

# BER Trade Surveys

## Preliminary Results

Laurie Binge

1 November 2017

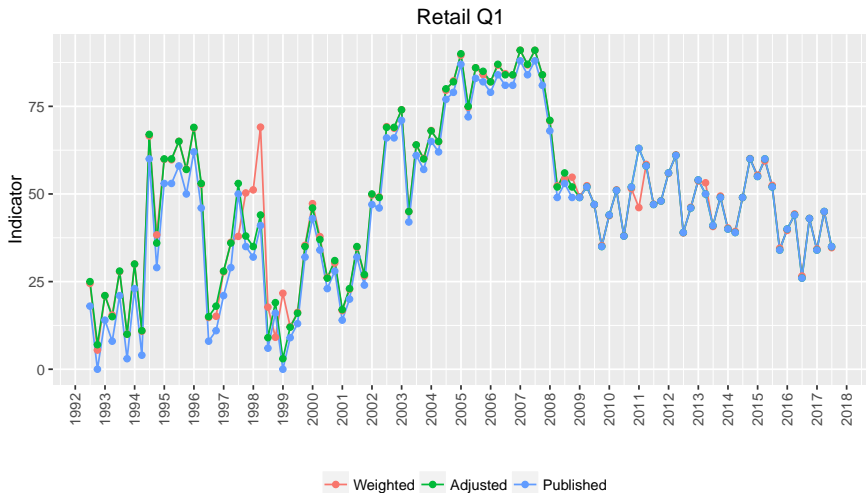
- 1 Retail Survey Results**
- 2 Wholesale Survey Results**
- 3 Motor Vehicle Survey Results**

# Retail Survey Results

## Comparing the Microdata to the Published Series

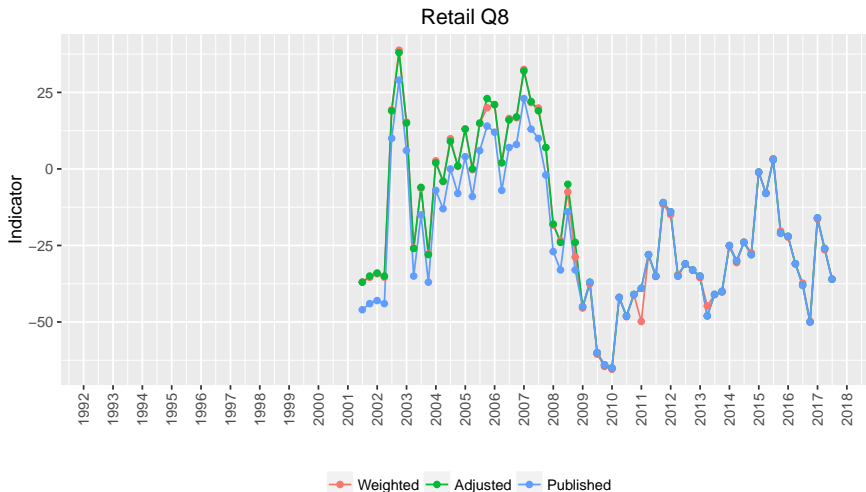
# Retail Survey Results: Q1

An adjustment factor is added to the published series for comparison to the microdata



# Retail Survey Results: Q8

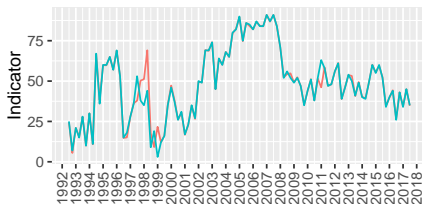
An adjustment factor is added to the published series for comparison to the microdata



