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Land transport survey (Preliminary)

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Table A –	· Kev figures a	s at the end of	December 2009
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Freight transportation estimates	December 2009 1/	% change between December 2008 and December 2009	% change between October to December 2008 and October to December 2009	% change between January to December 2008 and January to December 2009
Payload (000 tons)	50 857	0,7	-5,6	-7,7
Total income (R million)	5 746	7,7	0,4	-4,2

1/ Units of measurement can be found next to the respective variables in the previous column.

Passenger transportation estimates	December 2009 1/	% change between December 2008 and December 2009	% change between October to December 2008 and October to December 2009	% change between January to December 2008 and January to December 2009
Number of passengers (000)	77 948	11,2	3,7	4,1
Total income (R million)	617	8,6	2,5	4,9

1/ Units of measurement can be found next to the respective variables in the previous column

Income from freight transportation

Annual income from freight transportation for 2009 decreased by 4,2% compared with 2008. The fourth quarter of 2009 reflected a marginal year-on-year increase of 0,4%. However, income from freight transportation for December 2009 increased by 7,7% compared with December 2008, the first positive growth in income since March 2009.

The main contributors to the increase of 0,4% in income from freight transportation for the fourth quarter of 2009 compared with the fourth quarter of 2008 were primary mining and quarrying products (30,2% and contributing 7,0 percentage points) and containers (38,0% and contributing 1,1 percentage points). However, these increases were counteracted by decreases in other freight (-19,1% and contributing -2,1 percentage points), agriculture and forestry primary products (-21,3% and contributing -2,0 percentage points) and manufactured food, beverages and tobacco products (-8,8% and contributing -1,6 percentage points) – see Table B on page 3.

The volume of goods transported (payload) decreased by 7,7% between 2008 and 2009 and by 5,6% between the fourth quarters of 2008 and 2009.

Income from passenger transportation

Annual income from passenger transportation for 2009 increased by 4,9% compared with 2008, while 4,1% more passengers were transported during 2009. Income from passenger transportation for the fourth quarter of 2009 was 2,5% higher compared with the fourth quarter of 2008. The number of passengers increased by 3,7% between the fourth quarters of 2008 and 2009.

The main contributor to the increase of 2,5% in income from passenger transportation for the fourth quarter of 2009 compared with the fourth quarter of 2008 was road passenger transportation (increasing 2,8% and contributing 2,1 percentage points) – see Table C on page 4.

Table B – Contribution of each type of commodity to the percentage change in freight transportation income

Type of commodity	October to December 2008 (R million)	Weight 1/	October to December 2009 (R million)	Difference in income between October to December 2008 and October to December 2009 (R million)	Percentage change between October to December 2008 and October to December 2009	Contribution (percentage points) to the percentage change in total income 2/
Agriculture and forestry primary products	1 653	9.2	1 301	-352	-21.3	-2,0
Primary mining and quarrying products	4 195	23,3	5 461	1 266	30.2	-2,0
Manufactured food, beverages and tobacco products Textiles, clothing and leather goods	<u>3 290</u> 218	<u>18,3</u>	<u>3 002</u> 208	-288	-8,8	-1,6 -0,1
Chemicals, coke, petroleum, rubber, plastic and other mineral products	1 918	10,7	1 774	-144	-4,0	-0,8
Basic metals and fabricated metal products	999	5,6	988	-11	-1,1	-0,1
Non-metallic products	650	3,6	729	79	12,2	0,4
Electrical machinery, transport machinery and equipment	512	2,8	369	-143	-27,9	-0,8
Motor vehicles, parts and accessories	357	2,0	346	-11	-3,1	-0,1
Paper and paper products	425	2,4	412	-13	-3,1	-0,1
Commercial products	449	2,5	589	140	31,2	0,8
Used household and office products	391	2,2	270	-121	-30,9	-0,7
Containers	524	2,9	723	199	38,0	1,1
Parcels	469	2,6	324	-145	-30,9	-0,8
Other freight	1 939	10,8	1 569	-370	-19,1	-2,1
Total income 3/	17 989	100,0	18 065	76	0,4	0,4

1/ Weight is the percentage contribution of each type of commodity to the total income for the three months up to the current month of the previous year.

