BUREAU FOR ECONOMIC RESEARCH

Other services

Quarterly analysis of activity in hotels & restaurants, transport & storage, real estate and business services

First quarter 2023
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This publication is available online and exclusive to the BER's macro service subscribers. The historical time series are available on request.
For more information on the BER's services please visit: **www.ber.ac.za**

Executive summary

Other services confidence plummeted from 68 to 45 in the first quarter of 2023.

The fall stemmed from the transport and business services sub-sectors. Confidence in the hospitality sub-sector increased further and declined slightly in the real estate sub-sector.

In the first quarter, hotels and restaurants recorded even faster activity growth than during the fourth quarter of 2022. The rate of increase in selling prices in the hospitality sector skyrocketed.

High fuel costs, fierce competition, delays at the ports and security concerns put a lot of pressure on road freight operators. Survey participants mentioned benefitting from increased foreign tourism in the first quarter.

The continued improvement in property management (such as renting) partly compensated for the weaker sales of properties.

Demand for business services dropped off, as other businesses made less use of these services to fund load-shedding mitigation measures.

Whereas the other services sector supported GDP growth for the most part in recent quarters, it seems destined to join the more energy-intensive sectors of the economy in detracting from growth in the first quarter of 2023.

This report was completed on 20 March 2023.
Please refer to the glossary on the BER's website for explanations of technical terms.

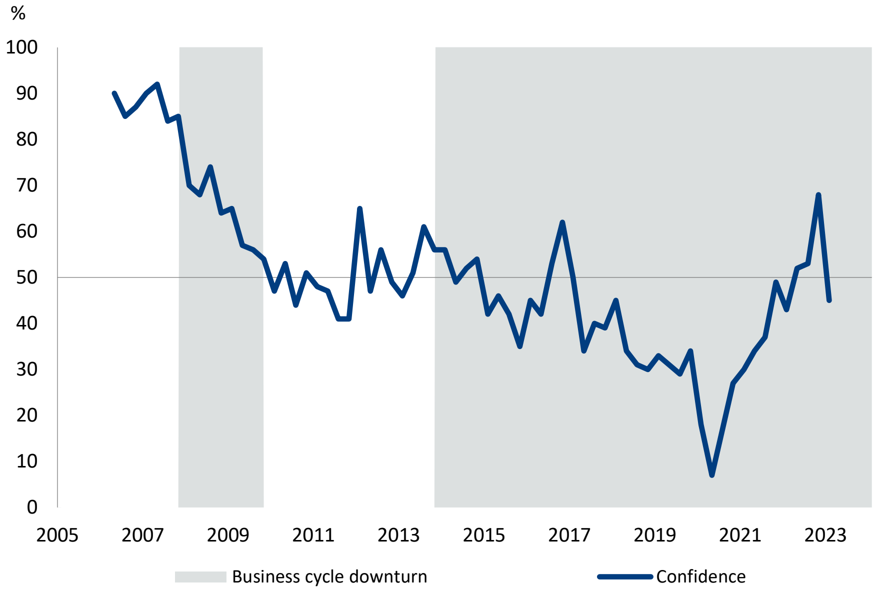
Contents

Hospitality the only bright spot in a bleak first quarter for other services

Introduction

After continuously increasing since reaching a nadir during the level 5 lockdown in the second quarter of 2020, confidence in the other services[1] sector plummeted in the first quarter of 2023[2]. The 23-point drop from 68 to 45 is the largest ever recorded in the survey's 18-year existence.

Figure 1: Other services confidence



Source: BER

Details

The fall in the overall index stemmed from the transport and business services sub-sectors. Confidence in the transport sub-sector collapsed to 14 and in the

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[1] Hotels, restaurants, transport, real estate and business services make up the other services sector. They are denoted as "other" services to distinguish them from the retail, wholesale and motor trade sectors, which are also part of the services sector but included in the RMB/BER business confidence index (BCI). The other services sector is not included in the BCI due to its lagging business cycle characteristics, i.e., it recovers/deteriorates later than the BCI sectors. Although the other services sector contributes a considerable 22% (2019) to GDP and employment, the BER does not include it in the BCI to safeguard its advanced signalling properties. Click **here** and **here** to watch short video clips on the other services survey.

[2] The survey was conducted among 350 firms from 8 to 27 February 2023.

crucial[3] business service sub-sector fell from 64 to 47. In contrast, confidence in the hospitality sub-sector increased from 73 to 75, a far cry from zero at the time of the hard lockdown in 2020. In the case of the last remaining sub-sector, real estate, confidence declined from 47 to 43.

Confidence closely mirrored developments in activity.

In the first quarter, hotels and restaurants recorded even faster activity growth than during the fourth quarter of 2022. Part of the exceptionally strong year-on-year growth could be attributed to a base effect. In the first quarter of 2022, not all COVID-19 restrictions were lifted and the international travel bans (due to the emergence of the Omicron variant in December 2021) knocked foreign tourist numbers. In contrast, the current summer holiday season saw international visitors return. Another explanation for the strong growth is a partial resumption in business travel, more local trips, increased eating out and, in the final instance, the normal pre-COVID summer seasonal factors.

The rate of increase in selling prices in the hotels and restaurants sector skyrocketed. The net balance went up from an already high 51 in the fourth quarter to a record high of 85[4] in the first quarter. According to media reports on the financial results and commentary of listed companies, accommodation rates increased noticeably to match those that applied pre-pandemic owing to the strong demand. Restaurants, in turn, had to adjust their menu prices sharply upwards to compensate for higher food prices and load-shedding costs[5].

Historically, the survey results for the transport and storage sector are quite volatile, i.e., there are large changes in the results between quarters. The first quarter was no exception. Having surged from 27 to 94 in the fourth quarter, confidence dropped back to 14 in the first quarter. Business volumes showed the same pattern.

The BER survey covers road freight transport and other supporting services (such as travel agencies, cargo handling and freight forwarding). Stats SA data shows that payload for road freight continued to grow strongly. In the fourth quarter, the year-on-year growth in real income turned positive for the first time after hefty declines in 2021 and 2022. High fuel costs, fierce competition, delays

[3] In the BER's survey, business services contribute 45%, transport 25%, real estate 20% and hospitality (i.e., hotels and restaurants) 10% to the total.

[4] The previous record high was 71 in the fourth quarter of 2007.

[5] According to Stats SA's CPI figures, prices at restaurants were 14.4% higher in January 2023 compared to January 2020 (i.e., just before the pandemic). Prices at hotels increased by 4.3% over the same period. As a comparison, headline inflation increased by 16.5% over this time.

at the ports and security concerns put a lot of pressure on road freight operators. Survey participants mentioned benefitting from increased foreign tourism in the first quarter.

Real estate confidence declined further from 47 to 43. Given that the long-term average is 45, confidence could be regarded as neither high nor low in the first quarter. Respondents commented that the continued improvement in property management (such as renting) partly compensated for the weaker sales of properties. One participant noted: "*The residential property market has shown some resilience in the face of rising interest rates, a slow economy and load-shedding, which impact both affordability and sentiment. Subdued price growth and rising costs will impact margins going forward, especially as volumes tighten.*" Another commented: "*Although higher interest rates had a negative effect on the property industry in general, it is a minor issue compared to the devastating effects of the poor performance from the local, provincial and national government.*"

Demand for business services (such as renting of machinery and equipment, computer services, legal services, accounting, consulting engineering, advertising, building and plant cleaning, debt collection and exhibitions) dropped off, as other businesses made less use of these services to fund load-shedding mitigation measures. One participant noted: "*Load-shedding is not only adding to our operating costs but is impacting our client's costs, which leads them to reduce our services so that they can cut costs. We are, therefore, receiving a doubled-edged effect, one on overheads and one in reduced revenue.*" Another commented: "*The business environment is uncertain, overall. Although conditions are better than during the lockdown, the electricity crisis is hampering a lot of capital expenditure projects, where we operate. However, we, as a company, are experiencing a greater workload. A large portion of our current activities is dedicated to preparing proposals and quotations, which do not result in revenue, hence our profitability has taken a knock despite our being very busy.*"

Final Remarks

After continuously recovering in 2021 and 2022, the fortunes of the other services sector reversed abruptly in the first quarter of 2023. While hospitality kept on improving, the situation in transport, real estate and business services took a turn for the worse, primarily due to extensive load-shedding and surging costs.