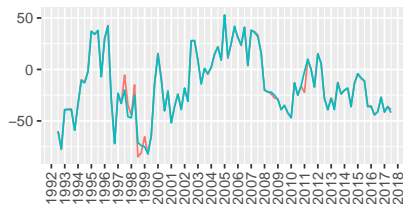
# Total Retail Results

The series are similar, except for 1997Q2-1998Q2 and 2010Q4

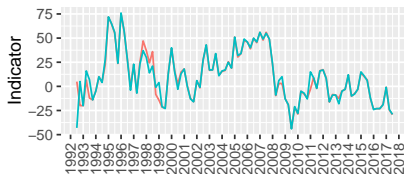
Retail: Q1



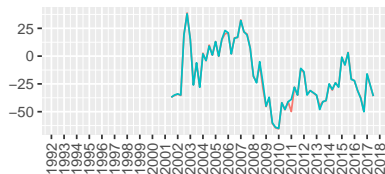
Retail: Q2A



Retail: Q3A



Retail: Q8

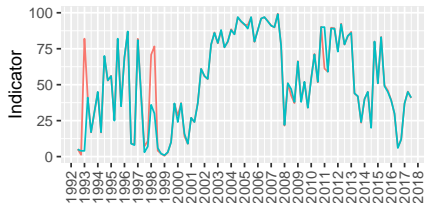


Weighted Adjusted

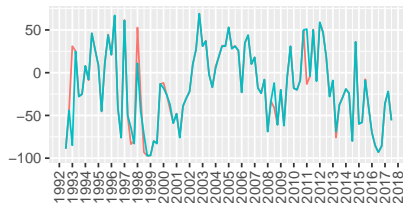
Weighted Adjusted

# Semi-Durable Retail Results

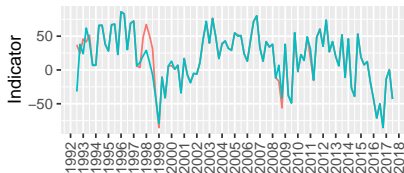
Retail Semi-Durable: Q1



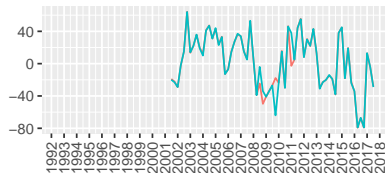
Retail Semi-Durable: Q2A



Retail Semi-Durable: Q3A



Retail Semi-Durable: Q8



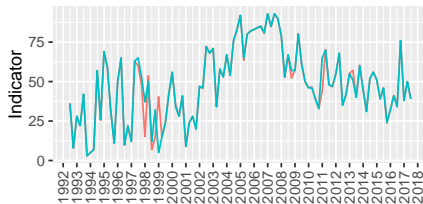
Weighted Adjusted

Weighted Adjusted

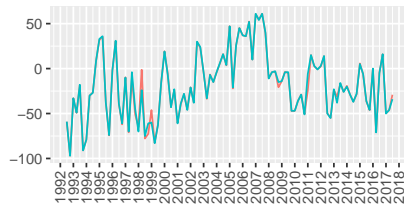


# Non-Durable Retail Results

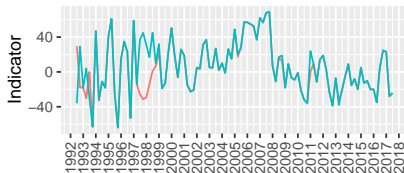
Retail: Q1



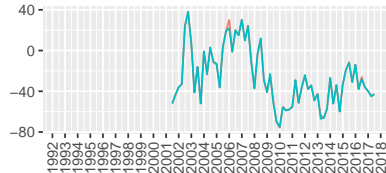
Retail: Q2A



Retail: Q3A



Retail: Q8

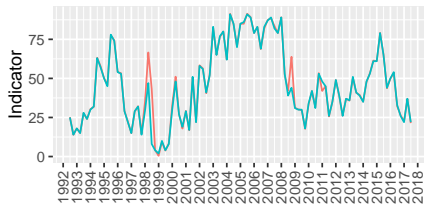


Weighted Adjusted

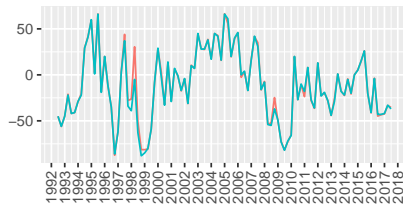
Weighted Adjusted

# Durable Retail Results

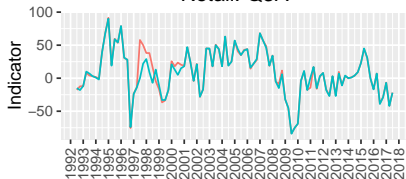
Retail: Q1



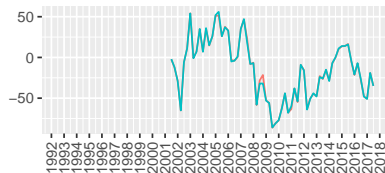
Retail: Q2A



Retail: Q3A



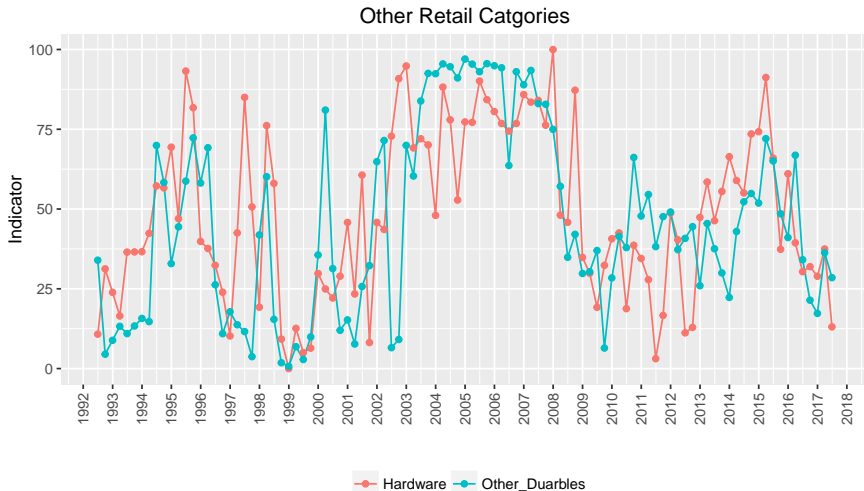
Retail: Q8



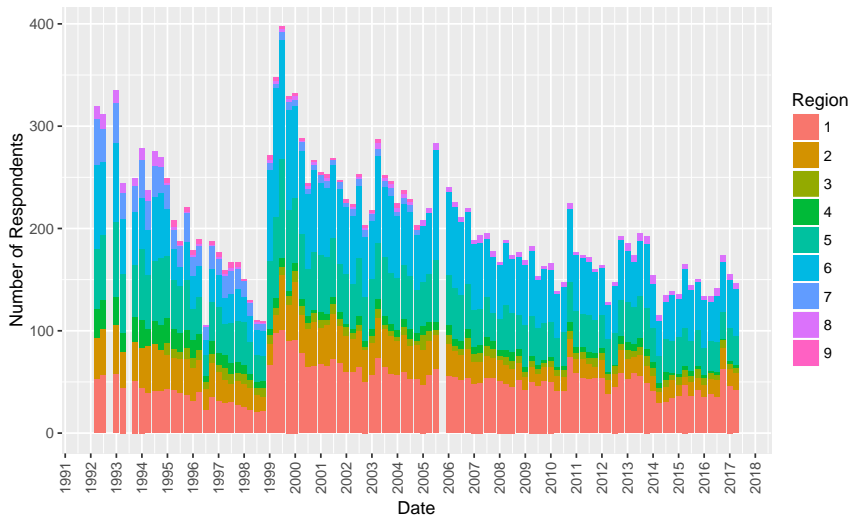
Weighted Adjusted

Weighted Adjusted

# Durable Retail Categories

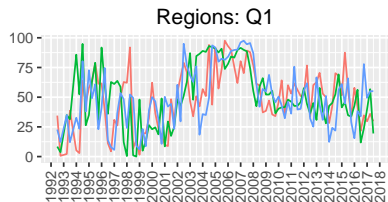
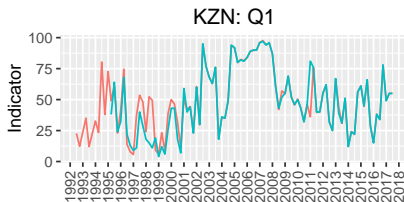
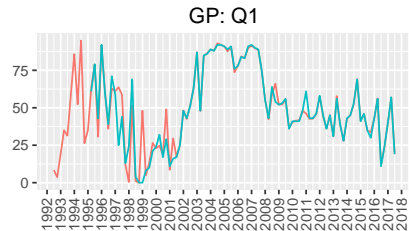
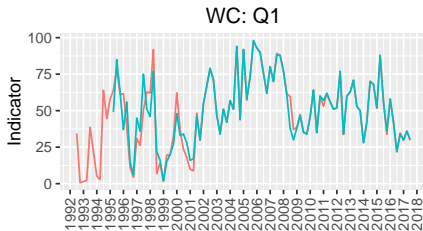


