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STATISTICAL RELEASE
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Land transport (Preliminary)

January 2024

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

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ENQUIRIES:
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Contents

Freight transportation: results for January 2024

Table A – Year-on-year percentage change in freight transportation (income at current prices)

	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Jan-24
Freight payload	-10,0	0,3	-1,1	3,2	-2,8	-6,7
Freight income	-4,6	4,5	6,2	3,7	3,8	-0,6

The volume of goods transported (payload) decreased by 6,7% in January 2024 compared with January 2023. The corresponding income decreased by 0,6% over the same period.

Table B – Freight transportation income at current prices for the latest three months by type of commodity

Type of commodity	Nov 2022 – Jan 2023 (R million)	Weight (%)	Nov 2023 – Jan 2024 (R million)	% change between Nov 2022 – Jan 2023 and Nov 2023 – Jan 2024	Contribution (% points) to the total % change
Agriculture and forestry primary products	3 785	7,0	3 457	-8,7	-0,6
Primary mining and quarrying products	17 547	32,6	19 038	8,5	2,8
Manufactured food, beverages and tobacco products	7 615	14,1	6 567	-13,8	-1,9
Textiles, clothing and leather goods	1 345	2,5	1 380	2,6	0,1
Chemicals, coke, petroleum, rubber, plastic and other mineral products	2 658	4,9	2 698	1,5	0,1
Basic metals and fabricated metal products	680	1,3	635	-6,6	-0,1
Non-metallic products	440	0,8	450	2,3	0,0
Electrical machinery, transport machinery and equipment	915	1,7	1 095	19,7	0,3
Motor vehicles, parts and accessories	1 600	3,0	1 519	-5,1	-0,2
Paper and paper products	291	0,5	271	-6,9	0,0
Commercial products	1 193	2,2	1 317	10,4	0,2
Used household and office products	1 257	2,3	1 229	-2,2	-0,1
Containers	2 418	4,5	2 837	17,3	0,8
Parcels	1 468	2,7	1 474	0,4	0,0
Other freight	10 614	19,7	11 102	4,6	0,9
Total income	**53 825**	**100,0**	**55 071**	**2,3**	**2,3**

Income from freight transportation increased by 2,3% in the three months ended January 2024 compared with the three months ended January 2023. The main positive contributors to this increase were:

- primary mining and quarrying products (8,5% and contributing 2,8 percentage points);
- 'other' freight (4,6% and contributing 0,9 of a percentage point); and
- containers (17,3% and contributing 0,8 of a percentage point) – see Table B.

Table C – Seasonally adjusted payload for the latest three months by type of transport

Payload	Aug – Oct 2023 (000 tons)	Weight (%)	Nov 2023 – Jan 2024 (000 tons)	% change between Aug – Oct 2023 and Nov 2023 – Jan 2024	Contribution (% points) to the total % change
Rail	43 452	17,2	40 420	-7,0	-1,2
Road	209 899	82,8	215 948	2,9	2,4
Total	**253 349**	**100,0**	**256 368**	**1,2**	**1,2**

Seasonally adjusted payload increased by 1,2% in the three months ended January 2024 compared with the previous three months. Road freight increased by 2,9% (contributing 2,4 percentage points) while rail freight decreased by 7,0% (contributing -1,2 percentage points) – see Table C.

Figure 1 – Freight transportation: seasonally adjusted payload

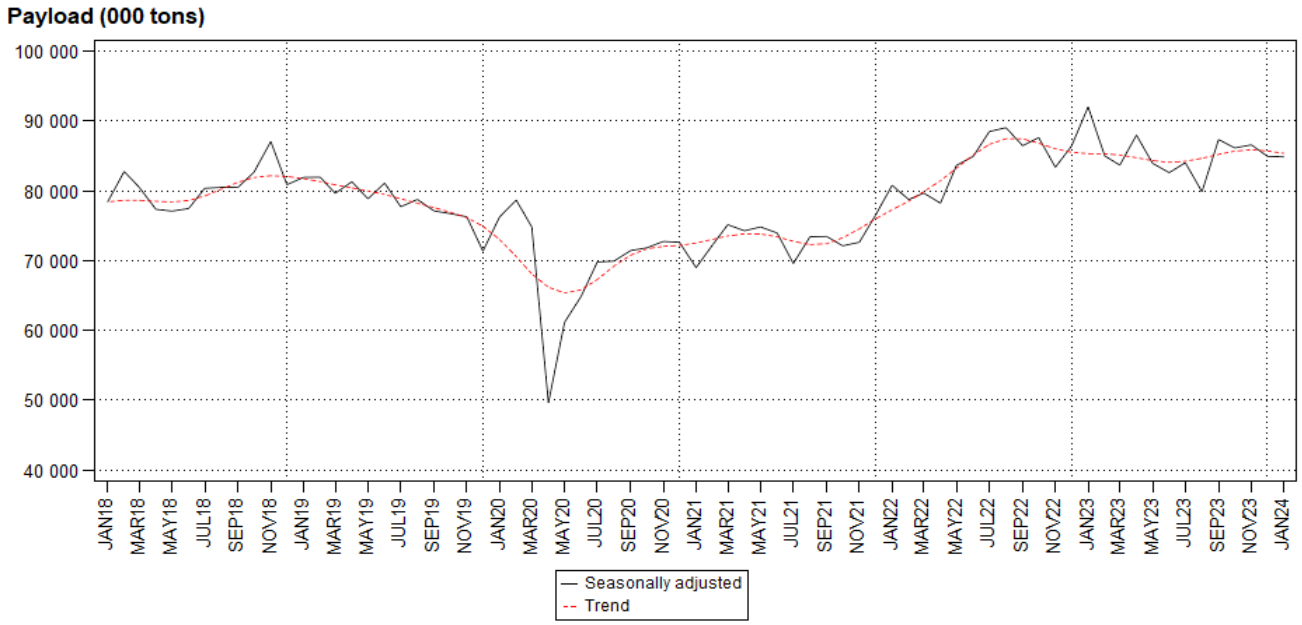
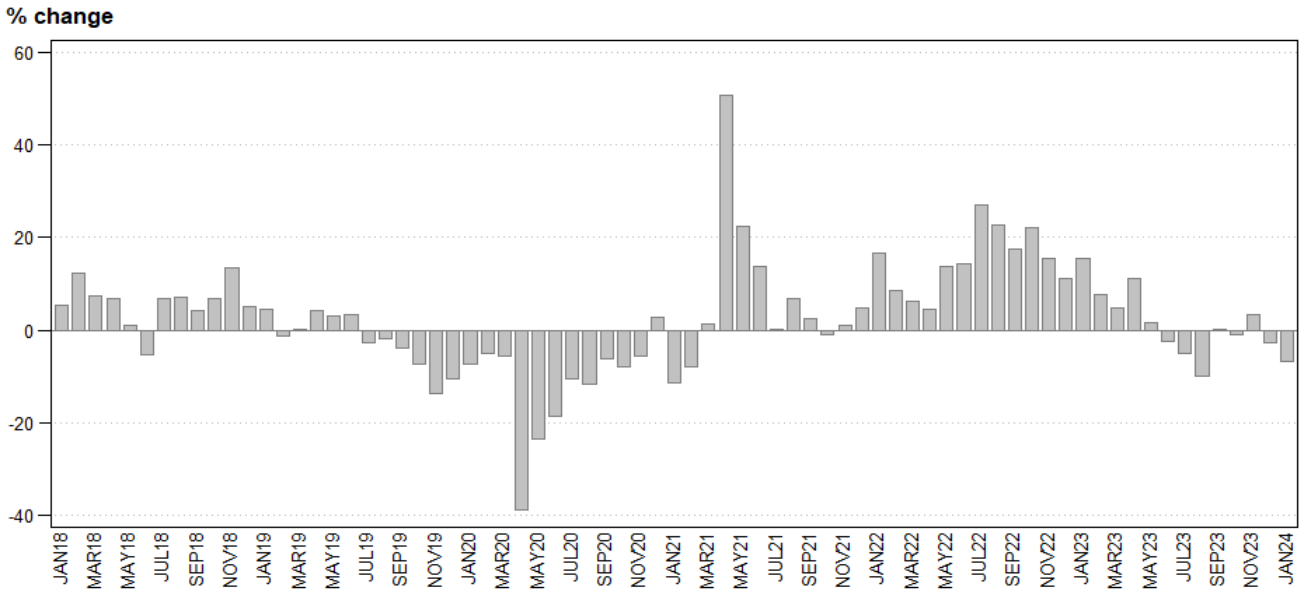