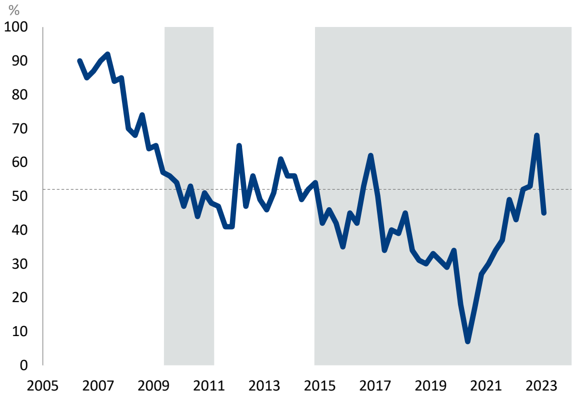
Whereas the other services sector supported GDP growth for the most part in recent quarters, it seems destined to join the more energy-intensive sectors of the economy in detracting from growth in the first quarter of 2023.

Survey results

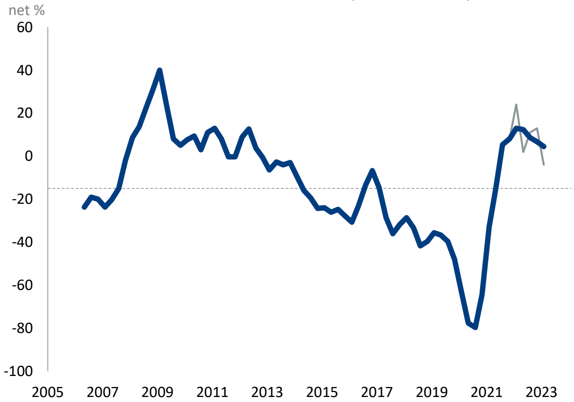
Other services: total[6]

Indicator	Unit	μ-σ	μ	μ+σ	21Q2	21Q3	21Q4	22Q1	22Q2	22Q3	22Q4	23Q1	Δ	σ Δ
Confidence	%	33	52	72	34	37	49	43	52	53	68	**45**	-23	8
Business conditions	Net %	-40	-14	13	16	-13	13	24	2	11	13	**-4**	-17	18
Smoothed	Net %	-37	-13	12	-33	-15	5	8	13	12	9	**7**	-2	9
Business volumes	Net %	-41	-10	20	3	-26	2	28	21	12	23	**-4**	-27	16
Smoothed	Net %	-40	-13	14	-42	-27	-7	1	17	20	19	**10**	-9	9
Selling prices / fees charged	Net %	-22	-4	15	-19	-21	6	20	26	13	22	**18**	-4	12

Confidence

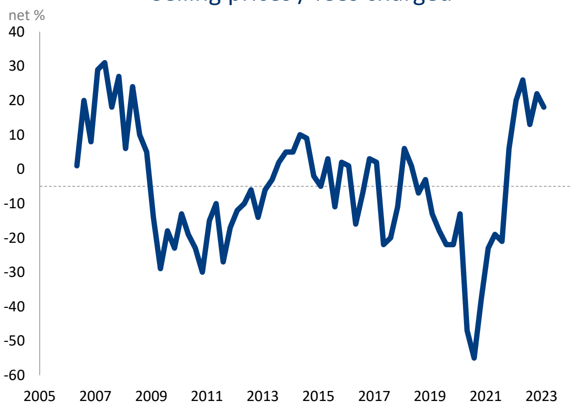


Business conditions (smoothed)



Business volumes (smoothed)

Selling prices / fees charged



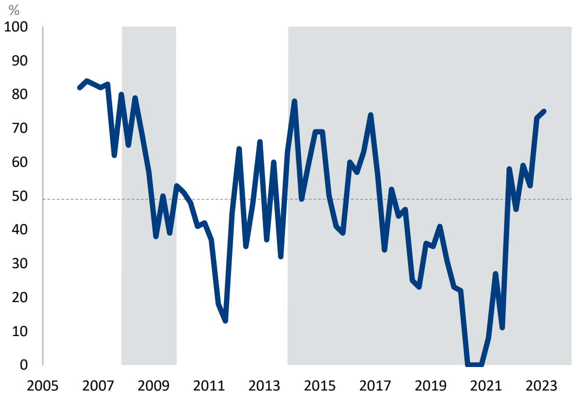
[6] The "other services: total" includes hotels & restaurants (15%), transport & storage (22%), real estate (18%) and business services (45%). The figures in brackets indicate the BER's weights, which account for the sector coverage and participation. Consult Table 2 for the sub-sector's share according to Stats SA's business censuses.

μ – average
σ – standard deviation
Δ – change from previous period
σ_Δ – volatility (standard deviation of the changes)
All of the above calculated since 2005
See Technical note for further details

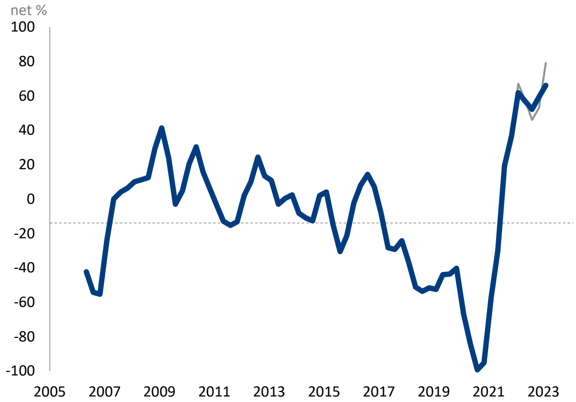
Hotels & restaurants[7]

Indicator	Unit	μ-σ	μ	μ+σ	21Q2	21Q3	21Q4	22Q1	22Q2	22Q3	22Q4	23Q1	Δ	σ Δ
Confidence	%	28	50	71	27	11	58	46	59	53	73	**75**	2	16
Business conditions	Net %	-50	-10	31	15	-18	61	67	57	46	53	**79**	26	32
Smoothed	Net %	-44	-9	26	-58	-30	19	37	62	57	52	**59**	7	15
Business volumes	Net %	-57	-11	36	8	-16	55	69	57	48	56	**80**	24	31
Smoothed	Net %	-55	-14	27	-59	-31	16	36	60	58	54	**61**	7	16
Selling prices / fees charged	Net %	-26	12	49	-24	-68	32	44	45	27	51	**85**	34	31
Smoothed	Net %	-21	11	44	-62	-58	-20	3	40	39	41	**54**	13	13

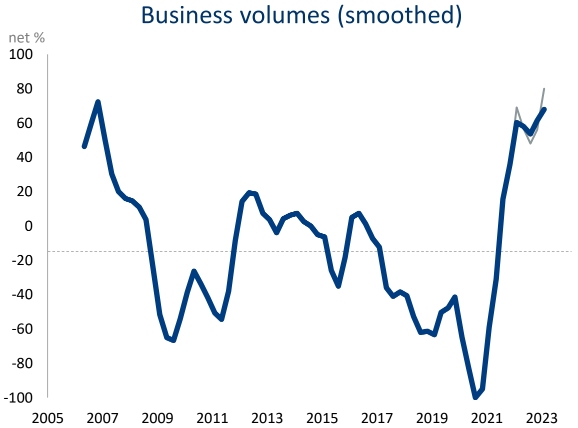
Confidence



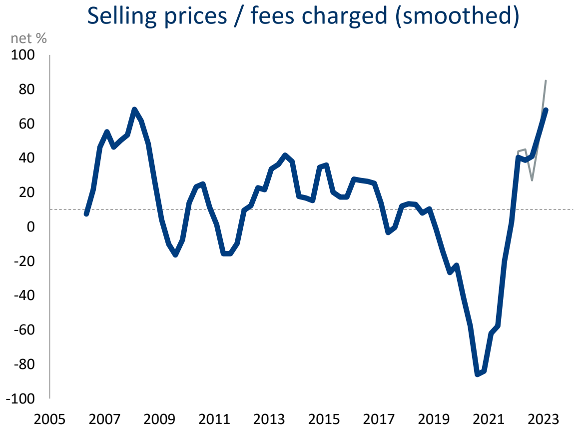
Business conditions (smoothed)



Business volumes (smoothed)



Selling prices / fees charged (smoothed)



[7] Hotels & other accommodation (SIC code 641) (74%), restaurants and other food outlets (642) (26%). The figures in brackets indicate the BER's weights, which account for the sector coverage and participation. Consult Table 2 for the sub-sector's share according to Stats SA's business censuses.