# Regional Responses



# Regional Results: Q1

The series are less similar before 2001

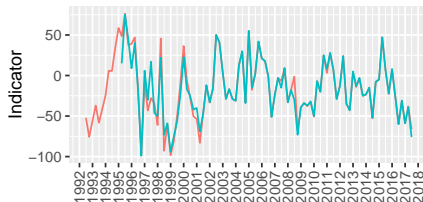


Microdata Adjusted

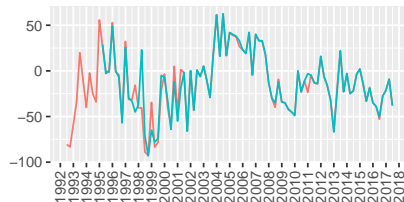
WC GP KZN

# Regional Results: Q2A

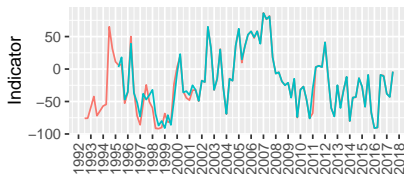
WC: Q2A



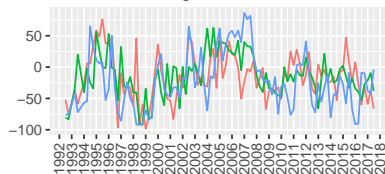
GP: Q2A



KZN: Q2A



Regions: Q2A



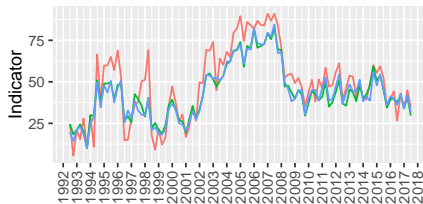
Microdata Adjusted

WC GP KZN

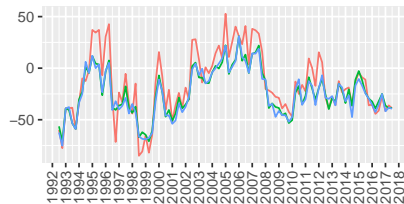
## New Weights

# New Weights: Total Retail

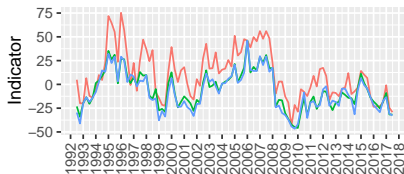
Q1



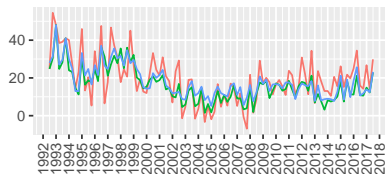
Q2A



Q3A



Q9



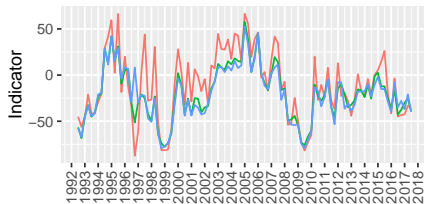
Microdata New 2-step

Microdata New 2-step

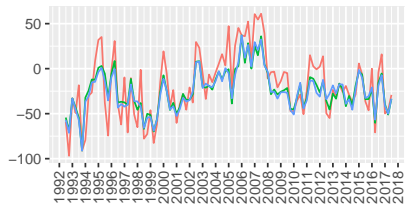


# New Weights: Retail Subsectors

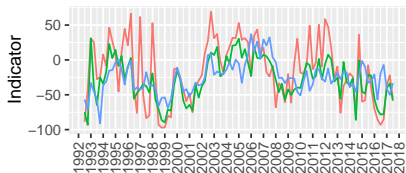
## Q2A: Durable



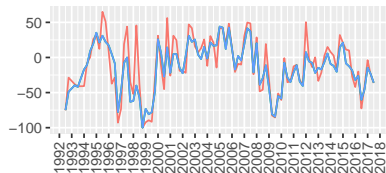
## Q2A: Non-Durable



## Q2A: Semi-Durable



## Q2A: Hardware



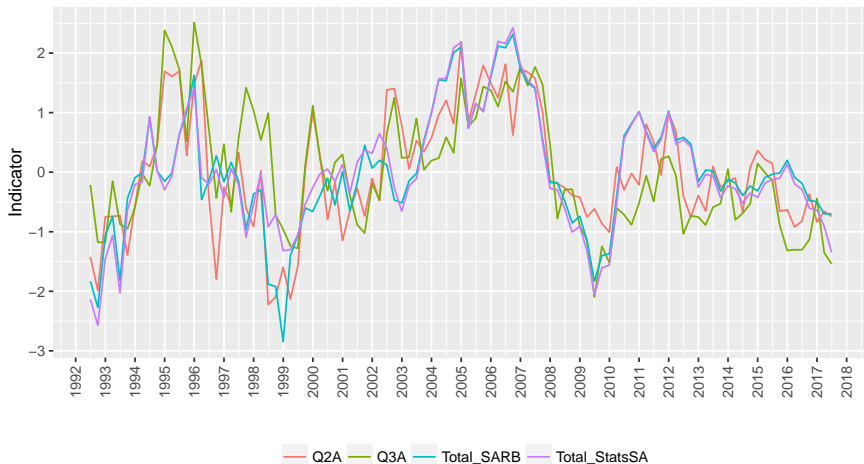
Microdata New 2-step

Microdata New 2-step

## References Series

# Total Retail Reference Series

## Retail Reference Series



# Correlations with Reference Series

Contemporaneous correlations are relatively high

**Table 1:** Correlations of retail series

	Q2A	Q3A	Q2A_u	Q3A_u	Q2A_new	Q3A_new	Q2A_2s	Q3A_2s
Total_SARB	0.56***	0.30***	0.65***	0.44***	0.62***	0.37***	0.64***	0.44***
Total_StatsA	0.54***	0.37***	0.62***	0.45***	0.58***	0.40***	0.59***	0.45***

