

# Retail Assessment

The Data Analysts team presents a research and a dasboard for  
asssesing offline retail stores

# AGENDA



The dashboard is available on the link



[https://public.tableau.com/views/RetailAssesment/RetailAssesment?:language=en-US&:display\\_count=n&:origin=viz\\_share\\_link](https://public.tableau.com/views/RetailAssesment/RetailAssesment?:language=en-US&:display_count=n&:origin=viz_share_link)

## Presented topics

- Business problem
- Metrics presentation
- Hypothesis testing
- Conclusion

Our goal was to assess the performance of the chain's sales outlets in order to know at what level of success each of them stands and to identify the best outlet of all, and the ones which have the maximum/minimum potential.

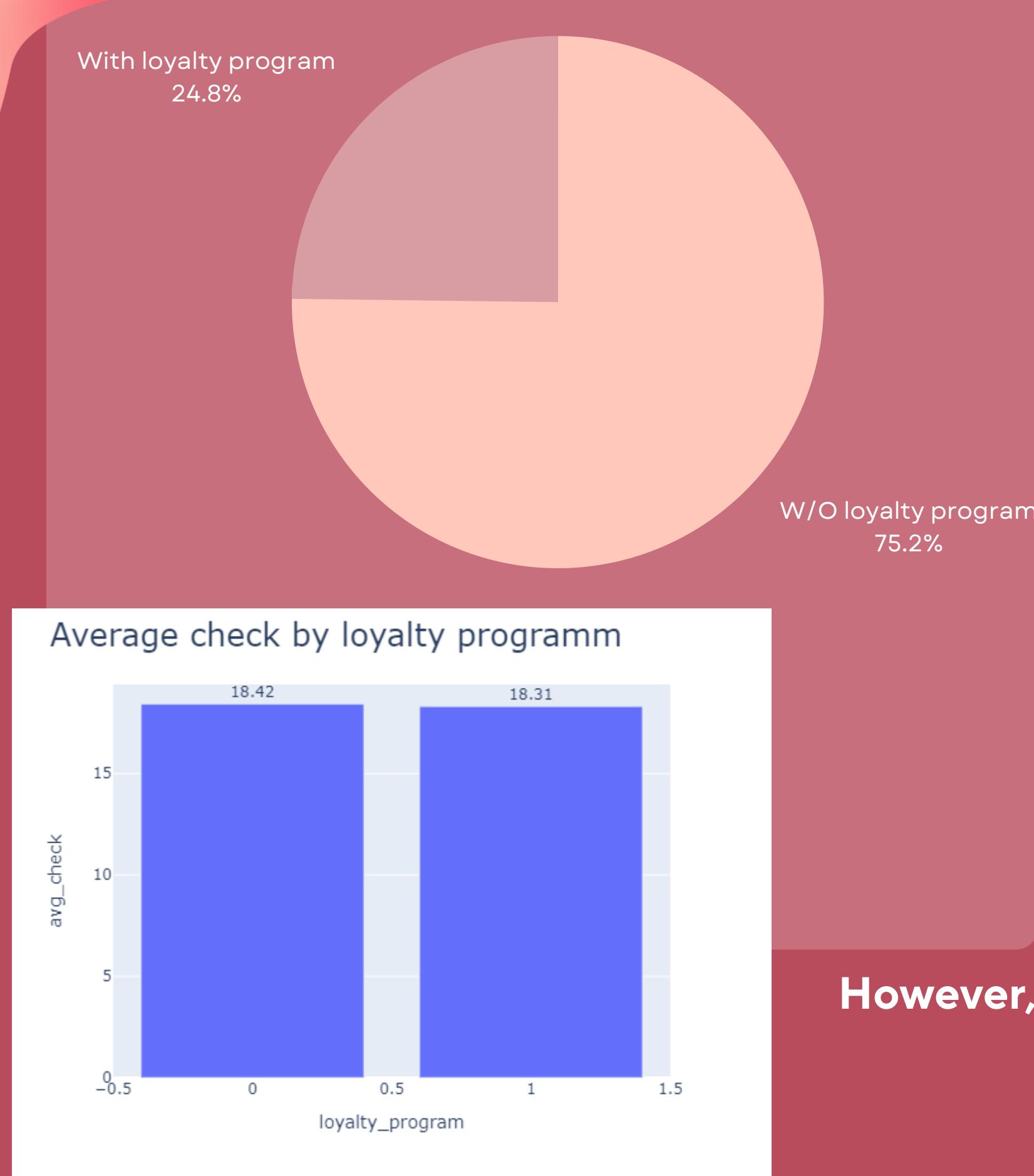
The insights of this analysis can be of great benefit to owners of the business/entrepreneurs, senior management, marketing team.