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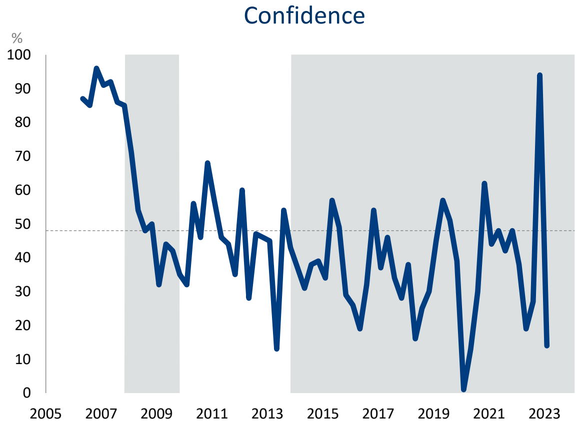
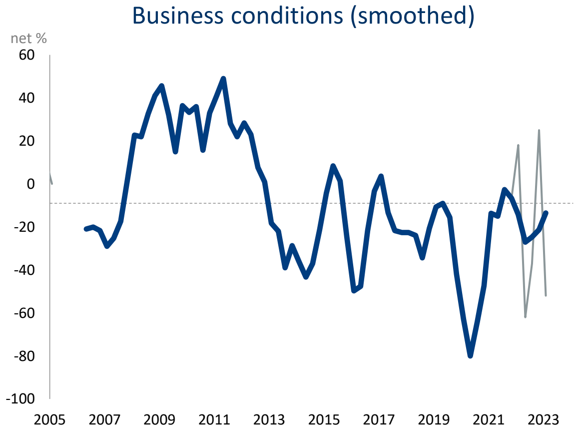
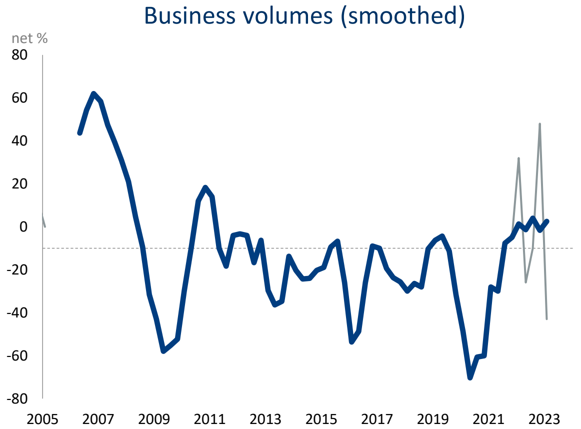
All of the above calculated since 2005
See Technical note for further details

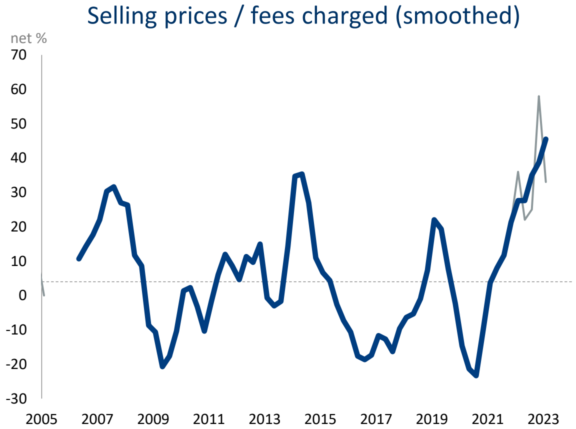
Transport & storage[8]

Indicator	Unit	μ-σ	μ	μ+σ	21Q2	21Q3	21Q4	22Q1	22Q2	22Q3	22Q4	23Q1	Δ	σ Δ
Confidence	%	25	47	69	48	42	48	38	19	27	94	**14**	-80	19
Business conditions	Net %	-46	-10	26	30	-39	1	18	-62	-37	25	**-52**	-77	37
Smoothed	Net %	-38	-8	21	-14	-15	-3	-7	-14	-27	-25	**-21**	4	13
Business volumes	Net %	-47	-10	26	24	-45	-2	32	-26	-10	48	**-43**	-91	34
Smoothed	Net %	-42	-13	16	-28	-30	-8	-5	1	-1	4	**-2**	-6	14
Selling prices / fees charged	Net %	-14	6	25	7	3	25	36	22	25	58	**33**	-25	18
Smoothed	Net %	-11	5	21	4	8	12	21	28	28	35	**39**	4	8









[8] 1) Land transport (39%): road freight (SIC code 7123)
2) Supporting transport & travel agencies (61%): cargo handling (7411), travel agencies & tour operators (7414), other (e.g., freight forwarding) (7419)
The figures in brackets indicate the BER's weights, which account for the sector coverage and participation. Consult Table 2 for the sub-sector's share according to Stats SA's business censuses.

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σ – standard deviation
Δ – change from previous period
$σ_Δ$ – volatility (standard deviation of the changes)
All of the above calculated since 2005
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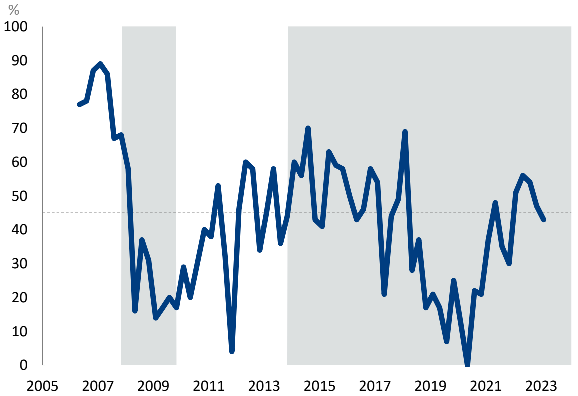
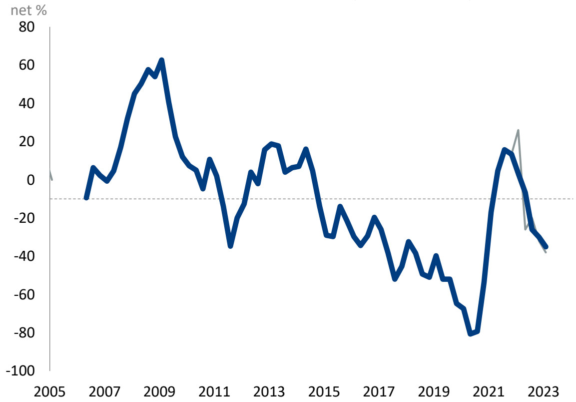
Real estate[9]

