

Employee Attrition



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CONSTRUCT:
TO STUDY / ANALYSE THE MAIN REASONS FOR EMPLOYEE
TURNOVER

**DEPENDENT
VARIABLE:**
EXTERNAL AND
INTERNAL FACTORS

**INDEPENDENT
VARIABLE:**
EMPLOYEE
TURNOVER

Objective of analysis of attrition data.

- **Finding the primary variable causing employee attrition.**
- **Which type of employee most frequently leaving the organization.**
- **Is there any specific pattern of employee attrition.**
- **What changes could be made in workplace to stop employee from leaving organization..**
- **Most Important thing finding probability of attrition of different segment of employee.**

Steps performed in process of getting final model

Data cleaning

- Employee IDs are missing in in_time and out_time data frames.
- Converting time difference (in seconds) into working hours of each employee on each date
- Removing such dates were weekend holidays or public holidays
- Derived metrics from timestamp information

Data Manipulation and Plotting.

- We cannot impute numeric values so converted them into categorical variable.
- Tried to figure out variables which seem to be reason of attrition intuitively but shows no patterns.

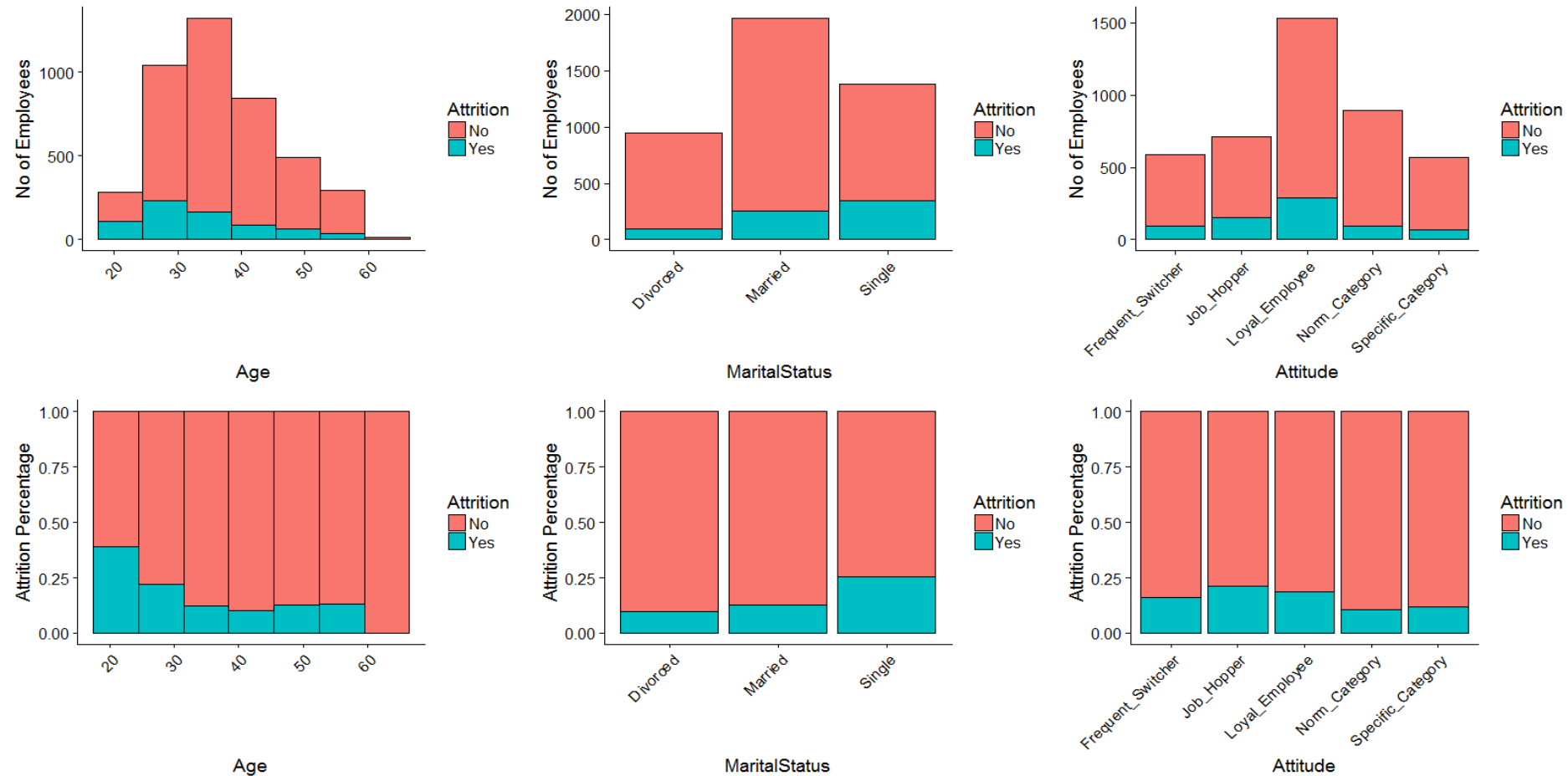
Model Building

- Created training and testing datasets.
- Removed least significant variable .
- Finally find most significant variable which caused employee attrition.

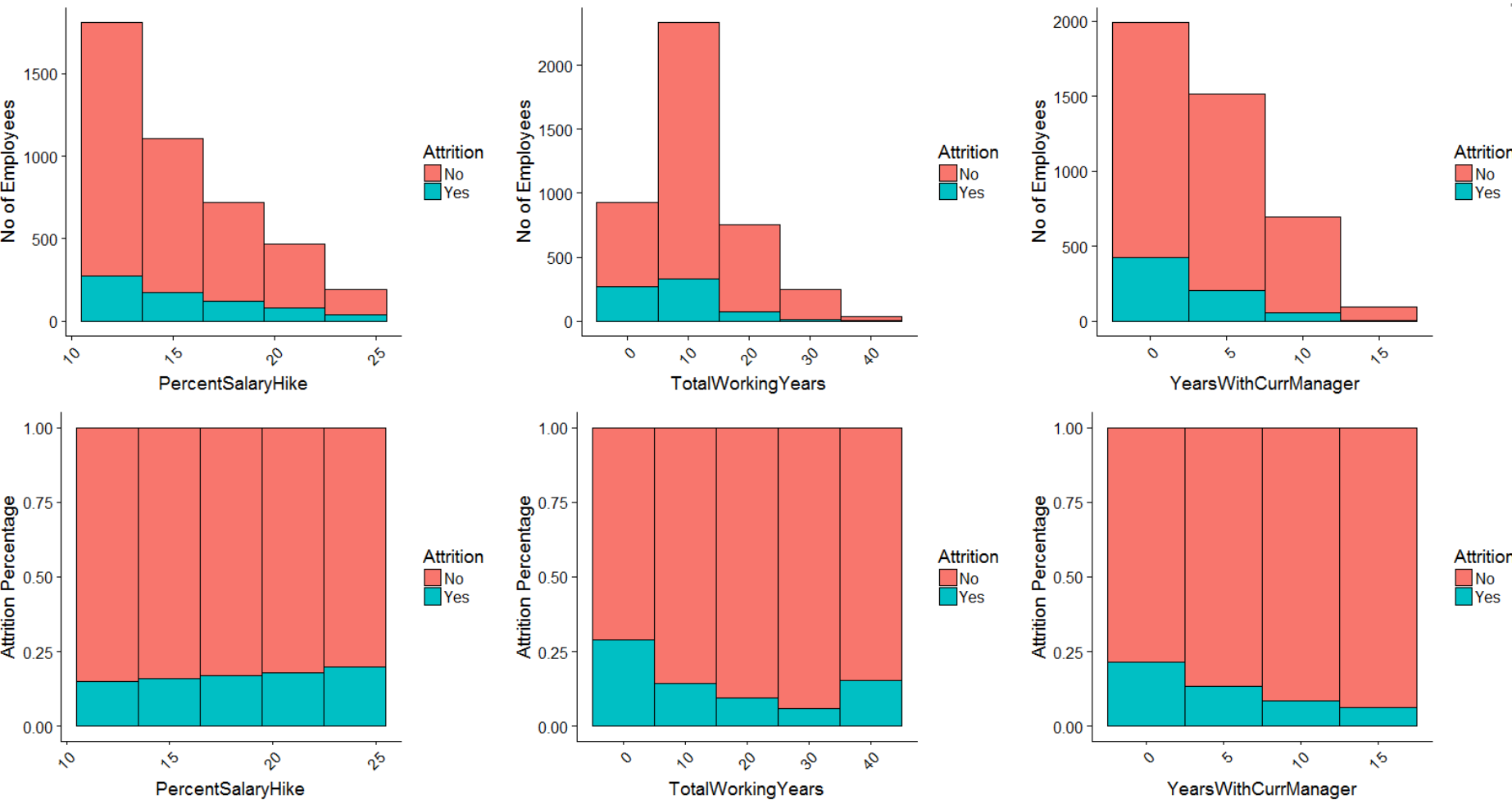
Comprehensive Analysis including all factors.