2/ The contribution to the percentage change is calculated by multiplying the percentage change of each type of commodity with its corresponding weight.

3/ The figures have been rounded off. Therefore, discrepancies may occur between the sums of the component items and the totals.

Table C – Contribution of each type of service to the percentage change in passenger transportation income

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Type of service	October to December 2008 (R million)	Weight 1/	October to December 2009 (R million)	Difference in income between October to December 2008 and October to December 2009 (R million)	Percentage change between October to December 2008 and October to December 2009	Contribution (percentage points) to the percentage change in total income 2/
Railway passenger transportation	482	25,0	490	8	1,7	0,4
Road passenger transportation	1 445	75,0	1 486	41	2,8	2,1
Total income 3/	1 927	100,0	1 976	49	2,5	2,5

1/ Weight is the percentage contribution of each type of service to the total income for the three months up to the current month of the previous year.

2/ The contribution to the percentage change is calculated by multiplying the percentage change of each type of service with its corresponding weight.

3/ The figures have been rounded off. Therefore, discrepancies may occur between the sums of the component items and the totals.

P J Lehohla Statistician-General

Detailed results

Table 1 shows land transportation estimates over the period January 2008 – December 2009.

Year and month 1/		Freight		Passengers				
		Payload (000 tons)	Income (R million)	Number of passengers (000)	Income (R million)			
2008	January	48 025	4 945	83 470	602			
	February	53 599	5 387	99 308	628			
	March	52 758	5 344	94 451	648			
	April	56 816	6 008	87 289	557			
	Мау	55 625	5 921	92 112	569			
	June	61 401	6 254	85 868	615			
	July	60 440	6 592	92 776	618			
	August	58 918	6 411	94 038	645			
	September	58 626	6 330	98 775	71(
	October	60 552	6 455	104 287	698			
	November	58 349	6 197	94 384	661			
	December	50 514	5 337	70 112	568			
	Total	675 623	71 181	1 096 870	7 519			
2009	January	48 428	5 027	85 708	570			
	February	50 814	5 330	93 678	660			
	March	51 797	5 517	106 536	713			
	April	49 161	5 397	95 667	651			
	Мау	49 398	5 512	100 313	673			
	June	52 704	5 702	94 334	640			
	July	54 079	5 933	98 979	680			
	August	52 277	5 700	92 609	648			
	September	54 830	5 994	95 597	675			
	October	53 645	6 132	104 927	701			
	November	55 352	6 187	95 768	658			
	December	50 857	5 746	77 948	617			
	Total	623 342	68 177	1 142 064	7 886			

1/ Preliminary.

Table 2 shows passenger transportation income by type of service.

Year a	nd month 1/	Rail	Road	Total 2/	
2008	January	185	417	602	
	February	174	454	628	
	March	153	495	648	
	April	142	415	557	
	Мау	156	413	569	
	June	141	474	615	
	July	147	471	618	
	August	155	490	645	
	September	176	534	710	
	October	175	523	698	
	November	158	503	661	
	December	149	419	568	
	Total	1 911	5 608	7 519	
2009	January	160	410	570	
	February	162	498	660	
	March	176	537	713	
	April	163	488	651	
	Мау	175	498	673	
	June	156	484	640	
	July	172	508	680	
	August	160	488	648	
	September	167	508	675	
	October	184	517	701	
	November	168	490	658	
	December	138	479	617	
	Total	1 981	5 905	7 886	

1/ Preliminary.

2/ The figures have been rounded off. Therefore, discrepancies may occur between the sums of the component items and the totals.

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Table 3 shows freight transportation income by type of commodity (see description of type of commodity on page 8).

Table 3 – Total income according to the type of commodity for freight transportation (R million)