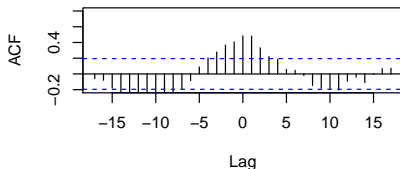
**Table 2:** Volatility of retail series

	Q2A	Q3A	Q2A_u	Q3A_u	Q2A_new	Q3A_new	Q2A_2s	Q3A_2s
Volatility	31.16	25.78	20.51	18.19	22.44	19.30	23.07	19.79

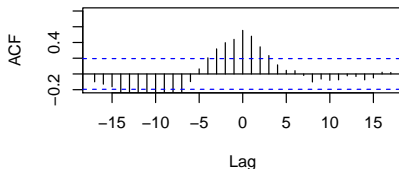
# Cross-Correlograms

Correlations are highest with one lag

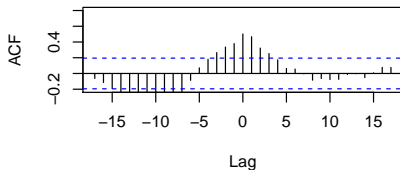
**Q2A & Sales\_StatsSA**



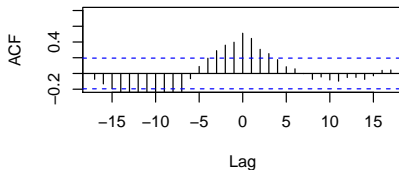
**Q2A\_u & Sales\_StatsSA**



**Q2A\_n & Sales\_StatsSA**

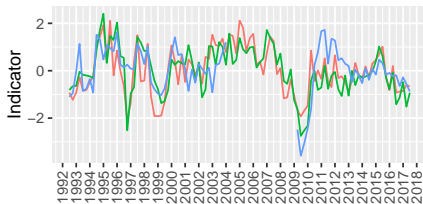


**Q2A\_2s & Sales\_StatsSA**

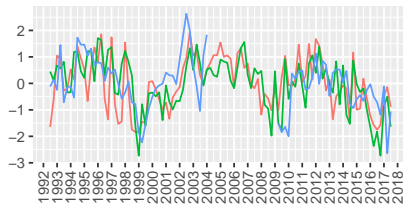


# Retail Subsector Reference Series

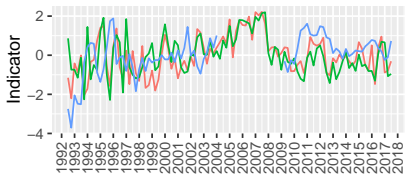
## Durable Goods



## Semi-Durable Goods



## Non-Durable Goods



— Q2A — Q3A — StatsSA

# Correlations with Subsector Reference Series

Contemporaneous correlations are relatively low

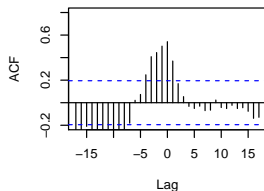
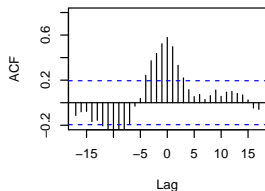
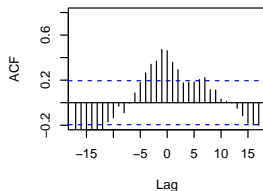
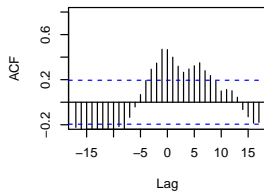
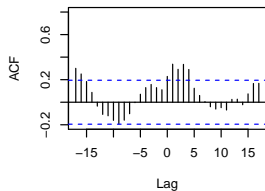
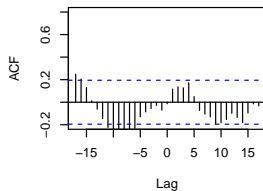
**Table 3:** Correlations of subsector series

	Q2A	Q3A	Q2A_n	Q3A_n	Q2A_2s	Q3A_2s
Durable Goods	0.57***	0.61***	0.59***	0.62***	0.59***	0.60***
Semi-Durable Goods	0.43***	0.46***	0.50***	0.48***	0.48***	0.47***
Non-Durable Goods	0.13	-0.14	0.26**	-0.05	0.28**	-0.02

**Table 4:** Volatility of subsector series

	Q2A	Q3A	Q2A_New	Q3A_New	Q2A_2s	Q3A_2s
Durable Goods	36.66	33.91	28.73	25.32	28.53	26.21
Semi-Durable Goods	44.38	38.55	30.14	27.74	30.02	27.96
Non-Durable Goods	35.68	29.65	22.79	19.54	22.82	19.32

# Cross-Correlograms for Subsector Series (2-step weighting)

**D\_Q2A & D\_Sales\_StatsSA****D\_Q3A & D\_Sales\_StatsSA****SD\_Q2A & SD\_Sales\_StatsSA****SD\_Q3A & SD\_Sales\_StatsSA****ND\_Q2A & ND\_Sales\_StatsSA****ND\_Q3A & ND\_Sales\_StatsSA**

