

Wealth Check Up – User Guide

Revealing the Financial Health using RShiny

Group 3

Application User Guide

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1. Businesses in Town

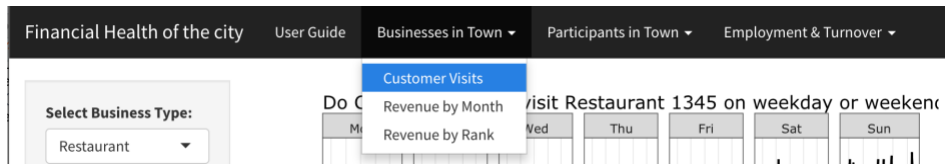


Figure 1 Landing page

This tab helps us understand the businesses in town

Customer Visits

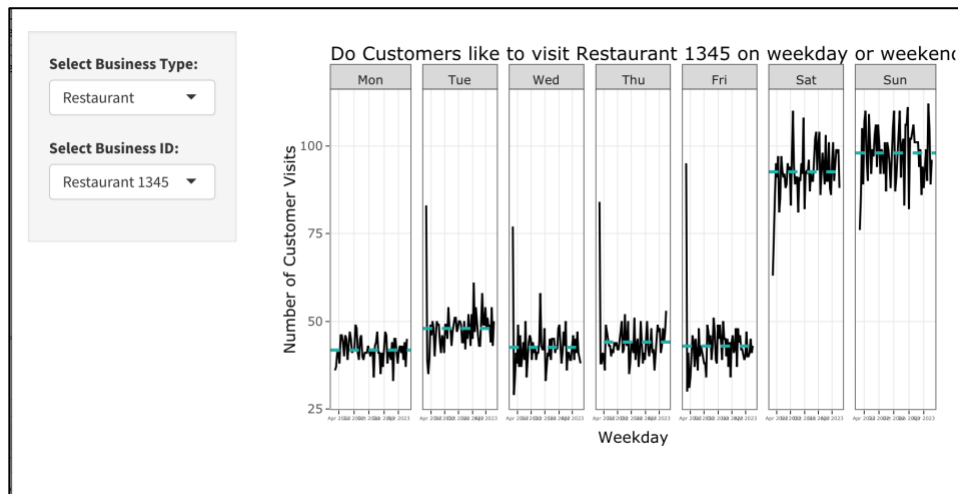


Figure 2 Customer visits

By selecting the Business Type and the ID, we can see how the customer visits have been during weekdays and weekends. This helps us understand the footfall during the days of the week

1. Revenue by Month



Figure 3 Revenue by Month

From this graph, we can understand the revenue earned by each of the business outlets over the period. This kind of graphs helps us answer the questions how the business has been and what are crests/trough

2. Revenue by Rank

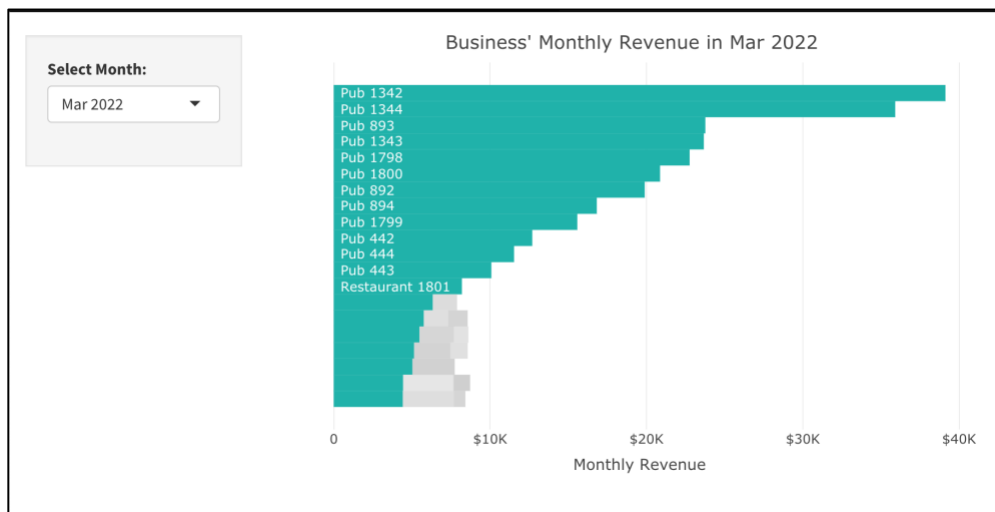


Figure 4 Revenue by Rank

By selecting the month from the dropdown, the packedbar helps us understand the how the businesses are ranked. This view helps us to understand which businesses have been flourishing and the ones which requires special attention.

