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SQL Project - Walmart Sales Analysis

Table - **features**

(store, date, temperature, fuel\_price, CPI, unemployment, Isholiday)

Table - **stores**

(store, type, size)

Table - **train**

(store, dept, date, weekly\_sales, Isholiday)

**GOAL**

* compare weekly sales across different stores and store departments; identify the top-performing and bottom-performing stores as well as departments
* compare annual sales across different stores and store departments; identify the top-performing and bottom-performing stores as well as departments
* analyze the effect of holidays on sales; are sales generally higher on holidays and how?

**Weekly Sales:**

Top performing store departments:

1. store 10 department 72 (2010-11-26)
2. store 10 department 72 (2011-11-25)
3. store 14 department 72 (2010-11-26)
4. store 20 department 72 (2010-11-26)
5. store 27 department 72 (2010-11-26)

Worst performing store departments:

1. store 28 department 6 (2010-10-08)
2. store 16 department 47 (2012-03-09)
3. store 28 department 32 (2011-03-25)
4. store 2 department 47 (2010-11-19)
5. store 2 department 47 (2010-07-30)

Top performing stores:

1. store 14 (2010-12-24)

2. store 20 (2010-12-24)

3. store 10 (2010-12-24)

4. store 4 (2011-12-23)

5. store 13 (2010-12-24)

Worst performing stores:

1. store 5 (2011-01-14)
2. store 5 (2010-07-30)
3. store 5 (2010-02-26)
4. store 5 (2010-03-26)
5. store 5 (2010-07-23)

**Yearly Sales:**

Top:

1. store 4 - 2011
2. store 20 - 2011
3. store 14 - 2011
4. store 14 - 2010
5. store 13 - 2011

6. store 20 - 2010

7. store 10 - 2011

Worst:

1. store 5 - 2012
2. store 5 - 2010
3. store 32 - 2012
4. store 5 - 2011
5. store 3 - 2012

**Per week:**

* department 72 is by far the best-performing department
* departments 6, 32, 47 are the worst-performing departments
* stores 14, 20, 10, 4 ,13 are the best-performing stores, and they are all relatively large sizes (110000 to 210000)
* store 5 is the worst-performing store, as it has the smallest store size (35000); followed by store 32

**Per year:**

* stores 4, 20 14, 13, 20,10 are among the best-performing stores
* stores 5 and 32 are the worst-performing stores

**Remarks:**

* store 10 is a very successful store based on the fact that its 72nd department holds the top 2 places for the most sales per week for any department
* department 72 is a great department that accounts for the highest sales, especially during the Christmas seasons; we can conclude that this is a department with many promotional and scarce goods
* the highest sales are generated roughly around Boxing Day and around the one-month mark within Christmas holiday; this should mostly be because of Boxing Day events; we also can assume that the reason is that the stores launch Christmas-related promotions such as Christmas trees, gifts, and other items
* the worst-performing sales are generated at random times when there are no significant holidays
* average weekly sales are higher on holidays than on non-holidays
* larger stores seem to generate higher sales
* the type of store (A, B, C) seems to have no clear correlation with sales values; but type A stores are the biggest, followed by type B

Note\*: Without further knowledge on these stores such as the department categories, locations, branding strategies, and other factors, we can only query data and provide generic analysis. More can be done with more datasets and contextualization.