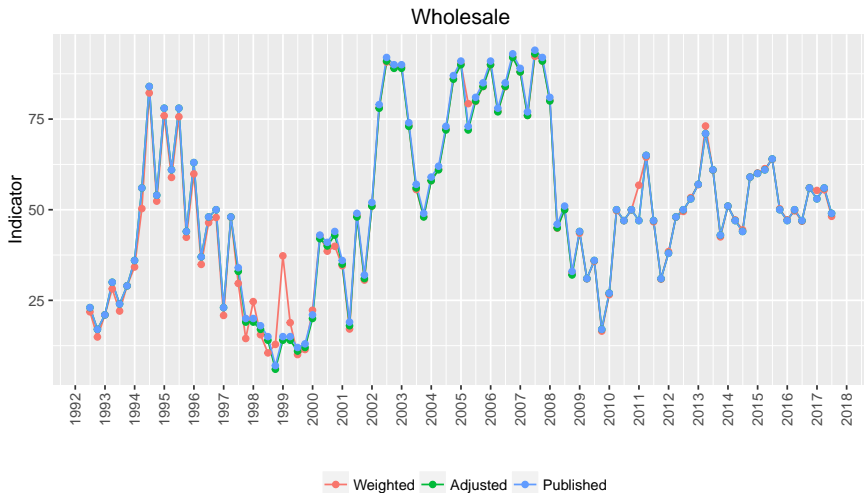


# Wholesale Survey Results

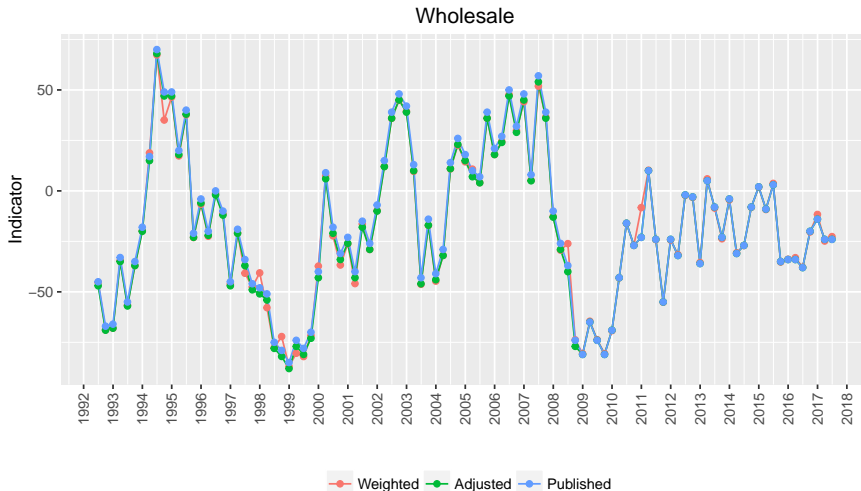
## Comparing the Microdata to the Published Series

# Wholesale Survey Results: Q1

An adjustment factor is added to the published series for comparison to the microdata



