Wealth Check Up – User Guide
Revealing the Financial Health using RShiny

Group 3

Application User Guide

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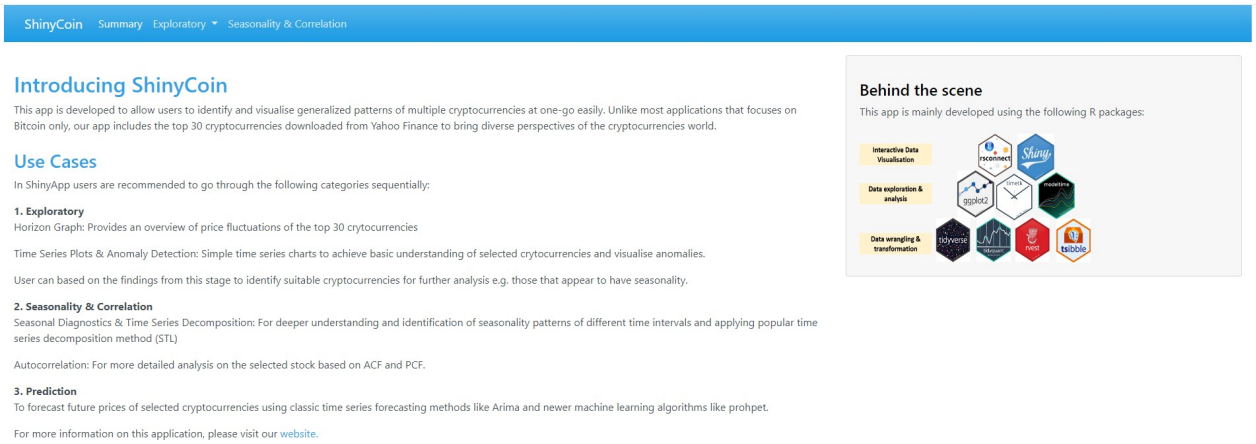
1. Introduction Page

A short description and uses cases of the application are presented on this page.

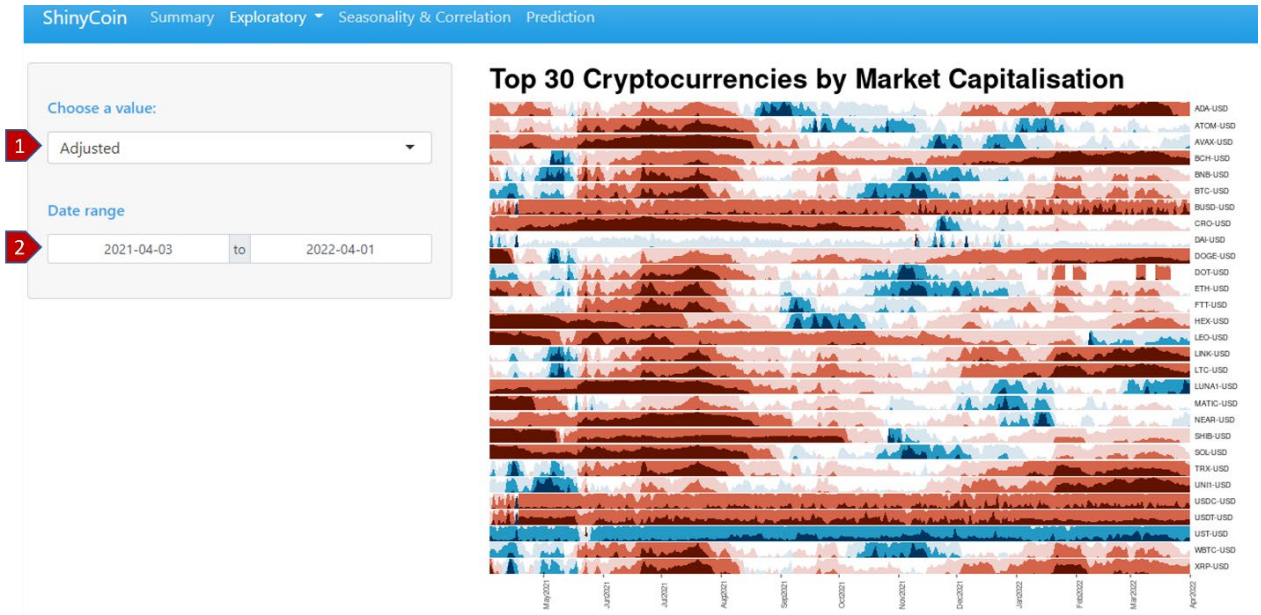


2. Businesses in Town

Three types of Visualisations can be performed. Horizon Graph, Simple Time Series plot and Anomaly Diagnostics.

a) Horizon Graph

Horizon Graph depict the fluctuation of historical cryto currencies' prices in percentile. Blue color represents the positive value, red for negative. The darker the shade of color, the greater the fluctuation. The Horizon graph generated can display all top 30 Crypto Currencies' price of time-series values on a single page that supports comparisons among them.



