

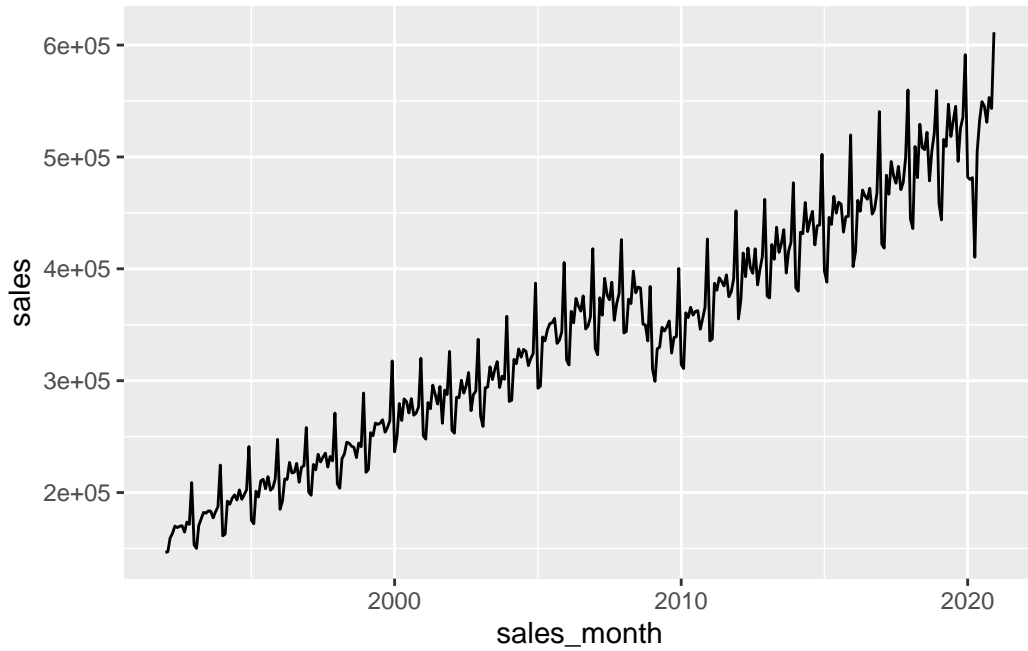
Untitled

```
SELECT sales_month, sales
FROM retail_sales
WHERE kind_of_business = 'Retail and food services sales, total'
ORDER BY 1
```

Table 1: Displaying records 1 - 10

sales_month	sales
1992-01-01	146376
1992-02-01	147079
1992-03-01	159336
1992-04-01	163669
1992-05-01	170068
1992-06-01	168663
1992-07-01	169890
1992-08-01	170364
1992-09-01	164617
1992-10-01	173655

```
retail_sales <- tbl(pg, "retail_sales")
retail_sales %>%
  filter(kind_of_business == 'Retail and food services sales, total') %>%
  select(sales_month, sales) %>%
  arrange(sales_month) %>%
  ggplot(aes(x = sales_month, y = sales)) +
  geom_line()
```



```
SELECT date_part('year',sales_month) as sales_year
,sum(sales) as sales
FROM retail_sales
WHERE kind_of_business = 'Retail and food services sales, total'
GROUP BY 1
;
```