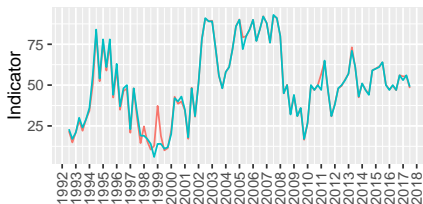
# Wholesale Survey Results: Q2A



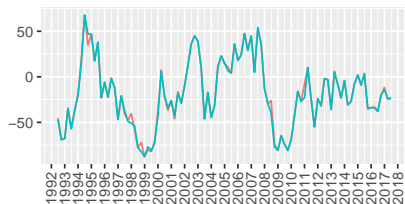
# Total Wholesale Results

Results are similar, except for the period around 1998

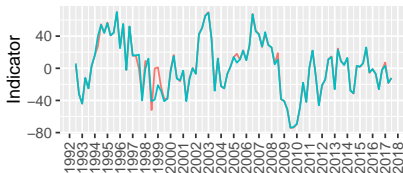
Wholesale: Q1



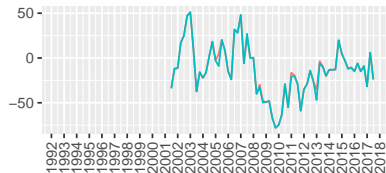
Wholesale: Q2A



Wholesale: Q3A



Wholesale: Q8

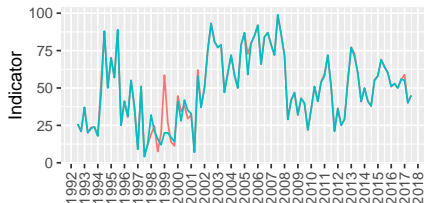


Weighted Adjusted

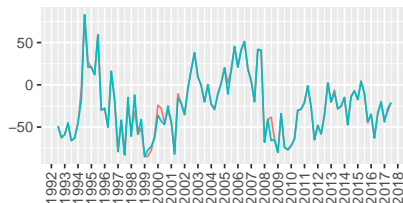
Weighted Adjusted

# Wholesale Consumer Goods

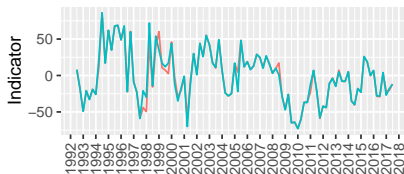
## Wholesale Consumer Goods: Q1



## Wholesale Consumer Goods: Q2A

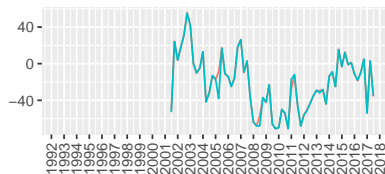


## Wholesale Consumer Goods: Q3A



Weighted Adjusted

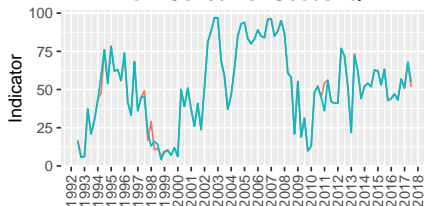
## Wholesale Consumer Goods: Q8



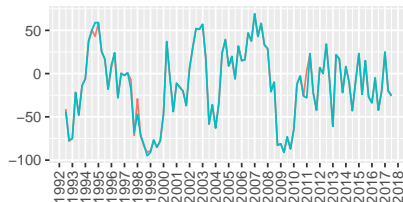
Weighted Adjusted

# Wholesale Non-Consumer Goods

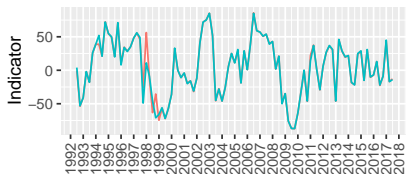
Non-Consumer Goods: Q1



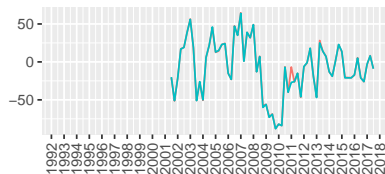
Non-Consumer Goods: Q2A



Non-Consumer Goods: Q3A



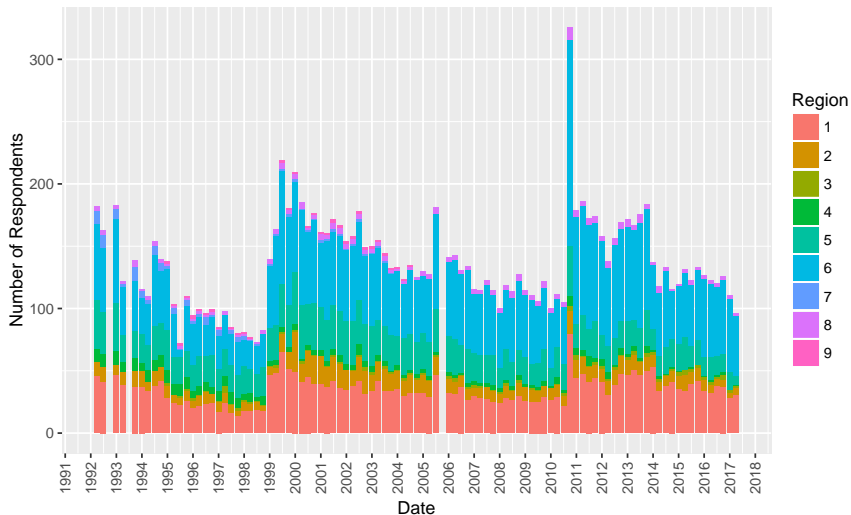
Non-Consumer Goods: Q8



Weighted Adjusted

Weighted Adjusted

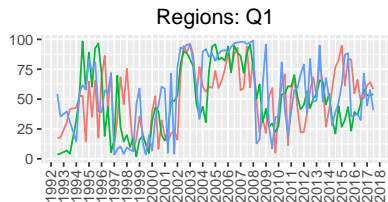
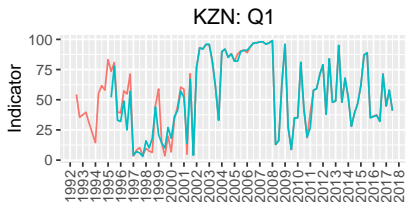
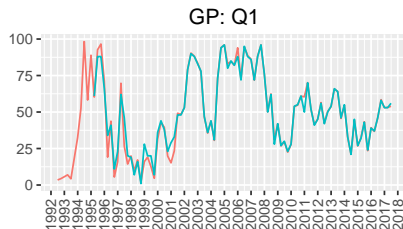
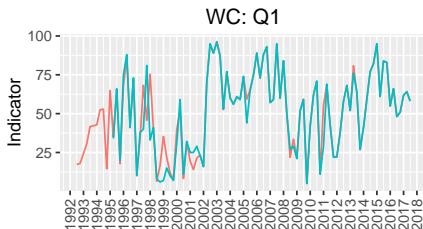
# Regional Wholesale Results





# Regional Wholesale Results: Q1

Gauteng and KZN adjustments are idiosyncratic (wrong sign)

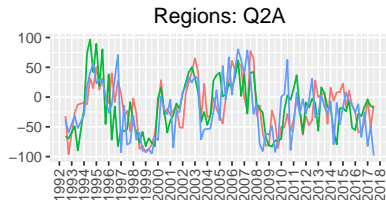
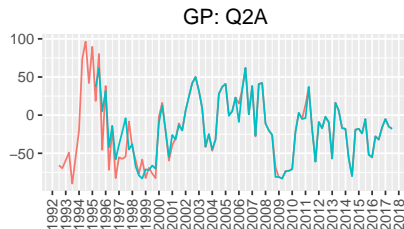
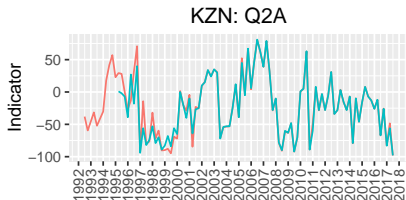
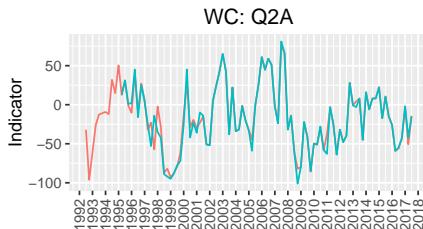


Microdata Adjusted

WC GP KZN

# Regional Wholesale Results: Q2A

Gauteng and KZN adjustments are idiosyncratic (wrong sign)



Microdata Adjusted

WC GP KZN

## New Weights

# New Weights

We still need to add series calculated with

- New weight categories
- Explicit 2-step weighting

## Reference Series

# Reference Series

We still need to add reference series

Compare the results in terms of

- Tracking record
- Volatility

# Motor Vehicle Survey Results

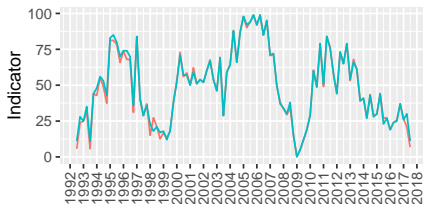
## Comparing the Microdata to the Published Series