2. Participants in Town

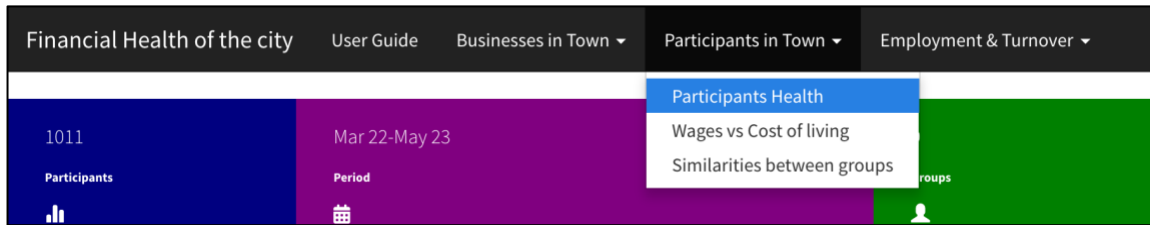


Figure 5 Landing Page

It is divided into 3 sections and talks about the Participants in Town

1. Participants Health

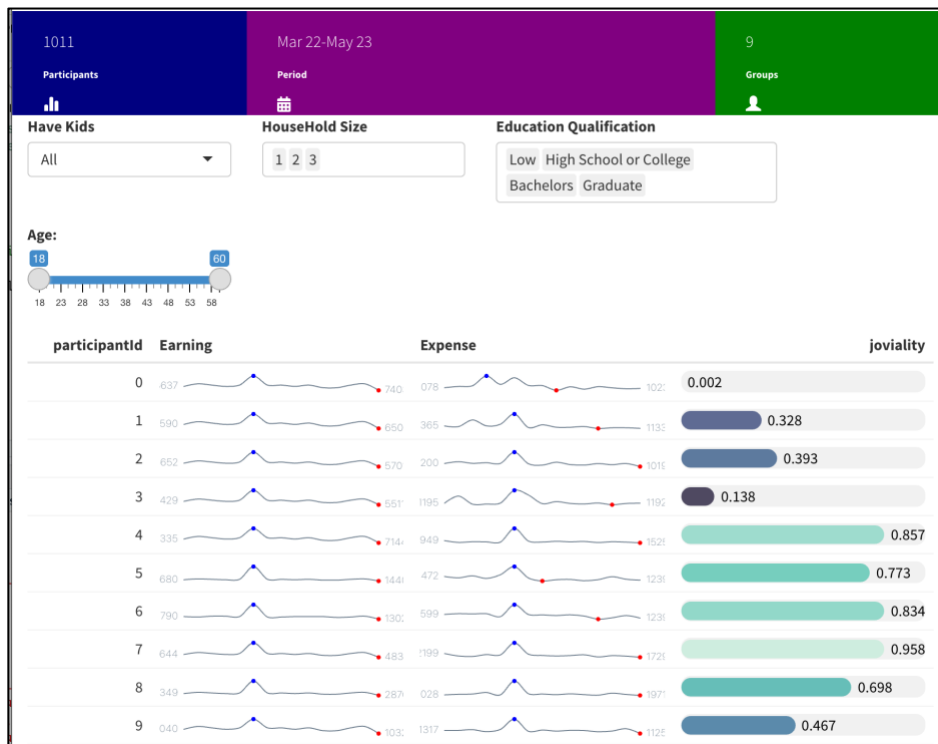


Figure 6 Participants Health

With the help of this dashboard, you can understand the participants' financial status. You can also play around with the attributes and filter users based on cases such as Have Kids, Household Size, Education Qualifications and Age.

Based on the filters, we can filter out the participants get the understanding of the data

2. Wages vs Cost of Living

To get an overall picture of the earnings of the participants, Lorenz curve is used.

