STATISTICAL RELEASE
P6141.2

Wholesale trade sales (Preliminary)

June 2022

The results published in the next publication (July 2022) will be based on a new sample. This is an annual procedure which typically affects the level of sales at both current and constant prices. To avoid breaks in time series and to minimise revisions to historical growth rates, historical sales levels will be revised (i.e. they will be linked to the estimates based on the new sample).

This release provides an analysis of revisions. If you have any questions or comments, please send these to Keshnee Naidoo, keshneen@statssa.gov.za.

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ENQUIRIES:
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July 2022

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Dipalopalo tsa Aforikaborwa • Dipalopalo tsa Aforika Borwa • Ezazibalo zaseNingizimu Afrika • Tshitatsitika Afrika Tshipembe • Tinhlayo Afrika-Dzonga
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IMPROVING LIVES THROUGH DATA ECOSYSTEMS

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Table A – Key growth rates in wholesale trade sales at constant 2019 prices

	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22
Year-on-year % change, unadjusted	7,2	7,6	2,9	-6,7	-2,3	-4,3
Month-on-month % change, seasonally adjusted	4,9	0,2	-0,4	-6,8	3,5	-2,2
3-month % change, seasonally adjusted 1/	0,6	1,9	3,7	0,3	-2,2	-5,6

1/ Percentage change between the previous 3 months and the 3 months ending in the month indicated.

Measured in real terms (constant 2019 prices), wholesale trade sales decreased by 4,3% in June 2022 compared with June 2021.

Seasonally adjusted wholesale trade sales decreased by 2,2% in June 2022 compared with May 2022. This followed month-on-month changes of 3,5% in May 2022 and -6,8% in April 2022.

In the second quarter of 2022, seasonally adjusted wholesale trade sales decreased by 5,6% compared with the first quarter of 2022.

Figure 1 – Wholesale trade sales at constant 2019 prices

Sales at current prices: results for June 2022

Table B – Key growth rates in wholesale trade sales at current prices

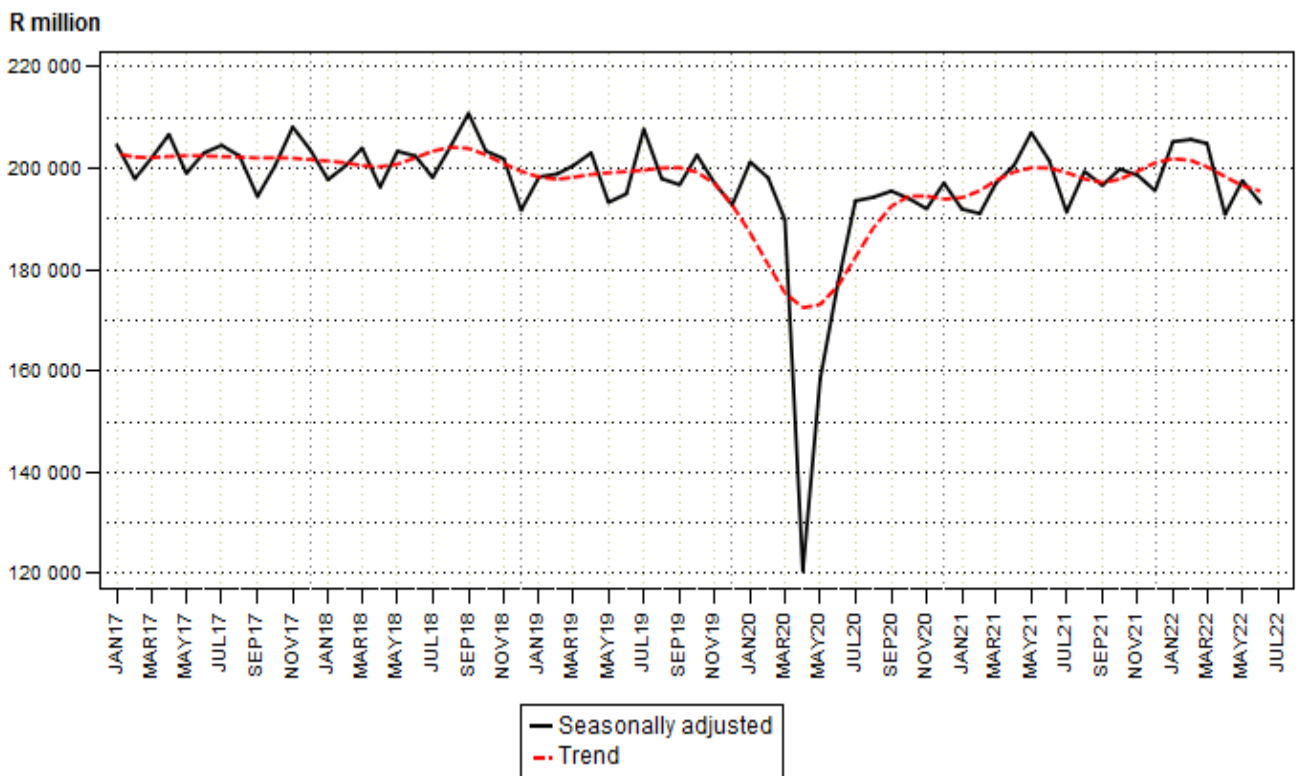|	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22
Year-on-year % change, unadjusted	22,5	22,6	20,1	9,9	17,7	16,9
Month-on-month % change, seasonally adjusted	4,6	3,4	0,3	-5,1	7,6	-1,3
3-month % change, seasonally adjusted 1/	5,8	7,4	8,2	5,2	3,0	0,6

1/ Percentage change between the previous 3 months and the 3 months ending in the month indicated.