Indicator	Unit	μ-σ	μ	μ+σ	21Q2	21Q3	21Q4	22Q1	22Q2	22Q3	22Q4	23Q1	Δ	σ Δ
Confidence	%	22	45	67	48	35	30	51	56	54	47	**43**	-4	16
Business conditions	Net %	-47	-11	26	33	4	10	26	-26	-20	-32	**-38**	-6	30
Smoothed	Net %	-42	-10	23	-17	5	16	13	3	-7	-26	**-30**	-4	12
Business volumes	Net %	-55	-26	3	25	-28	-3	32	9	-13	-13	**-28**	-15	29
Smoothed	Net %	-51	-28	-5	-25	-12	-2	0	13	9	-6	**-18**	-12	11
Selling prices / fees charged	Net %	-43	-12	19	-24	-13	-17	13	27	12	-20	**-20**	0	25
Smoothed	Net %	-39	-16	8	-16	-16	-18	-6	8	17	6	**-9**	-15	11

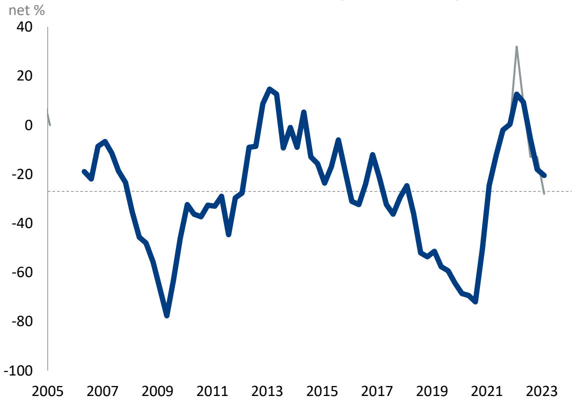
Confidence



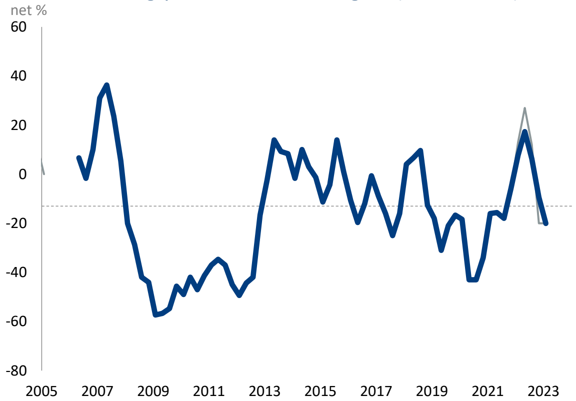
Business conditions (smoothed)



Business volumes (smoothed)



Selling prices / fees charged (smoothed)



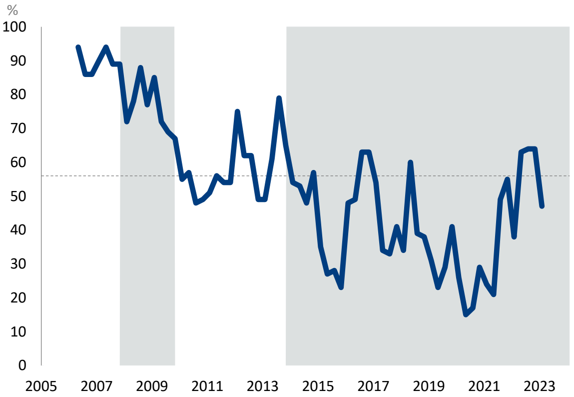
[9] Estate agents (auctioneering and sale of property) (SIC code 841) (35%) and property management (841) (65%). The figures in brackets indicate the BER's weights, which account for the sector coverage and participation. Consult Table 2 for the sub-sector's share according to Stats SA's business censuses.

μ – average
σ – standard deviation
Δ – change from previous period
σΔ – volatility (standard deviation of the changes)
All of the above calculated since 2005
See Technical note for further details

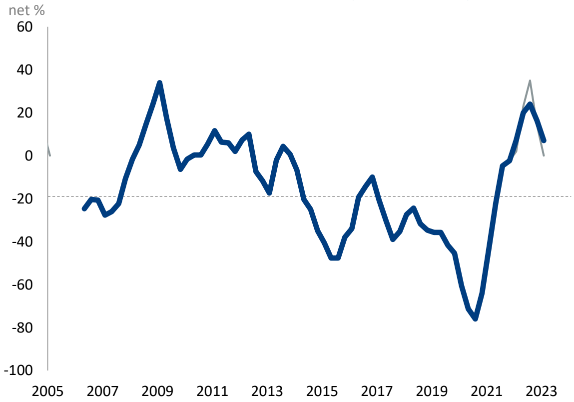
Business services[10]

Indicator	Unit	μ-σ	μ	μ+σ	21Q2	21Q3	21Q4	22Q1	22Q2	22Q3	22Q4	23Q1	Δ	σ Δ
Confidence	%	34	56	78	21	49	55	38	63	64	64	**47**	-17	11
Business conditions	Net %	-43	-17	10	-5	-6	-3	2	23	35	14	**0**	-14	19
Smoothed	Net %	-40	-16	8	-43	-22	-5	-2	7	20	24	**16**	-8	9
Business volumes	Net %	-39	-7	25	-30	-23	-23	0	32	20	13	**-9**	-22	16
Smoothed	Net %	-39	-10	19	-52	-36	-25	-15	3	17	22	**8**	-14	10
Selling prices / fees charged	Net %	-31	-12	8	-34	-15	-11	4	16	-1	18	**3**	-15	15
Smoothed	Net %	-30	-14	3	-36	-27	-20	-7	3	6	11	**7**	-4	6

Confidence

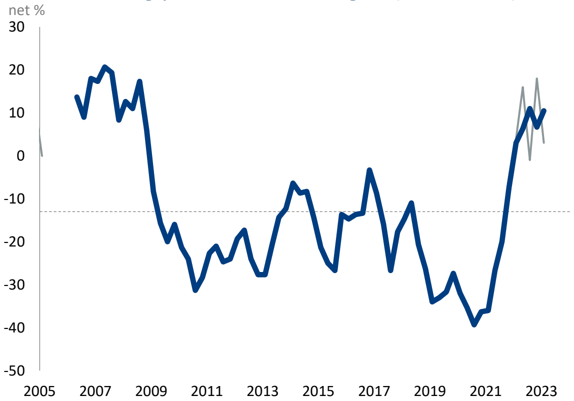


Business conditions (smoothed)



Business volumes (smoothed)

Selling prices / fees charged (smoothed)



[10] 1) Renting of machinery & equipment (8%): transport equipment (SIC code 851), other machinery & equipment (852).
2) Computer services (19%): hardware consultancy (861), software consultancy (862).
3) Legal services, accounting & other (30%): legal services, accounting, bookkeeping, auditing & tax consulting (8811-2), business & management consulting (8814).
4) Consulting engineering activities (88211) (23%)
5) Advertising (883) (3%)
6) Other (16%): building & industrial plant cleaning activities (8893), other (8899) e.g., debt collection, interior design, exhibitions.
The figures in brackets indicate the BER's weights, which account for the sector coverage and participation. Consult Table 2 for the sub-sector's share according to Stats SA's business censuses.