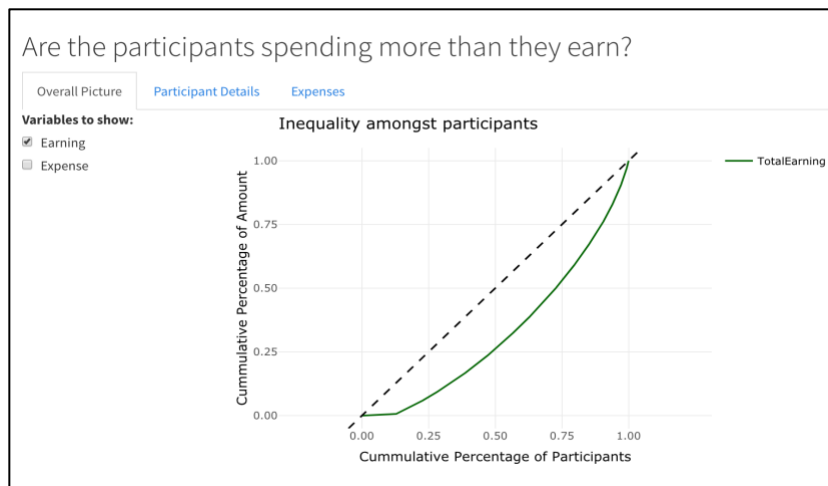


Figure 7 Wage vs Cost of Living: Overall Picture

Here you can select the variables to understand the Earnings and Expenditure among the cumulative percentage of participants.

To further drill down to understand the proportion of income spent on the categories, you can navigate to the next one.



Figure 8 Wage vs Cost of Living: Participant details

You can select the month and you can see the proportion of income spent on the categories such as Education, Food, Shelter and Recreation.

The app offers you to choose multiple months from the dropdown to understand the seasonal trends such as during vacations, off seasons, summers, winters.

To understand the expense incurred weekly across the period, we can select the category and the

week and a heatmap would be created.

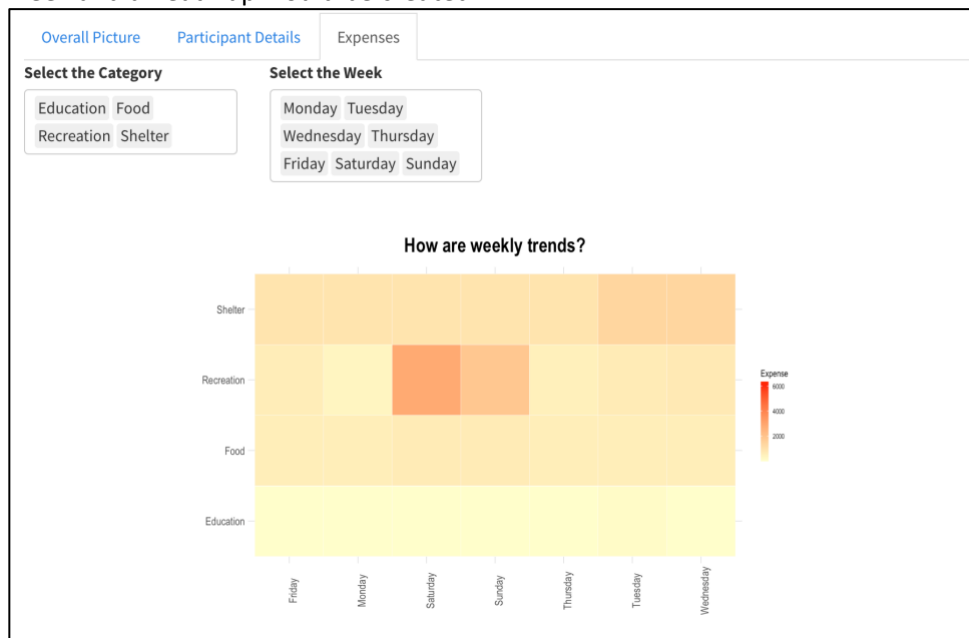


Figure 9 Wage vs Cost of Living Expenses

This graph helps us go through the weekdays and weekend trends

3. Similarity between groups

To go through similarity between groups, you can go through the dashboard to which is split on interest groups. Here you can sort the participants and understand the similarities.

Can we find some similarity?

