 GNI Questionnaire and in this Report.



GNI RQ NL 2022
Annex A - Bridge Tal

Annex B – Methodology for reservations

This annex provides the methodology for the reservations on reinvested earnings on foreign direct investment and for sub sectoring on non-financial corporations.



GNI RQ NL 2022
Annex B - Reservatio