Year a	nd month 1/	Type A	Type B	Type C	Type D	Type E	Type F	Type G	Туре Н	Type I	Type J	Type K	Type L	Туре М	Type N	Type O	Total 2/
2008	January	425	1 169	828	43	535	375	205	90	137	97	132	71	190	123	525	4 945
	February	478	1 354	839	52	591	365	224	102	132	97	113	95	226	124	595	5 387
	March	448	1 334	818	44	601	375	214	112	142	91	122	80	255	125	583	5 344
	April	546	1 465	940	57	685	406	251	118	156	102	132	84	259	135	672	6 008
	Мау	533	1 480	924	58	675	386	218	128	129	105	156	85	234	137	673	5 921
	June	547	1 558	945	53	717	399	217	166	132	110	158	78	225	131	818	6 254
	July	570	1 619	1 032	67	753	408	237	176	149	170	170	112	231	136	762	6 592
	August	556	1 649	1 038	72	708	409	221	168	134	125	170	117	203	121	720	6 411
	September	557	1 628	1 006	62	663	416	234	121	124	120	188	111	207	149	744	6 330
	October	603	1 520	1 067	82	721	395	227	148	129	181	162	137	195	171	717	6 455
	November	535	1 438	1 143	69	641	376	230	196	121	111	171	140	170	173	683	6 197
	December	515	1 237	1 080	67	556	228	193	168	107	133	116	114	159	125	539	5 337
	Total	6 313	17 451	11 660	726	7 846	4 538	2 671	1 693	1 592	1 442	1 790	1 224	2 554	1 650	8 031	71 181
2009	January	516	1 186	956	62	539	237	215	165	114	91	105	103	113	119	506	5 027
	February	442	1 457	971	43	596	259	192	146	102	104	96	80	137	131	574	5 330
	March	471	1 281	1 038	62	624	328	203	171	120	113	155	69	154	113	615	5 517
	April	441	1 497	922	34	584	279	205	136	85	116	154	70	157	94	623	5 397
	Мау	482	1 377	1 009	39	631	272	234	127	108	123	181	68	162	95	603	5 512
	June	518	1 645	894	49	621	282	239	114	99	123	154	76	168	91	628	5 702
	July	539	1 612	1 084	64	658	279	254	102	122	124	155	78	163	81	619	5 933
	August	495	1 618	910	84	636	285	228	131	114	128	157	73	186	71	584	5 700
	September	486	1 807	911	69	635	341	243	118	109	142	162	74	238	98	559	5 994
	October	479	1 831	1 038	67	587	335	241	128	113	148	197	80	248	104	537	6 132
	November	434	1 927	889	76	615	333	269	134	135	151	195	86	263	123	556	6 187
	December	388	1 703	1 075	65	572	320	219	107	98	113	197	104	212	97	476	5 746
	Total	5 691	18 941	11 697	714	7 298	3 550	2 742	1 579	1 319	1 476	1 908	961	2 201	1 217	6 880	68 177

1/ Preliminary.

2/ The figures have been rounded off. Therefore, discrepancies may occur between the sums of the component items and the totals.

Group type	Type of commodity included in group type
Туре А	Transportation of agriculture and forestry primary products
Туре В	Transportation of primary mining and quarrying products
Туре С	Transportation of manufactured food, beverages and tobacco products
Type D	Transportation of textiles, clothing and leather products
Туре Е	Transportation of chemicals, coke, petroleum, rubber, plastic and other mineral products
Туре F	Transportation of basic metals and fabricated metal products
Type G	Transportation of non-metallic products
Туре Н	Transportation of electrical machinery, transport machinery and equipment
Type I	Transportation of motor vehicles, parts and accessories
Type J	Transportation of paper and paper products
Туре К	Transportation of commercial products
Type L	Transportation of used household and office products
Туре М	Transportation of containers
Type N	Transportation of parcels
Туре О	Transportation of other freight

Description of type of commodity included in indicated group type in Table 3

Outlined below in Tables 4.1 and 4.2 are the estimates and percentage changes in freight and passenger transportation.

Table 4 – Estimates and percentage changes in land transportation

Table 4.1 – Quarterly and cumulative estimates and percentage changes for freight transportation

Freight transportation estimates	October to December 2008	October to December 2009	% change between October to December 2008 and October to December 2009	January to December 2008	January to December 2009	% change between January to December 2008 and January to December 2009
Payload (000 tons)	169 415	159 854	-5,6	675 623	623 342	-7,7
Total income (R million)	17 989	18 065	0,4	71 181	68 177	-4,2

Table 4.2 – Quarterly and cumulative estimates and percentage changes for passenger transportation

Passenger transportation estimates	October to December 2008	October to December 2009	% change between October to December 2008 and October to December 2009	January to December 2008	January to December 2009	% change between January to December 2008 and January to December 2009
Number of passengers (000)	268 783	278 643	3,7	1 096 870	1 142 064	4,1
Total income (R million)	1 927	1 976	2,5	7 519	7 886	4,9