Interest Groups Cluster Analysis

participantId	interestGroup	interestGroup_colors	TotalEarning	TotalExpense	joviality
0	H	#011936	134,904.7	18,226.8	0.002
1	B	#AF52D5	118,421.0	21,139.5	0.328
2	A	#F5A24B	104,429.0	18,363.7	0.393
3	I	#012957	100,943.9	19,327.1	0.138
4	H	#011936	130,266.9	28,323.0	0.857
4	H	#011936	130,266.9	28,323.0	0.857
4	H	#011936	130,266.9	28,323.0	0.857
5	D	#C0DFA1	28,088.9	20,988.2	0.773
6	I	#012957	28,369.7	23,271.6	0.834
7	A	#F5A24B	89,270.4	30,815.8	0.958

1-10 of 1031 rows

Previous 1 2 3 4 5 ... 104 Next

Figure 10 Similarity between groups: Interest Groups

Scrolling below, we have a horizon map which tells the spending pattern of the groups

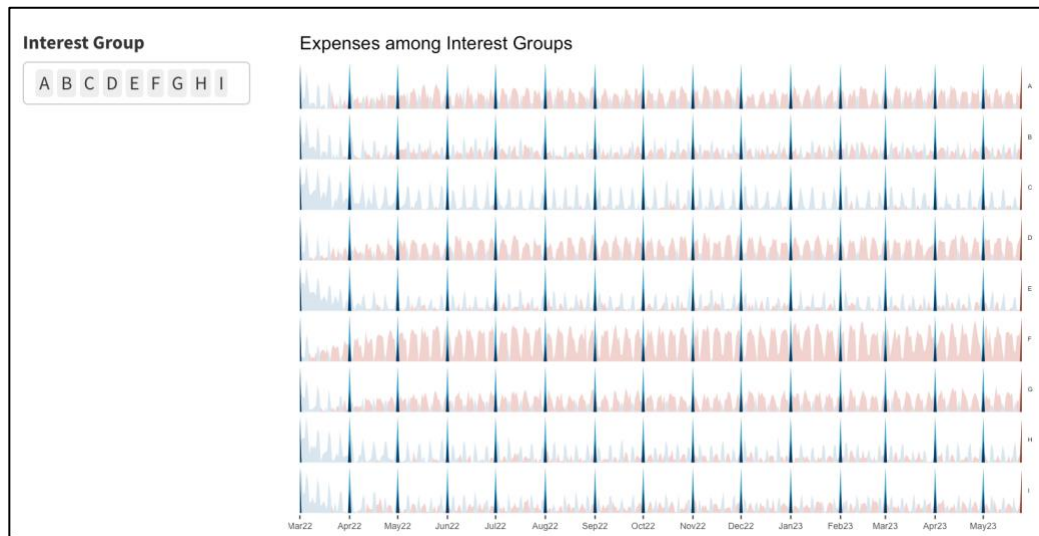


Figure 11 Similarity between groups: Expenses among Interest Groups

The origin is set at midpoint. Red lines depict the expense below the origin and blue line depicts above. The sharp curves at the start of each month depict the rent paid for their shelter.

Navigate to the 'Cluster Analysis' tab to cluster the participants based on the expenditures in each of the categories

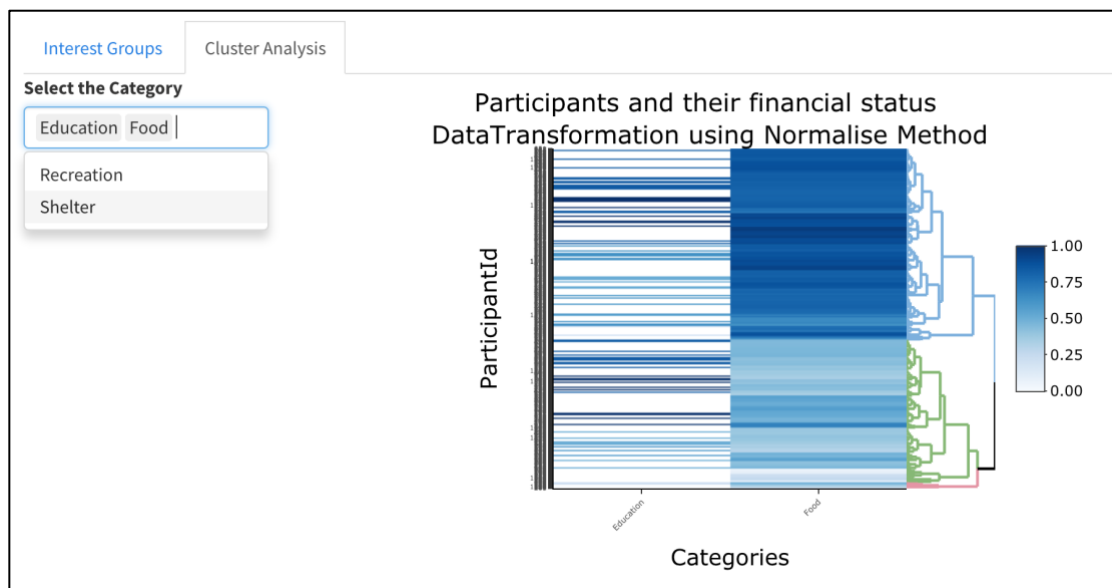


Figure 12 Similarity between groups: Cluster Analysis

By setting k=5, we can create 5 clusters and see how they are being clustered. You can also hover across each of them to see the participants and their value

3. Employment & Turnover

This tab has 3 subsets and it describes the health of the various employers within the city limits, employment pattern among the residents of the city. It also shows the turnover rate, the employers which have high or low turnover.