Measured in nominal terms (current prices), wholesale trade sales increased by 16,9% in June 2022 compared with June 2021. The main positive contributors were dealers in:

- solid, liquid and gaseous fuels and related products (51,3% and contributing 11,4 percentage points); and
- food, beverages and tobacco (16,7% and contributing 2,5 percentage points) – see Tables 8 and 9.

Table C – Wholesale trade sales at current prices for the latest quarter by type of dealer

Type of dealer	Apr – Jun 2021 (R million)	Weight	Apr – Jun 2022 (R million)	% change between Apr – Jun 2021 and Apr – Jun 2022	Contribution (% points) to the total % change
Fee or contract basis	22 818	3,6	22 985	0,7	0,0
Agricultural raw materials and livestock	53 981	8,4	59 347	9,9	0,8
Food, beverages and tobacco	95 566	14,9	107 165	12,1	1,8
Textiles, clothing and footwear	9 211	1,4	10 411	13,0	0,2
Other household goods except precious stones	82 093	12,8	80 293	-2,2	-0,3
Precious stones, jewellery and silverware	12 015	1,9	7 711	-35,8	-0,7
Solid, liquid and gaseous fuels and related products	142 974	22,3	209 135	46,3	10,3
Metals and metal ores	23 986	3,7	25 397	5,9	0,2
Construction and building materials	37 017	5,8	38 459	3,9	0,2
Other intermediate products, waste and scrap	30 595	4,8	42 650	39,4	1,9
Machinery, equipment and supplies	81 768	12,7	79 550	-2,7	-0,3
Other goods	49 446	7,7	54 715	10,7	0,8
Total	**641 467**	**100,0**	**737 817**	**15,0**	**15,0**

Wholesale trade sales increased by 15,0% in the second quarter of 2022 compared with the second quarter of 2021. The main positive contributors were dealers in:

- solid, liquid and gaseous fuels and related products (46,3% and contributing 10,3 percentage points);
- 'other' intermediate products, waste and scrap (39,4% and contributing 1,9 percentage points); and
- food, beverages and tobacco (12,1% and contributing 1,8 percentage points) – see Table C.

Risenga Maluleke
Statistician-General

Tables

Table 1 – Wholesale trade sales at constant 2019 prices (R million)

Month	2016	2017	2018	2019	2020	2021	2022 1/
Jan	179 104	181 331	176 894	175 305	179 858	165 893	177 890
Feb	212 114	188 477	190 241	188 742	191 066	182 349	196 126
Mar	210 612	209 576	210 256	202 102	194 333	204 476	210 501
Apr	191 373	185 683	179 746	188 603	108 676	183 368	171 055
May	207 768	200 234	204 353	197 486	157 109	206 135	201 492
Jun	209 123	207 498	203 837	190 660	183 704	204 694	195 923
Jul	203 015	199 168	197 981	210 901	197 572	193 932	
Aug	209 500	205 890	209 541	201 375	192 174	201 633	
Sep	219 880	201 076	210 584	202 063	203 007	203 953	
Oct	216 659	216 407	222 853	220 688	211 882	212 430	
Nov	226 307	228 765	226 026	215 016	207 580	220 075	
Dec	212 058	197 499	184 348	189 164	192 767	193 427	
Total	**2 497 513**	**2 421 604**	**2 416 660**	**2 382 105**	**2 219 728**	**2 372 365**	

1/ Figures for latest month are preliminary.

Table 2 – Year-on-year percentage change in wholesale trade sales at constant 2019 prices

Month	2017	2018	2019	2020	2021	2022	*2022 year-to-date*
Jan	1,2	-2,4	-0,9	2,6	-7,8	7,2	*7,2*
Feb	-11,1	0,9	-0,8	1,2	-4,6	7,6	*7,4*
Mar	-0,5	0,3	-3,9	-3,8	5,2	2,9	*5,8*
Apr	-3,0	-3,2	4,9	-42,4	68,7	-6,7	*2,6*
May	-3,6	2,1	-3,4	-20,4	31,2	-2,3	*1,6*
Jun	-0,8	-1,8	-6,5	-3,6	11,4	-4,3	*0,5*
Jul	-1,9	-0,6	6,5	-6,3	-1,8		
Aug	-1,7	1,8	-3,9	-4,6	4,9		
Sep	-8,6	4,7	-4,0	0,5	0,5		
Oct	-0,1	3,0	-1,0	-4,0	0,3		
Nov	1,1	-1,2	-4,9	-3,5	6,0		
Dec	-6,9	-6,7	2,6	1,9	0,3		
Total	**-3,0**	**-0,2**	**-1,4**	**-6,8**	**6,9**		

