Unveiling the real contribution of final demand to GDP growth

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Abstract

This article focuses on the decomposition of real GDP growth in Portugal by components of final demand. Typically, the analysis of expenditure contributions to the real GDP growth does not take into account that part of the final demand is directly or indirectly satisfied by imports. This can lead to an overstatement of the real contribution of the components of final demand. Therefore, several methodological alternatives are considered aiming to remove the imports associated with each component of final demand from the corresponding contribution. In particular, a new approach is proposed that involves the annual estimation of the import content which in turn reflects expenditure structure and the respective evolution in volume over time, leading to more accurate results than the other alternatives considered. (JEL: C67, D57, F43)

1. Introduction

The analysis of the contributions of the different components of final demand to the evolution of GDP is important as it allows us to assess which expenditure items (private consumption, public consumption, investment or exports) are more determinant for the real change in GDP. The decomposition of real GDP growth can be presented in different ways, depending on the treatment given to imports that are associated with each demand component. In this article, we intend to present a procedure for estimating the contribution of each component of the final demand taking into account the corresponding import content.

In the more traditional economic analysis, the contributions of final demand components to real GDP growth presented are not adjusted from associated imports, which makes it difficult to interpret the real contribution of each component. Typically, imports are taken as an aggregate and its total amount is deducted, having associated a negative contribution to GDP. However, this approach overestimates the contribution of each component of domestic demand (private consumption, public consumption, investment) and exports, not allowing to evaluate or compare the real contribution of each component. In some cases, the contribution of imports is subtracted from that of

exports, being presented in an aggregate named net external demand or net exports. This practice is commonly used, for example, in official publications by the OECD, the European Commission and the European Central Bank. In this case, the contribution of the external component to GDP appears underestimated, and the overestimation of the contribution of domestic demand remains. A possible reason for these forms of presentation is the lack of data on the import content of the final demand, mainly in real terms. Indeed, even in nominal terms this information is not available on a regular basis, given the detail required for its calculation. Some examples of analyzes and uses of import content in nominal terms can be seen in Bravo and Álvarez (2012) for Spain, Cardoso *et al.* (2013) for Portugal, Bussière *et al.* (2013) for a panel of OECD countries and Mikulic and Lovrincevic (2018) for the case of Croatia.

As an alternative to the so-called traditional presentations mentioned above, a few institutions present the contributions of demand components to real GDP growth net of the imports associated with each component of final demand. In this regard, it is worth mentioning the case of the central bank of the Netherlands, De Nederlandsche Bank, as well as the Portuguese case, in which both the Banco de Portugal in its analyzes and forecasts and Statistics Portugal, when publishing the annual national accounts, have been presenting demand contributions in this alternative form (see, for example, Banco de Portugal (2021) and Statistics Portugal (2020)). For a discussion of the differences between the so-called traditional contributions of expenditure components to the GDP growth and those adjusted for imports, see, for example, Kranendonk and Verbruggen (2008) for the United States and some European countries and Grech and Rapa (2019) for Malta. More recently, Andersson *et al.* (2021) emphasize the importance of using import intensity-adjusted final demand components for a better understanding of the impact of the COVID-19 pandemic on euro area economic growth.

Compiling these contributions requires the determination of imports (direct and indirect) associated with each aggregate of demand, which in turn is only possible with the use of input-output matrices of national accounts and the respective import matrices. Since these matrices are generally not available on a regular basis (in many cases only on a five-year basis), decomposing GDP growth over time entails estimating or making assumptions for these import contents. Typically, import contents calculated for a given year are used, namely the most recent year for which this information is available.

Additionally, this information is compiled only at current prices, meaning that import contents at constant prices for a given year are not available. In fact, effectively obtaining contributions net of imports to the real GDP change involves estimating or making assumptions for the evolution of import contents in volume. This article presents some alternative strategies for calculating the annual import contents and shows the impact of the assumptions on the contributions to real GDP growth. Among the procedures considered, the approach with the best results is based on the methodology used by Cardoso and Rua (2019) to obtain the import contents at constant prices, which are used to calculate the contributions net of imports of the different components of final demand to real GDP growth.

The article is organized as follows. In section 2 the different alternatives considered for import contents are discussed and in section 3 the respective total values for the

final demand weighted by import contents are compared with the observed imports, as a measure of the error of each approach. Section 4 assesses the decomposition of real GDP growth by final demand components in light of the different alternatives discussed previously. This also makes it possible to assess the reliability of the different approaches based on the discrepancy between the sum of the contributions obtained for the demand components and the actual GDP growth. Section 5 illustrates the use of final demand weighted by import contents resulting from the selected approach in estimating a function for imports. Finally, section 6 concludes.

2. Import content of final demand components

This section briefly describes the methodology for estimating the import contents of final demand and its components, which will be used both to obtain the net contributions of the demand components to the real change in GDP and for the volume indicator of final demand weighted by import content presented in the following sections. The objective is to estimate for each year the import content since 1999 implicit in the various components of the final demand.

The available import contents are based on the input-output symmetric matrices system, which are only available at current prices. In the period under study, the symmetric input-output matrices are available for the following years: 1999, 2005, 2008, 2013, 2015 and 2017. These matrices present information on intermediate consumption and final uses by product in the economic territory, coming from both imports and domestic production. Given the different nomenclatures of national accounts on the basis of the various matrices used, these matrices were aggregated considering the highest possible detail by product in order to ensure comparability over time, resulting in 49 products/branches of activity. From this information disaggregated by product, it is possible to calculate the import content per unit of final demand by product and for each component of final demand (see Cardoso and Rua (2019) for a detailed methodological explanation). Considering the structure of the respective expenditure, it is possible to calculate the import content implicit in the various components of final demand.[1] It should be noted that the non-imported content corresponds to the impact on GDP.

Since there is no official import content at constant prices, the aim is to obtain an annual estimate of these import contents by taking advantage of the more detailed information available for each year. Based on that, it is possible to calculate the import content implicit in other aggregates, for example, for the breakdown of expenditure usually published in quarterly national accounts. For this purpose, three alternatives are considered.

