Dear Shan Carter and Kevin Quealy,

I am a PhD student in Professor Ben Shneiderman’s Information Visualization course at the University of Maryland, College Park. I am writing concerning the visualization of “Housing’s Rise and Fall in 20 Cities” which has been published on August 27, 2013. Congratulations for your excellent interactive visualization!

I found this visualization easy to use, interactive and informative. It serves the purpose for users from different level which ranges from novice to advance. It can be useful for people who want to look at the trend of economy (novice users). Also, it can provide good insight for those who are involved in housing business (advance users). It is easy to play with and I think people can be benefitted for their decision making about ‘where to spend money’ is going to be worth.

One of the nice things about this visualization is if user hover the mouse in a curve they can see the name of the city. This makes it easy to follow how the rise and fall of house price is going on. Also users can select curve corresponding to a specific city and mouse-hover on another city to see comparative up and down of the price. The drop down list of cities given in alphabetical order adds additional flexibility to select a city. Same thing applies for month and year selection from the drop down list. Specifically, this is useful when the curves are too close and harder to select a specific city that the user want to look at. Then, instead of selecting from the plot they can use the drop down list.

One of the thoughtful design done here is if the slider is moved, the curve shifts up and down so that it starts from (0,0) point of the graph [if the slider is considered as a y axis]. This makes the visualization quite intuitive because psychologically people tend to compare any kind of change from zero, e.g. it is easier to see and compare any increase or decrease from 0% to 10% than any shift from 85% to 95%.

The linking and brushing of drop down list, plot and the table makes the whole visualization more informative. The text written at the top of the plot explaining what the highlighted line indicates is helpful for novice users. The key points of that explanation also changes based on selection. The table contains some small but effective visual components, e.g. for any percentage of change, it shows directional horizontal bar indicating whether it is increase or decrease and how much the percentage of change is.

The color chosen for this visualization is also wise because the colors used here are not problematic for people who are color blind. Also the change of color while brushing and linking in plot and the table is consistent.

Despite all of the nice features described above regarding this visualization, there is scope for further improvement. You can consider the following suggestions to incorporate here. I am pointing my suggestion into two categories: major and minor.

Major issues:

While the user hover the mouse on the plot, it does not show the specific value of time and percentage of price-change. It would be more informative if a tool tip shows these values, especially for price-change since it is a continuous measurement.

The x axis label is positioned at the top of the figure and based on the position of slider the beginning and ending of timing is also being shown here. However, the labeling technique is
somewhat confusing because it does not readily come to the mind that ’00 represents year-2000, ’01 represents year 2001 and so on. Initially, I thought this is some kind fraction rather than a year.

The table used in this visualization contains lots of information. However, the significant shortcoming of the table is users do not have option to sort. The automated sorting option according to numeric order and/or alphabetical order would give more flexibility to the users to play around. Also, the rows of the table could have been made sortable by dragging.

The meaning and the purpose of all columns are not really clear to me, especially the column with header “Year-Over-Year-Change”. Like the explanatory text corresponding to the selected curve at the top of the plot, another explanatory text could have been added corresponding to the selected row.

Minor improvements:

Check box can be added in the table corresponding to each city to highlight more than two curves. This will aid to compare housing price of multiple city.

Double slider could have been added so that user can check the rise/fall of price for a specific time frame. For instance, with dynamic query slider it’s easier to check how much price shift happened in two years as compared to next two years.

If the page is scrolled down to see some details in table the x-axis becomes out of sight. Placing the x-axis at the bottom of figure instead of at the top would make it easier to use.

The whole time frame in the x-axis is from year 2000 to 2013. With data from larger time frame, the curves would loss details. To accommodate that, “Details on Demand” e.g. “drag/select and expand” facility can be added.

With data of 20 cities, the use of drop down list if fine. However, data with more cities this drop down list might not be that much useful. In that case a text box with search option can be a solution.

Finally, I appreciate both the simplicity and effectiveness of this visualization. I hope I will see more of your excellent works in future.

Sincerely

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