Table 3 – Seasonally adjusted wholesale trade sales at constant 2019 prices

Month	R million				Month-on-month % change			
	2019	2020	2021	2022	2019	2020	2021	2022
Jan	198 303	201 253	191 949	205 253	3,4	4,4	-2,6	4,9
Feb	198 867	198 112	191 067	205 682	0,3	-1,6	-0,5	0,2
Mar	200 516	189 831	197 083	204 892	0,8	-4,2	3,1	-0,4
Apr	203 031	120 502	200 533	190 882	1,3	-36,5	1,8	-6,8
May	193 276	158 445	207 012	197 554	-4,8	31,5	3,2	3,5
Jun	194 972	177 461	201 546	193 193	0,9	12,0	-2,6	-2,2
Jul	207 729	193 575	191 372		6,5	9,1	-5,0	
Aug	197 948	194 288	199 371		-4,7	0,4	4,2	
Sep	196 757	195 501	196 648		-0,6	0,6	-1,4	
Oct	202 598	194 056	199 849		3,0	-0,7	1,6	
Nov	196 975	192 016	198 616		-2,8	-1,1	-0,6	
Dec	192 800	197 091	195 576		-2,1	2,6	-1,5	

Table 4 – Wholesale trade sales at current prices (R million)

Month	2016	2017	2018	2019	2020	2021	2022 1/
Jan	148 633	158 283	164 310	169 452	182 464	171 406	209 904
Feb	177 422	166 867	175 820	182 601	193 791	191 148	234 373
Mar	175 593	185 868	191 971	198 273	196 253	217 075	260 625
Apr	162 374	163 870	166 628	188 786	107 706	196 999	216 479
May	176 555	178 751	192 368	198 978	153 312	222 201	261 516
Jun	180 408	184 561	194 920	192 995	180 854	222 267	259 822
Jul	176 843	177 022	191 441	212 230	198 330	212 763	
Aug	180 052	183 592	203 432	202 651	195 134	223 115	
Sep	187 925	181 881	205 443	203 660	206 153	228 477	
Oct	186 418	197 562	222 515	223 563	216 469	240 167	
Nov	197 724	211 249	226 575	217 297	212 103	253 881	
Dec	185 268	184 350	181 630	191 619	197 089	227 273	
Total	**2 135 215**	**2 173 856**	**2 317 053**	**2 382 105**	**2 239 658**	**2 606 772**	

1/ Figures for latest month are preliminary.

Table 5 – Year-on-year percentage change in wholesale trade sales at current prices

Month	2017	2018	2019	2020	2021	2022	*2022 year-to-date*
Jan	6,5	3,8	3,1	7,7	-6,1	22,5	*22,5*
Feb	-5,9	5,4	3,9	6,1	-1,4	22,6	*22,5*
Mar	5,9	3,3	3,3	-1,0	10,6	20,1	*21,6*
Apr	0,9	1,7	13,3	-42,9	82,9	9,9	*18,6*
May	1,2	7,6	3,4	-23,0	44,9	17,7	*18,4*
Jun	2,3	5,6	-1,0	-6,3	22,9	16,9	*18,1*
Jul	0,1	8,1	10,9	-6,5	7,3		
Aug	2,0	10,8	-0,4	-3,7	14,3		
Sep	-3,2	13,0	-0,9	1,2	10,8		
Oct	6,0	12,6	0,5	-3,2	10,9		
Nov	6,8	7,3	-4,1	-2,4	19,7		
Dec	-0,5	-1,5	5,5	2,9	15,3		
Total	**1,8**	**6,6**	**2,8**	**-6,0**	**16,4**		

Table 6 – Seasonally adjusted wholesale trade sales at current prices

Month	R million				Month-on-month % change			
	2019	2020	2021	2022	2019	2020	2021	2022
Jan	193 105	207 684	199 643	242 434	2,7	5,8	-1,3	4,6
Feb	194 380	205 360	203 739	250 567	0,7	-1,1	2,1	3,4
Mar	195 306	190 605	210 215	251 289	0,5	-7,2	3,2	0,3
Apr	205 844	118 980	213 295	238 582	5,4	-37,6	1,5	-5,1
May	195 667	155 063	221 133	256 726	-4,9	30,3	3,7	7,6
Jun	193 739	175 497	217 424	253 282	-1,0	13,2	-1,7	-1,3
Jul	208 014	193 739	208 308		7,4	10,4	-4,2	
Aug	198 237	194 622	219 773		-4,7	0,5	5,5	
Sep	197 226	197 609	218 893		-0,5	1,5	-0,4	
Oct	205 329	199 628	226 587		4,1	1,0	3,5	
Nov	198 691	194 334	229 315		-3,2	-2,7	1,2	
Dec	196 209	202 214	231 848		-1,2	4,1	1,1	

Table 7 – Wholesale trade sales at current prices by type of dealer (R million)