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1. It should be noted that the import contents are from the perspective of the economic territory, reflecting the fact that the information by product contained in the input-output matrices is presented from the perspective of the territory. Therefore, and in the absence of additional information, it is implicitly assumed that the import contents from residents correspond to those determined for the territory.

The first alternative considered is simply to use, for the entire period under analysis, the import contents (calculated at current prices) for the most recent year available, which currently corresponds to 2017. At the level of detail we need to calculate the contributions (see section 3) the import contents are thus taken as fixed over time and those implicit in the various final demand aggregates result only from changes in the corresponding expenditure composition.

Alternatively, we used all the information available over time, from annual national accounts and from input-output matrices and respective import contents (available only for the above mentioned years) to obtain an annual series of import contents calculated at current prices since 1999. Conceptually, the import content for any desired aggregate results from the weighting of the import content per unit of final demand of each product by the expenditure structure per product of that aggregate. In the years mentioned above where there is information about the input-output matrices, this calculation is immediate. For the remaining years, the expenditure structure is available with the corresponding detail in the annual national accounts, but for the import contents by product we need to make assumptions. Therefore, for these years, a linear interpolation between the closest years available for import contents was considered for the import contents at the elementary level (in particular, 49 products for each demand component). For example, the import contents by product for 2006 and 2007 result from a linear interpolation between the 2005 and 2008 values and were weighted by the 2006 and 2007 annual national accounts structure (at current prices) of each type of expenditure to obtain the final demand aggregates. Since the last year for which there are import contents is 2017, the import content, at the most elementary level, for 2018 was obtained by linearly extrapolation based on the trend observed in the most recent period.[2]

Since the focus of the following analysis is the evolution in real terms, a third alternative is considered, which corresponds to the estimation of annual import contents at constant prices. The methodology used to obtain the import contents at constant prices is identical to the one used to calculate the import contents at current prices, although the basic information, namely that of the input-output matrices (available at current prices) is previously deflated and converted to constant prices of the reference year. For this purpose, detailed information on national accounts deflators was used, as proposed in Cardoso and Rua (2019). For the remaining years, the interpolation of import contents at the elementary level was carried out, similarly to what was done at current prices, and taking into account the annual structure of expenditure by product in volume terms. The reference year for constant prices was 2016, as it is the base year and also the reference year for the chained linked volume series of the current national accounts. Thus, we calculate the import contents annually by product and by component of final demand from 1999 to 2018 at constant 2016 prices.

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2.   In particular, it was assumed for 2018 the average change observed in the previous decade, from 2008 to 2017.
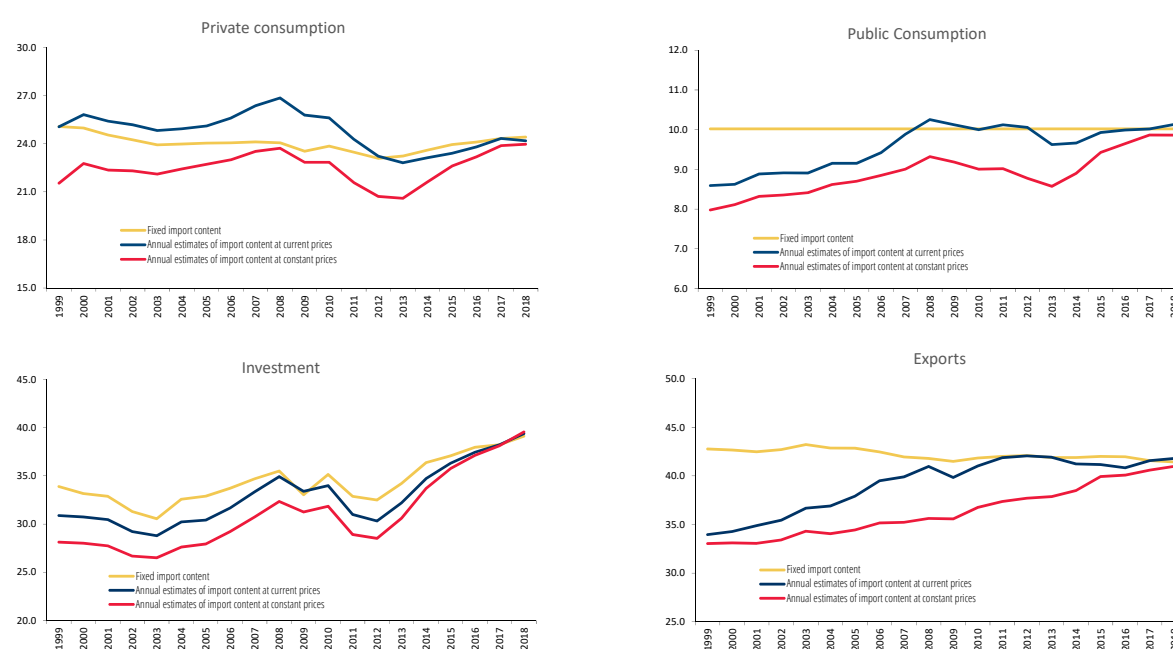
FIGURE 1: Import content of the main components of final demand (in percentage)

In Figure 1, the resulting import content is presented for the main aggregates of final demand. Analyzing the results of the various alternatives, it is possible to see, as discussed in detail by Cardoso and Rua (2019), an increase in the import content in volume, namely in investment and exports and, to a lesser extent, in private consumption. This growth profile is only partially captured with the import content compiled in nominal terms.

An initial assessment of these alternatives can be made by comparing the resulting import content for the final demand with the one implicit in the most recent version of the national accounts (see Figure 2). In fact, based on the latter information, it is possible to assess the import content for the final demand as a whole (but not for its decomposition by components or by products) by simply computing the ratio between imports and final demand in volume.