Figure 2 – Freight transportation: year-on-year percentage change in payload



Passenger transportation: results for January 2024

Table D – Year-on-year percentage change in passenger transportation (income at current prices)

	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Jan-24
Passenger journeys	14,2	23,8	23,0	16,6	9,2	21,0
Passenger income	10,6	14,8	15,1	12,9	6,6	13,4

The number of passenger journeys increased by 21,0% in January 2024 compared with January 2023. The corresponding income increased by 13,4% over the same period.

Table E – Seasonally adjusted passenger journeys for the latest three months by type of transport

Passenger journeys	Aug – Oct 2023 (000)	Weight (%)	Nov 2023 – Jan 2024 (000)	% change between Aug – Oct 2023 and Nov 2023 – Jan 2024	Contribution (% points) to the total % change
Rail	11 481	14,6	12 628	10,0	1,5
Road	67 213	85,4	69 320	3,1	2,6
Total	**78 693**	**100,0**	**81 947**	**4,1**	**4,1**

Seasonally adjusted passenger journeys increased by 4,1% in the three months ended January 2024 compared with the previous three months. Road passenger journeys increased by 3,1% (contributing 2,6 percentage points) and rail passenger journeys increased by 10,0% (contributing 1,5 percentage points) – see Table E.

Figure 3 – Passenger transportation: seasonally adjusted passenger journeys

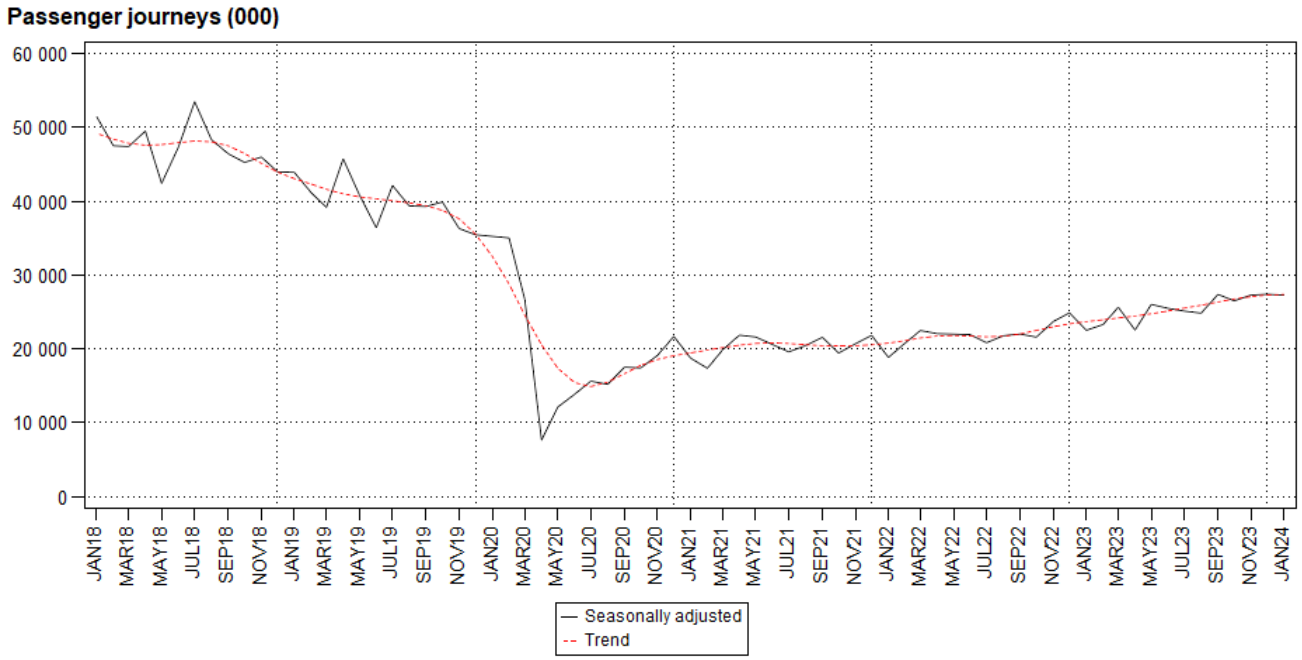
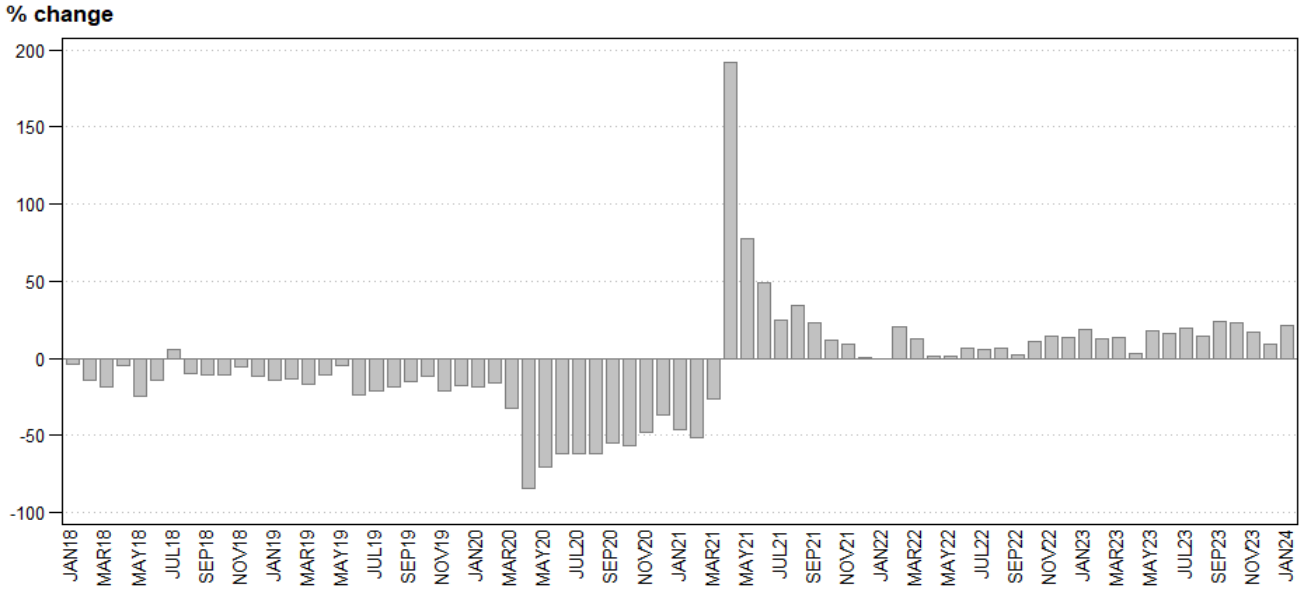