Based on the conclusions of the analysis we will be able to:

1. Point out strong and weak outlets for further investigation if there is a chance for improvement of their performance
2. Make sound and effective management decisions
3. Compare the profitability of outlets, taking into account their contingent and revenue by shop

# Metrics description

Metric	Details	Purpose
• General metrics	Total revenue - 1099831.6\$ Total sum of refunds is - 108485.5\$	It is recommended to monitor the sum of refunds, understand it's share and work on refunds policy
• Average check	Total average check - 18.39\$ Customers w/o loyalty pr. - 18.42\$ Customers with loyalty pr. - 18.31\$	Characterizes the sales, can be considered as the metric for improvement or comparison
• Daily revenue	Daily revenue median 13114.52\$	Basing on daily revenue we can make forecasts and predictions
• Cohort analysis	LTV and purchases per buyer	Gives an idea of customers actions and behaviour throughout period of time
• ABC analysis	* class A - 23% of products that bring us 80% of the revenue. * class B - 27% of products, they are the ones that bring us 15% of revenue * class C - 50% of products, but they bring us only 5% of the revenue.	Can assist in inventory forecasting, proper pricing, resources distribution among outlets

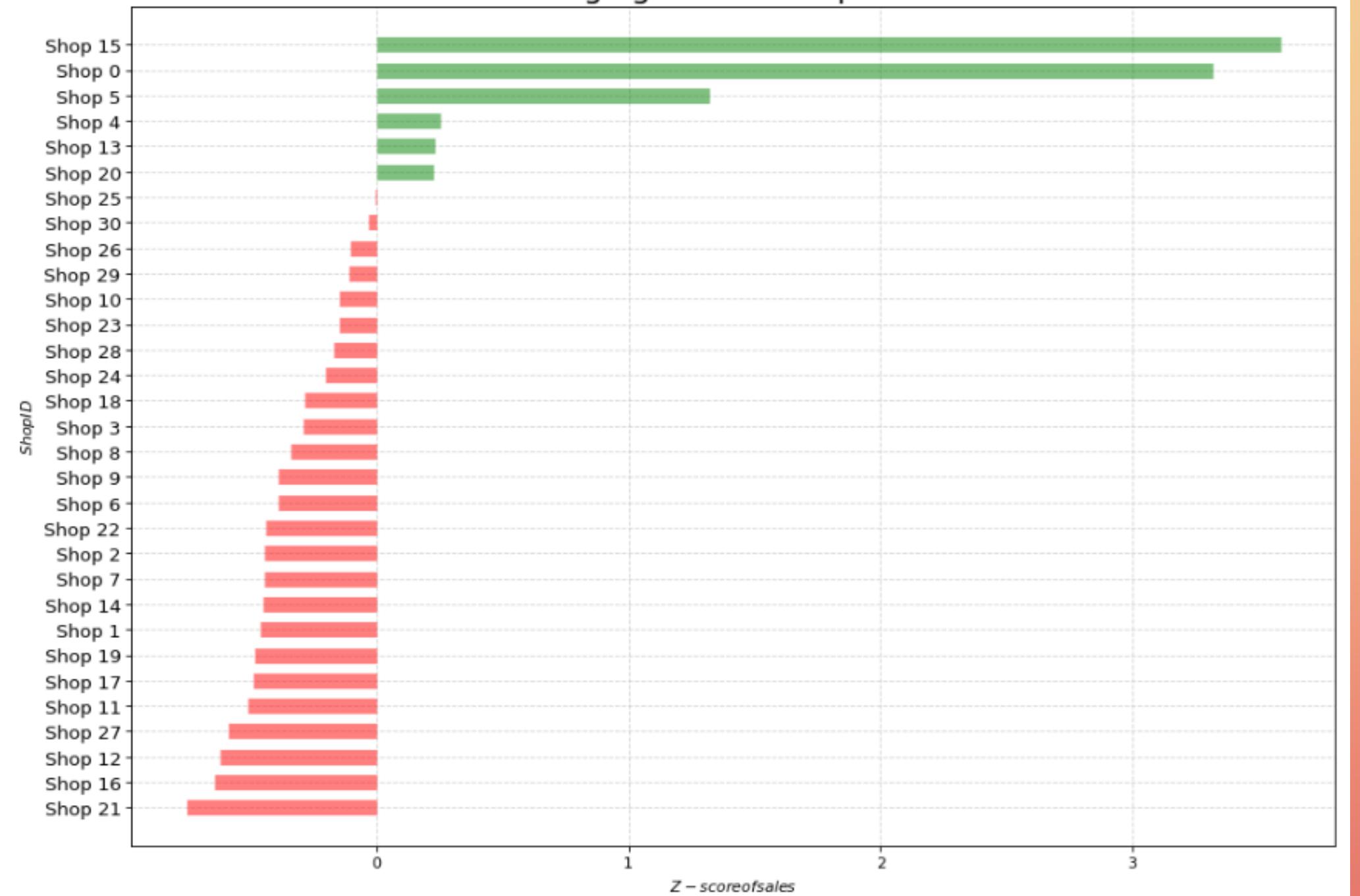


**Customers that participate in the loyalty program make only 25% (**269022.36\$**) of the revenue,**

**while revenue received from customers with loyalty programm is 75% share of total (**814909.24\$**)**

**However, average check for each group is almost the same**

### Diverging Bars of Shops Sales



## Total sales

Shop 15', 'Shop 0', 'Shop 5', 'Shop 4', 'Shop 13' and 'Shop 14' sales are above average, 'Shop 21' is the underdog