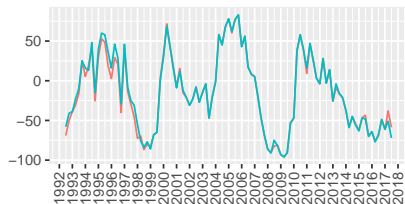
# New Vehicle Survey Results

Clearly there were adjustment factors at the start of the period

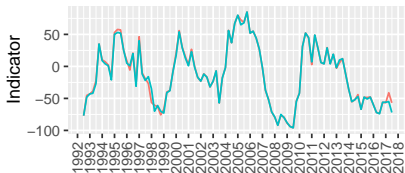
New Vehicles: Q1



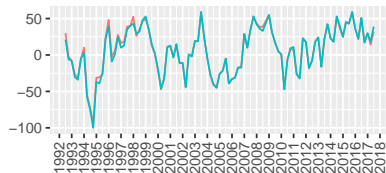
New Vehicles: Q2A



New Vehicles: Q3A



New Vehicles: Q5



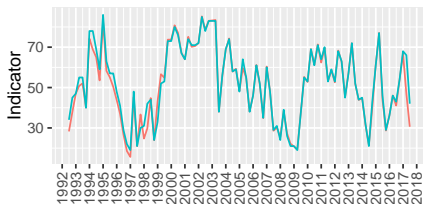
— Weighted — Published

— Weighted — Published

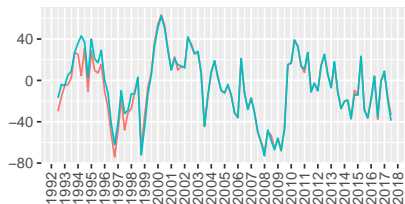
# Used Vehicle Survey Results

Clearly there were adjustment factors at the start of the period

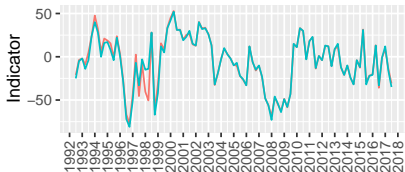
Used Vehicles: Q1



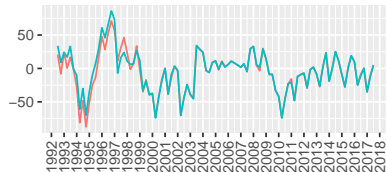
Used Vehicles: Q2A



Used Vehicles: Q3A



Used Vehicles: Q5



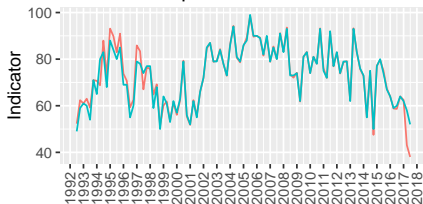
— Weighted — Published

— Weighted — Published

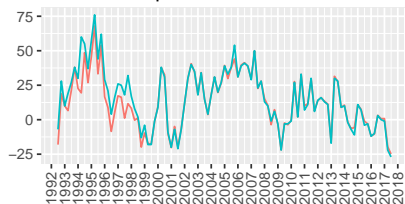
# Spare Parts Survey Results

Clearly there were adjustment factors at the start of the period

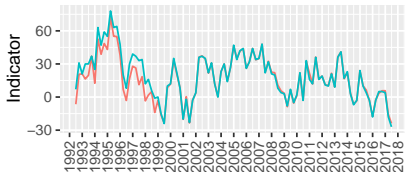
Spare Parts: Q1



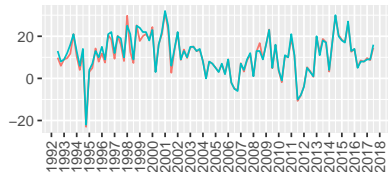
Spare Parts: Q2A



Spare Parts: Q3A



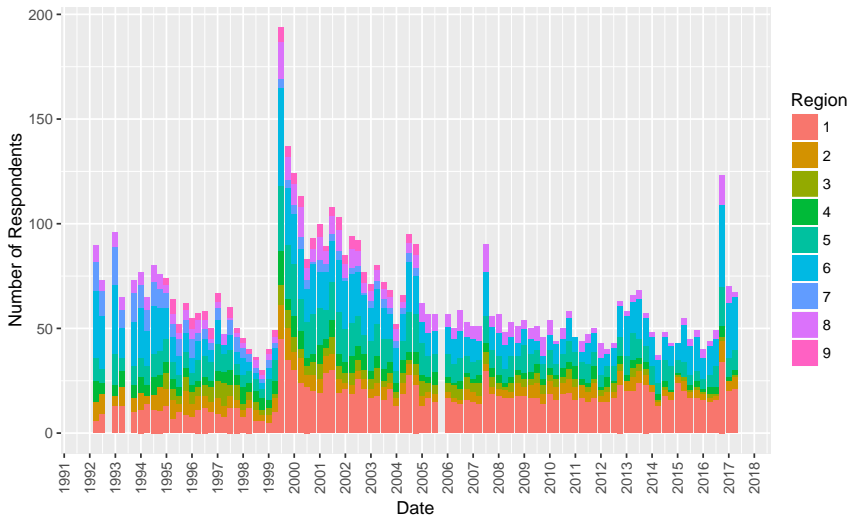
Spare Parts: Q5



— Weighted — Published

— Weighted — Published

# Regional Motor Vehicle Results

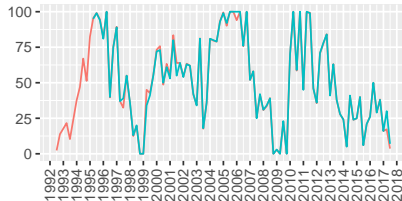


# Regional Motor Vehicle Results: Q1

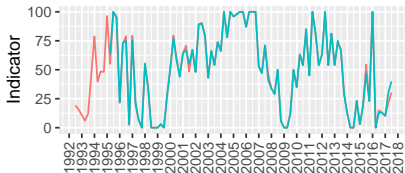
WC: Q1



GP: Q1



KZN: Q1



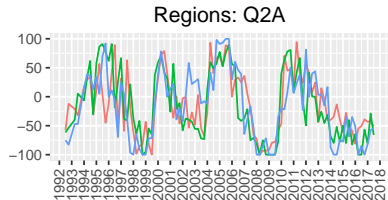
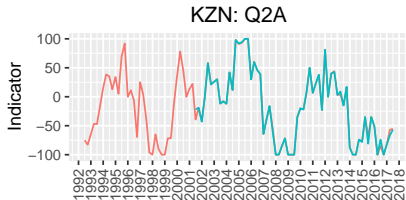
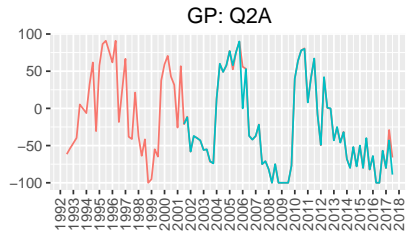
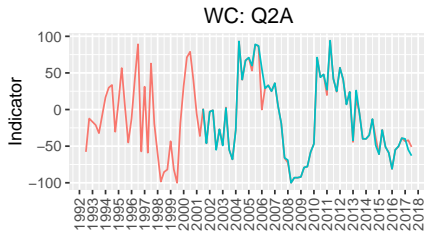
Regions: Q1