Figure 4 – Passenger transportation: year-on-year percentage change in passenger journeys



Risenga Maluleke
Statistician-General

Tables

Table 1 – Freight transportation (income at current prices)

Year and month [1]		Rail		Road		Total	
		Payload (000 tons)	Income (R million)	Payload (000 tons)	Income (R million)	Payload (000 tons)	Income (R million)
2023	Jan	13 242	2 986	70 995	14 683	84 237	17 669
	Feb	12 961	2 976	65 887	13 854	78 848	16 830
	Mar	11 964	2 853	71 003	14 971	82 967	17 824
	Apr	13 552	3 283	71 195	14 707	84 747	17 990
	May	12 096	3 060	75 445	15 485	87 541	18 545
	Jun	13 282	3 500	70 292	14 781	83 574	18 280
	Jul	11 247	2 856	74 273	15 608	85 520	18 463
	Aug	13 841	3 485	73 709	15 747	87 550	19 232
	Sep	18 971	4 825	71 311	15 373	90 281	20 198
	Oct	11 839	3 052	76 653	16 306	88 492	19 358
	Nov	13 338	3 457	77 411	16 249	90 749	19 706
	Dec	14 042	3 822	64 158	13 987	78 200	17 809
	Total	**160 375**	**40 155**	**862 332**	**181 751**	**1 022 706**	**221 904**
2024	Jan	12 774	3 343	65 808	14 213	78 582	17 556

[1] Figures for the latest month are preliminary.

Table 2 – Year-on-year percentage change in freight transportation (income at current prices)

Year and month		Rail		Road		Total	
		Payload	Income	Payload	Income	Payload	Income
2023	Jan	-5,4	3,2	20,2	21,8	15,3	18,2
	Feb	-12,3	-2,6	12,6	14,0	7,6	10,7
	Mar	-9,6	3,2	7,6	8,9	4,8	8,0
	Apr	-6,1	5,0	15,0	12,8	11,0	11,3
	May	-12,0	2,8	4,0	2,8	1,5	2,8
	Jun	0,2	14,4	-3,0	-2,6	-2,5	0,3
	Jul	-8,3	0,2	-4,4	-4,8	-4,9	-4,1
	Aug	-4,6	5,5	-10,9	-6,6	-10,0	-4,6
	Sep	28,2	38,0	-5,1	-2,9	0,3	4,5
	Oct	18,4	47,0	-3,5	0,9	-1,1	6,2
	Nov	46,0	50,6	-1,7	-2,7	3,2	3,7
	Dec	16,8	37,2	-6,2	-2,7	-2,8	3,8
	Total	**2,7**	**15,8**	**1,1**	**2,4**	**1,4**	**4,6**
2024	Jan	-3,5	12,0	-7,3	-3,2	-6,7	-0,6

Table 3 – Seasonally adjusted freight transportation (income at current prices)

Year and month		Rail		Road		Total	
		Payload (000 tons)	Income (R million)	Payload (000 tons)	Income (R million)	Payload (000 tons)	Income (R million)
2023	Jan	13 411	3 108	78 607	16 132	92 017	19 240
	Feb	12 787	2 990	72 215	15 058	85 003	18 048
	Mar	12 455	3 063	71 221	14 984	83 676	18 046
	Apr	12 981	3 160	75 001	15 507	87 982	18 667
	May	12 284	3 140	71 661	14 847	83 944	17 987
	Jun	12 741	3 317	69 857	14 656	82 598	17 973
	Jul	12 462	3 172	71 566	15 043	84 028	18 214
	Aug	12 542	3 249	67 319	14 693	79 860	17 942
	Sep	16 831	4 395	70 516	15 079	87 346	19 473
	Oct	14 079	3 263	72 064	15 443	86 143	18 706
	Nov	13 518	3 403	73 066	15 315	86 585	18 718
	Dec	14 008	3 736	70 921	15 263	84 929	18 998
2024	Jan	12 894	3 479	71 961	15 474	84 854	18 953

Table 4 – Month-on-month percentage change in seasonally adjusted freight transportation (income at current prices)

Year and month		Rail		Road		Total	
		Payload	Income	Payload	Income	Payload	Income
2023	Jan	11,3	13,0	5,7	4,4	6,5	5,7
	Feb	-4,7	-3,8	-8,1	-6,7	-7,6	-6,2
	Mar	-2,6	2,4	-1,4	-0,5	-1,6	0,0
	Apr	4,2	3,2	5,3	3,5	5,1	3,4
	May	-5,4	-0,6	-4,5	-4,3	-4,6	-3,6
	Jun	3,7	5,6	-2,5	-1,3	-1,6	-0,1
	Jul	-2,2	-4,4	2,4	2,6	1,7	1,3
	Aug	0,6	2,4	-5,9	-2,3	-5,0	-1,5
	Sep	34,2	35,3	4,7	2,6	9,4	8,5
	Oct	-16,4	-25,8	2,2	2,4	-1,4	-3,9
	Nov	-4,0	4,3	1,4	-0,8	0,5	0,1
	Dec	3,6	9,8	-2,9	-0,3	-1,9	1,5
2024	Jan	-8,0	-6,9	1,5	1,4	-0,1	-0,2