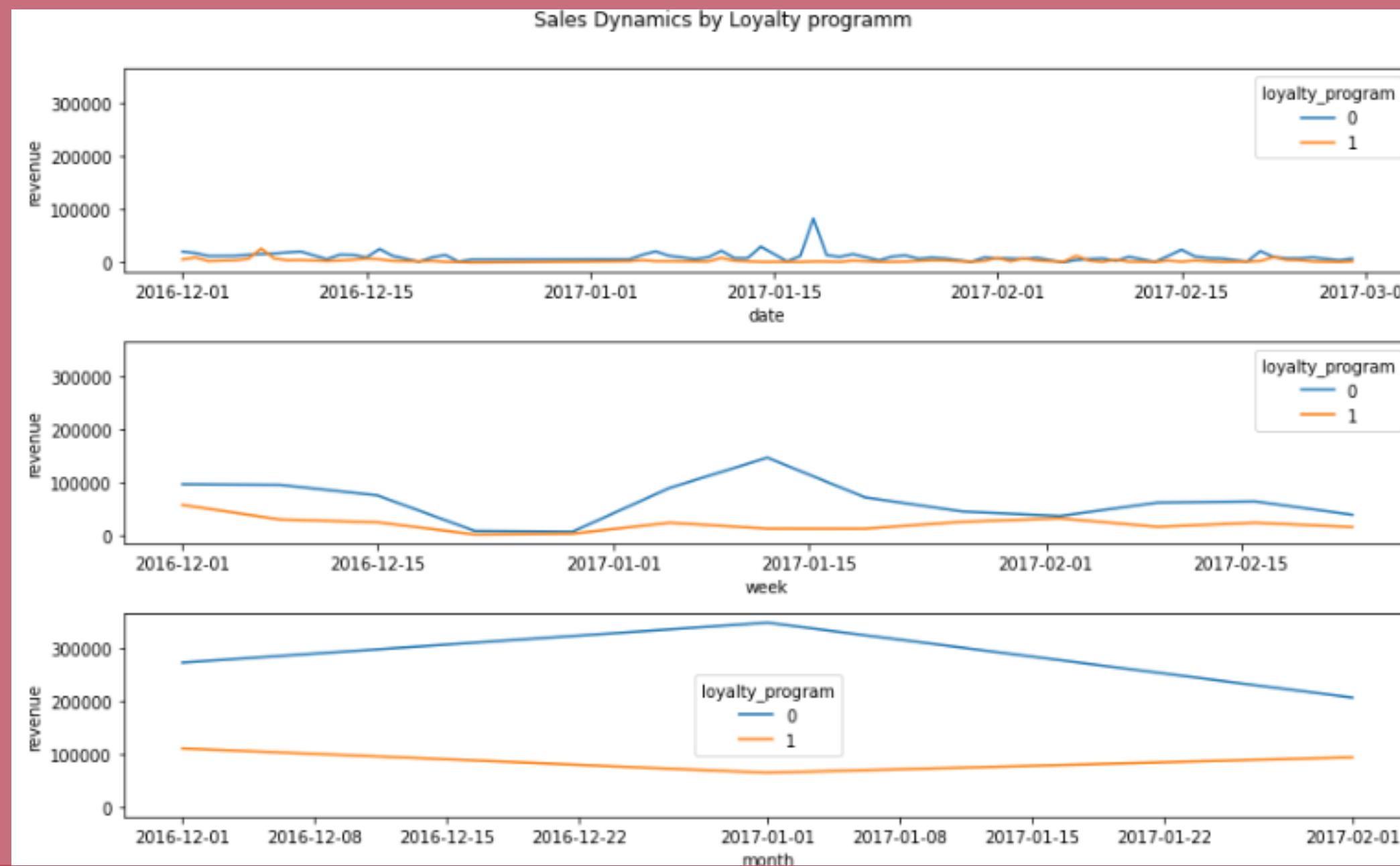
shop_id	revenue
Shop 15	112186.68
Shop 0	106375.42
Shop 5	63457.26
Shop 4	40451.41
Shop 13	39911.36