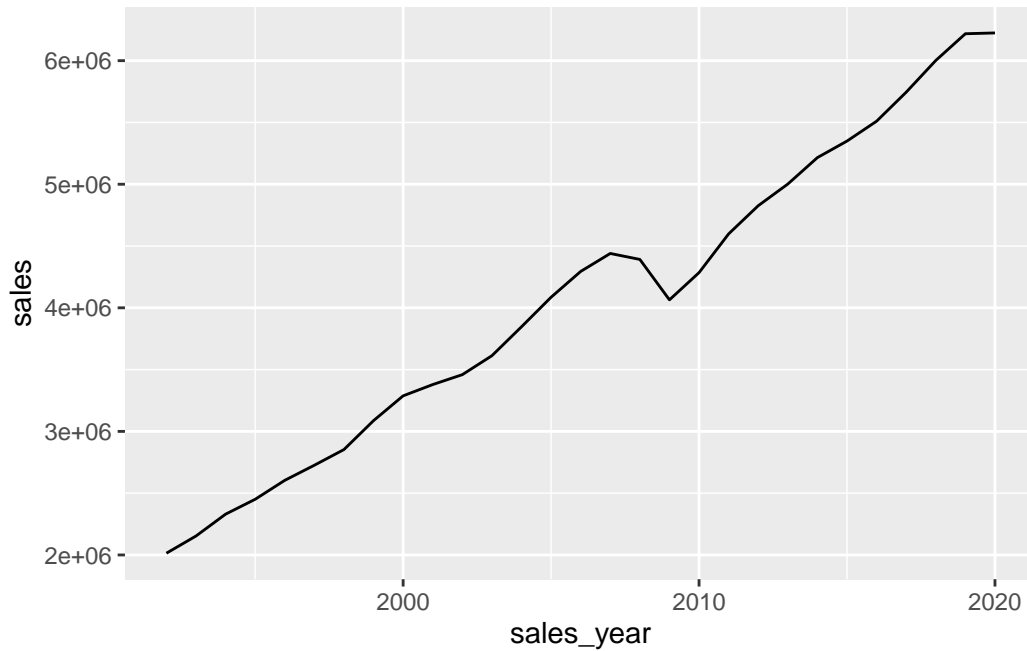
Table 2: Displaying records 1 - 10

sales_year	sales
2007	4439733
2005	4085746
1992	2014102
2011	4598302
2014	5215656
2006	4294359
2010	4284968
2001	3378906
2019	6218002
2018	6001623

```

retail_sales %>%
  filter(kind_of_business == 'Retail and food services sales, total') %>%
  mutate(sales_year = date_part('year', sales_month)) %>%
  group_by(sales_year) %>%
  summarize(sales = sum(sales, na.rm = TRUE)) %>%
  arrange(sales_year) %>%
  ggplot(aes(x = sales_year, y = sales)) +
  geom_line()

```



```

SELECT date_part('year',sales_month) as sales_year,
       kind_of_business, sum(sales) as sales
FROM retail_sales
WHERE kind_of_business IN
      ('Book stores',
       'Sporting goods stores',
       'Hobby, toy, and game stores')
GROUP BY 1,2
ORDER BY 1;

```

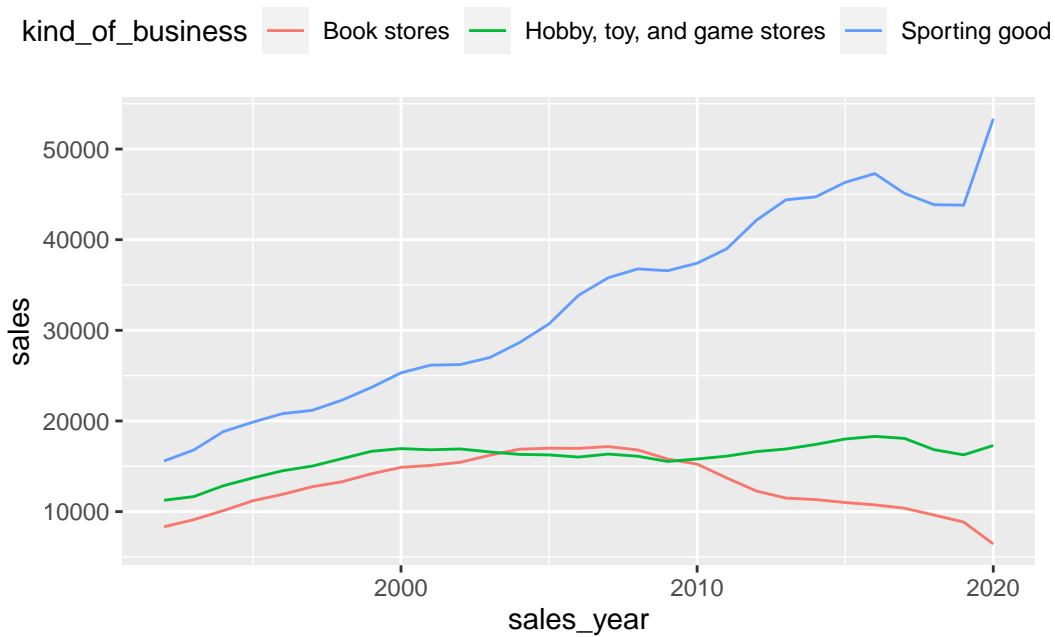
Table 3: Displaying records 1 - 10

sales_year	kind_of_business	sales
1992	Sporting goods stores	15583
1992	Hobby, toy, and game stores	11251
1992	Book stores	8327
1993	Hobby, toy, and game stores	11651
1993	Sporting goods stores	16791
1993	Book stores	9108
1994	Sporting goods stores	18825
1994	Book stores	10107
1994	Hobby, toy, and game stores	12850
1995	Hobby, toy, and game stores	13714

```

retail_sales %>%
  filter(kind_of_business %in%
         c('Book stores',
           'Sporting goods stores',
           'Hobby, toy, and game stores')) %>%
  mutate(sales_year = date_part('year', sales_month)) %>%
  group_by(sales_year, kind_of_business) %>%
  summarize(sales = sum(sales, na.rm = TRUE), .groups = "drop") %>%
  arrange(sales_year) %>%
  ggplot(aes(x = sales_year, y = sales, color = kind_of_business)) +
  geom_line() +
  theme(legend.position = "top")