Type of dealer	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22 1/
Fee or contract basis	4 056	6 237	5 697	6 457	8 187	8 341
Agricultural raw materials and livestock	13 446	17 089	18 595	14 768	23 467	21 112
Food, beverages and tobacco	30 760	33 324	38 113	33 158	35 268	38 739
Textiles, clothing and footwear	2 818	3 739	3 969	3 477	3 958	2 976
Other household goods except precious stones	26 464	24 716	30 109	26 604	27 526	26 163
Precious stones, jewellery and silverware	4 269	3 435	5 807	2 198	2 948	2 565
Solid, liquid and gaseous fuels and related products	57 062	60 051	71 196	58 354	76 141	74 640
Metals and metal ores	6 326	7 120	9 949	8 330	9 204	7 863
Construction and building materials	9 808	15 323	14 411	11 724	13 969	12 766
Other intermediate products, waste and scrap	15 390	16 149	15 404	12 559	14 621	15 470
Machinery, equipment and supplies	25 030	30 181	28 101	22 669	27 608	29 273
Other goods	14 475	17 009	19 274	16 182	18 618	19 915
Total	**209 904**	**234 373**	**260 625**	**216 479**	**261 516**	**259 822**

1/ Figures are preliminary.

Table 8 – Year-on-year percentage change in wholesale trade sales at current prices by type of dealer

Type of dealer	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22
Fee or contract basis	17,7	11,0	-8,5	-3,1	6,3	-1,3
Agricultural raw materials and livestock	1,0	19,1	21,1	0,8	7,3	20,9
Food, beverages and tobacco	27,5	7,4	7,7	7,6	11,7	16,7
Textiles, clothing and footwear	55,6	43,4	-9,6	7,6	21,7	9,1
Other household goods except precious stones	6,9	9,0	19,0	-0,7	3,2	-8,6
Precious stones, jewellery and silverware	166,5	94,7	52,1	-46,2	-19,8	-39,7
Solid, liquid and gaseous fuels and related products	51,3	57,8	49,9	31,5	54,5	51,3
Metals and metal ores	20,7	16,2	27,8	11,6	17,2	-9,3
Construction and building materials	-14,0	38,3	14,3	3,5	-0,8	9,9
Other intermediate products, waste and scrap	55,3	31,5	35,9	38,2	50,7	31,1
Machinery, equipment and supplies	-0,1	2,8	-10,8	-4,6	-3,3	-0,7
Other goods	11,2	5,1	21,4	9,8	3,2	19,5
Total	**22,5**	**22,6**	**20,1**	**9,9**	**17,7**	**16,9**

Table 9 – Contribution of type of dealer to the year-on-year percentage change in wholesale trade sales at current prices

Type of dealer	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22
Fee or contract basis	0,4	0,3	-0,2	-0,1	0,2	0,0
Agricultural raw materials and livestock	0,1	1,4	1,5	0,1	0,7	1,7
Food, beverages and tobacco	3,9	1,2	1,3	1,2	1,7	2,5
Textiles, clothing and footwear	0,6	0,6	-0,2	0,1	0,3	0,1
Other household goods except precious stones	1,0	1,1	2,2	-0,1	0,4	-1,1
Precious stones, jewellery and silverware	1,5	0,9	0,9	-1,0	-0,3	-0,8
Solid, liquid and gaseous fuels and related products	11,3	11,5	10,9	7,1	12,1	11,4
Metals and metal ores	0,6	0,5	1,0	0,4	0,6	-0,4
Construction and building materials	-0,9	2,2	0,8	0,2	-0,1	0,5
Other intermediate products, waste and scrap	3,2	2,0	1,9	1,8	2,2	1,6
Machinery, equipment and supplies	0,0	0,4	-1,6	-0,6	-0,4	-0,1
Other goods	0,9	0,4	1,6	0,7	0,3	1,5
Total	**22,5**	**22,6**	**20,1**	**9,9**	**17,7**	**16,9**

Analysis of revisions

Introduction

Preliminary monthly values for wholesale trade are published approximately seven weeks after the reference month, e.g. preliminary wholesale sales for March are published around mid-May. The preliminary values are revised the following month, using additional information received from respondents. This and other reasons for revising wholesale trade values from time to time are shown in the following revisions schedule.

Revisions schedule for wholesale trade

Reason for revision	Schedule
Additional information from respondents	Monthly (revision of previous month)
New sample	Annual (July reference month published in September)
New base year (year for constant prices)	Periodic, approximately four- to five-year intervals

Note that seasonally adjusted values are revised monthly.

Analysis

Revisions may be analysed in terms of several dimensions, namely rand values and/or growth rates (e.g. month-on-month percentage changes, year-on-year percentage changes); current prices and/or constant prices; seasonally adjusted and/or unadjusted data; totals and/or components; preliminary estimate compared with first revision and/or latest available revision; and various combinations of these options.

This analysis is confined to the following:

• Total wholesale trade, year-on-year growth rate, constant prices, unadjusted.

• Preliminary growth rates are compared with the latest available revised growth rates, where the preliminary growth rate refers to the first year-on-year growth rate published for the month in question.

• Time period: January 2012 to May 2022.

Figure 2 shows the preliminary and revised growth rates (line chart, left vertical axis) and the difference between them (bar chart, right vertical axis, where difference = revised - preliminary).

Table 10 provides key results relating to revisions.