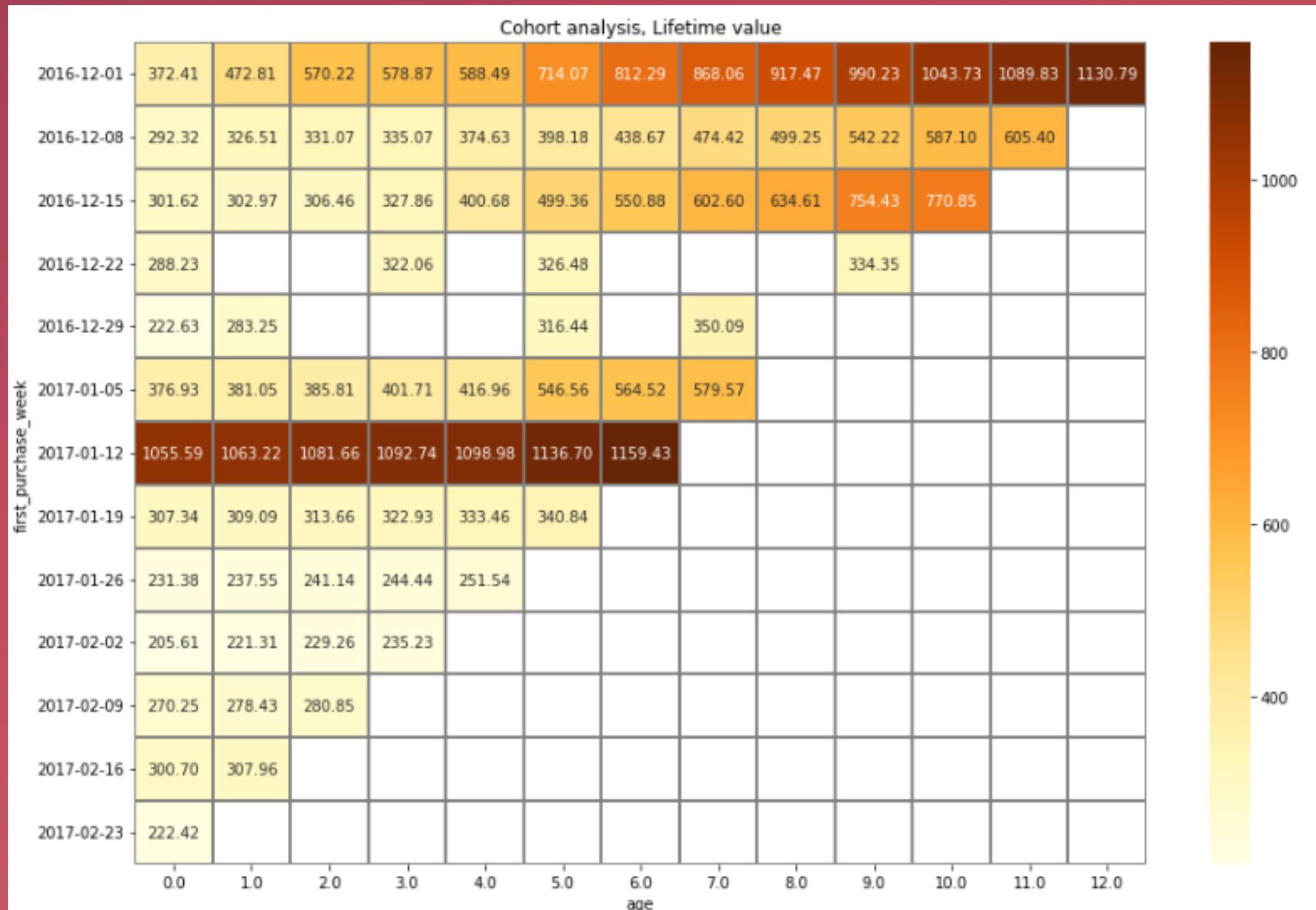
## Average check

The lowest median average check is at Shop 0 (6.49\$) and the highest is at Shop 3 (21.69\$).

# Revenues from customers w/o loyalty program decrease

The revenues are less and without any high peaks for customers with loyalty programm, however in perspective of monthly dynamics it seems that while revenues from customers without loyalty programm decrease, revenue from customers with loyalty program increases.





The first cohort by the 12-th week almost doubles it's LTV comparing to average. The highest LTV is at cohort of 12-01-2017 - we had our peak of sales on that week.

# The mean LTV for the given period is 534.83\$

**23%**

Class A products - they bring 80% of all revenue

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**27%**

Class B products, they are the ones that bring us 15% of revenue

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**50%**

Class C products, most numerous group , but they bring us only 5% of the revenue.

# Hypothesis

We had two assumptions:

- a. The average revenue from customers of loyalty program and without loyalty program are not different.
- b. The LTV of customers with loyalty program and without loyalty program are not different.

We conducted statistical test to check if the statements were true, but the results of the tests showed no significant differences in both cases.

In other words, with 95% confidence we can say that average checks and LTV in customers with and without loyalty programmes are not different.



# Recommendations:

- To monitor the sum and share of total revenue of refunds
- To check how missing values and 0 values occurred
- To collect more information about discounts for customer with loyalty program



Thank you!