1. Turnover Analysis

Navigate to Employment & Turnover → Turnover Analysis

We have 3 sub panels here Job Route, Change of Wage and Change of Workplaces

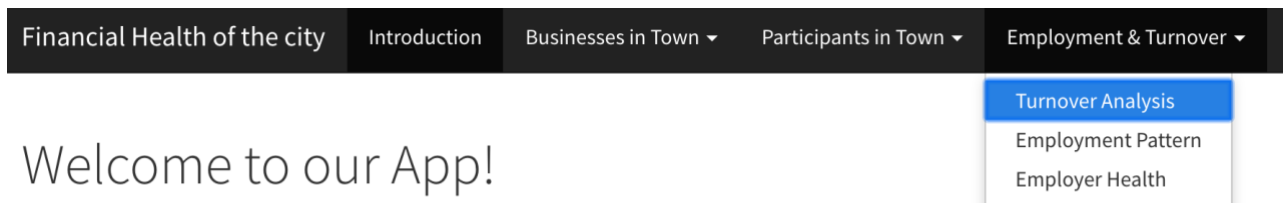


Figure 13 Employment & Turnover: Landing page

a) Job Route

This tab shows the route of employee from home to work before and after switching the job.

1. Select from the dropdown list the participant Id.

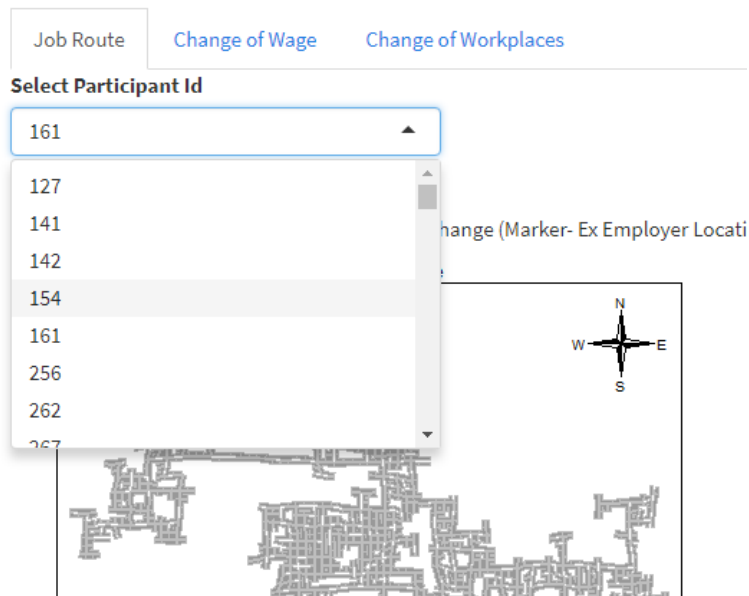


Figure 14 Turnover Analysis: Job Change

2. Once Participant Id is selected, work commute route before switching and after switching appears side by side.

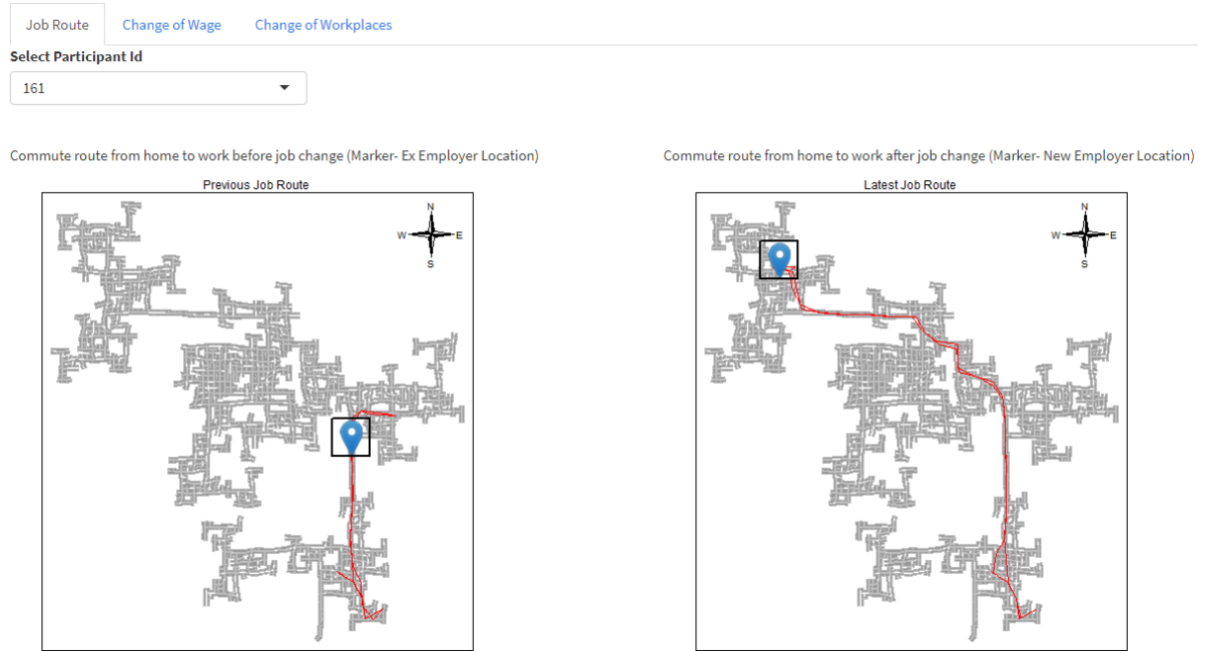


Figure 15 Turnover Analysis: Change of Wage

b) Change of Wage

This tab shows based on the grouping how the wages change before and after switching job.

1. Select the category basis of which you need to see the wage change.
2. For eg. If Interest Group is selected, it shows the pay difference amount. Blue indicates the pay increase and red indicates the pay decrease amount

What is the impact of job switch among participants ?



Figure 16 Turnover Analysis: Change of Wage

c) Change of Workplaces

First bar chart shows the no. of participants who have worked in more than 2 workplaces. Click on each bar to see the no. of participants whose pay has been increased or decreased. It is the drill down version of first chart.

What is the impact of job switch among participants ?