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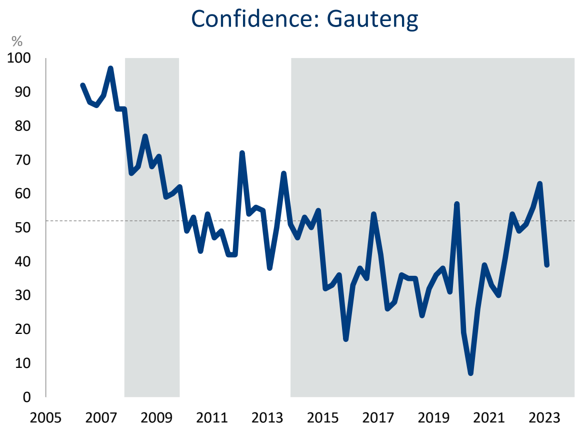
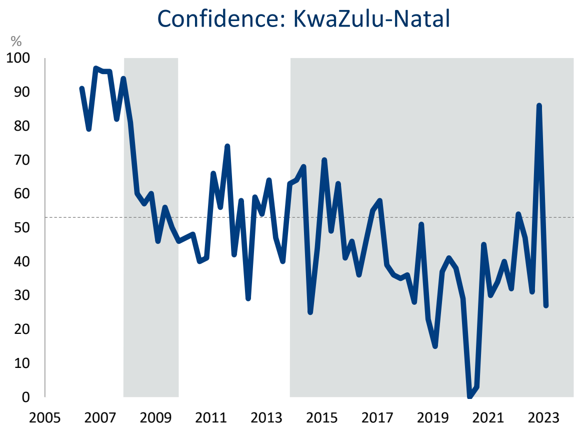
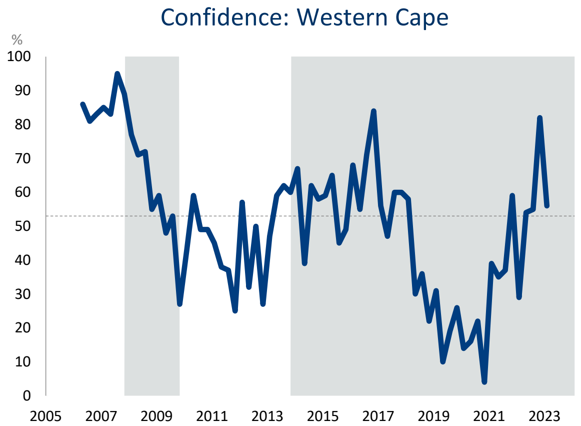
Δ – change from previous period
$σ_Δ$ – volatility (standard deviation of the changes)
All of the above calculated since 2005
See Technical note for further details

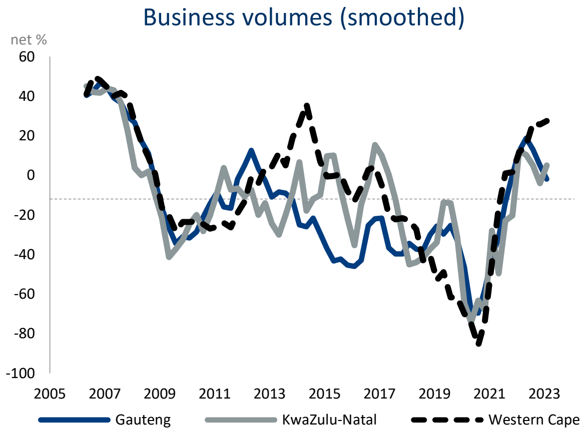
Provinces

Indicator	Unit	μ-σ	μ	μ+σ	21Q2	21Q3	21Q4	22Q1	22Q2	22Q3	22Q4	23Q1	Δ	σ Δ
Gauteng														
Confidence	%	31	52	72	30	41	54	49	51	56	63	**39**	-24	12
Business volumes	Net %	-44	-12	20	-13	-28	0	29	8	19	12	**-16**	-28	20
Smoothed	Net %	-43	-15	12	-42	-31	-14	0	12	19	13	**5**	-8	9
KwaZulu-Natal														
Confidence	%	30	53	76	34	40	32	54	47	31	86	**27**	-59	18
Business volumes	Net %	-46	-9	27	35	-88	-16	43	10	-22	27	**-17**	-44	39
Smoothed	Net %	-43	-15	12	-42	-31	-14	0	12	19	13	**5**	-8	9
Western Cape														
Confidence	%	31	53	75	35	37	59	29	54	55	82	**56**	-26	15
Business volumes	Net %	-40	-5	30	6	-14	11	8	16	22	41	**14**	-27	21









μ – average
σ – standard deviation
Δ – change from previous period
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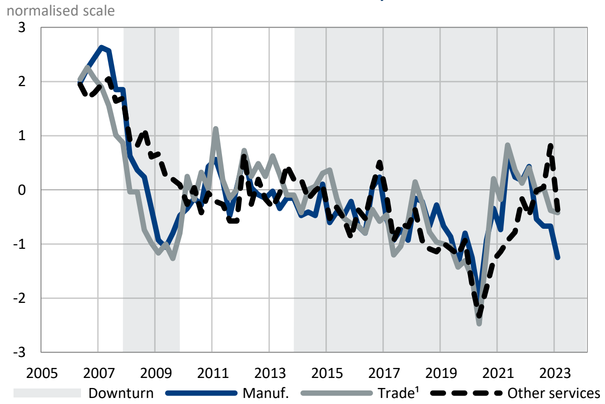
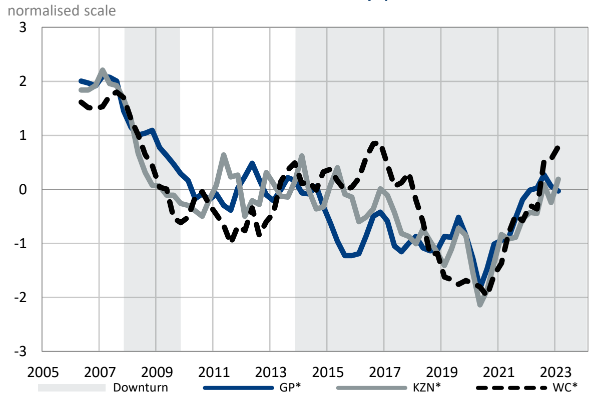
All of the above calculated since 2005
See Technical note for further details