[1] Choose the desired value of observation (adjusted, low, high, open, close, volume)
[2] Select the desired period of observation. Default value is one year from now.

b) Anomaly Diagnostics

Allow users to view anomalies of price changes upon selection of desired date range. The anomalies would be marked with red color.

Note: Simple Time Series plot and Anomaly Diagnostics share the same set of UI interface.

[1] Select the desired cryptocurrency, allow choosing up to four different coins for comparison.

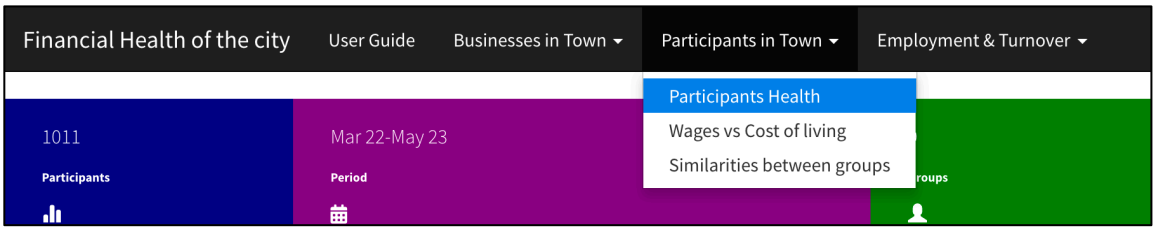
[2] Choose the desired value of observation (adjusted, low, high, open, close, volume)

[3] Choose the desired date range.

c) Simple Time Series

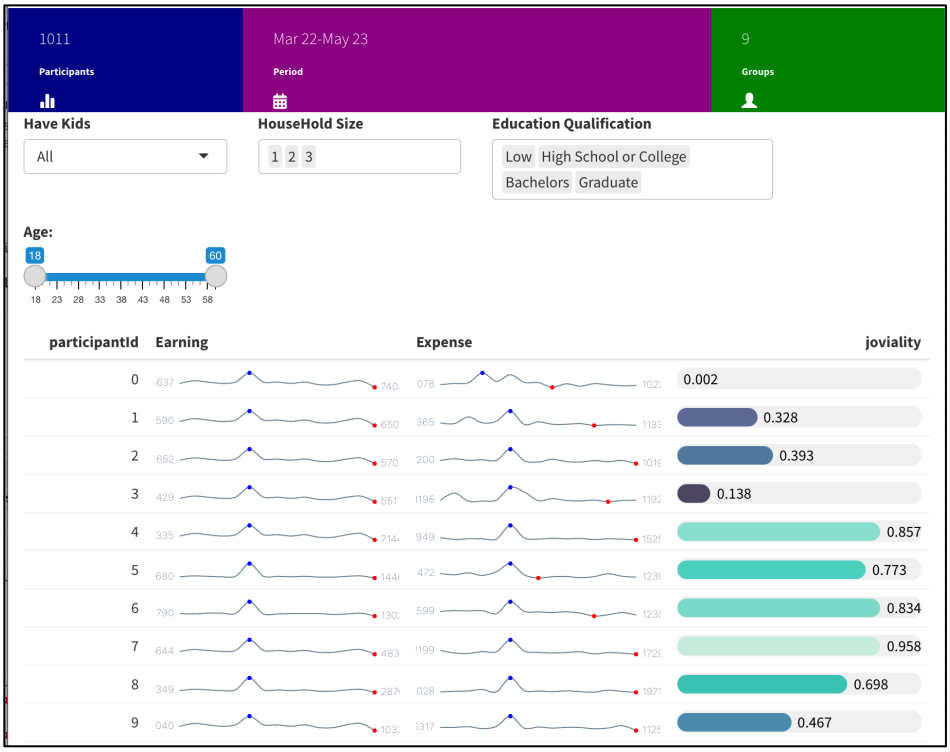
Simple Time Series Plot is a line plot showing the evolution of the time series over time. This app allows users to choose up to four coins for comparison and generate the results across the panel on each individual facets.