- We see that younger employees are most prone to attrition.
- Single employees have more chances of leaving job.
- Job Hoppers have max. attrition as expected, but surprisingly, 2nd highest are the loyal ones.

Last modified 12/24/2017



Poorer the ratings of Environment Satisfaction, Job Satisfaction and WorkLifeBalance more chances of employee's attrition



Attrition variable after applying logistics regression

These variable are positively affecting employee attrition:

Frequent business travel.

Employee have single marital status.

Year since last promotion.

Total working hours.

These variable are negatively affecting employee attrition.

Environment Satisfaction.

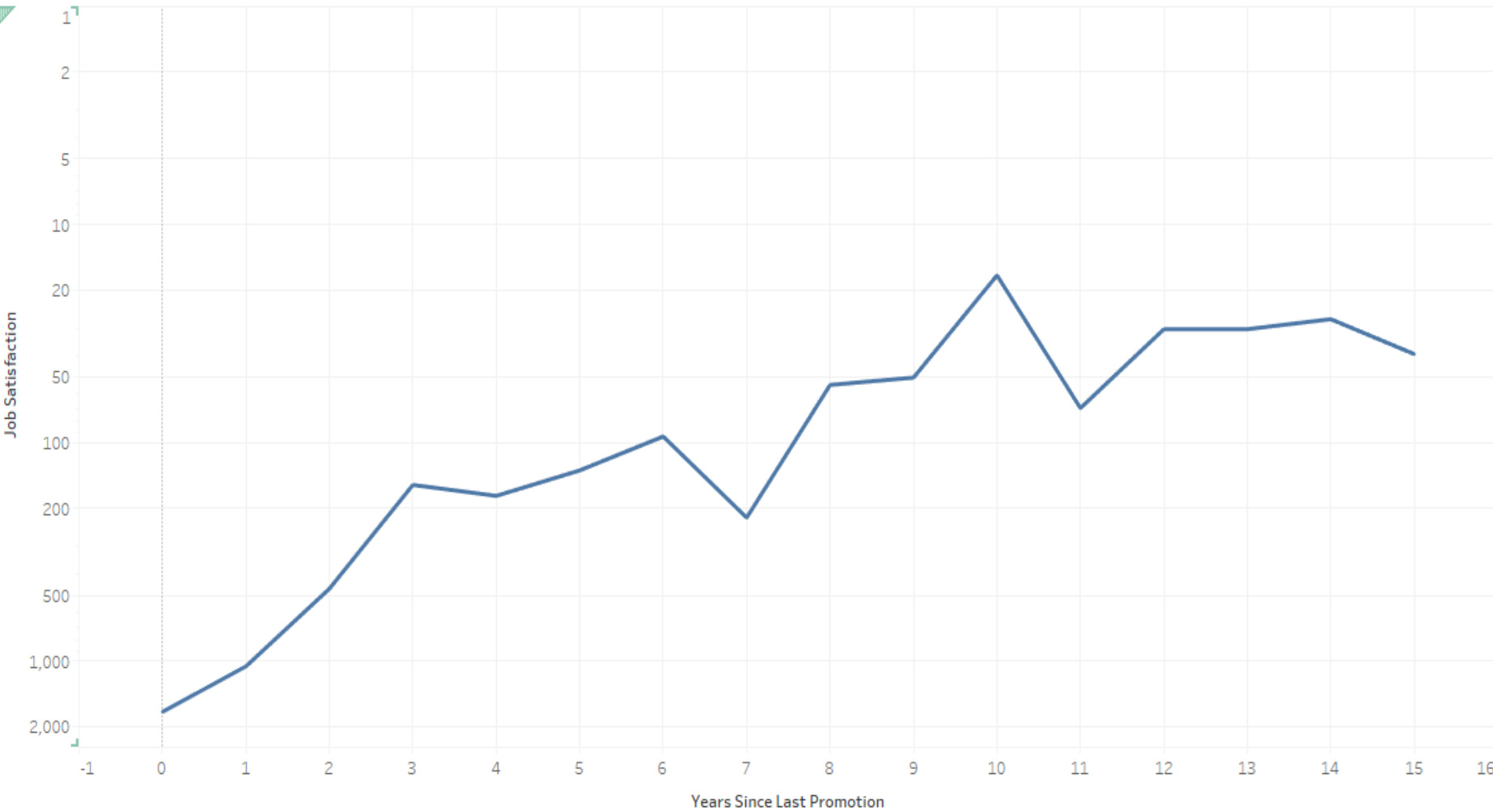
Job Satisfaction

WorkLifeBalance

Years Outside

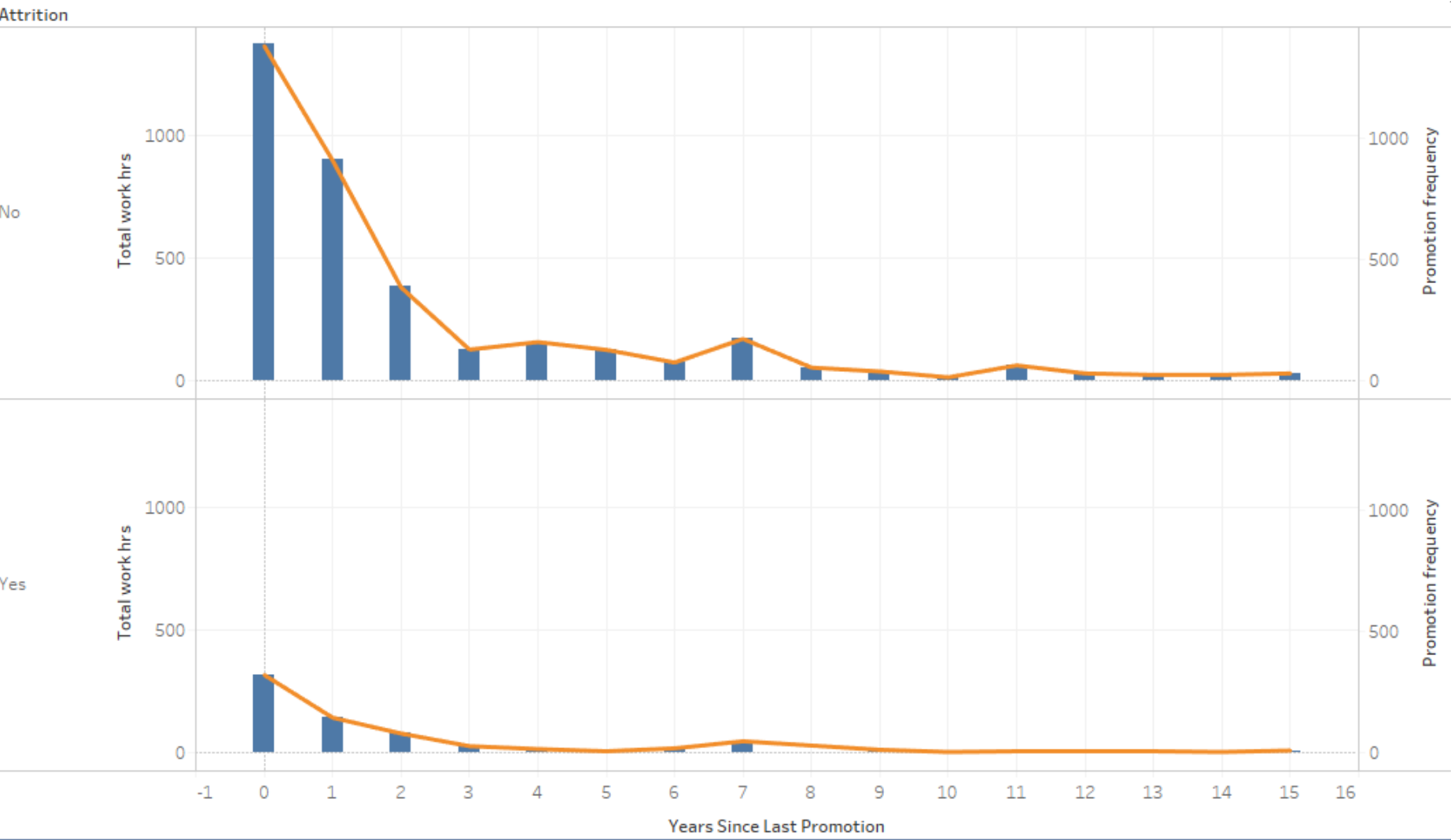
Job satisfaction is decreasing with passage of time.