Table 5 – Freight transportation income at current prices by type of commodity (R million)

Type of commodity	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Jan-24 [1]
Agriculture and forestry primary products	1 324	1 218	1 297	1 290	1 079	1 088
Primary mining and quarrying products	5 883	7 024	6 366	6 784	6 246	6 008
Manufactured food, beverages and tobacco products	2 203	2 225	2 309	2 258	2 135	2 174
Textiles, clothing and leather products	437	457	527	536	451	393
Chemicals, coke, petroleum, rubber, plastic and other mineral products	937	981	893	940	878	880
Basic metals and fabricated metal products	268	257	280	202	224	209
Non-metallic products	151	150	172	183	138	129
Electrical machinery, transport machinery and equipment	367	319	364	389	335	371
Motor vehicles, parts and accessories	530	513	519	563	429	527
Paper and paper products	92	104	105	111	87	73
Commercial products	386	409	424	438	445	434
Used household and office products	405	393	409	432	440	357
Containers	865	871	843	928	921	988
Parcels	498	493	519	607	436	431
Other freight	4 886	4 784	4 332	4 044	3 566	3 492
Total	**19 232**	**20 198**	**19 358**	**19 706**	**17 809**	**17 556**

[1] Figures are preliminary.

Table 6 – Year-on-year percentage change in freight transportation income at current prices by type of commodity

Type of commodity	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Jan-24
Agriculture and forestry primary products	-12,3	-12,6	-0,2	-4,9	-15,8	-5,1
Primary mining and quarrying products	-18,5	5,1	10,3	19,2	9,6	-2,4
Manufactured food, beverages and tobacco products	-17,5	-12,7	-7,8	-15,0	-15,2	-10,9
Textiles, clothing and leather products	-3,3	-3,8	5,6	-4,6	8,9	6,5
Chemicals, coke, petroleum, rubber, plastic and other mineral products	0,3	8,3	-7,6	-0,1	6,6	-1,5
Basic metals and fabricated metal products	16,0	-1,9	40,7	-22,6	-1,3	8,9
Non-metallic products	-17,0	-14,3	27,4	10,9	-0,7	-5,1
Electrical machinery, transport machinery and equipment	16,9	-1,2	6,4	8,1	30,9	24,1
Motor vehicles, parts and accessories	0,4	-4,1	-1,1	3,5	-22,6	5,0
Paper and paper products	-18,6	3,0	-0,9	-5,1	-4,4	-12,0
Commercial products	-10,9	-7,5	2,7	-9,7	21,9	26,5
Used household and office products	-23,6	-16,2	1,0	-7,7	0,2	2,0
Containers	0,3	6,7	15,8	5,9	17,2	30,7
Parcels	-6,9	-4,1	4,4	-4,1	4,8	2,9
Other freight	33,6	29,5	12,8	4,2	13,3	-2,6
Total	**-4,6**	**4,5**	**6,2**	**3,7**	**3,8**	**-0,6**

Table 7 – Contribution of each type of commodity to the year-on-year percentage change in freight transportation income at current prices (percentage points)

Type of commodity	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Jan-24
Agriculture and forestry primary products	-0,9	-0,9	0,0	-0,4	-1,2	-0,3
Primary mining and quarrying products	-6,6	1,8	3,3	5,7	3,2	-0,8
Manufactured food, beverages and tobacco products	-2,3	-1,7	-1,1	-2,1	-2,2	-1,5
Textiles, clothing and leather products	-0,1	-0,1	0,2	-0,1	0,2	0,1
Chemicals, coke, petroleum, rubber, plastic and other mineral products	0,0	0,4	-0,4	0,0	0,3	-0,1
Basic metals and fabricated metal products	0,2	0,0	0,4	-0,3	0,0	0,1
Non-metallic products	-0,2	-0,1	0,2	0,1	0,0	0,0
Electrical machinery, transport machinery and equipment	0,3	0,0	0,1	0,2	0,5	0,4
Motor vehicles, parts and accessories	0,0	-0,1	0,0	0,1	-0,7	0,1
Paper and paper products	-0,1	0,0	0,0	0,0	0,0	-0,1
Commercial products	-0,2	-0,2	0,1	-0,2	0,5	0,5
Used household and office products	-0,6	-0,4	0,0	-0,2	0,0	0,0
Containers	0,0	0,3	0,6	0,3	0,8	1,3
Parcels	-0,2	-0,1	0,1	-0,1	0,1	0,1
Other freight	6,1	5,6	2,7	0,9	2,4	-0,5
Total	**-4,6**	**4,5**	**6,2**	**3,7**	**3,8**	**-0,6**

Table 8 – Passenger transportation (income at current prices)

Year and month [1]		Rail		Road		Total	
		Passenger journeys (000)	Income (R million)	Passenger journeys (000)	Income (R million)	Passenger journeys (000)	Income (R million)
2023	Jan	2 483	125	18 901	787	21 384	912
	Feb	3 124	122	20 859	770	23 983	892
	Mar	3 567	136	24 333	903	27 900	1 039
	Apr	2 635	110	17 830	730	20 465	840
	May	3 468	113	21 437	776	24 905	889
	Jun	3 222	116	21 625	874	24 847	990
	Jul	3 163	96	21 371	849	24 534	945
	Aug	3 901	117	21 835	819	25 736	936
	Sep	3 844	143	25 668	930	29 512	1 073
	Oct	4 379	153	23 783	831	28 162	984
	Nov	4 915	143	24 225	861	29 140	1 004
	Dec	3 058	79	20 669	952	23 727	1 031
	Total	**41 759**	**1 453**	**262 536**	**10 082**	**304 295**	**11 535**
2024	Jan	4 075	151	21 800	883	25 875	1 034

[1] Figures for the latest month are preliminary.