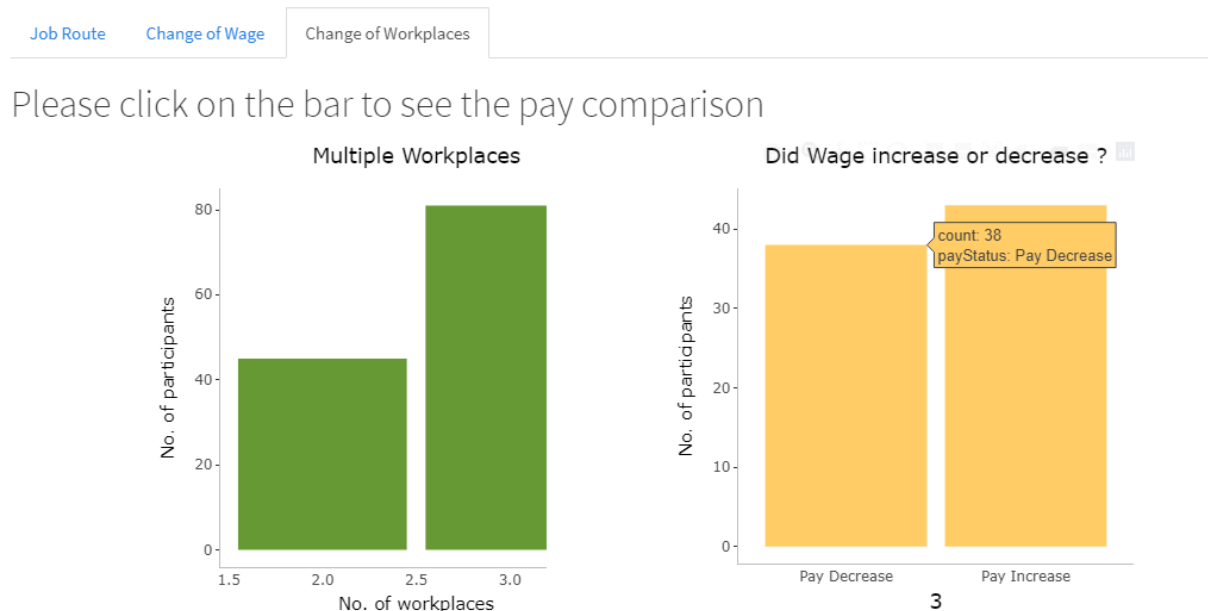


Figure 17 Turnover Analysis: Change of workplace

2. Employment Pattern

Navigate to Employment & Turnover → Employment Pattern

a) Education vs Pay

This tab shows how participants with each educational qualification receive hourly rate. Click on the no. of checkboxes for which you want to see the hourly rate

What is the pattern found in the employment ?

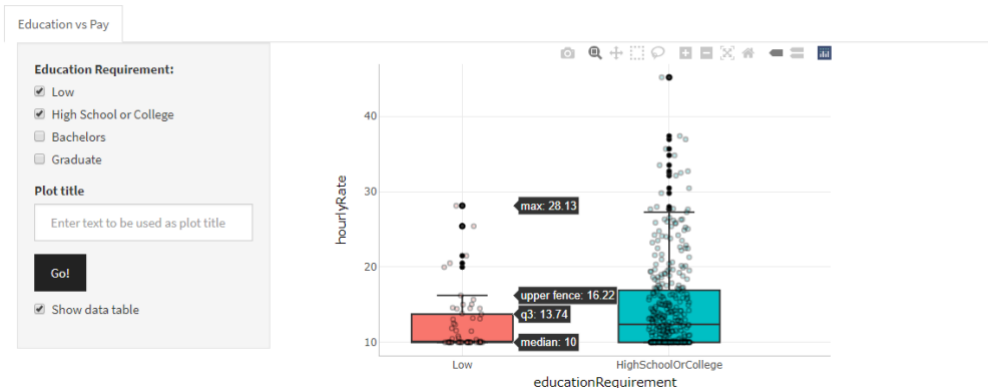


Figure 18 Employment pattern: Education Pay