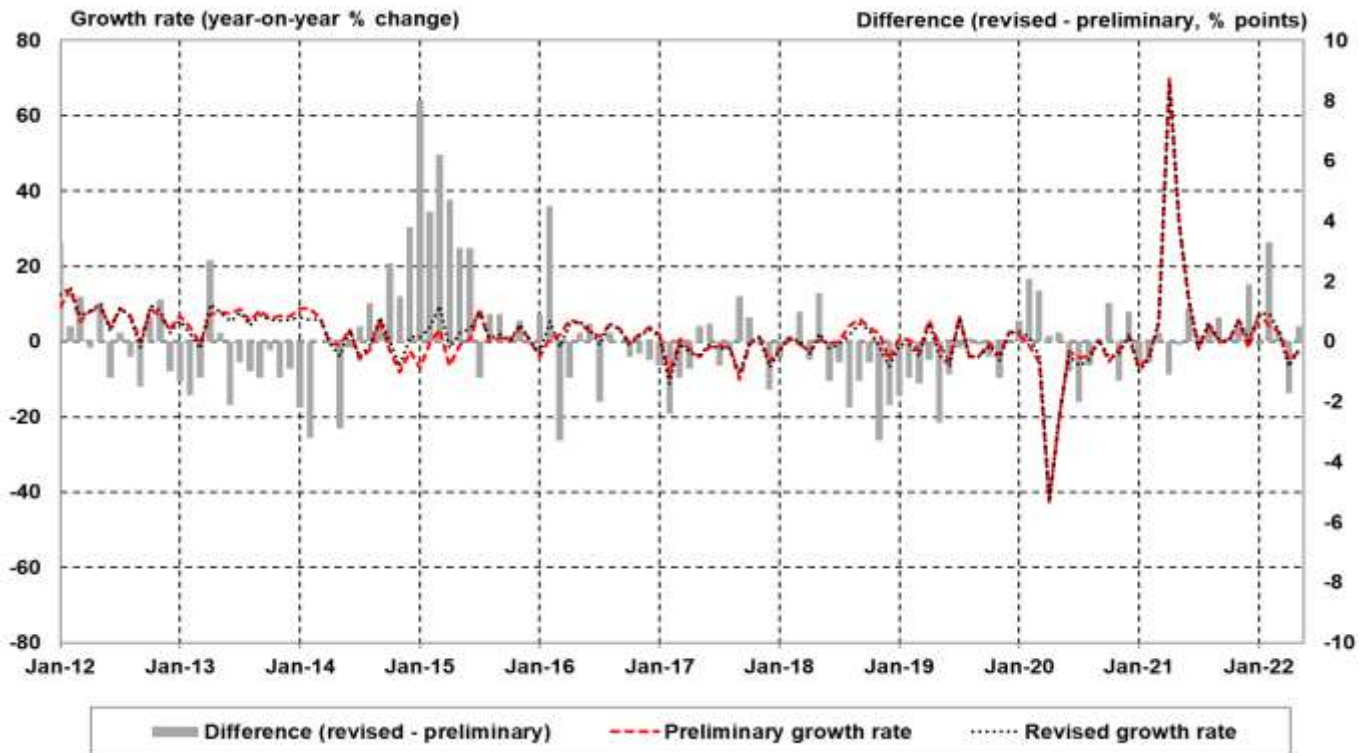**Figure 2 – Wholesale trade year-on-year growth rates: preliminary and revised**

Table 10 – Wholesale trade year-on-year growth rates: preliminary and revised

Description	Value / outcome	Comment
Average year-on-year growth rate over the whole period	Preliminary: 1,62% Revised: 1,70%	The average of revised growth rates is slightly higher than the average of preliminary growth rates
Mean revision	0,07 of a percentage point	This is the average of the revisions
Mean absolute revision	1,27 percentage points	Average of the revisions, but based on the absolute value of each revision (positives and negatives do not cancel each other)
Largest upward revision	8,0 percentage points	Preliminary -7,0% was revised up to 1,0% (January 2015)
Largest downward revision	-3,3 percentage points	Preliminary 1,8% was revised down to -1,5% (March 2016) Preliminary 2,1% was revised down to -1,2% (November 2018)
Range for all revisions	-3,3 to 8,0 percentage points	
Range within which 90% of the revisions lie	-2,3 to 3,6 percentage points	This may be regarded as the normal range for revisions, with revisions outside this range being outliers
Number of upward revisions	57 (or 45,6% of the total observations)	
Number of downward revisions	64 (or 51,2% of the total observations)	

Wholesale trade sales, June 2022

Description	Value / outcome	Comment
Number of zero revisions	4 (or 3,2% of the total observations)	
Is the mean revision (0,07) significantly different from zero?	No	This indicates that there is no bias in the preliminary estimate; see Note 1 below
Standard deviation of the revisions	1,80 percentage points	Standard deviation is a measure of dispersion about the mean – see the row below
Percentage of revisions that lie within one standard deviation of the mean	77,6%	This is the percentage of revisions that lie between -1,72 and 1,87 percentage points; the higher the percentage, the lower is the dispersion about the mean; see too Figure 3 below

Note 1: Is the mean revision significantly different from zero?

