TASK

Look at customer payment data from **2014-07 to 2015-07 in Canada,** tell the stories based on what you have seen from the data, and provide suggestions to your manager

BACKGROUND

Customers can choose different ways to pay their credit card bills, such as paper, online, mobile phones. Some types of payment are very costly for us, for example, paper and third-party payment. We recently launched mobile payment which is the most efficient and cost-saving payment for us. From customer behavior perspective, the first thing you want to do is to find out how much each payment method has grown from **2014-07 to 2015-07**, and then provide any insight you have to help us make better decisions

Data you can use:

1. Table **pmt_dt_detail** has payment details of each payment made by each customer every day

payment_id	customer_id	pmt_type_code	country_code	pmt_date	pmt_amt
5078756786	2431344708	200	2	2014-09-10	1402.91
5099828310	1932662560	991	1	2015-07-24	26
5073489757	10042413986	1	2	2015-07-06	1811.81
5087478076	2055497048	726	2	2015-12-16	76
5073012009	1932662560	765	2	2012-07-06	201
……	……	……	……	……	……
5105365281	10047470574	980	1	2012-01-30	79
5064336112	10033752573	18	2	2015-07-01	51
5086619957	2311059742	300	2	2013-07-15	104
5087529745	10034709281	756	2	2015-07-16	31
5100388949	1932662560	13	3	2014-02-23	121
5071121958	2237204825	991	2	2015-07-04	2001

- payment_id: each payment transaction has a payment ID associated with
- customer_id: customer who made the payment; each customer can make multiple payments any time they want
- pmt_type_code: we use code to represent different methods of payments
- country_code: where do the customers come from? **1 means Canada – in this case, we only care about Canada Market**
- pmt_date – the date when the payment happened
- pmt_amt: the dollar amount paid by the customers

2. pmt_type_code mapping table:

pmt_type_code	payment_type
1,2,5,12,13	**AutoPay**
18,20,28,25	**Branch**
30,49,50	**EOS**
200,222,205	**IVR**
300,301,401	**Paper**
726,756,765	**Third Party**
980,990,991,999	**Mobile phone pay**

For example, if pmt_type_code = 1 or 2 or 5 or 12 or 13, then the payment type is Autopay

Write down your code:

Hint:

1. We only compare 2015-07 vs. 2014-07;
2. What is the key metric to evaluate the growth for each payment type? Do we care about the payment dollar amount?

Write down your insights:

After you successfully run the query, you get the data as below:

Month	payment_type	payment_cnt
2014-07	AutoPay	1864152
2014-07	Branch	544395
2014-07	EOS	3418896
2014-07	IVR	3016611
2014-07	Paper	6551058
2014-07	Third Party	6626390
2014-07	Mobile phone pay	6547399

Month	payment_type	payment_cnt
2015-07	AutoPay	2598597
2015-07	Branch	636387
2015-07	EOS	3606525
2015-07	IVR	3465282
2015-07	Paper	6295700
2015-07	Third Party	6719662
2015-07	Mobile phone pay	10047095

What is the main insight you can get from the data and what is your recommendation?