3. Participants in Town



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

1) Participants Health

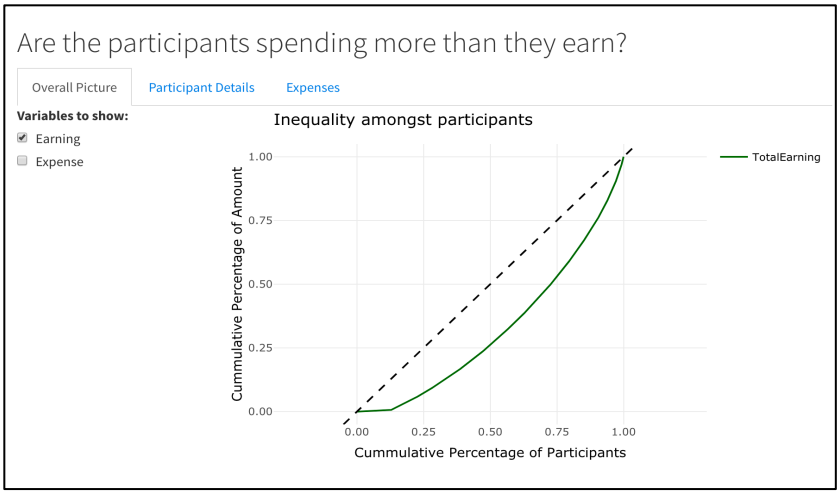


With the help of this dashboard, you can understand the participants' financial status. You can also play around with the attributes and filter users based on cases such as Have Kids, Household Size, Education Qualifications and Age.

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.



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

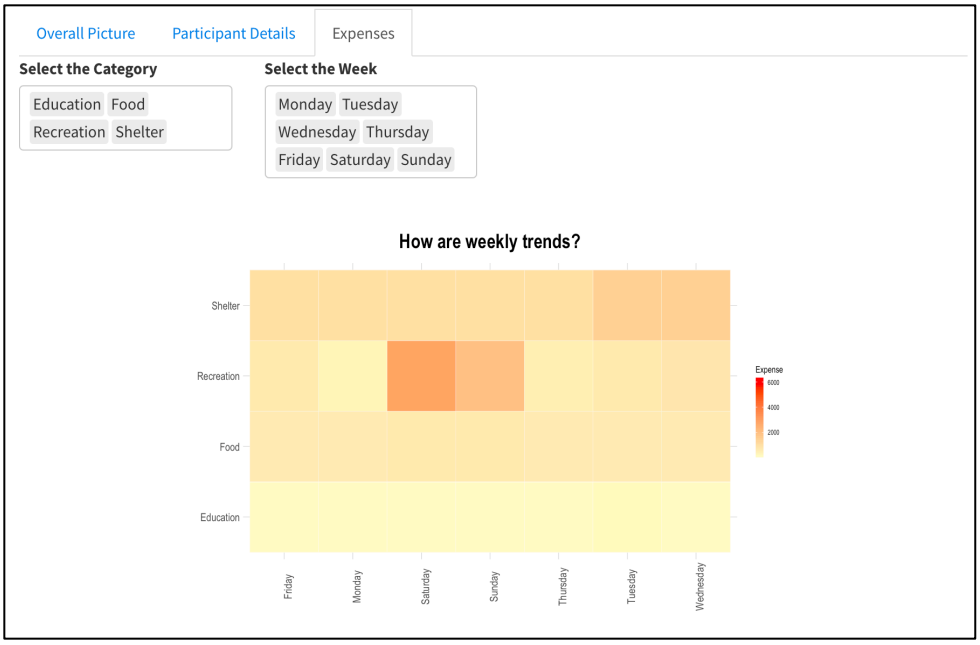
To further drill down to understand the proportion of income spent on the categories, you can navigate to the next one.

participantId	↓ Education (%)	Food (%)	Shelter (%)	Recreation (%)
255	4.93	22.79	34.32	25.52
294	4.53	22.25	34.36	15.54
273	4.20	13.97	33.12	21.74
311	4.16	12.23	31.52	19.07
573	4.10	20.37	34.83	17.44
813	3.89	12.82	34.34	21.80
815	3.89	18.37	34.28	15.87

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.

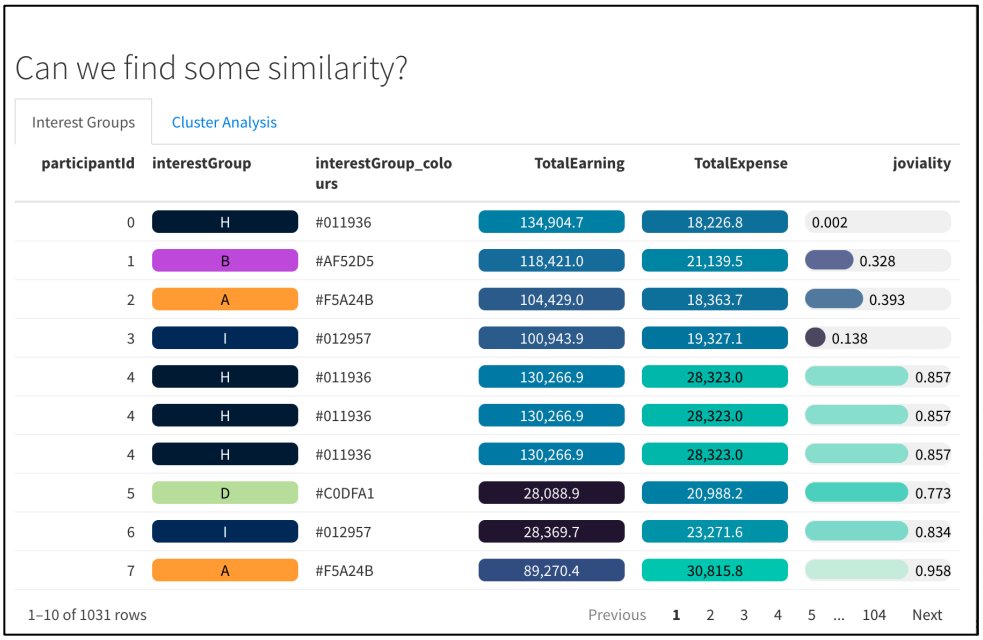
To understand the expense incurred weekly across the period, we can select the category and the week and a heatmap would be created.