Summary

Business confidence by sector

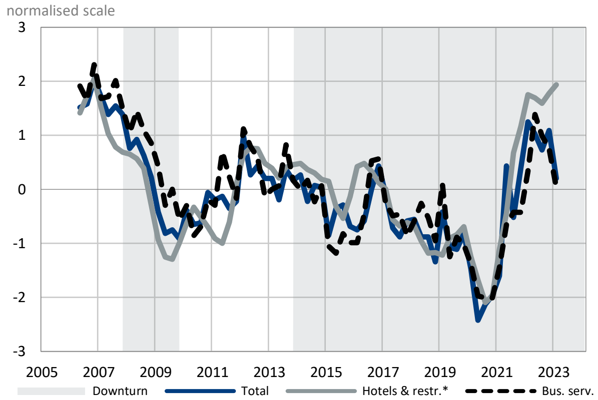


Business confidence by province

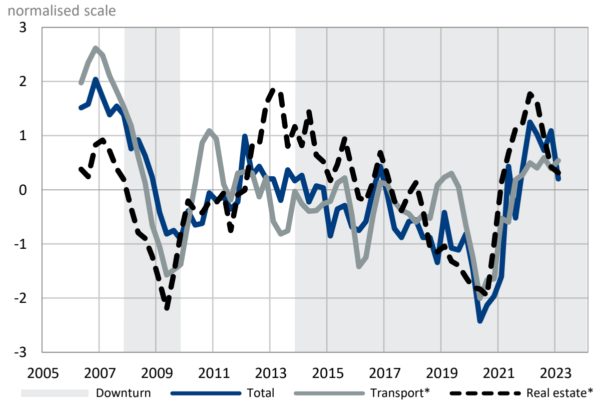


[1] Trade = average of retail, wholesale & motor trade

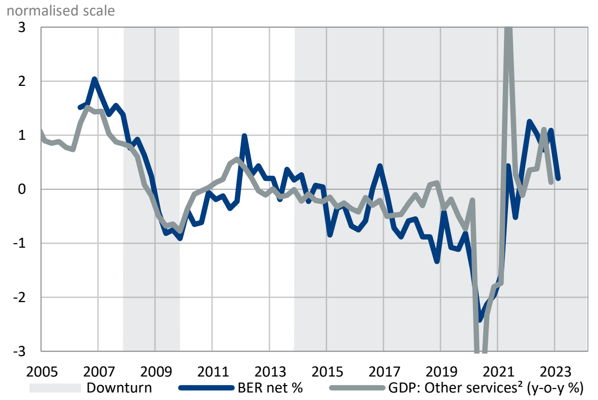
Business volumes



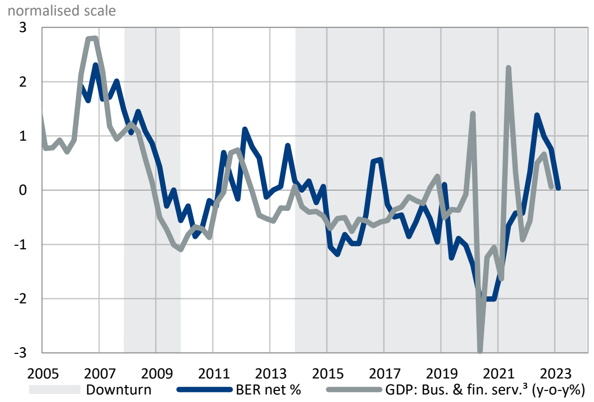
Business volumes



Total other services: volumes



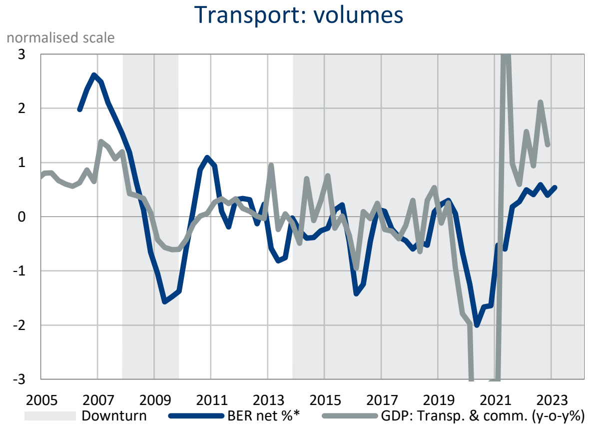
Business services: volumes



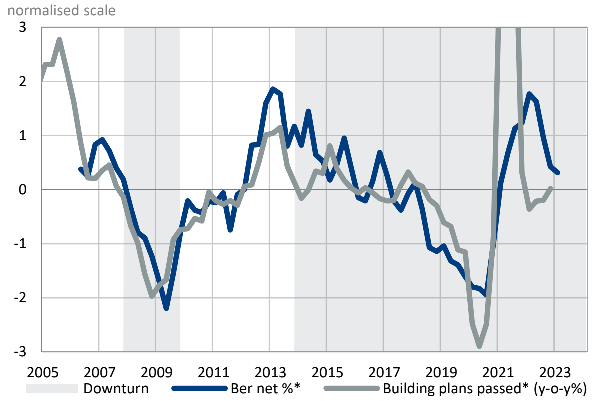
** three-quarter centred moving average*

Summary continues

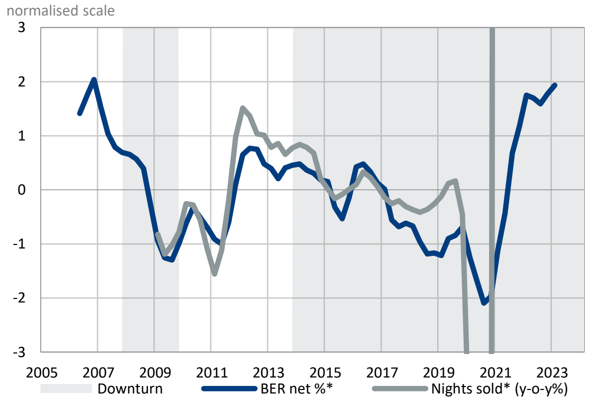
Transport: volumes



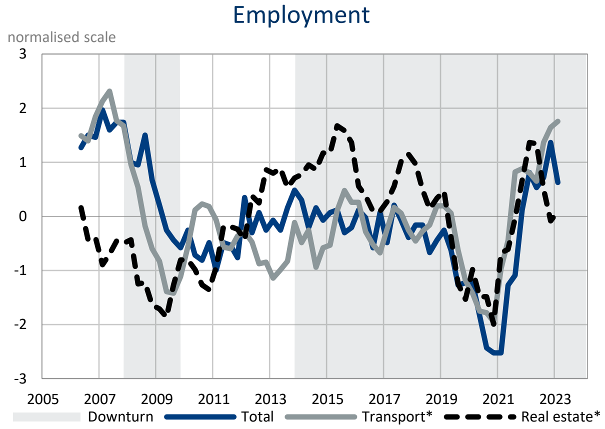
Real estate: volumes



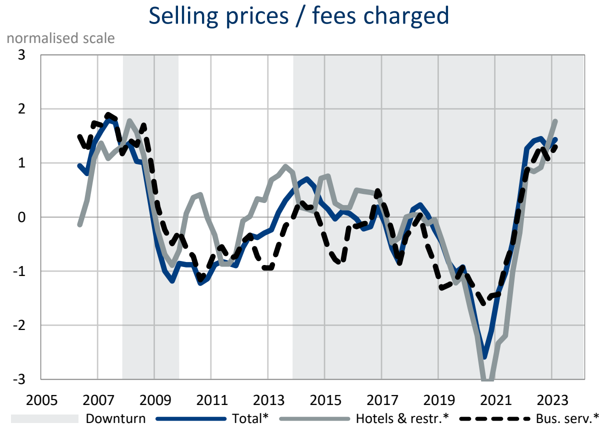
Hotels & restaurants: volumes



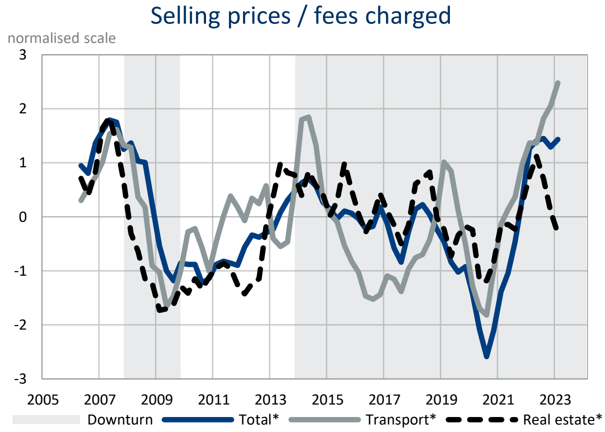
Employment



Selling prices / fees charged



Selling prices / fees charged



[*] *three-quarter centred moving average*

Technical note

The other services survey method

Short-term planning is hampered as official (quantitative or numeric) data is released with a time lag. Business tendency *survey* (BTS) *results reveal what happened between the release of the last official figures and the current situation*. The survey results not only reveal earlier developments in activity, employment etc. (for which official figures are published), but also provide unique information, such as business confidence and respondents' expectations (or forecast) for the next quarter for which no official figures exist. It is now widely recognised that such subjective individual expectations play a key role in economic developments. Furthermore, the survey results of successive quarters *provide a means of tracking cyclical movements, pinpointing trend changes* and establishing forecasts.

Of the various sub-sectors making up the services sector of the economy, the BER's surveys have covered the domestic trade sectors (i.e., the retail, wholesale and motor trade) since their inception in the 1950s. In 2005, the BER expanded the surveys' sector coverage to select other services sectors, namely catering (restaurants and take-away outlets), accommodation (hotels and guest houses), transport, real estate and business services. Click **here** for a short video about the BER's other services survey.

In deciding which of the remaining services sector to cover, the BER followed its international counterparts. While the government provides the bulk of services, the selected sectors are those in which private firms dominate. For reasons of focus and feasibility, the BER does not cover personal services and sectors dominated by a few large firms (e.g. telecommunication and air transport).

These other services sectors are responsible for a large and rising share of GDP and employment, but the cyclical turning points in their overall confidence, business climate and activity time series lag those of the sectors that the BER traditionally reported on. Therefore, they are not included in the BER's composite cyclical indicators (e.g. the business confidence index). A short video on how this survey compares to the RMB/BER BCI can be found **here**.