Table 9 – Year-on-year percentage change in passenger transportation (income at current prices)

Year and month		Rail		Road		Total	
		Passenger journeys	Income	Passenger journeys	Income	Passenger journeys	Income
2023	Jan	81,6	257,1	13,9	19,2	19,1	31,2
	Feb	58,3	106,8	7,9	11,9	12,5	19,4
	Mar	60,8	100,0	9,1	9,1	13,7	16,0
	Apr	82,9	44,7	-3,1	1,4	3,2	5,5
	May	169,9	46,8	8,4	8,4	18,3	12,1
	Jun	215,6	81,3	5,8	11,6	15,8	16,9
	Jul	199,5	5,5	9,7	10,5	19,4	10,0
	Aug	192,2	21,9	3,0	9,2	14,2	10,6
	Sep	174,6	37,5	14,4	11,9	23,8	14,8
	Oct	140,1	39,1	12,9	11,5	23,0	15,1
	Nov	112,7	37,5	6,8	9,7	16,6	12,9
	Dec	62,1	29,5	4,2	5,1	9,2	6,6
	Total	**118,4**	**53,8**	**7,8**	**9,8**	**15,8**	**13,9**
2024	Jan	64,1	20,8	15,3	12,2	21,0	13,4

Table 10 – Seasonally adjusted passenger transportation (income at current prices)

Year and month		Rail		Road		Total	
		Passenger journeys (000)	Income (R million)	Passenger journeys (000)	Income (R million)	Passenger journeys (000)	Income (R million)
2023	Jan	2 653	112	19 845	763	22 499	875
	Feb	2 843	117	20 441	818	23 284	935
	Mar	3 261	128	22 370	919	25 631	1 047
	Apr	2 659	116	19 878	828	22 537	944
	May	3 613	116	22 404	821	26 017	937
	Jun	3 474	123	21 999	853	25 473	976
	Jul	3 491	108	21 613	834	25 105	941
	Aug	3 741	119	21 089	833	24 830	952
	Sep	3 800	127	23 573	861	27 372	988
	Oct	3 940	129	22 551	831	26 491	960
	Nov	4 142	132	23 147	848	27 288	980
	Dec	4 155	123	23 234	872	27 389	995
2024	Jan	4 331	135	22 939	856	27 270	990

Table 11 – Month-on-month percentage change in seasonally adjusted passenger transportation (income at current prices)

Year and month		Rail		Road		Total	
		Passenger journeys	Income	Passenger journeys	Income	Passenger journeys	Income
2023	Jan	2,9	19,1	-11,0	-8,6	-9,6	-5,8
	Feb	7,2	4,5	3,0	7,2	3,5	6,9
	Mar	14,7	9,4	9,4	12,3	10,1	12,0
	Apr	-18,5	-9,4	-11,1	-9,9	-12,1	-9,8
	May	35,9	0,0	12,7	-0,8	15,4	-0,7
	Jun	-3,8	6,0	-1,8	3,9	-2,1	4,2
	Jul	0,5	-12,2	-1,8	-2,2	-1,4	-3,6
	Aug	7,2	10,2	-2,4	-0,1	-1,1	1,2
	Sep	1,6	6,7	11,8	3,4	10,2	3,8
	Oct	3,7	1,6	-4,3	-3,5	-3,2	-2,8
	Nov	5,1	2,3	2,6	2,0	3,0	2,1
	Dec	0,3	-6,8	0,4	2,8	0,4	1,5
2024	Jan	4,2	9,8	-1,3	-1,8	-0,4	-0,5

Analysis of revisions

Introduction

Preliminary monthly values for land transport are published approximately seven to eight weeks after the reference month, e.g. preliminary land transport values for March are published in the second half of May. The preliminary values are revised the following month, using additional information received from respondents. This and other reasons for revising land transport values from time to time are shown in the following revisions schedule.

Revisions schedule for land transport

Reason for revision	Schedule
Additional information from respondents	Monthly (revision of previous month)
New sample	Annual (July reference month published in September)

Note that seasonally adjusted values are revised monthly.

Analysis

Revisions may be analysed in terms of several dimensions, namely levels and/or growth rates (e.g. month-on-month percentage changes, year-on-year percentage changes); 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 freight payload, year-on-year growth rate, unadjusted.
- Total passenger journeys, year-on-year growth rate, 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 December 2023.

Figures 5 and 6 show the preliminary and revised growth rates for freight payload and passenger journeys (line chart, left vertical axis) and the difference between them (bar chart, right vertical axis, where difference = revised - preliminary).

Table 12 provides key results relating to revisions.