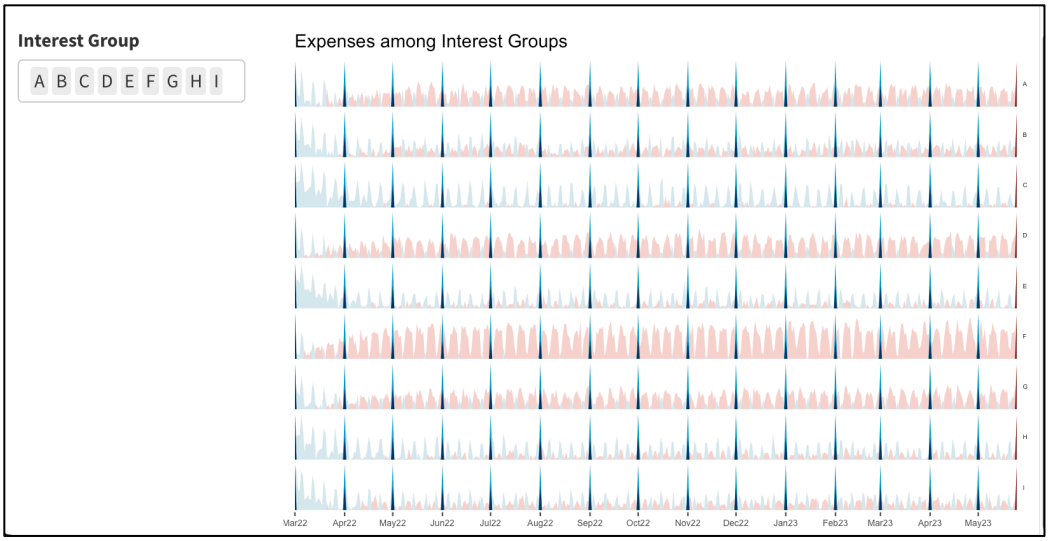
This graph helps us go through the weekdays and weekend trends

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.

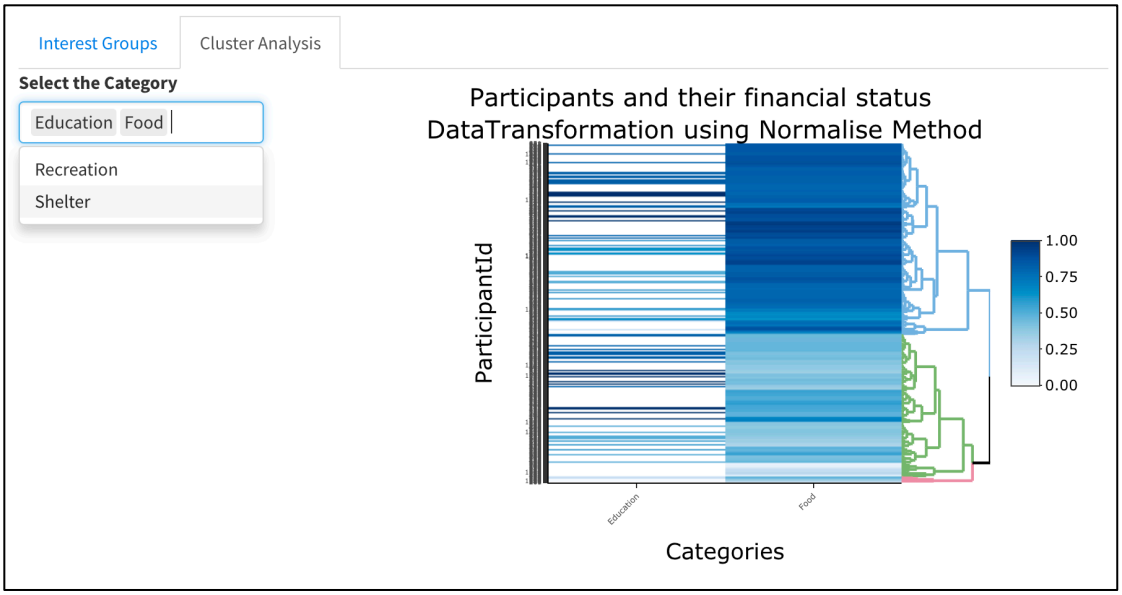


Scrolling below, we have a horizon map which tells the spending pattern of the groups