Firms in the other services sector differ from those that the BER has been reporting on traditionally (i.e. building contractors, manufacturers, retailers, wholesalers and vehicle dealers) in several important aspects.

1. The most obvious difference is that other services providers do not carry stocks to balance unexpected changes in demand. In contrast to stocks of raw material inputs and finished goods in manufacturing, as well as retail, wholesale and new vehicle inventories, other services cannot be stored temporarily. Instead, other service providers have to take care of short-term fluctuations in demand via adjustments in the utilisation of their workforce and/or space.

2. Another difference is that the cyclical peaks and troughs in other services sector's activity are not symmetrical and do not move in synch with those of the sectors reported on traditionally. While the five sectors included in the RMB/BER business confidence index (BCI) reach upper and lower cyclical turning points at more or less the same time, other services lag the recovery at the bottom, as it takes time before capital and other business spending increase and starts to lift accommodation, transport and business services. To safeguard the cyclical and advanced signalling (predictive) properties of the RMB/BER BCI, the other service sector is not included in the BCI. Whereas quantitative estimates benefit from an expanded sector coverage, this is not necessarily the case for cyclical measures.

3. A final major difference is that there is no readily available equivalent official monthly reference measure of other services activity. Stats SA has been producing high-frequency data on the performance of hotels, restaurants and transport for a couple of years, but nothing on real estate and business services. The latter two are only covered together with financial intermediation in the quarterly GDP production numbers.

Table 1 A comparison of the sectors covered in the BCI vis-à-vis other services survey

	GDP %	Employment %	BCI	Other services
Primary sector	**10.3**	**10.2**		
Agriculture, forestry & fishing	2.2	7.1		
Mining and quarrying	8.2	3.1		
Secondary sector	**21.7**	**15.5**		
Manufacturing	14.0	9.3	√	
Electricity, gas and water	3.7	0.4		
Construction	4.0	5.8	√	
Tertiary (services) sector	**68.0**	**74.3**		
Trade, catering and accommodation	14.9	23.2		
Wholesale trade	4.9	5.1	√	
Retail trade; repair of household goods	7.0	10.7	√	
Motor trade; repair of motor vehicles	2.1	4.0	√	
Catering and accommodation	1.0	3.4		√
Transport, storage & communication	10.0	4.7		
Transport	8.0	3.9		√
Communication	2.0	0.7		
Finance, real estate & business services	19.4	17.6		
Finance and insurance	6.1	2.5		
Real estate	5.5	1.1		√
Business services *	7.8	13.9		√
General government services	17.8	12.9		
Personal services **	5.9	16.0		
All sectors	**100.0**	**100.0**	**31.9**	**22.3**

GDP = Gross Domestic Product (National Accounts) from the production side; sector division according to the Standard Industrial Classification (SIC) of All Economic Activities, at current prices, 2019

Employment covers the formal and informal sector.

Data source: Quantec, author's own calculations

BCI = RMB/BER business confidence index

* Business services consist of 1) the renting of machinery and equipment (8%), 2) computer services (16%), 3) legal, accounting, market research & management consultancy (27%), 4) consulting engineering (21%), 5) advertising (3%) and 6) other (e.g. labour recruitment, security activities, building and plant cleaning, and miscellaneous such as debt collection, interior design and exhibitions) (25%).

** Personal services consist of 1) education (20%), 2) health & social work (45%), 3) other community services (e.g. refuse removal) (2%), 4) activities of membership organisations (e.g. those of trade unions) (2%), 5) recreation (e.g. cinemas, TV production), cultural (arts, news agencies, libraries, museums, nature reserves) & sport activities (26%) and 6) other (washing & dry-cleaning of clothes, hair dressing & beauty treatments, funeral services & miscellaneous (4%).

Table 2 Composition of the other services sector (sub-sectors as % of the total)

	Stats SA		BER	
	2016	**2020**	**2016**	**2020**
1. Hotels & restaurants	**5.4**	**5.9**	**12.8**	**15.2**
Hotels and other accommodation	2.5	2.5	9.4	11.2
Restaurants and other food outlets	2.9	3.4	3.4	4.0
2. Transport, storage & communication	**40.9**	**41.8**		
2.1 Transport & storage	**25.2**	**26.2**	**24.4**	**22.1**
2.1.1 Land transport & pipelines	9.8	10.4	11.5	8.7
Rail transport	2.8	2.9	2.4	
Other land transport	6.7	7.1	9.0	8.7
Bus & other passenger transport	0.6	0.7	1.2	
Road freight	6.0	6.4	7.7	8.7
Pipelines	0.3	0.4		
2.2.2 Water transport	0.0	0.0	0.1	
2.2.3 Air transport	3.2	3.0		
2.2.4 Supporting transport & travel agencies	12.1	12.7	12.8	13.4
Cargo handling	0.9	0.8	2.1	1.8
Storage & warehousing	1.3	1.5	1.9	
Other (e.g., airport & harbour operation)	1.4	1.6		
Travel agencies & tour operators	0.8	1.0	1.8	3.1
Other (e.g., freight forwarding)	7.8	7.8	7.1	8.5
2.2 Post & telecommunication	**15.7**	**15.6**		
Postal and courier activities	0.7	0.8		
Telecom & cellular	15.0	14.8		
3. Real estate	**12.9**	**12.1**	**16.7**	**17.8**
Auctioneering & property sales	4.5	4.6	5.6	6.3
Property management & other	8.5	7.5	11.1	11.5
4. Business services	**40.8**	**40.2**	**46.1**	**44.9**
4.1 Renting of machinery & household goods	**2.4**	**2.0**	**3.5**	**3.5**
Rental of transport equipment	0.9	0.5	0.9	0.7
Rental of other machinery & equipment	1.4	1.3	2.5	2.8
Rental of personal & household equipment	0.1	0.2	0.1	
4.2 Computer and related services	**6.1**	**7.4**	**7.5**	**8.7**
Hardware consultancy	0.3	0.3	0.5	1.3
Software consultancy	4.6	5.9	5.9	7.4
Data processing & database activities	0.7	0.9	0.8	
Maintenance, repair & other	0.4	0.2	0.3	
4.3 Research & development	**0.9**	**0.7**		

	Stats SA		BER	
	2016	**2020**	**2016**	**2020**
4.4 Other business activities	**31.3**	**30.0**	**35.0**	**32.6**
4.4.1 Legal, accounting & consultancy	8.4	9.3	12.5	13.4
Legal services	1.7	1.9	7.1	7.5
Accounting, auditing & tax consultancy	1.4	1.8		
Market research & public opinion polling	0.2	0.2	0.2	
Business & management consultancy	5.0	5.3	5.1	6.0
4.4.2 Architectural & other technical activities	4.5	3.5	9.7	10.4
Architectural & engineering consultancy	4.2	3.1	9.7	10.4
Consulting engineering activities	3.5	2.4	9.7	10.4
Architectural activities	0.3	0.4		
Quantity surveying & other	0.5	0.3		
Technical testing & analysis	0.3	0.3		
4.4.3 Advertising	1.3	1.5	1.3	1.5
4.4.4 Business activities n.e.c.	17.1	15.8	11.6	7.3
Labour recruitment & provision of personnel	2.0	2.0	1.4	
Investigation and security activities	3.1	2.9	2.7	
Building & industrial plant cleaning activities	1.2	0.8	1.5	1.5
Photographic activities	0.0	0.0	0.5	
Packaging	0.2	0.2		
Other	10.6	9.9	5.5	5.8
Debt collection & credit rating	4.1	-		
Business brokerage	0.0	-		
Specialised design (e.g., interior design)	1.2	-	1.0	-
Telephone services (e.g., telemarketing)	2.3	-	2.0	-
Other appraisal	0.0	-		
Demonstration & exhibition	1.2	-	1.0	-
Other n.e.c.	1.7	-	1.5	-
Total	**100.0**	**100.0**	**100.0**	**100.0**

- not available; n.e.c. = not classified elsewhere; shaded = BER does not cover
Stats SA sources:
Accommodation: Report 64-11-01, 2015 & 2018
Restaurants: Report 64-20-01, 2015 & 2018
Land Transport: Report 71-02-01, 2016 & 2019
Post & Telecommunication: Report 75-01-01, 2016 & 2019
Real Estate & Business Services: Report 80-04-02, 2016 & 2020
Used the GDP deflator for "wholesale, retail, hotels & restaurants" and "transport, storage & communication" to estimate income in 2016 and 2020.
BER:
2016 applied to the period 2017 to 22Q2, 2020 applies since 22Q3

The survey results are obtained from questionnaires completed by senior executives during the middle month of every calendar quarter.