Figure 5 – Freight payload year-on-year growth rates: preliminary and revised

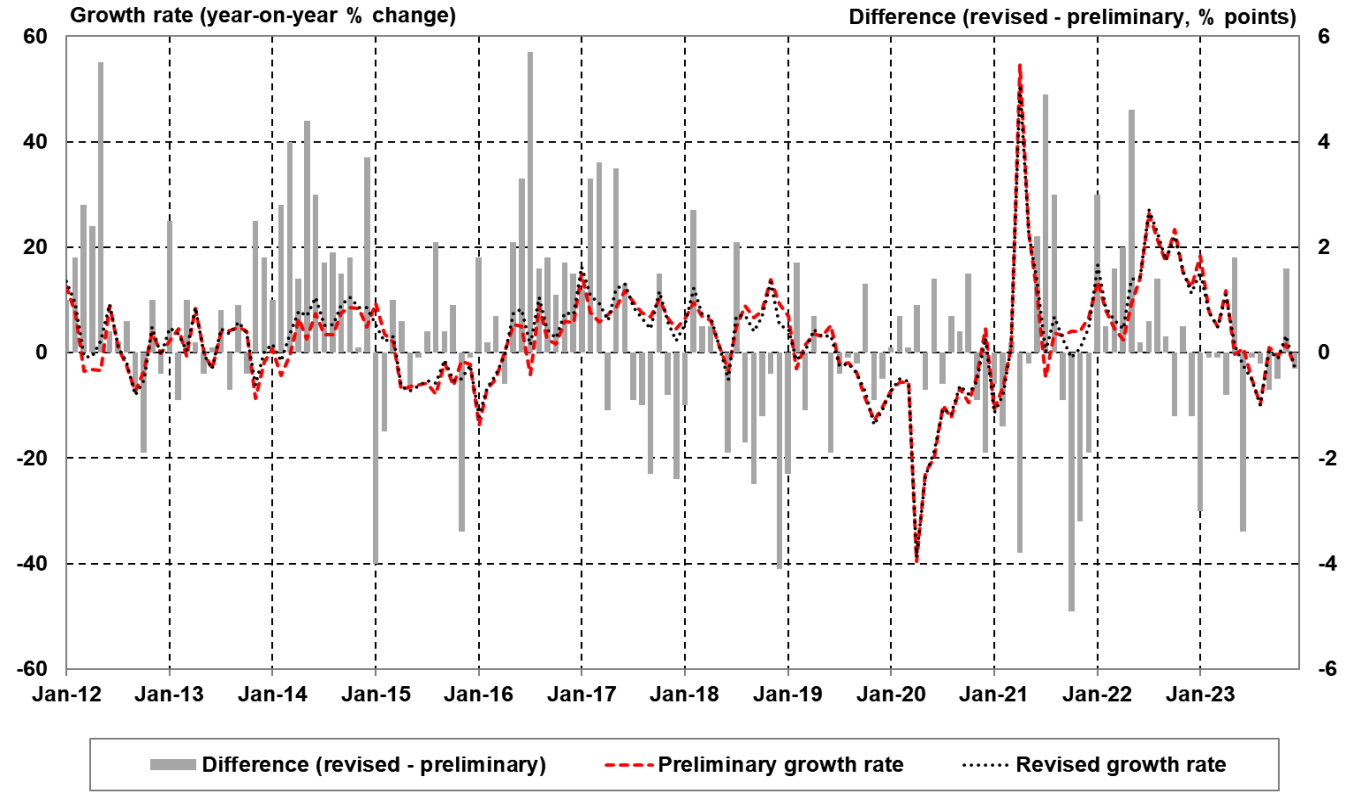


Figure 6 – Passenger journeys year-on-year growth rates: preliminary and revised

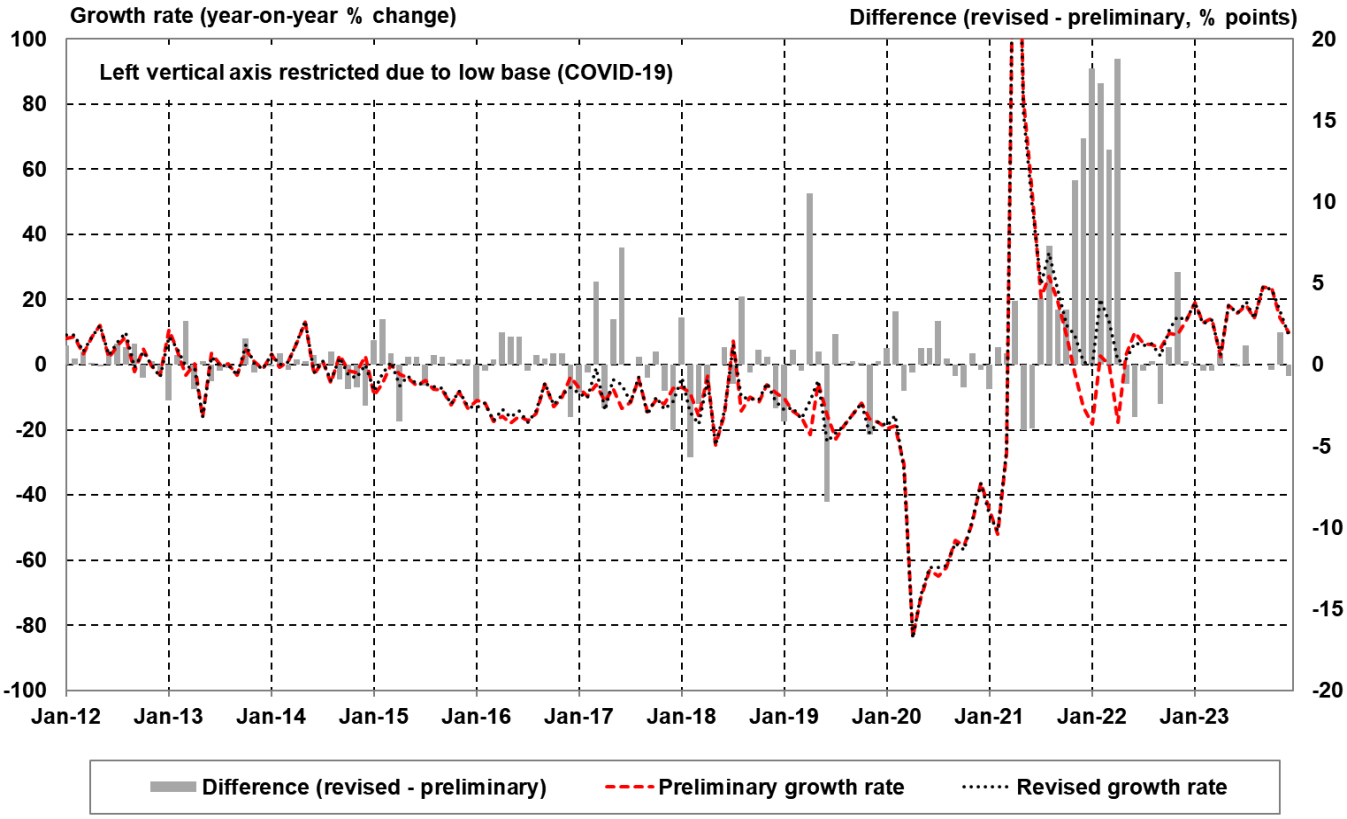


Table 12 – Transportation estimates year-on-year growth rates: preliminary and revised

Description	Type of transportation	Value / outcome	Comment
Average year-on-year growth rate over the whole period	Freight payload	Preliminary: 2,46% Revised: 2,88%	The average of revised growth rates is higher than the average of preliminary growth rates
	Passenger journeys	Preliminary: -4,96% Revised: -4,12%	
Mean revision	Freight payload	0,42 of a percentage point	This is the average of the revisions
	Passenger journeys	0,83 of a percentage point	
Mean absolute revision	Freight payload	1,49 percentage points	Average of the revisions, but based on the absolute value of each revision (positives and negatives do not cancel each other)
	Passenger journeys	2,08 percentage points	
Largest upward revision	Freight payload	5,7 percentage points	Preliminary -4,2% was revised up to 1,5% (July 2016)
	Passenger journeys	18,8 percentage points	Preliminary -17,6% was revised up to 1,2% (April 2022)
Largest downward revision	Freight payload	-4,9 percentage points	Preliminary 4,0% was revised down to -0,9% (October 2021)
	Passenger journeys	-8,4 percentage points	Preliminary -15,3% was revised down to -23,7% (June 2019)
Range for all revisions	Freight payload	-4,9 to 5,7 percentage points	
	Passenger journeys	-8,4 to 18,8 percentage points	
Range within which 90% of the revisions lie	Freight payload	-3,2 to 3,7 percentage points	This may be regarded as the normal range for revisions, with revisions outside this range being outliers
	Passenger journeys	-3,5 to 9,7 percentage points	
Number of upward revisions	Freight payload	83 (or 57,6% of the total observations)	
	Passenger journeys	83 (or 57,6% of the total observations)	
Number of downward revisions	Freight payload	59 (or 41,0% of the total observations)	
	Passenger journeys	54 (or 37,5% of the total observations)	
Number of zero revisions	Freight payload	2 (or 1,4% of the total observations)	
	Passenger journeys	7 (or 4,9% of the total observations)	
Is the mean revision (0,42) significantly different from zero?	Freight payload	Yes	This indicates that there is bias in the preliminary estimate – see Note 1
Is the mean revision (0,83) significantly different from zero?	Passenger journeys	Yes	This indicates that there is bias in the preliminary estimate – see Note 1

Standard deviation of the revisions	Freight payload	1,91 percentage points	Standard deviation is a measure of dispersion about the mean – see the rows below
	Passenger journeys	3,86 percentage points	
Percentage of revisions that lie within one standard deviation of the mean	Freight payload	72,9%	This is the percentage of revisions that lie between -1,49 and 2,33 percentage points; the higher the percentage, the lower is the dispersion about the mean – see Figure 7
	Passenger journeys	85,4%	This is the percentage of revisions that lie between -3,03 and 4,70 percentage points; the higher the percentage, the lower is the dispersion about the mean – see Figure 8

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 the case of freight payload, the test statistic is 2,27, which lies above the critical value of 1,98, indicating that the mean revision (MR) is significantly different from zero at a 5% significance level. Accordingly, there is under-estimation of the annual growth rate detected in the preliminary estimates. Note that for the period January 2018 to December 2023 the MR is -0,13, which is much closer to zero than the MR for the whole period (0,42).