```



```
SELECT sales_month, kind_of_business, sales
FROM retail_sales
WHERE kind_of_business IN ('Men's clothing stores','Women's clothing stores')
ORDER BY 1,2;
```

Table 4: Displaying records 1 - 10

sales_month	kind_of_business	sales
1992-01-01	Men's clothing stores	701
1992-01-01	Women's clothing stores	1873
1992-02-01	Men's clothing stores	658
1992-02-01	Women's clothing stores	1991
1992-03-01	Men's clothing stores	731
1992-03-01	Women's clothing stores	2403
1992-04-01	Men's clothing stores	816
1992-04-01	Women's clothing stores	2665
1992-05-01	Men's clothing stores	856
1992-05-01	Women's clothing stores	2752

```
retail_sales %>%
  filter(kind_of_business %in% c("Men's clothing stores",
```

```

                                "Women's clothing stores")) %>%
select(sales_month, kind_of_business, sales) %>%
arrange(sales_month) %>%
ggplot(aes(x = sales_month, y = sales, color = kind_of_business)) +
geom_line() +
theme(legend.position = "top")

```



```

SELECT date_part('year',sales_month) as sales_year,
       kind_of_business, sum(sales) as sales
FROM retail_sales
WHERE kind_of_business IN
      ('Men's clothing stores',
       'Women's clothing stores')
GROUP BY 1, 2
ORDER BY 1, 2;

```

Table 5: Displaying records 1 - 10

sales_year	kind_of_business	sales
1992	Men's clothing stores	10179
1992	Women's clothing stores	31815
1993	Men's clothing stores	9962

sales_year	kind_of_business	sales
1993	Women's clothing stores	32350
1994	Men's clothing stores	10032
1994	Women's clothing stores	30585
1995	Men's clothing stores	9315
1995	Women's clothing stores	28696
1996	Men's clothing stores	9546
1996	Women's clothing stores	28238

```
retail_sales %>%
  filter(kind_of_business %in%
    c("Men's clothing stores",
      "Women's clothing stores")) %>%
  mutate(sales_year = date_part('year', sales_month)) %>%
  group_by(sales_year, kind_of_business) %>%
  summarize(sales = sum(sales, na.rm = TRUE), .groups = "drop") %>%
  arrange(sales_year) %>%
  ggplot(aes(x = sales_year, y = sales, color = kind_of_business)) +
  geom_line() +
  theme(legend.position = "top")
```



```

SELECT date_part('year',sales_month) AS sales_year,
       sum(CASE WHEN kind_of_business = 'Women's clothing stores'
                then sales
                END) AS womens_sales,
       sum(CASE WHEN kind_of_business = 'Men's clothing stores'
                then sales
                END) AS mens_sales
FROM retail_sales
WHERE kind_of_business IN
      ('Men's clothing stores',
       'Women's clothing stores')
GROUP BY 1
ORDER BY 1;

```

Table 6: Displaying records 1 - 10

sales_year	womens_sales	mens_sales
1992	31815	10179
1993	32350	9962
1994	30585	10032
1995	28696	9315
1996	28238	9546
1997	27822	10069
1998	28332	10196
1999	29549	9667
2000	31447	9507
2001	31453	8625

```

retail_sales %>%
  filter(kind_of_business %in%
         c("Men's clothing stores",
           "Women's clothing stores")) %>%
  mutate(kind_of_business = tolower(str_replace(kind_of_business, "'.*$', "s")),
         sales_year = date_part('year', sales_month)) %>%
  group_by(sales_year, kind_of_business) %>%
  summarize(sales = sum(sales, na.rm = TRUE), .groups = "drop") %>%
  pivot_wider(id_cols = "sales_year",
              names_from = "kind_of_business",
              names_glue = "{kind_of_business}_{.value}",
              values_from = "sales") %>%

```



```
arrange(sales_year) %>%  
collect(n = 10) %>%  
knitr::kable()
```

sales_year	mens_sales	womens_sales
1992	10179	31815
1993	9962	32350
1994	10032	30585
1995	9315	28696
1996	9546	28238
1997	10069	27822
1998	10196	28332
1999	9667	29549
2000	9507	31447
2001	8625	31453