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



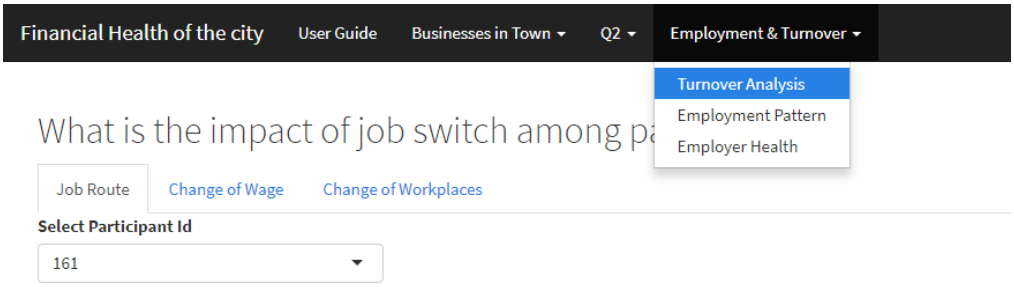
By setting k=5, we can create 5 clusters and see how they are being clustered. You can also hover across each of them to see the participants and their value

4. 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

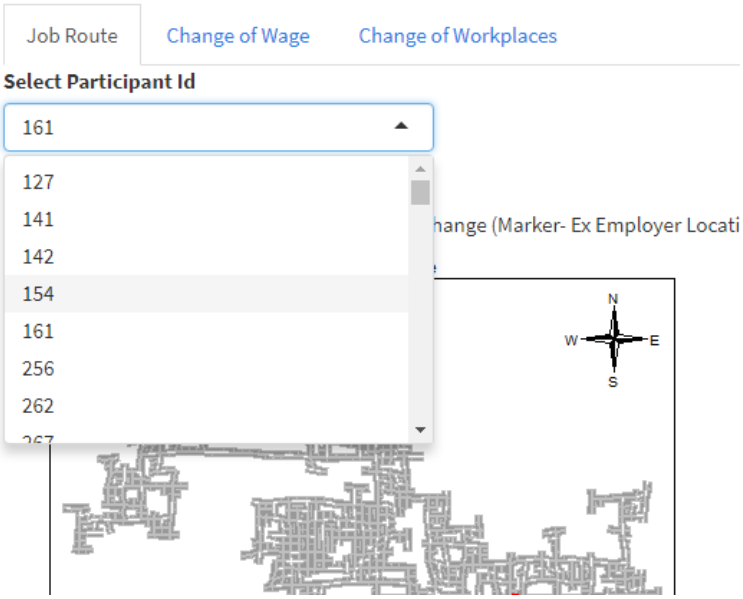
Navigate to Employment & Turnover → Turnover Analysis
We have 3 sub panels here Job Route, Change of Wage and Change of Workplaces