The formula for the test statistic is as follows:

$$test\ statistic = \frac{\bar{R}}{\sqrt{\left(\frac{1}{n(n-1)}\right)\left(\sum_{t=1}^{n}\hat{\varepsilon}_t^2 + \frac{3}{4}\sum_{t=2}^{n}\hat{\varepsilon}_t\,\hat{\varepsilon}_{t-1} + \frac{2}{3}\sum_{t=3}^{n}\hat{\varepsilon}_t\,\hat{\varepsilon}_{t-2}\right)}}$$

where

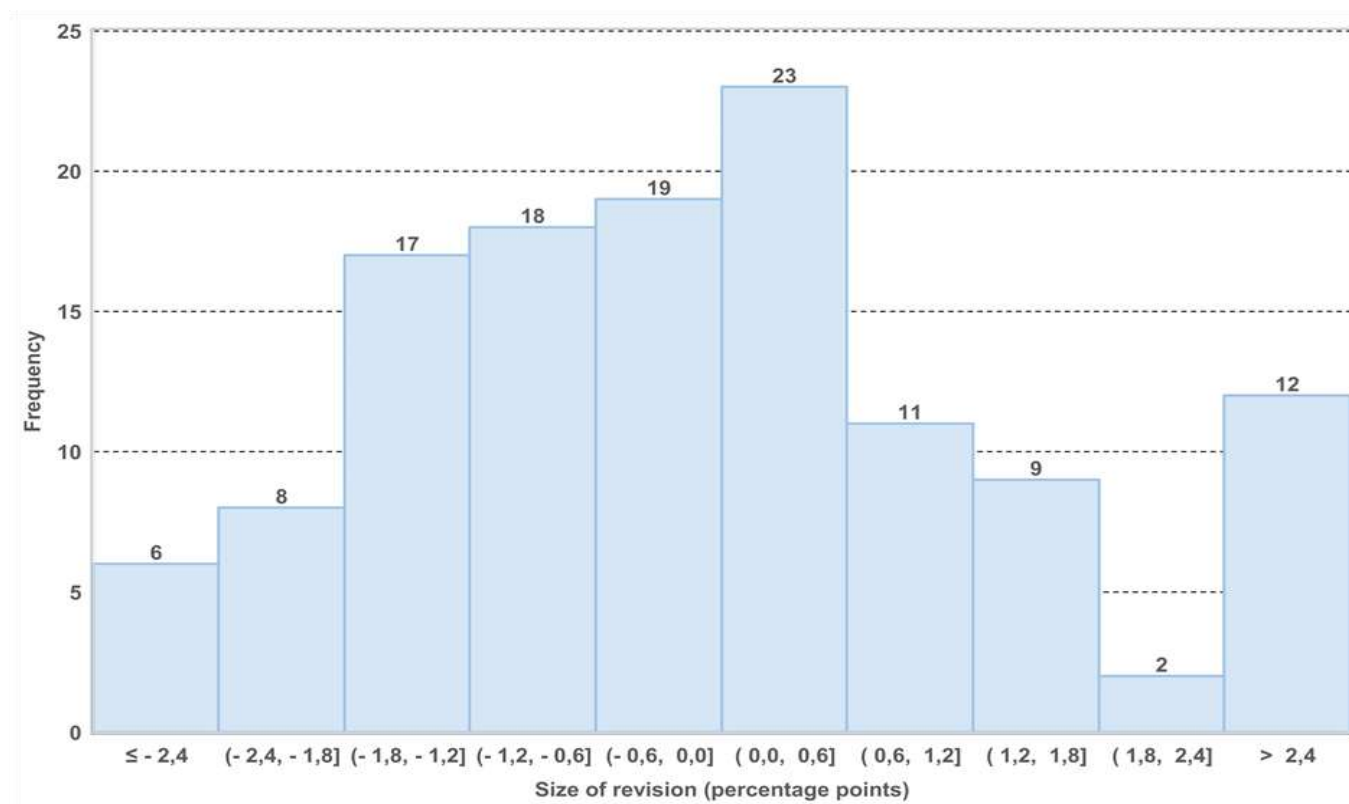$n = number\ of\ observations$

$\bar{R} = mean\ revision$

$\hat{\varepsilon}_t = R_t - \bar{R}, with\ R_t = revision\ in\ period\ t$

Note that if the test statistic shows that the mean revision (MR) is significantly different from zero, then there is bias in the preliminary estimates. Bias in a series suggests there is scope to enhance the compilation of that series in an attempt to remove or minimise the bias. MR > 0 (statistically significant) implies under-estimation of the preliminary estimates. MR < 0 (statistically significant) implies over-estimation of the preliminary estimates.

In this case the test statistic is 0,36, which lies below the critical value of 1,98, indicating that the MR is not significantly different from zero at a 95% confidence interval. Accordingly, no bias is detected in the preliminary estimates.

Figure 3 shows the revisions in terms of a histogram. There were 19 revisions between -0,6 and 0,0 (-0,6 < revision ≤ 0,0) and 23 revisions between 0,0 and 0,6 (0,0 < revision ≤ 0,6). 77,6% of revisions lay between -1,8 and 1,8 percentage points.