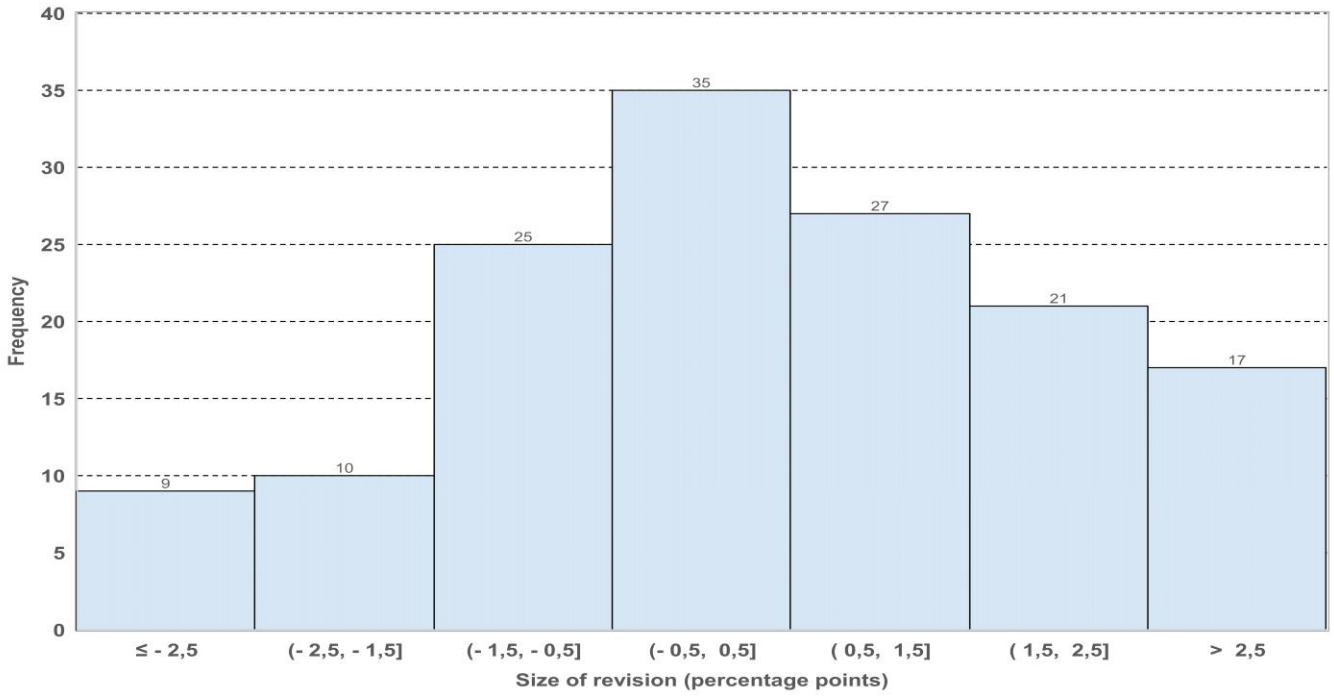
In the case of passenger journeys the test statistic is 2,00, which lies above the critical value of 1,98, indicating that the mean revision (MR) is significantly different from zero at a 5% significance level. Accordingly, there is under-estimation of the annual growth rate detected in the preliminary estimates.

The revisions for freight payload and passenger journeys will be monitored going forward to assess whether a change in the methodology for imputations is required.

Figures 7 and 8 show the revisions in terms of histograms.

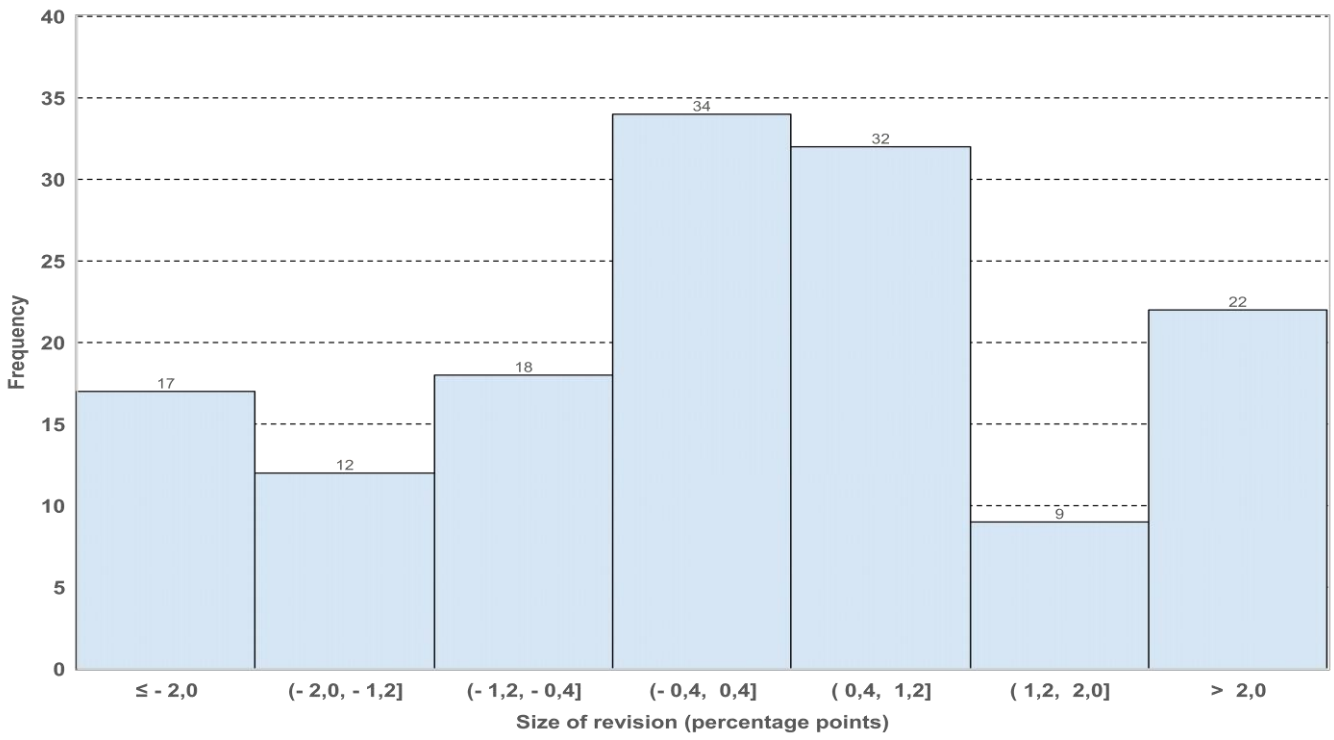
For freight payload, there were 25 revisions between -1,5 and -0,5 (-1,5 < revision ≤ -0,5) and 35 revisions between -0,5 and 0,5 (-0,5 < revision ≤ 0,5). Around 81,9% of revisions lie between -2,5 and 2,5 percentage points.