What is the pattern found in the employment ?

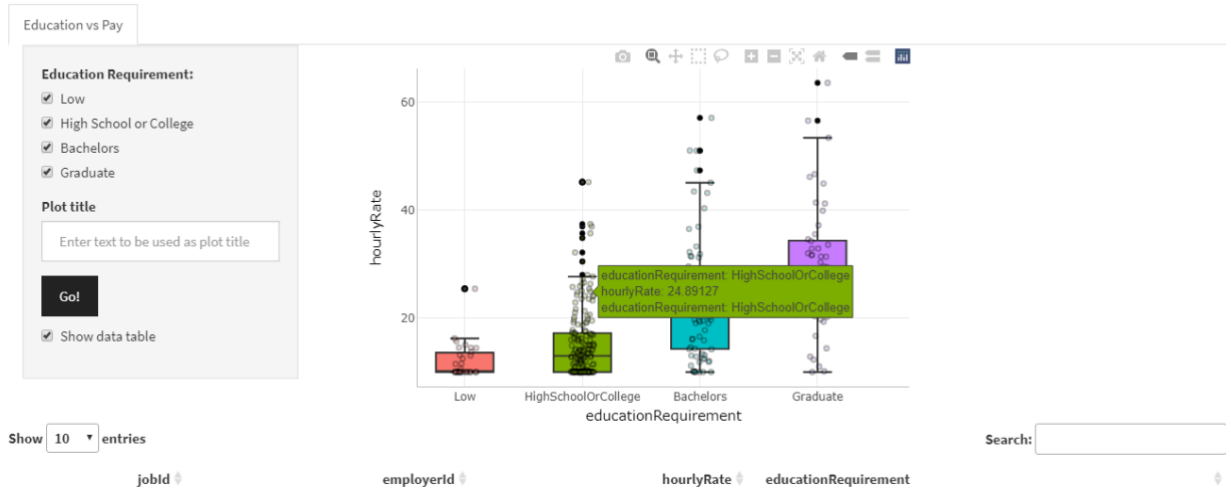


Figure 19 Education vs Pay

3. Employer Health

Navigate to Employment & Turnover → Turnover Analysis

a) Wage By Employers

This tab shows how many jobs does each employer provide and the wage provided for each employee.

Choose the desired colour pattern from the drop down list

The size of the block represents the total wage and colour of the block represents the average age.

Which employers are financially healthy ?