Figure 3 – Wholesale trade year-on-year growth rates: histogram of revisions

Survey information

Introduction

1 Statistics South Africa (Stats SA) conducts a monthly survey covering enterprises in the wholesale trade industry (see point 4 below). This survey is based on a sample drawn from Stats SA's 2021 business sampling frame (BSF) that contains businesses registered at the South African Revenue Service (SARS) for value added tax (VAT) and income tax (IT). Stats SA continuously updates its BSF, which is linked to the SARS administrative data.

2 In order to improve timeliness, some information for the latest month had to be estimated due to late response. These estimates will be revised in future statistical releases as soon as information becomes available. Published wholesale trade sales estimates exclude VAT.

Purpose of the survey

3 The results of the monthly wholesale trade sales survey are used to compile estimates of the gross domestic product (GDP) and its components, which are used in monitoring the state of the economy and formulation of economic policy. These statistics are also used in the analysis of comparative business and industry performance.

Scope of the survey

4 This survey covers wholesale enterprises according to the following types of dealers:

- Wholesale trade on a fee or contract basis – sales by commission agents, commodity brokers, auctioneers and 'other' wholesale trade on a fee or contract basis;
- Wholesale trade in agricultural raw materials and livestock;
- Wholesale trade in food, beverages and tobacco;
- Wholesale trade in textiles, clothing and footwear;
- Wholesale trade in 'other' household goods except precious stones. This group includes wholesale trade in household furniture, requisites and appliances, wholesale trade in books and stationery, wholesale trade in pharmaceuticals and toiletries and wholesale trade in 'other' household goods not elsewhere classified;
- Wholesale trade in precious stones, jewellery and silverware;
- Wholesale trade in solid, liquid and gaseous fuels and related products;
- Wholesale trade in metals and metal ores;
- Wholesale trade in construction materials, hardware, plumbing and heating equipment and supplies;
- Wholesale trade in 'other' intermediate products, waste and scrap;
- Wholesale trade in machinery, equipment and supplies; and
- Wholesale trade in 'other' goods. This group covers general wholesale trade and 'other' wholesale trade not classified elsewhere.

Classification

5 The 1993 edition of the *Standard Industrial Classification of all Economic Activities* (SIC), Fifth Edition, Report No. 09-90-02, was used to classify the statistical units in the survey. The SIC is based on the 1990 *International Standard Industrial Classification of all Economic Activities* (ISIC) with suitable adaptations for local conditions. Each enterprise is classified to the industry which reflects its predominant activity. Statistics in this publication are presented at SIC four digit level.

Collection rate

6 The preliminary collection rate for the survey on wholesale trade sales for June 2022 was 76,5%. The improved collection rate for May 2022 was 80,5%.

Statistical unit	**7**	The statistical unit for which information is compiled and published is the enterprise, defined as a legal unit or a combination of legal units that includes and directly controls all functions necessary to carry out its sales activities. The statistical units are derived from and linked to the South African Revenue Service (SARS) administrative data.
Revised figures	**8**	Revised figures are mainly due to late submission of data to Stats SA, or respondents reporting revisions or corrections to their figures. Preliminary figures, as indicated in the relevant tables, are subject to change and when revised will not be indicated as such.
Related publications	**9**	Users may also refer to the following publication available from Stats SA: • *Stats in Brief* issued annually.
Rounding-off of figures	**10**	Where figures have been rounded off, discrepancies may occur between sums of the component items and the totals.
Historical data	**11**	Historical wholesale trade sales data are available on the Stats SA website. To access the data electronically, use the following link: Click to download historical data
Past publications	**12**	Past wholesale trade sales releases are available on the Stats SA website. To access the releases electronically, use the following link: Click to download past releases

Technical notes

Survey methodology and design	**1**	The survey is conducted monthly. Questionnaires are sent to a sample of 1 469 enterprises from a population of 19 883 enterprises. Completed questionnaires are required to be returned to Stats SA within 10 days after the end of the reference month. Email, fax and telephone reminders are used to follow up on non-respondents.
	2	A stratified random sample was drawn at the SIC four-digit level in April 2021 from Stats SA's business sampling frame (BSF). Strata were formed using a combination of Standard Industrial Classification and the measure of size classes for enterprises (see point 3 below). The Neyman optimal allocation formula given below was used to allocate samples to each stratum:

$$nh = n * (Nh * Sh) / [\Sigma (Ni * Si)].$$

Neyman allocation formula not only allocates sample sizes to each stratum but also calculates the relative precision for each stratum as well as the relative precision for all strata. The relative precision for these strata was 5,8%.

Class limits	**3**	The wholesale sampling frame is divided into four size groups. All large enterprises (size group one) are completely enumerated. Simple random sampling is applied to the remaining size groups (medium, small and very small). The total value of sales of the large enterprises (size group one) is added to the weighted totals of size group two, three and four to reflect the total value of sales.