Job satisfaction vs years since last promotion



Total work hrs vs Year since last promotion vs Attrition rate

Graph clearly showing positive impact of working hours as employee spend more time in organization and working hours decreases attrition rates goes down.

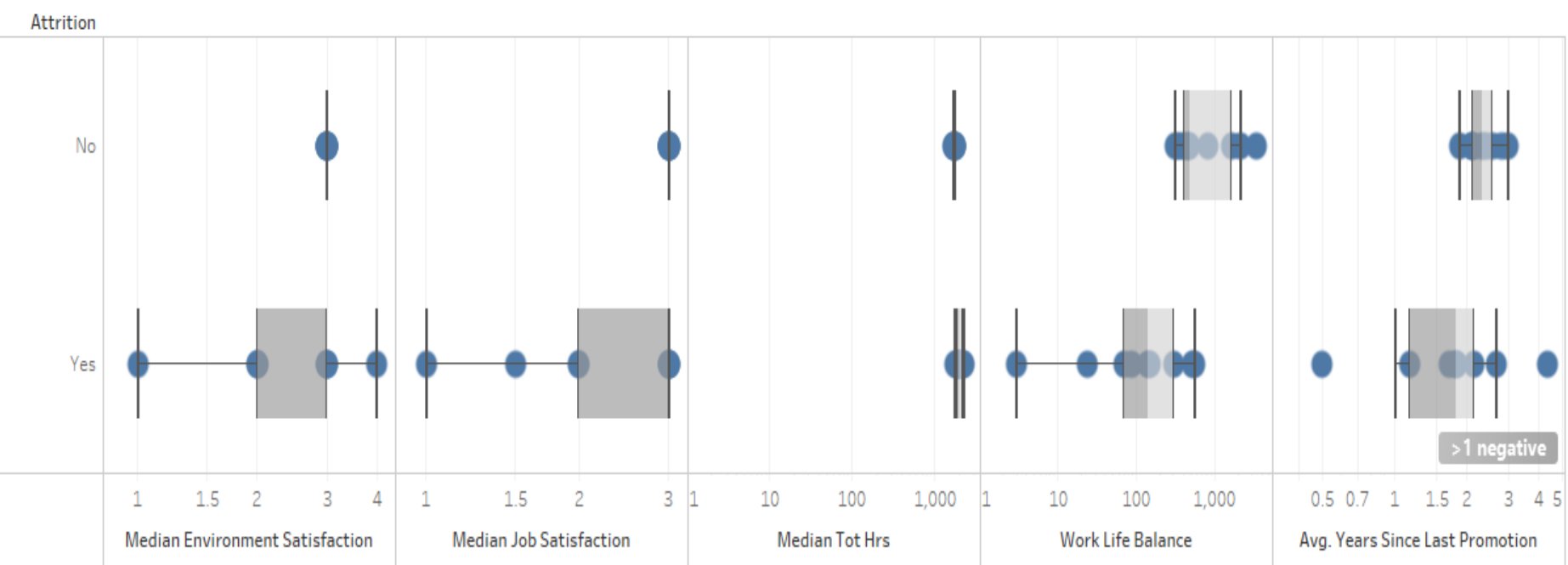


Reasons for attrition

- 1. Environment satisfaction.
- 2. Job satisfaction.
- 3. Total working hrs.
- 4. Work life balance.
- 5. Promotion not happened in due time.

Last Modified 12/2

Finally graph comparing attrition rate with major significant variables



Findings & Conclusions.

Therefore, on the basis of observation it is recommended to provide employee friendly environment, better internal growth opportunities and regular promotions.
Work life balance concept should also be followed to create good working environment.

Therefore above are potential factor which will help to reduce turnover and increase employee satisfaction and commitment. In turn, an effective reduction in turnover has clear economic and organization benefits which leads to an productive and profitable organization.