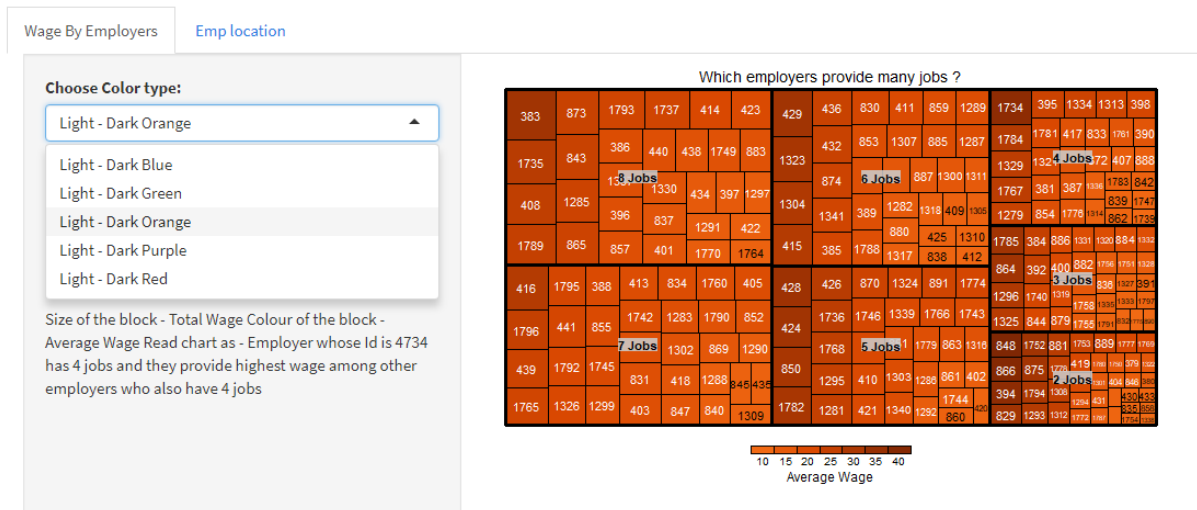


Figure 20 Wage by Employers

b) Employer Location

This tab shows that how many employees have left the firm and how many employees have joined the firm.

Choose the option which you want to see

Employees left the firm → Selecting this option shows no. of employees left that company and size of the bubble is proportional to no. of employees.

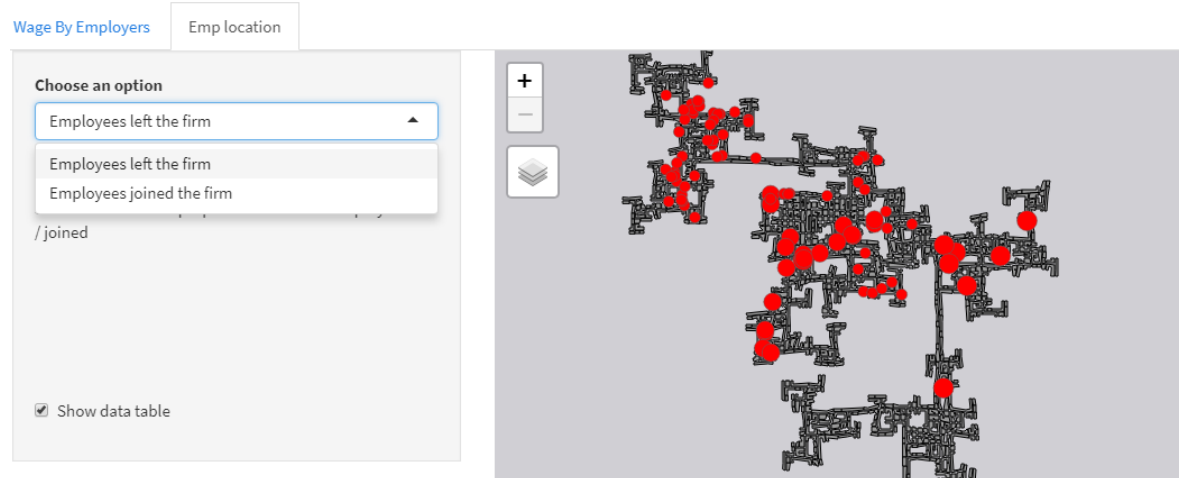


Figure 21 Employer location

Employees joined the firm → Selecting this option shows no. of employees joined that company and size of the bubble is proportional to no. of employees.



Figure 22 Employer Location