Figure 2 shows that the evolution of the total import content is significantly conditioned by the approach considered in its calculation. In the case where import content is considered fixed, it is assumed that the import intensity of both intermediate consumption and final uses at the elementary level did not vary over time. However, import content, although relatively stable, varies over time, which is not captured with this approach. In turn, using annual estimates obtained at current prices allows for a closer approximation to the intended result. However, the evolution in volume showed an ascending profile over the period, more marked than that observed at current prices as referred to in Cardoso and Rua (2019) and as corroborated by Figure 2. This difference essentially reflects the evolution of relative prices, that is, the increase in volume of import content is somewhat mitigated in nominal terms, by the fact that import prices on average have grown less than those of final demand in the period under analysis.
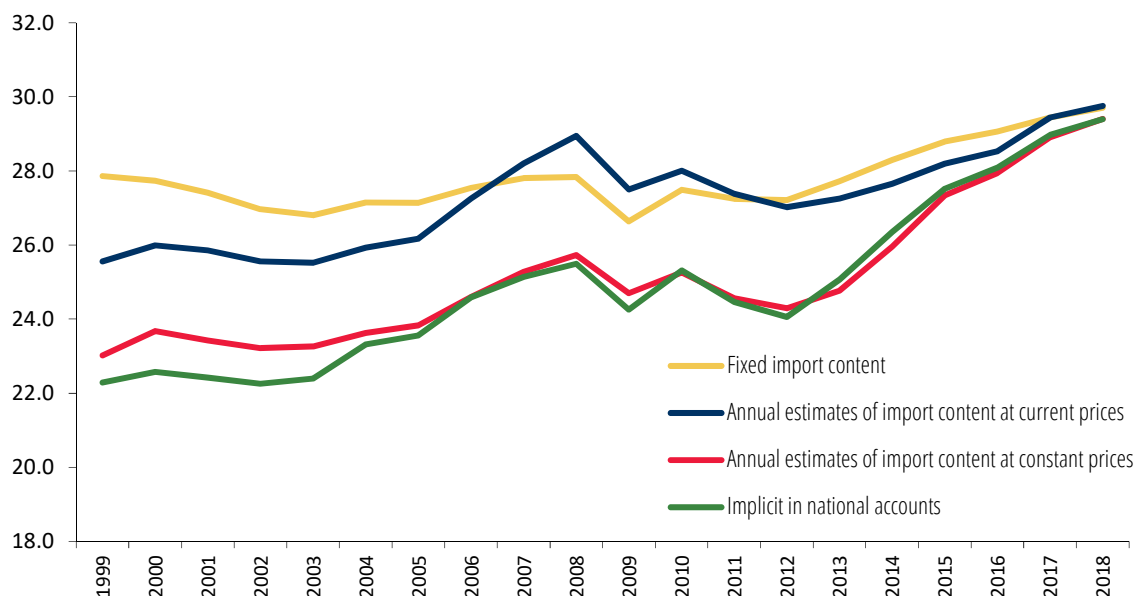
FIGURE 2: Import content of final demand in volume.

Note: Import content per unit of total final demand (in percentage), resulting from the aggregation of the demand components in volume with the import content of each component obtained according to each approach.

In fact, the figure shows that resorting to the import content estimated at constant prices is what allows for a closer approximation (both in terms of level and in terms of evolution) to the import content implicit in total final demand in volume. In the earlier period, especially from 1999 to 2005, the differences are a little larger, which must be related, on the one hand, to the longer time interval in which input-output matrices were not compiled (there are matrices in 1999 and 2005 but not between these two years) and, on the other hand, to the revisions to the series that have meanwhile been incorporated in the national accounts but were not followed by an update of the corresponding input-output matrices. In the following sections, we compare the results arising from the use of these alternatives as an approximation to the observed imports (weighted final demand indicators) and for computing the contributions (net of imports) of the different components of final demand to the real GDP rate of change.

3. Weighted final demand and imports

Based on the import contents discussed in the previous section, it is possible to estimate a proxy for imports, called the final demand weighted by import contents, and compare with the actual observed imports. This indicator results from the weighting of the different components of demand by the respective import content, the total being obtained by aggregation. Multiplying the import contents previously obtained for each component of final demand by the respective expenditure level of each component (in volume), we obtain the imports in volume necessary to satisfy that component of final demand. By aggregating all these imports, it is possible to compare the total with
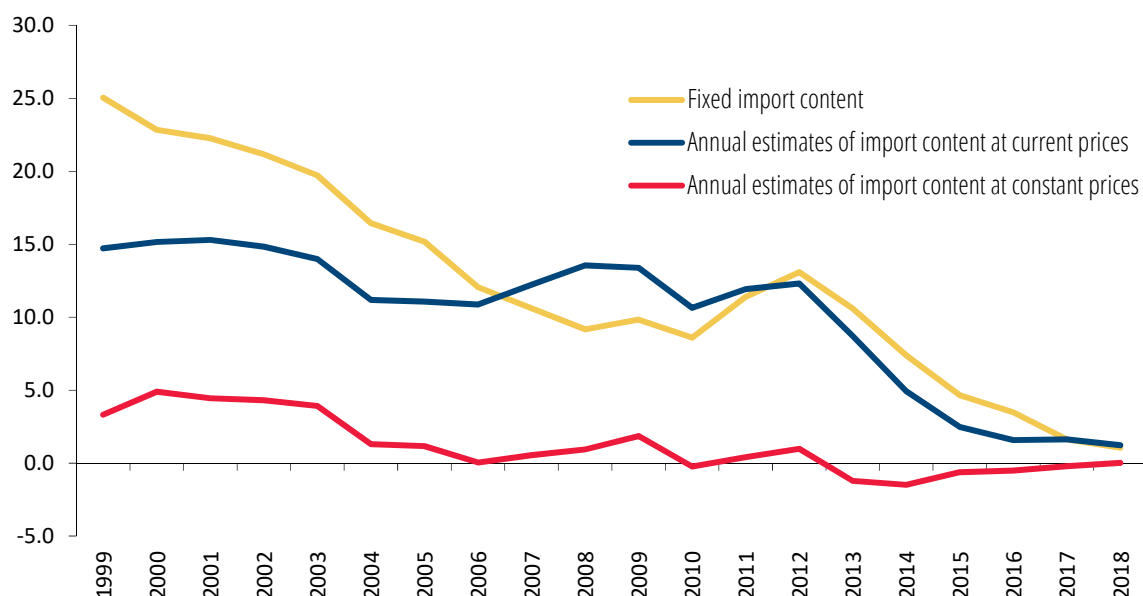
FIGURE 3: Discrepancy between weighted final demand and imports (in percentage of imports)

actually observed imports and assess the respective discrepancy. It should be noted that the results depend on the level of detail considered for the final demand, being the closer the higher the disaggregation used.