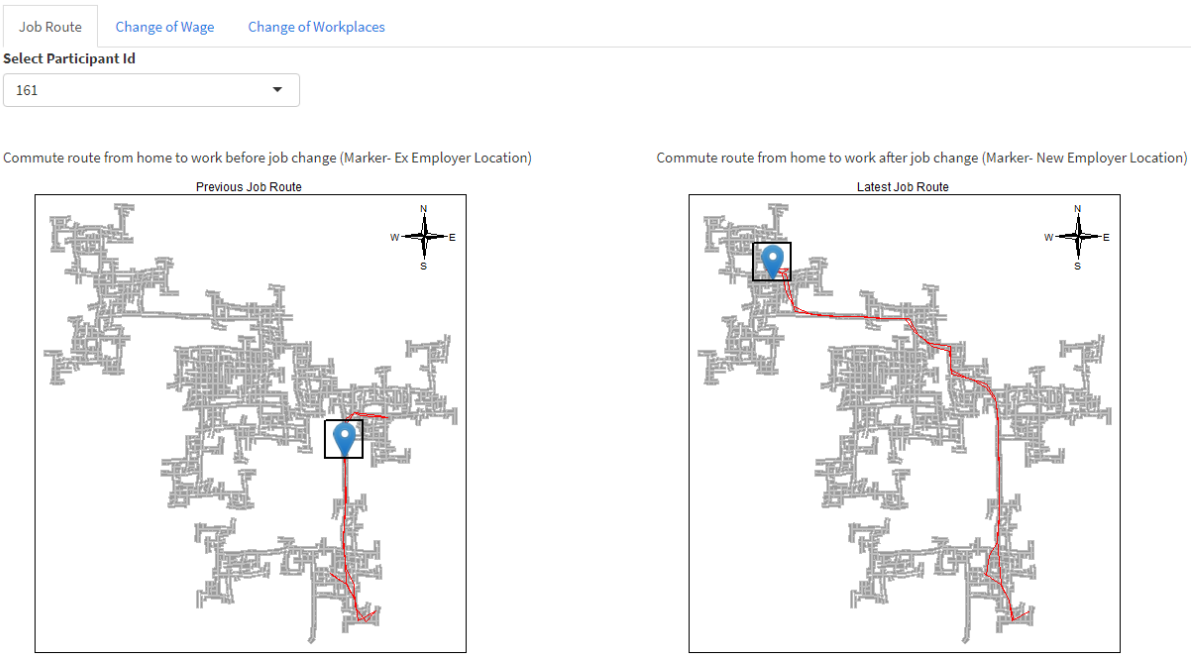
a) Job Route

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.



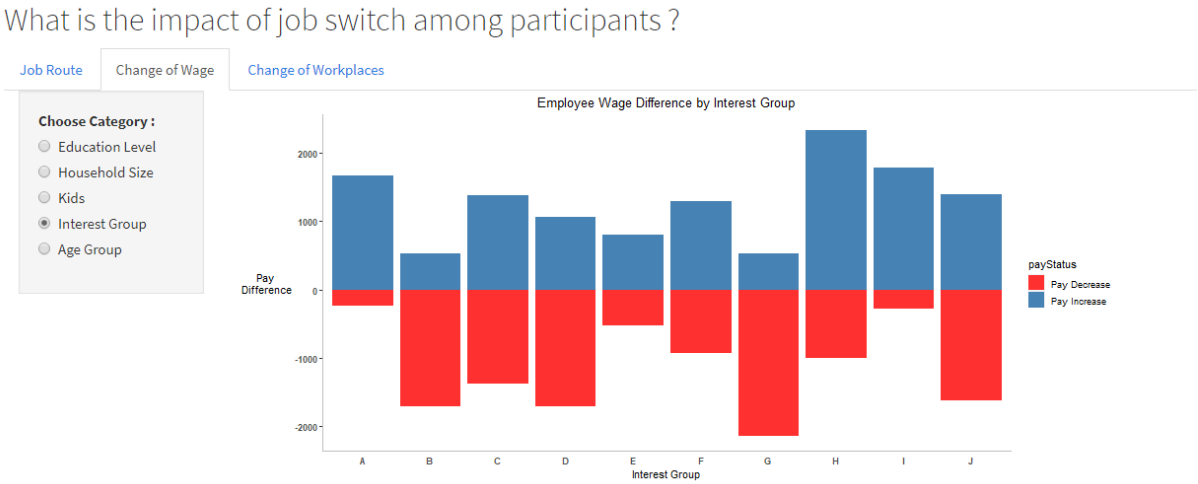
2. Once Participant Id is selected, work commute route before switching and after switching appears side by side.



b) Change of Wage

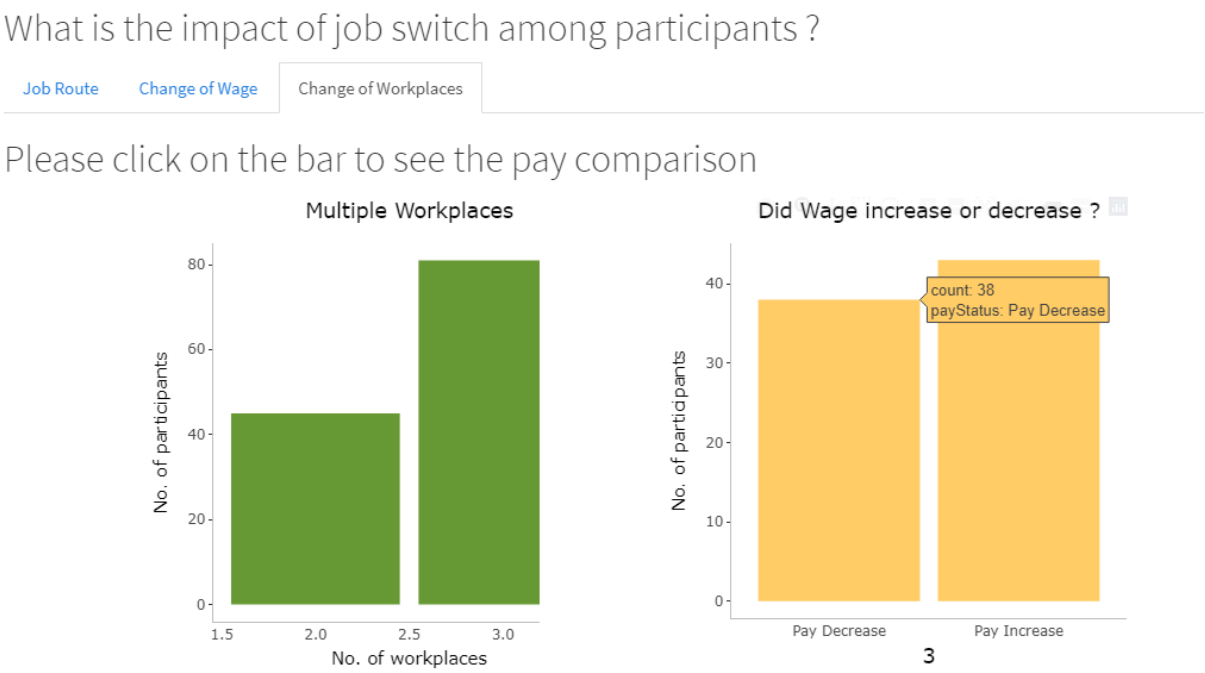
This tab shows based on the grouping how the wages change before and after switching job.