Measure of size classes (Rand)

Enterprise size	Size group	Lower limits	Upper limits
Very small	4	2 675 608	27 000 000
Small	3	27 000 001	144 000 000
Medium	2	144 000 001	288 000 000
Large	1	288 000 001	

Sample weighting	**4**	For those strata not completely enumerated, the weights to produce estimates are the inverse ratio of the sampling fraction, modified to take account of non-response in the survey. Stratum estimates are calculated and then aggregated with the completely enumerated stratum to form group estimates. These procedures are consistent with international best practice.
Seasonal adjustment	**5**	Seasonally adjusted estimates are generated each month using the X-12-ARIMA Seasonal Adjustment Program developed by the United States Census Bureau. Seasonal adjustment is a means of removing the estimated effects of normal seasonal variation from the series so that the effects of other influences on the series can be more clearly recognised. Seasonal adjustment does not aim to remove irregular or non-seasonal influences which may be present in any particular month. Influences that are volatile or unsystematic can still make it difficult to interpret the movement of the series even after adjustment for seasonal variations. Therefore, the month-to-month movements of seasonally adjusted estimates may not be reliable indicators of trend behaviour. The X-12-ARIMA procedure for wholesale trade sales is described in more detail on the Stats SA website: [Click to download seasonal adjustment wholesale trade sales February 2022](#)

| **Trend cycle** | **6** | The trend is the long-term pattern or movement of a time series. The X-12-ARIMA Seasonal Adjustment Program is used for smoothing seasonally adjusted estimates to estimates of the underlying trend cycle. |

Constant prices **7** Stats SA compiles its monthly estimates of wholesale trade sales at current prices from a survey of wholesalers in the formal sector. For January 1998 to December 2011, wholesale trade sales at constant prices were calculated using the 'all groups' PPI for domestic output, but excluding electricity and other utilities.

From January 2012, wholesale trade sales at constant prices are compiled as follows:
(1) Deflate sales of dealers in agricultural raw materials and livestock using the PPI for agriculture.
(2) Deflate sales of dealers in food, beverages and tobacco using the final manufacturing PPI for food products, beverages and tobacco.
(3) Deflate sales of dealers in textiles, clothing and footwear using the final manufacturing PPI for textiles, clothing and footwear.
(4) Deflate sales of dealers in solid, liquid and gaseous fuels and related products using the final manufacturing PPI for coal and petroleum products.
(5) Deflate sales of dealers in machinery, equipment and supplies using the final manufacturing PPIs for general and special purpose machinery; household appliances and office machinery; and electrical machinery and communication and metering equipment.
(6) Deflate the remaining wholesale trade sales using the headline PPI (final manufacturing) excluding the PPIs for food products, beverages and tobacco; textiles, clothing and footwear; coal and petroleum products; general and special purpose machinery; household appliances and office machinery; electrical machinery and communication and metering equipment; and transport equipment. The PPI for transport equipment is excluded because it measures producer prices of motor vehicles, which are not included in wholesale trade.
Total wholesale trade sales at constant prices is obtained by aggregating (1) to (6).

Reliability of estimates **8** Data presented in this publication are based on information obtained from a sample and are, therefore, subject to sampling variability; that is, they may differ from the figures that would have been produced if the data had been obtained from all enterprises in the wholesale industry in South Africa. Estimates are subject to sampling and non-sampling errors.

9 Inaccuracies may occur because of imperfections in reporting by enterprises and errors made in the collection and processing of the data. Inaccuracies of this kind are referred to as non-sampling errors. Every effort is made to minimise non-sampling errors by careful design of questionnaires, testing them in pilot studies, editing reported data and implementing efficient operating procedures. Fluctuations may occur in consecutive months as a result of seasonal and economic factors.

Month-on-month percentage change **10** The month-on-month percentage change in a variable for any given month is the change between that month and the previous month, expressed as a percentage of the latter.

Year-on-year percentage change **11** The year-on-year percentage change in a variable for any given period is the change between that period and the corresponding period of the previous year, expressed as a percentage of the latter.

| **Contribution (percentage points)** | **12** | The contribution (percentage points) to the year-on-year percentage change is calculated by multiplying the percentage change of each type of wholesaler by its corresponding weight, divided by 100. The weight is the percentage contribution of each type of wholesaler to total wholesale trade sales in the corresponding period of the previous year. |

Glossary

| **Enterprise** | An enterprise is a legal entity or a combination of legal units that includes and directly controls all functions necessary to carry out its sales activities. |
| **Industry** | An industry is made up of enterprises engaged in the same or similar kinds of economic activity. Industries are defined in the *System of National Accounts* (SNA) in the same way as in the *Standard Industrial Classification of All Economic Activities* (SIC)*,* Fifth Edition, Report No. 09-90-02 of January 1993. |

Symbols and abbreviations	BSF	Business sampling frame
	GDP	Gross domestic product
	ISIC	International Standard Industrial Classification
	SIC	Standard Industrial Classification of all Economic Activities
	SARS	South African Revenue Service
	Stats SA	Statistics South Africa
	VAT	Value added tax

| **Wholesale trade** | Wholesale trade includes the resale (sale without transformation) of new and used goods and products to other wholesalers, retailers, agricultural, industrial, commercial, institutional and professional users either directly or through agents on a fee or contract basis. |
| **Wholesaler** | A wholesaler is an enterprise deriving 50% or more of its turnover from sales of goods to other businesses and institutions. |

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Stats SA publishes approximately 300 different statistical releases each year. It is not economically viable to produce them in more than one of South Africa's eleven official languages. Since the releases are used extensively, not only locally but also by international economic and social-scientific communities. Stats SA releases are published in English only.

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