This exercise was done for the different import content alternatives defined above. With this aim, the most recent version of the national accounts was used, considering the level of disaggregation of the demand components currently released by Statistics Portugal in its quarterly publication. In particular, private consumption is broken down into durable goods, food and beverages and other non-durable consumption, GFCF is divided into construction, transport equipment, machinery and equipment and other GFCF and exports are separated into goods and services.

	Level (in percentage of imports)		Annual rate of change (in percentage points)	
	Average (abs)	Average	Average (abs)	Average
Fixed import content	12.3	12.3	1.7	-1.2
Annual estimates of import content at current prices	10.1	10.1	1.2	-0.7
Annual estimates of import content at constant prices	1.6	1.2	0.8	-0.2

TABLE 1. Discrepancy between weighted final demand and imports

Note: The average (abs) corresponds to the average of the absolute values of the discrepancies.

Figure 3 shows the discrepancies, as a percentage of imports, for the three alternatives considered for import content. As time goes back, the discrepancy clearly tends to increase, as one would expect. In fact, revisions to the national accounts have taken place over time, either through the incorporation of new basic information or due to methodological changes, which were not reflected in the input-output matrices (including the import matrices) previously published. It should be noted that this increase in discrepancy is very significant in the case of the use of import content at current prices. The use of annual estimates between the years for which it is actually

possible to calculate import contents makes it possible to mitigate the discrepancy. However, it is the use of annual estimates of import contents at constant prices that allows for the smallest discrepancy over the entire period (see Table 1). This approach allows us to obtain an average discrepancy of 1.2 percent, which compares with 10.1 and 12.3 percent, respectively, in the case of import contents calculated at current prices, depending on whether or not there are annual estimates. The findings are very similar considering the average of the discrepancies in absolute terms. Furthermore, the use of calculation at constant prices also presents a smaller discrepancy when evaluated in terms of the annual rate of change of imports, recording an average discrepancy of -0.2 p.p. and 0.8 p.p. in absolute terms. Therefore, both the average discrepancy and the average absolute discrepancy are clearly lower than that observed for any of the alternatives in which import contents obtained at current prices are used.

4. Decomposition of real GDP growth

Once the imports necessary to satisfy each of the final demand components have been determined, it is possible to determine the contribution, net of imports, of each demand component to real GDP growth. This contribution seeks to assess the extent to which each of the final demand components effectively contributes to the growth of the national economy once the imports generated directly or indirectly by each of these expenditure components are adjusted. The contribution of each component to GDP growth reflects the change in that aggregate weighted by its non-imported content, which corresponds to its domestic content.
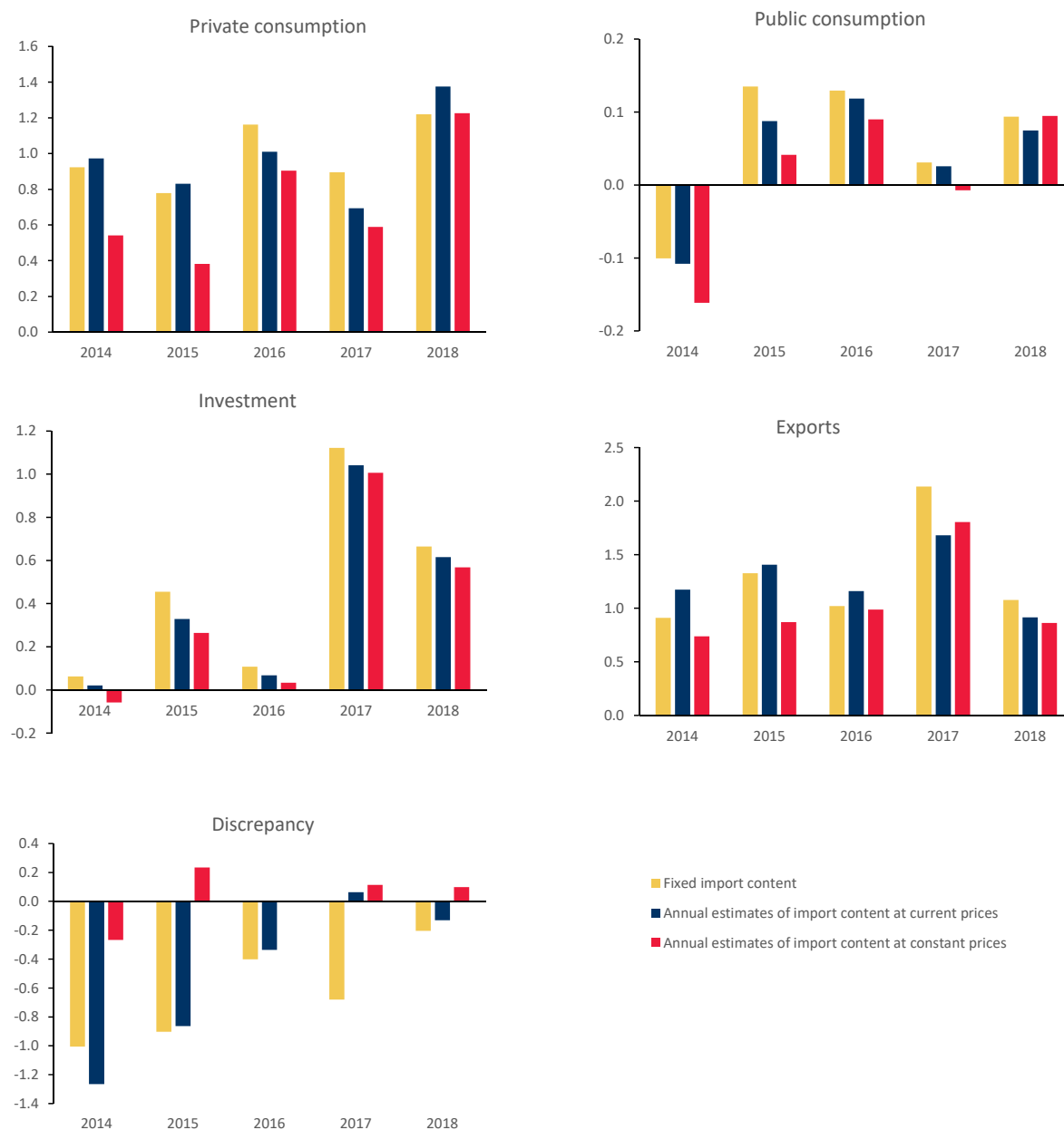
FIGURE 4: Contributions to the real GDP rate of change (in percentage points)