Figure 7 – Freight payload year-on-year growth rates: histogram of revisions



For passenger journeys, there were 18 revisions between -1,2 and -0,4 (-1,2 < revision ≤ -0,4); 34 revisions between -0,4 and 0,4 (-0,4 < revision ≤ 0,4); and 32 revisions between 0,4 and 1,2 (0,4 < revision ≤ 1,2). Around 72,9% of revisions lie between -2,0 and 2,0 percentage points.

Figure 8 – Passenger journeys year-on-year growth rates: histogram of revisions



Explanatory notes

Introduction

1 Statistics South Africa (Stats SA) conducts a monthly survey of the land transportation industry, covering passenger and freight transportation by rail and road (see point 4 below). This survey is based on a sample drawn from the 2023 statistical business register (SBR) that contains businesses registered for value-added tax (VAT) and income tax.

2 In order to improve timeliness, some information for the latest month had to be imputed due to late response. These imputations will be revised in future statistical releases as soon as information becomes available. Published land transportation income estimates exclude VAT.

Purpose of the survey

3 The results of the monthly land transport 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 enterprises involved in land transportation according to the following types of transportation:

- railway transport (including passenger and freight transportation);
- 'other' scheduled passenger land transport – urban, suburban and inter-urban bus and coach passenger lines and school buses;
- 'other' non-scheduled passenger land transport – safaris and sightseeing bus tours, metered taxis and 'other' passenger transport including renting of motor cars with drivers; and
- freight transport by road.

Exclusions

5 Passenger transportation excludes:

- minibus taxis;
- metropolitan buses (including the Bus Rapid Transport system – BRT); and
- rental of private cars/buses without drivers.

Freight transportation excludes:

- renting of trucks without drivers; and
- in-house transportation.

Classification

6 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. Statistics in this publication are presented at SIC division (two-digit) level. Each enterprise is classified to the industry which reflects its predominant activity.

Collection rate

7 The preliminary collection rate for the survey on land transportation for January 2024 was 69,5%. The improved collection rate for December 2023 was 72,8%.

Statistical unit

8 The statistical unit for which information is compiled and published is an enterprise, defined as a legal unit or a combination of legal units that includes and directly controls all functions necessary to carry out its income activities. The statistical units are derived from and linked to the South African Revenue Service (SARS) administrative data.

Revised figures

9 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

10 Users may also wish to refer to the following publication available from Stats SA –

- *Stats in Brief* issued annually.

Rounding-off of figures

11 Where figures have been rounded off, discrepancies may occur between sums of the component items and the totals.

Historical data **12** Historical land transport data are available on the Stats SA website. To access the data electronically, use the following link:
Click to download historical data.

Past publications **13** Past land transport 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 on a monthly basis. Questionnaires are sent to a sample of 784 enterprises from a population of 5 136 enterprises. Completed questionnaires are required to be returned to Stats SA within 10 days after the end of the reference month. Email 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 2023 from Stats SA's statistical business register (SBR). Strata were formed using a combination of Standard Industrial Classification and the measure of size classes for enterprises (see paragraph 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 1,2%.

Sample design and class limits

3 The land transportation industry is divided into four size groups. All large enterprises (size group one) are completely enumerated. Simple random sampling is applied to medium (size group two) and small (size groups three and four) enterprises. The total value of income of the large enterprises (size group one) is added to the weighted totals of size groups two, three and four to reflect the total value of income.

Measure of size classes (Rand)

Enterprise size	Size group	Lower limit	Upper limit
Very small	4	1 375 366	9 000 000
Small	3	9 000 001	39 000 000
Medium	2	39 000 001	78 000 000
Large	1	78 000 001	

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 division estimates. These procedures are in line with international best practice.

Reliability of estimates

5 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 land transport industry in South Africa. Estimates are subject to sampling and non-sampling errors.

6 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.

Relative standard error

7 One measure is the standard error (SE), which indicates the extent to which an estimate might have varied by chance because only a sample of enterprises was used. The relative standard error (RSE) provides an immediate indication of the percentage errors likely to have occurred due to sampling, and thus avoids the need to refer to the size of the estimate.

Estimates of land transport within 95% confidence limits – January 2024

	Lower limit (R million)	Estimate (R million)	Upper limit (R million)	Relative standard error (RSE) %
Freight income	15 714	17 556	19 396	5,3
Passenger income	1 019	1 034	1 048	0,7

Year-on-year percentage change

8 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)

9 The contribution (percentage points) to the annual percentage change for any given period is calculated by multiplying the percentage change of each type of commodity/service by its corresponding weight, divided by 100. The weight is the percentage contribution of each type of commodity/service to total income in the corresponding period of the previous year.

Seasonal adjustment

10 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 recognised more clearly. 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 land transportation is described in more detail on the Stats SA website at:
Click to download seasonal adjustment land transport February 2022.

Trend cycle

11 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.

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 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

GDP	Gross domestic product
ISIC	International Standard Industrial Classification
SARS	South African Revenue Service
SBR	Statistical Business Register
SIC	Standard Industrial Classification of All Economic Activities
Stats SA	Statistics South Africa
VAT	Value-added tax

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General information

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 12 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.

Advance release calendar

A release calendar is disseminated on www.statssa.gov.za.

Stats SA products

A complete set of Stats SA publications is available at the Stats SA Library and the following libraries:

National Library of South Africa, Pretoria Division
National Library of South Africa, Cape Town Division
Natal Society Library, Pietermaritzburg
Library of Parliament, Cape Town
Bloemfontein Public Library
Johannesburg Public Library
Eastern Cape Library Services, Qonce
Central Regional Library, Polokwane
Central Reference Library, Mbombela
Central Reference Collection, Kimberley
Central Reference Library, Mmabatho

Stats SA also provides a subscription service.

Electronic services

A large range of data is available via online services. For more details about our electronic services, contact Stats SA’s user information service at (012) 310 8600.

You can visit us on the internet at: www.statssa.gov.za.

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