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



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.

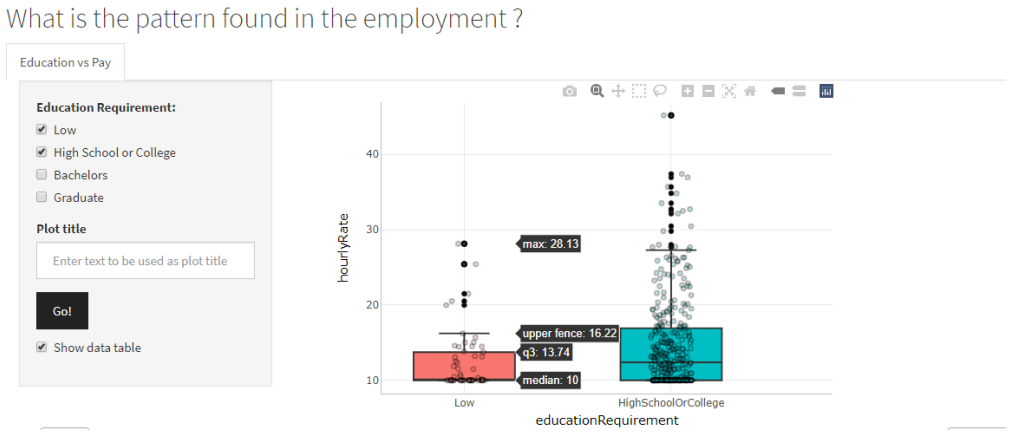


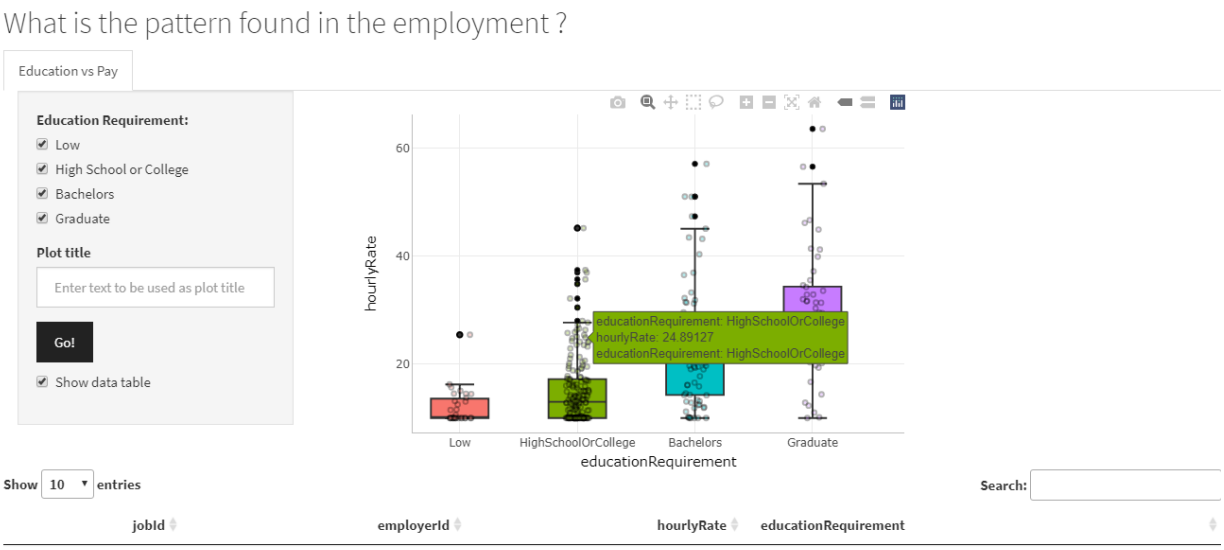
2. Employment Pattern

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





3. Employer Health

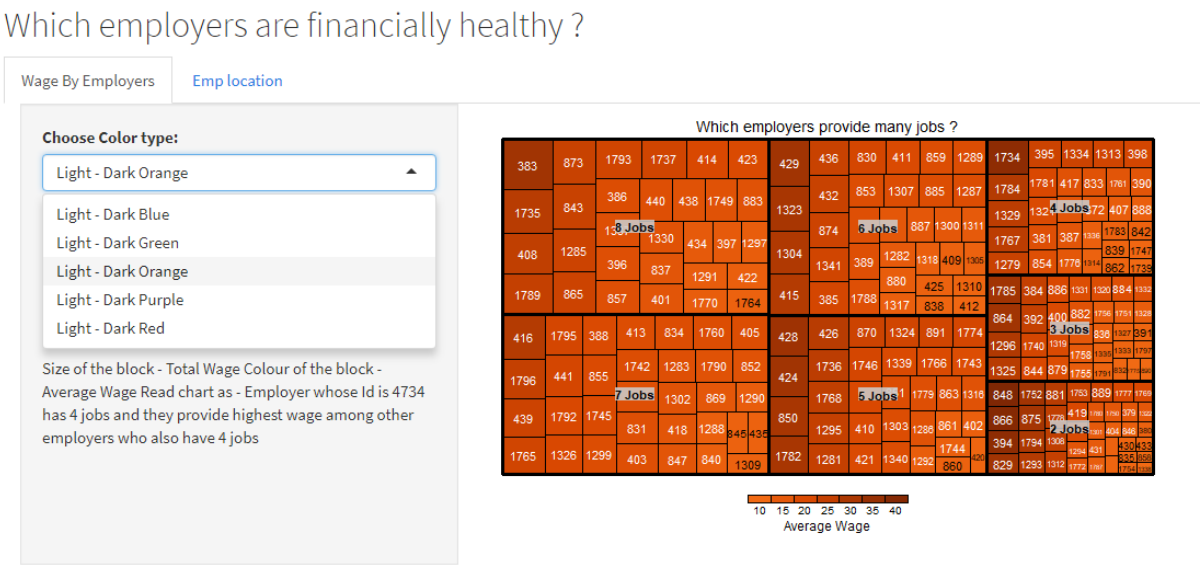