Note: The discrepancy shown in the last figure corresponds to the difference between the real rate of change of GDP and the sum of the contributions (net of imports) of the different components of final demand presented in the remaining figures.

The net contributions of the main components of final demand to real GDP growth were computed considering either the import contents at current prices, fixed in a year or with annual estimates, or the annual estimates of the import contents at constant prices. Thus, a comparative analysis of the real GDP breakdown by components is carried out, conditional on the alternative used for import contents.

It can be seen that the assumption made for import contents has a substantial impact on the result obtained for each component of the final demand. In the case of private

consumption, the use of annual estimates for the case of import content at current prices would lead to higher contributions in the years 2014, 2015 and 2018 and lower in 2016 and 2017 compared to the case of fixed import contents. In turn, the use of import contents at constant prices would lead to a lower contribution from that component, particularly in 2014 and 2015. For public consumption, the differences are much smaller, also reflecting the reduced import content that this item tends to present. In the case of investment, the contribution calculated with import contents at constant prices is always lower than that obtained with import contents at current prices with annual estimates, which in turn is lower than that obtained from fixed import content. Regarding exports, the respective contribution calculated with annual import content at current prices is higher than that obtained with fixed import content in 2014, 2015 and 2016, but lower in 2017 and 2018. In turn, the contribution of exports using import content at prices constants is lower in most years.

Calculating the sum of the aforementioned net contributions of the different components of final demand, it is possible to assess the difference in relation to the real growth actually observed for GDP. Figure 4 also presents the discrepancies obtained for the different alternatives. It should be noted that any of the alternatives based on import content at current prices (with fixed coefficients or with an annual estimate) has an underlying significant discrepancy. On the contrary, the use of import content at constant prices generates a relatively small discrepancy. It should be noted that in all alternatives, the discrepancies also reflect, in addition to the need to estimate import content, small differences resulting from the non-additivity of chain-linked volume data of national accounts, that is, the fact that the sum of the expenditure components do not exactly match GDP.[3]

In accumulated terms, in the period from 2013 to 2018, the importance of using import content at constant prices becomes even more evident (see Figure 5). In fact, with import contents at constant prices, the resulting discrepancy is very small (0.2 p.p.) when compared to the use of import content at current prices, whose discrepancy amounts to -2.6 p.p. and -3.3 p.p. with annual estimate or fixed in 2017, respectively. From the above, the approach based on import content at constant prices is therefore the most accurate, as in this case the sum of the contributions is much closer to the real evolution of GDP.

	In percentage points	
	Average (abs)	Average
Fixed import content	0.5	-0.3
Annual estimates of import content at current prices	0.4	-0.2
Annual estimates of import content at constant prices	0.3	0.0

TABLE 2. Discrepancy between the sum of contributions and the real rate of change of GDP (from 2000 to 2018)

Note: The average (abs) corresponds to the average of the absolute value of the discrepancies.

3. Note that the remaining discrepancy could be eliminated, for example, by proportionally distributing the imports differential over the final demand components.
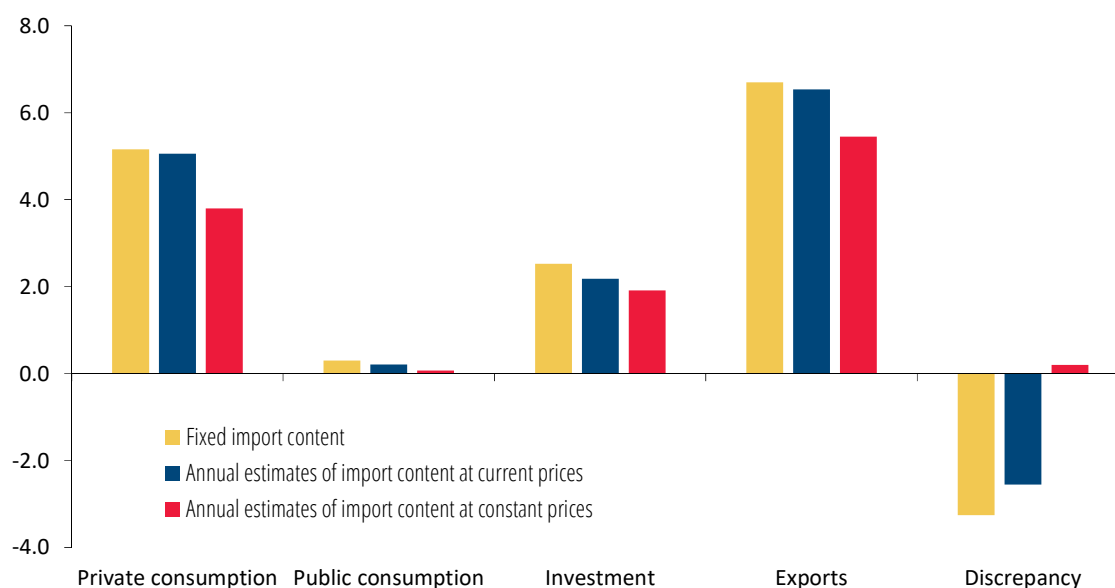
FIGURE 5: Contribution to the accumulated real change in GDP, in percentage points (from 2013 to 2018)