The business survey questionnaire contains a small number of questions. These questions are qualitative in nature, e.g., "Compared to the same quarter a year ago, is the volume of sales up, the same or down?". No figures are requested.

The sample of executives remains the same from one survey to the next. A panel is in effect established. The sample provides for the main sectors (see Table 2). The list of participants is reviewed every few years to replace those firms that went out of business or stopped responding during the previous two years with new ones. The sector weights are updated every five years and adjusted for the response pattern.

To provide for widely differing sizes, each firm in the manufacturing, trade and other services sectors is allocated a weight based on its turnover. Firms in the building sector are not weighted. Participants have to complete a "participant details form" at the time of recruitment and every few years to ensure that their sector classification and turnover (optional) are correct.

Consult the BER web page (**www.ber.ac.za**) for more information about the business tendency survey method.

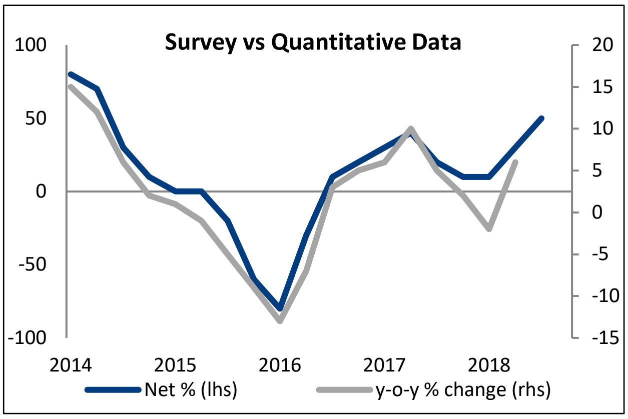
The unique units of measurement of qualitative surveys

Net percentage (net %)

The responses related to the change in activity, prices, employment, business conditions, expected economic performance etc. are presented as a "net percentage" (also called a "net balance" or a "net majority"). If, for example, the percentages of respondents rating the volume of sales as "higher", the "same" or "lower" compared to a year ago are 70%, 10% and 20% respectively, then one can conclude that the majority of participants experienced higher sales. The net percentage is calculated as the percentage of respondents rating "sales" as higher less the percentage rating it as "lower". The percentage rating it as the "same" is ignored. The net percentage in this example is therefore 50%, being the difference between the 70% "higher" and the 20% "lower". A net percentage of –10%, for instance, would indicate a decline in sales compared to a year ago. Take note that this does not mean a year-on-year contraction of 10%. It only means that the activity of a majority of 10% of the respondents was lower compared to a year ago.

The net percentage, or net balance statistic, can theoretically vary between a minimum of -100 (when all participants replied "lower") and a maximum of +100 (when all respondents replied "higher"). Theoretically a value of zero, therefore, indicates no change, between 0 and 100 reflects a rise (or improvement) and between 0 and –100 a decline (or deterioration) compared to the same quarter a year ago. The net balance statistic is a diffusion index, i.e. it indicates the degree to which the indicated change is "diffused" (spread) throughout the sample population. It indicates both the direction and size of the change.

Given that it reflects respondents' estimation of the change in the phenomenon/variable in the current quarter relative to the same quarter a year ago, the net percentage corresponds to a year-on-year percentage change/growth rate in the corresponding/equivalent official data series (see the figure on the right).



Percentage (%)

The responses relating to business confidence are presented as percentages.

In the case of business confidence, respondents have to rate prevailing business conditions as either "satisfactory" or "unsatisfactory". The percentage of respondents rating prevailing business conditions as satisfactory is taken as an indicator (proxy) for business confidence. A reading of 10 for business confidence, for instance, means that only 10% of the respondents indicated that they were satisfied. In this example, 90% were, therefore, unsatisfied.

Theoretically, the confidence series can vary between a minimum of zero and a maximum of 100. A value of zero would reflect an extreme lack of confidence and 100 extreme confidence. These results reflect respondents' evaluation of the phenomenon/the survey variable in respect to that specific survey quarter, i.e. not relative to some period in the past or future.

Descriptive statistics in the tables

Smoothed

Some series show erratic/volatile movements, i.e., data jumps around quite a bit between consecutive quarters. In such cases, it is necessary to smooth these movements over a longer period to obtain a general trend. Another case where we added moving averages is when the correlation between the survey results and the corresponding reference series is low or non-existent.

Three-quarter centred moving averages (3qcma) were selected in order to not disturb turning points too much, e.g. the moving average of 17Q4 is calculated as the average of 17Q3, 17Q4 and 18Q1, that of 18Q1 is calculated as the average of 17Q4, 18Q1 and 18Q2 etc. For the smoothed series to run up to the last unsmoothed data point, the last smoothed data point is only the average of two quarters, namely the previous and current quarter.

When a smoothed series is added, it is prudent not to attach too much value to the unsmoothed results of a particular quarter, but rather to evaluate it in its historical context.

Seasonal adjustment (SA)

In theory, the time series ought to display no seasonal patterns because respondents are instructed to compare the current quarter with the same one of a year ago (e.g., they must compare the current Festive Season or wet/dry winter period with the same time a year ago). However, in practice, some series nevertheless reveal seasonal patterns, probably because some respondents incorrectly compare the survey quarter with the one directly preceding it. In such cases, a seasonally adjusted series (i.e., where such seasonal variation is eliminated with X12 ARIMA) is added.

Average (μ)

The neutral level of the time series for the two measurement types, net percentage and percentage, is 50 or zero respectively. The long-term average (mean) is often not equivalent to this neutral level. In such cases, it is more useful to evaluate the current results relative to such a long-term average than the neutral level.

One standard deviation below (μ-σ) and above (μ+σ) the average

The standard deviation indicates the common variation in or dispersion of the values. Data points falling between one standard deviation below and above the average could be regarded as common. Any data point falling outside these ranges, therefore, displays statistically significant variation.

Change (Delta: Δ)

This statistic indicates the change in the results of the latest quarter relative to the preceding quarter.

Volatility (standard deviation of the deltas: Δσ)

This statistic indicates the volatility of the quarter-on-quarter change. If the size (regardless if it is an increase or decline) of the change is greater than the standard deviation of the deltas, then it displays a statistically significant variation.

Conventions and aids provided in the charts

Shaded areas

Indicates cyclical downturns as demarcated by the South African Reserve Bank. Users need to take note that the business cycle could have already reversed course towards the end of the period covered in the chart, but usually we wait until the bank determines a turning point before changing the shaded areas.

Solid vs. dotted horizontal (X) axes:

A solid line indicates the theoretical mid-points of 50 or zero respectively, while a dotted line indicates the long-term average (mean). Also see the section on the "average" above.

Normalised scale

Time series data is normalised (standardised) when one wishes to observe the co-movement among indicators with different units of measurement, say for instance, between a diffusion index (confidence) and the growth rate in a volume index (GDP growth). Normalisation converts both series to the same scale (unit) by subtracting the long-term average from each series and dividing it by its standard deviation. This ensures that one compares "apples" with "apples" when making a visual inspection and not mistakenly identify co-movements or deviations that different scales could produce.