Navigate to Employment & Turnover → Turnover Analysis

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.

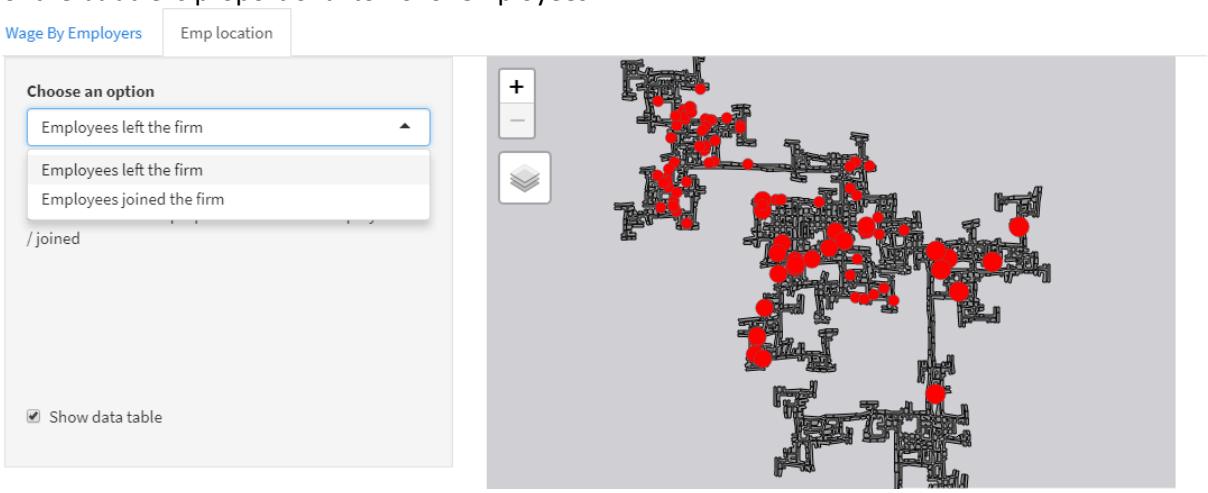


b) Employer Location

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 employess left that company and size of the bubble is proportional to no. of employees.



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