Table 2 presents some summary statistics about the discrepancies between the sum of the contributions of the final demand components and the real rate of change of GDP for the period as a whole. Similar to the previous results, it is the approach based on annual import content at constant prices that generates a smaller discrepancy for the decomposition of real GDP change.

In order to illustrate the relevance of considering contributions net of imports, in Figure 6, the net contributions obtained with import contents at constant prices are compared with the contributions usually used to break down real GDP growth by final demand components.[4] For each year, two vertical columns are presented whose sum corresponds to the rate of change of GDP for that year. The first column represents the traditional contributions (which we call gross contributions) while the second corresponds to the contributions of final demand components net of the respective imports. It can be seen that the non-adjustment of the contributions from imports leads to an overestimation of the real contribution of each component of final demand to real GDP growth. This difference in assessment depends on the magnitude of the import content but also on the weight of that component. In fact, the most significant quantitative differences are registered in private consumption and exports.

For the most recent years, namely 2019 and 2020, it is not possible to proceed as described in section 2 given the absence of detailed annual national accounts. Therefore, the available breakdown published in the scope of quarterly national accounts (and mentioned in section 2) was considered and the variation observed for the import content of final demand as a whole was assumed for the evolution of the import content

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4. The Appendix presents the import contents of the final demand components at constant 2016 prices, implicit in the calculation of the contributions net of imports.

FIGURE 6: Contributions to the real GDP growth rate

For each year, the left-hand bar refers to the gross contributions of each component to GDP and the right-hand bar to the corresponding net contributions (percentage points).
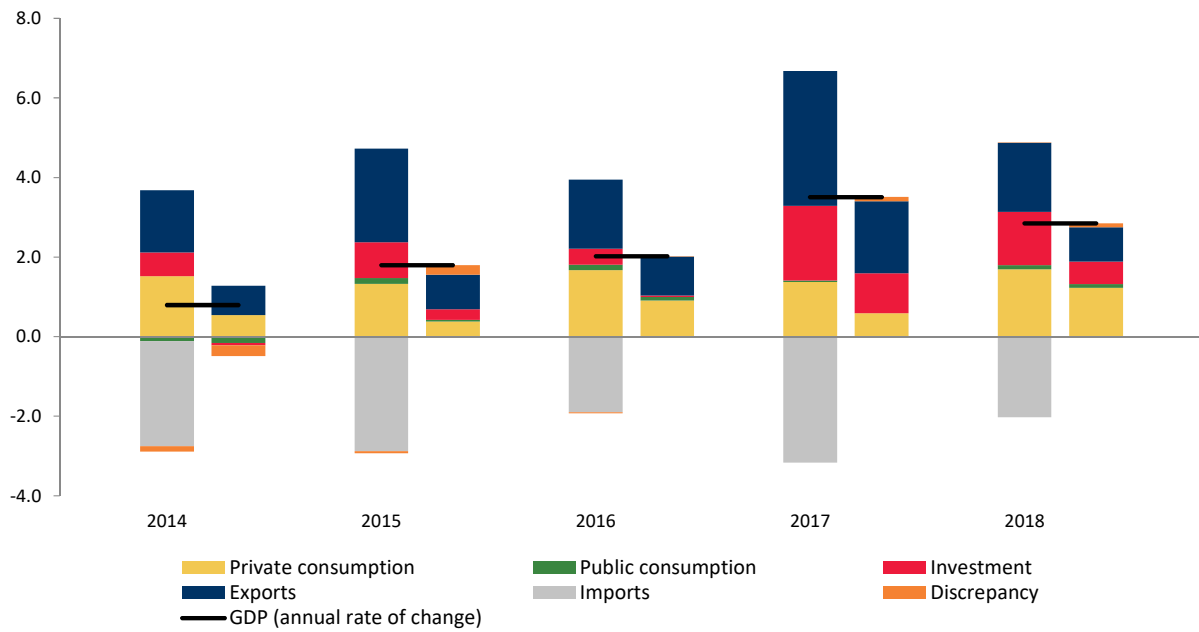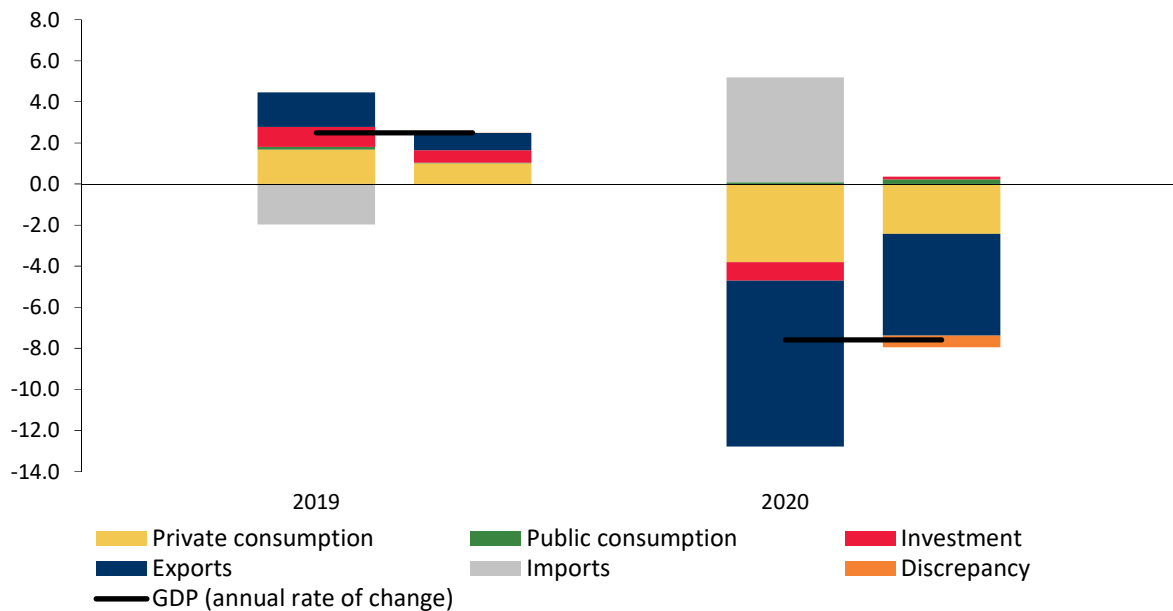