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 4 below). This survey is based on a sample drawn from the 2009 Business Sampling Frame (BSF) that contains businesses registered for value added tax (VAT).			
	2	As is usual, information for the latest month had to be estimated for respondents who have not reported by the cut-off date for production of results. These estimates will be revised in future statistical releases when their reported 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. Note: This survey excludes passenger transportation by minibus taxis. 			
Classification	5	The 1993 edition of the <i>Standard Industrial Classification of all Economic Activities (SIC)</i> , Fifth Edition, Report No. 09-90-02, was used to classify the statistical units in the survey. The SIC is based on the 1990 <i>International Standard Industrial Classification of all</i> <i>Economic Activities (ISIC)</i> 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.			
Response rate	6	The overall response rate for the fourth quarter of 2009 was 92,7%.			
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 income activities.			
Survey methodology and design	8	Questionnaires are collected monthly and the results are published on a quarterly basis. Questionnaires are sent to a sample of about 700 enterprises from a population of about 4 500 enterprises. Completed questionnaires are required to be returned to Stats SA within 10 days after the end of the reference month. Fax and telephone reminders are used to follow up non-respondents.			
Sample design	9	The value of income is obtained monthly from the sample of about 700 enterprises (which was drawn in April 2009 at the SIC four-digit level) from a population of about 4 500 land transportation enterprises. 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 size groups two (medium sized), three and four (small) 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.			

Weighting methodology	10	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, which are in line with international best practice, are described in more detail on the Stats SA website at http://www.statssa.gov.za/publications/publicationsearch.asp.			
Reliability of estimates	11	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. Preliminary figures are indicated in the tables.			
	12	made in the o to as non-sa careful desig implementing	may occur because of imperfections in reporting by enterprises and errors collection and processing of the data. Inaccuracies of this kind are referred ampling errors. Every effort is made to minimise non-sampling errors by n of questionnaires, testing them in pilot studies, editing reported data and g efficient operating procedures. Fluctuations may occur in consecutive result of seasonal and economic factors.		
Revised figures	13	Revised figures are due to respondents reporting revisions or corrections to their figures and late submission of their data to Stats SA. Preliminary figures are indicated in the relevant tables. Data are edited at the enterprise level.			
Related	14	Users may also wish to refer to the following publications available from Stats SA -			
publications		 Bulletin of Statistics issued quarterly. SA Statistics issued annually. 			
Rounding off of figures	15	Where figures have been rounded off discrepancies may occur between sums of the component items and the totals.			
Pre-release policy	16	Stats SA's pr	e-release policy may be inspected at its Website, www.statssa.gov.za.		
Symbols and abbreviations	17	BR BSF GDP ISIC SIC SARS Stats SA VAT *	Business Register Business Sampling Frame Gross Domestic Product International Standard Industrial Classification Standard Industrial Classification of all Economic Activities South African Revenue Service Statistics South Africa Value added tax Revised Figures not available		
Change in next publication	18	Starting from the January 2010 release, the Land transport survey will be published on a monthly basis.			

Technical note

Neyman optimal allocation

A stratified random sample was drawn from the population of enterprises on the business sampling frame (BSF). Strata were formed using a combination of Standard Industrial Classification and the measure of size classes for enterprises. The Neyman optimal allocation formula given below was used to allocate samples to each stratum.

$$n_{h} = \frac{N_{h}S_{h}}{\sum N_{h}S_{h}}$$

where N_h and S_h are the stratum population size and the stratum variance, respectively.

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 did not exceed 4,0%.

Class limits

Enterprise size	Size Group	Lower limits	Upper limits
Very small	4	0	3 000 000
Small	3	3 000 001	13 000 000
Medium	2	13 000 001	26 000 000
Large	1	26 000 001	

Glossary

EnterpriseThe 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.IndustryAn 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, Fifth Edition,
Report No. 09-90-02 of January 1993 (SIC).Statistical unitA statistical unit is a unit about which statistics are tabulated, compiled or published.
The statistical units are derived from and linked to the South African Revenue Service
(SARS) administrative data.Number of
passengersThe number of passengers refers to the passenger journeys.

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