Microdata Published

WC GP KZN

# Regional Motor Vehicle Results: Q2A



Microdata Published

WC GP KZN

## New Weights

# New Weights

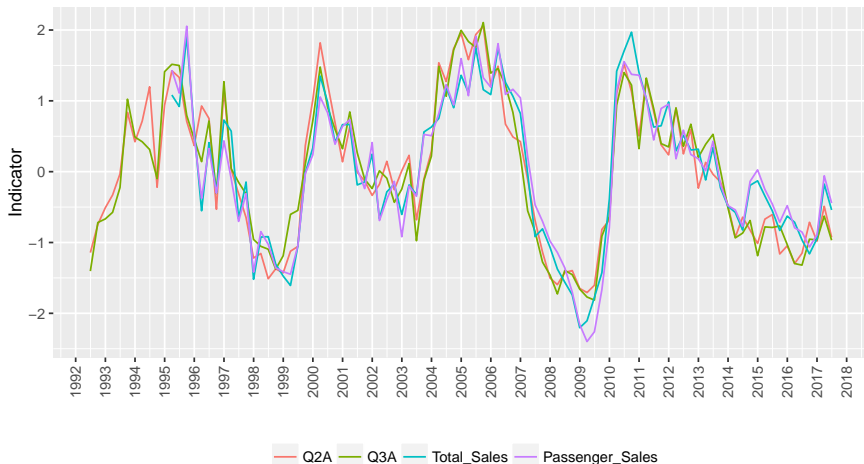
We still need to try alternative weights



## Reference Series

# Reference Series: New Vehicles

Motor Reference Series



# Contemporaneous correlations

**Table 5:** Correlations of motor vehicle series

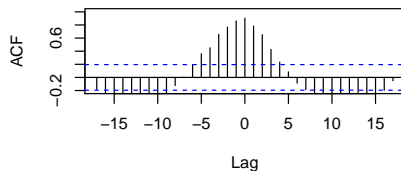
	Q2A	Q3A	Q2A_u	Q3A_u
Total_Sales	0.89***	0.89***	0.90***	0.90***
Passenger_Sales	0.88***	0.89***	0.90***	0.90***

**Table 6:** Volatility of motor vehicle series

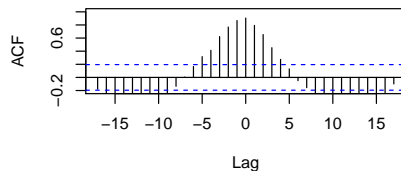
	Q2A	Q3A	Q2A_u	Q3A_u
Vol	47.50	46.15	43.13	41.53

# Cross-correlations

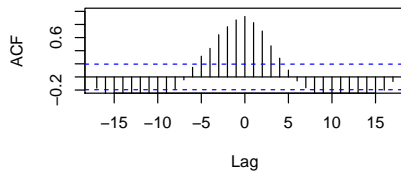
### Q2A & Passenger\_Sales



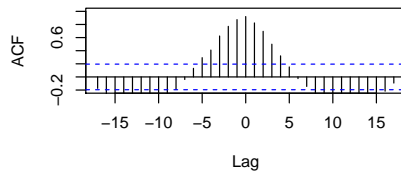
### Q3A & Passenger\_Sales



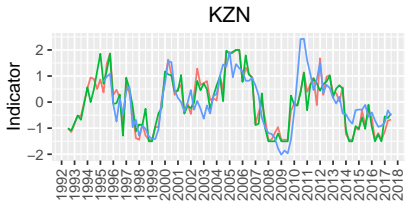
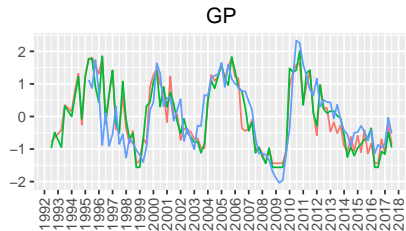
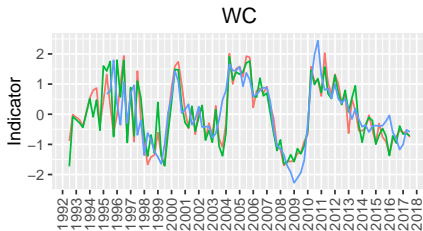
### Q2A\_u & Passenger\_Sales



### Q3A\_u & Passenger\_Sales



# Regional Reference Series



Q2A Q3A Passenger\_Sales

# Regional contemporaneous correlations

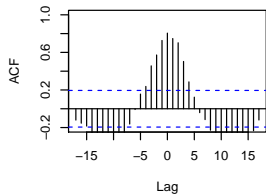
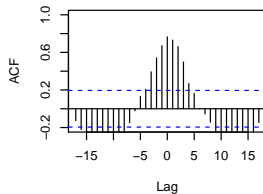
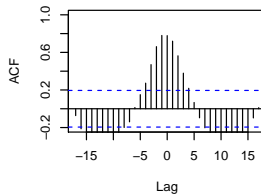
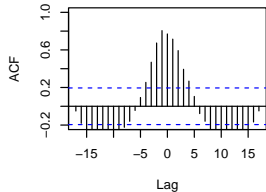
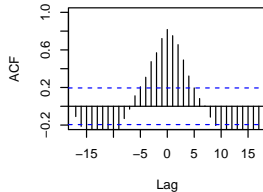
**Table 7:** Correlations of regional series

	WC_Q2A	WC_Q3A	GP_Q2A	GP_Q3A	KZN_Q2A	KZN_Q3A
Total Sales	0.77***	0.75***	0.74***	0.73***	0.80***	0.77***
Passenger Sales	0.77***	0.75***	0.76***	0.75***	0.80***	0.76***

**Table 8:** Volatility of regional series

	WC_Q2A	WC_Q3A	GP_Q2A	GP_Q3A	KZN_Q2A	KZN_Q3A
Volatility	52.03	53.41	58.84	55.92	57.97	57.05

# Regional cross-correlations

**WC\_Q2A & WC\_Sales****WC\_Q3A & WC\_Sales****GP\_Q2A & GP\_Sales****GP\_Q3A & GP\_Sales****KZN\_Q2A & KZN\_Sales****KZN\_Q3A & KZN\_Sales**