FIGURE 7: Contributions to the real GDP growth rate in 2019 and 2020

For each year, the left-hand bar refers to the gross contributions of each component to GDP and the right-hand bar to the corresponding net contributions (percentage points).

of each component. Figure 7 shows the resulting contributions to the GDP rate of change in 2019 and 2020. Note the very substantial quantitative difference, in particular in 2020, between gross contributions and contributions net from imports. In 2019, the component that registered the greatest positive contribution was private consumption, followed by exports and then investment. In 2020, it is worth mentioning the subtantially negative contributions of private consumption and mainly exports, which are clearly mitigated when the net contributions are used.

5. Estimation of the imports function

In addition to the contribution analysis carried out previously, the import contents also allow the calculation of the weighted final demand, an indicator typically used in macroeconometric modeling of the imports evolution (see, for example, Laxton *et al.* (1998), Herzberg *et al.* (2002), Bussière *et al.* (2013) and Cardoso *et al.* (2013)). Using quarterly national accounts data for the demand components and assuming for all quarters of a given year the import contents corresponding to the respective year (calculated at constant prices as described in section 2), we calculated the indicator of quarterly final demand weighted by import content. Figure 8 suggests that this indicator is a good proxy for the evolution of imports, in particular when compared to unweighted final demand.
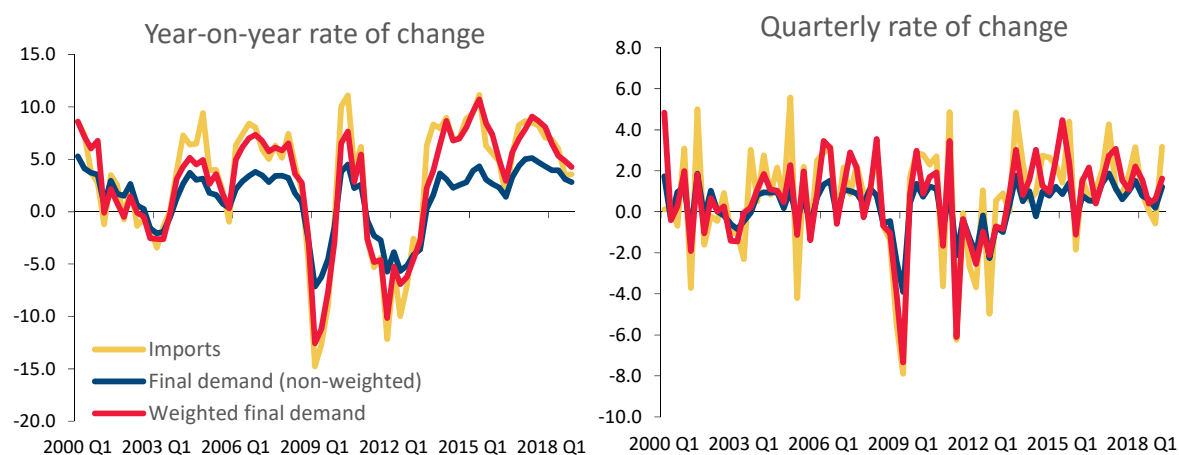
FIGURE 8: Imports and weighted final demand, in volume (in percentage)

Based on this proxy, a model for volume imports was estimated for the last two decades. As usual in the literature, we considered a macroeconometric model of the error-correction mechanism type. The estimated model for the period between the first quarter of 1999 and the fourth quarter of 2018 was as follows: [5]

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5. The years 2019 and 2020 were excluded from the sample period given their preliminary nature as discussed in the previous section.

$$\Delta \ln M_t = \underset{(-1.76)}{-0.003} + \underset{(14.6)}{1.11} \Delta \ln FD_t^* \underset{(-3.71)}{-0.27} \left(\ln M_{t-1} - \ln FD_{t-1}^* \right)$$

$$\widehat{\sigma} = 0.014 \qquad R^2 = 0.74 \qquad F\,(2,76) = 106.7\,[0.000]$$

where M are the imports of goods and services, at constant prices, and FD^* corresponds to the final demand weighted by the annual import contents at constant prices. We report the usual t-ratios for the estimated coefficients in parentheses, the standard deviation of the error, the R^2 and the F statistic of global adherence of the model with the respective *p-value*.

In what regards the specified model, the following should be noted. As expected, the restriction commonly imposed in the literature of a unitary elasticity in the long run between imports and weighted final demand is not rejected statistically, and is therefore assumed in the estimation of the model. Regarding the coefficient associated with short-term dynamics, the value estimated is only slightly above 1. In fact, and contrary to what has been found empirically in previous works, a unitary elasticity in the short term is not rejected.[6] Naturally, an exact unitary coefficient is not obtained in the short run, given the lack of import matrices for all time periods (and at constant prices) so that measurement errors persist in practice. In other words, with the aforementioned measure of final demand weighted by import contents at constant prices, an approximately unitary elasticity is obtained, both in the short and in the long run. Note that, if there were no measurement errors in the calculation of import contents, this elasticity, by construction, would be exactly unitary.

In addition, the statistical significance of an import price competitiveness indicator was also assessed, defined as the ratio between the deflator of imports of goods and services and the deflator of GDP (see, for example, Fagan and Mestre (2005)). However, this additional regressor was not relevant in the estimated model. This result reflects the fact that the impact of changes in relative prices is already largely reflected in the evolution of import content at constant prices and in the composition of weighted final demand, therefore, the inclusion of that regressor is not necessary.

These results reinforce the validity of this approach as a way to obtain an informative indicator for the evolution of imports.

6. Concluding remarks

Within the scope of economic analysis, it is usual to assess the importance of the different components of final demand for the real evolution of GDP. This allows identifying, for example, whether real growth is sustained by the external component, namely exports, or whether it is the components of domestic demand, such as private consumption or investment, that are being more decisive for the activity developments.

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6. For a discussion of the elasticity of imports to final demand, weighted or unweighted, see, for example, Bussière *et al.* (2013).

However, typically, the analysis of contributions to GDP growth does not take into account that part of the final demand is satisfied directly or indirectly by imports, with this proportion being very heterogeneous across demand components. This fact, in general, leads to a significant overstatement of the real contribution of each expenditure item to the GDP rate of change. Therefore, it is crucial to adjust for the effect of imports associated with each component of final demand in order to allow a more accurate assessment of its real contribution.

In this article, several alternatives were considered regarding the estimation of import content on an annual basis in order to obtain the net contribution of imports of each component of final demand. Among the alternatives considered, the one based on the estimation of annual import contents at constant prices was the most informative. This approach makes it possible to get closer to actually observed imports and generates a relatively small discrepancy in terms of contributions. It is therefore important to point out that, for the purpose of decomposing the real change in GDP, it is crucial to consider the evolution of import contents in volume terms.

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Appendix

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Private consumption	21.5	22.8	22.4	22.3	22.1	22.4	22.7	23.0	23.5	23.7	22.8
Durable goods	56.2	55.8	55.7	55.6	55.5	55.3	55.2	55.8	56.5	57.0	56.5
Non-durable goods and services	16.9	18.4	18.4	18.7	18.9	19.2	19.4	19.7	20.1	20.3	20.0
Food and beverage	30.3	31.4	30.9	31.3	31.7	32.1	32.4	33.5	34.4	35.5	35.0
Other non-durable goods and services	13.7	15.4	15.5	15.8	15.9	16.2	16.4	16.5	16.8	16.8	16.5
Public consumption	8.0	8.1	8.3	8.4	8.4	8.6	8.7	8.8	9.0	9.3	9.2
GFCF	27.1	27.6	27.2	26.5	26.8	27.4	27.8	29.1	30.6	32.3	31.3
Transport equipment	64.3	64.0	64.6	65.1	65.3	66.6	67.7	69.7	73.3	76.9	78.6
Other machinery and equipment	66.4	66.9	67.2	67.4	67.3	67.4	67.4	68.1	67.1	67.7	68.4
Construction	15.2	15.4	15.5	15.5	15.5	15.7	15.6	16.0	16.3	16.7	16.4
Other	13.7	16.6	16.4	16.1	15.2	14.9	13.2	14.7	18.5	21.3	20.6
Exports	33.0	33.1	33.1	33.4	34.3	34.1	34.4	35.2	35.2	35.6	35.6
Goods	40.1	40.0	39.9	40.2	40.6	40.6	40.8	42.0	42.3	42.8	43.1
Services	13.8	14.9	15.3	15.2	15.8	16.1	16.8	17.7	18.7	19.2	19.2
Final demand	23.0	23.7	23.4	23.2	23.3	23.6	23.8	24.6	25.3	25.7	24.7

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Private consumption	22.8	21.6	20.7	20.6	21.6	22.6	23.2	23.9	24.0	24.4	23.6
Durable goods	56.0	55.1	54.4	53.5	54.1	54.7	55.7	56.8	56.6	57.0	56.0
Non-durable goods and services	19.7	18.9	18.5	18.4	19.0	19.7	20.1	20.5	20.5	20.9	20.3
Food and beverage	34.4	34.0	33.5	32.8	33.3	33.7	33.8	34.0	33.8	34.3	33.3
Other non-durable goods and services	16.3	15.3	14.9	14.7	15.4	16.2	16.6	17.1	17.1	17.6	16.6
Public consumption	9.0	9.0	8.8	8.6	8.9	9.4	9.6	9.9	9.9	10.3	9.3
GFCF	31.6	28.7	28.4	30.3	33.2	35.2	36.6	37.4	38.4	38.4	35.3
Transport equipment	73.9	72.0	71.0	74.1	71.3	72.9	72.6	74.4	75.9	76.3	75.3
Other machinery and equipment	69.3	69.9	70.8	71.9	72.7	73.4	73.2	73.2	73.8	74.3	73.2
Construction	15.9	15.5	14.9	14.2	15.7	17.1	18.1	19.3	19.8	20.3	19.3
Other	20.2	14.9	14.9	14.9	16.9	18.5	18.3	18.0	18.2	18.6	17.6
Exports	36.8	37.4	37.7	37.9	38.5	39.9	40.1	40.6	41.0	41.3	42.0
Goods	44.5	45.4	45.9	46.9	46.8	48.0	48.2	49.0	49.7	50.2	49.2
Services	19.0	18.5	17.9	17.0	19.2	20.8	21.0	22.0	22.2	22.6	21.6
Final demand	25.3	24.6	24.3	24.8	26.0	27.3	27.9	28.9	29.4	29.9	28.4

TABLE A.1. Estimates of import contents of GDP components at 2016 constant prices (in percentage).

Note: For the years 2019 and 2020, the available information has a lower level of detail than for previous years (as described in section 4), so the respective import contents should be read with additional caution.